Journal of Adolescence 2000, **23**, 137–155
doi:10.1006/jado.2000.0304, available online at http://www.idealibrary.com on IDEAL®

Pathological attachment and attachment style in late adolescence

DANIEL K. LAPSLEY, NICOLE M. VARSHNEY AND MATTHEW C. AALSMA

Attachment theory is frequently invoked to account for patterns of adaptation within relationships. West and Sheldon derived a measure of dysfunctional adult attachment from Bowlby's theory. Four patterns are identified: compulsive self-reliance; caregiving; care-seeking; and angry withdrawal. The aim of this study was to assess the psychometric properties of this promising measure, and to assess its ability to predict symptomatology relative to measures of attachment style. Participants included 209 late adolescents who were involved in committed relationships. They responded to categorical and continuous measures of attachment style and various measures of symptomatology and college adjustment. The four dimensions of pathological attachment showed strong internal consistency and few gender differences. Compulsive care-seeking, angry withdrawal and compulsive self-reliance were particularly strong predictors of psychiatric symptomatology and insecure attachment style. Attachment pathology and insecure attachment style predicted symptomatology similarly, though variations were evident depending on how style was assessed. This study is the first to provide evidence of convergent, discriminant and predictive validity for this measure. Directions for future research are noted.

© 2000 The Association for Professionals in Services for Adolescents

Introduction

Bowlby's (1958, 1960) theory of infant attachment has proven to be a rich source of insights for understanding the dynamics of human relationships across the lifespan. In his view attachment behaviors are progressively organized over the first months of life in order to secure the proximity of specific individuals and to motivate their care of the child. The felt security of a relationship with a responsive caregiver encourages the developing child to explore his or her physical and social environment with confidence, and to find in this relationship a haven of safety, comfort and reassurance when faced with stress, uncertainty or danger. Consequently, the willingness and ability of parents to provide a secure base is an important determinant of the nature of the affectional bonds that emerges between parents and children.

Bowlby further argued that within this relational context the child develops representational models of the self ("I am lovable") and of one's relational experience ("Others are trustworthy"). These internal working models are enduring and stable mental representations of attachment relationships that are carried forward into new relationships as the child develops. Hence, these mental models are assumed to exhibit considerable developmental continuity, and to serve as the basis for recapitulating certain habitual patterns of interactions which becomes, over time, habitual, automatic, and hard to change (Bowlby, 1980).

Reprint requests and correspondence should be addressed to: D. K. Lapsley, Department of Educational Psychology, Teachers College 520, Ball State University, Muncie, IN 47306 (E-mail: dklapsley@bsuvc.bsu.edu)

0140-1971/00/020137+19 $35·00/0 © 2000 The Association for Professionals in Services for Adolescents

In recent years, researchers have begun to explore the lifespan implications of attachment theory. Two approaches can be discerned. One approach attempts to show that the various attachment classifications of infancy are relevant for understanding patterns of interactions among late adolescents in close dyadic (typically romantic or dating) relationships (Bartholomew and Perlman, 1994; Shaver *et al.*, 1996). The heterotypic similarity of infant and adult attachment styles is predicated on the stability of internal working models which tend, in theory, to be recapitulated in new relational experiences across the lifecourse. Hence "adult attachment patterns have their roots in childhood attachment patterns" (Rothbard and Shaver, 1994, p. 61). Consequently, a number of categorical (e.g. Hazan and Shaver, 1987; Bartholomew and Horowitz, 1991) and continuous (Simpson, 1990; Feeny *et al.*, 1994; Griffen and Bartholomew, 1994) measures have been developed that yield attachment styles that are directly analogous to the attachment classifications identified in infancy. Research utilizing these assessments typically show that late adolescents who report insecure attachment styles also show difficulties with affect regulation, intimacy, interpersonal problem-solving, social competence, and other markers of dysfunctional adjustment, in contrast to individuals with secure attachment styles (Shaver and Hazan, 1993; Lopez, 1994; Cooper *et al.*, 1998).

A second approach attempts to explore the clinical and therapeutic implications of attachment theory (Sperling and Berman, 1994). Indeed, Bowlby (1978, p. 5) argued that "many forms of psychiatric disturbances can be attributed to deviations in the development of attachment behavior". He writes

> if we are to help patients therapeutically it is necessary that we enable them to consider in detail how present modes of perceiving and dealing with emotionally significant persons, including the therapist, may be influenced and perhaps seriously distorted by experiences with parents during the years of childhood and adolescence (p. 5).

Indeed, Bowlby (1978) argued that a causal relationship exists between common variations in the way that parents perform their roles and one's later capacity to form affectional bonds during adulthood. But Bowlby's own writings on the clinical and therapeutic implications of attachment theory have not largely been followed in the therapeutic attachment literature. Instead, clinical psychology, following the lead of the attachment styles literature, tend to treat adult attachment as an analog of infancy attachment classifications, and to direct possible therapeutic intervention to the problem of *insecure* attachment (Kenny and Rice, 1995). In other words, the tendency is to explore the applied implications of attachment theory from the perspective of Ainsworth's classification of attachment status or style, and not from Bowlby's own writings on the matter. Although the study of adult attachment styles has important implications for therapeutic practice, as Lopez (1995) points out, Bowlby's own conceptualization of the clinical implications of his theory has not, heretofore, been adequately considered.

Bowlby (1978) identified three deviant, clinically significant patterns of adult attachment. The first he termed *anxious* attachment. In his view these individuals typically were exposed to one or both parents who were unresponsive to the child's signals; or who actively disparaged or rejected the child; or who resorted to love withdrawal as a discipline technique; or who threatened to abandon the family, or to commit suicide, as a means of coercing a spouse, or of disciplining the child; or who insisted that the child act as an attachment figure for a parent. A child who grows up under this regime is thought to be constantly anxious lest he or she lose access to an attachment figure. In adult relationships such an individual is

likely to be vigilant to signs of loss and abandonment, and will therefore demonstrate a low threshold for exhibiting proximity-maintaining attachment behavior.

A second pattern Bowlby (1978) called *compulsive self-reliance.* As the term implies an individual who displays this pattern will disclaim the need for close interpersonal relationships. Indeed, this person distrusts relationships, mocks their necessity, and avoids situations where he or she might be rejected, or relied upon by others. Bowlby (1978) suggests that under stress these individuals are prone to depression and various psychosomatic symptoms.

Third, a pattern of *compulsive care-giving* was also identified by Bowlby (1978) as an attachment-related pathology. These individuals are actively involved in relationships, but always as a giver of care, never as a recipient. The etiology of this pattern can be traced to parents who were unable (because of illness, incapacity, or disability) to provide care for the child, but who were pleased to receive it, or to demand it, from the child. "Thus, from early childhood, the person who develops in this way has found that the only affectional bond available is one in which he must always be the caregiver and that the only care he can ever receive is the care he gives himself" (Bowlby, 1978, p. 14).

Individuals who display these patterns are likely to respond poorly to life events that involve illness, death or separation from an attachment figure. Difficulties in marriages and adult partnerships, and relationships with one's own children, are also anticipated. Indeed, deviant attachment history is theoretically linked to depression, anxiety, anger, emotional detachment and personality disturbances. It leads to biased ways of perceiving events and of processing relational information, thereby providing ample opportunities for mis-attribution, misinterpretation, and mis-communication.

Although there is a large and growing research literature on individual differences in adult attachment style, empirical research on the clinical sequelae of deviant attachment has been slower to develop, perhaps because there are far fewer available options for assessing adult attachment *pathology* than is the case with adult attachment *style.* One promising measure was introduced by West and Sheldon (1988; West and Sheldon-Keller, 1994). This instrument assesses three aspects of attachment pathology derived from Bowlby's theory: *compulsive self-reliance, compulsive care-giving,* and *compulsive care-seeking.* It also assesses a fourth component, called *angry withdrawal*, which was patterned after Ainsworth's account of Group C infants. Relatively little is known, however, about the psychometric properties of this measure. The initial report, based on a relatively small sample of university students ($n=78$), was limited to estimates of instrument reliability and sub-scale correlations (West and Sheldon, 1988). What is missing is research demonstrating the validity and clinical utility of the measure (Lyddon *et al.,* 1993). One purpose of this project, then, was to explore the psychometric and nomological properties of this promising measure using a much larger sample and a more extensive examination of convergent-discriminant validity. Using multiple regression and correlation analyses we attempted to determine if the four components of the West and Sheldon (1988) significantly predicted various aspects of psychopathological symptomatology and college adjustment.

This question was pursued in a sample of late adolescent university students for three reasons. First, epidemiological surveys of the general (non-clinic) population show that clinically relevant symptomatology is pervasive in a significant minority (perhaps one-fifth) of late adolescents, and that perhaps as many as 60 per cent of individuals report occasional symptomatology though not serious enough to impair daily functioning (Weiner, 1992).

Second, university life can often tax the adaptational resources of young adults. Indeed, the transition to college has often been likened to a naturally occurring "strange situation" that challenges students with just the sort of experiences (e.g. separation from an attachment figure, negotiating novel physical and social environments, making friends, managing romantic relationships) that are likely to evoke the attachment behavioural system. Consequently, students with dysfunctional patterns of adult attachment are good candidates for showing a poorer profile of adjustment. Third, there has been a decided trend towards the development of assessments that detect clinical symptomatology in community samples of adolescents. If the West and Sheldon (1988) measure is found useful in this regard then it would be a welcome addition to the methodological options available to both clinical research and practice for exploring the relational foundations of presenting problems.

A second purpose to this project was to explore the relative contribution of adult attachment pathology and adult attachment style to the prediction of symptomatology and adjustment. A number of options are apparent. For example, insofar as theoretical accounts of attachment styles and of attachment pathology both trade on the notion of internal working models, it may turn out that the extant measurement options do not sharply distinguish between, say, insecure attachment style and adult attachment pathology, so that measures of both constructs are equivalent in their ability to predict psychological and relational dysfunction. Second, it may also be the case that the indices of attachment style and of attachment pathology differentially predict adjustment and symptomatology. Perhaps indices of attachment style are better indicated for detecting relational insecurities or adjustment problems, while the measure of attachment pathology is better indicated for detecting clinically relevant symptomatology. Or perhaps one or the other construct is pervasively superior in its predictive power; or is otherwise a valuable source of complementary information for purposes of diagnosis and the organization of therapeutic interventions. The answer to these questions could well yield clearer recommendations for the use of attachment constructs in clinical research and practice with adolescents. This latter question will also be pursued by multiple regression and correlational techniques.

Finally, we explored the possibility that men and women would be differentially at risk for attachment pathology, or that the pattern of relationships between attachment and adjustment and psychopathology might vary by gender. Traditional attachment theory does not provide firm ground for positing gender differences in adult attachment. Moreover, although some empirical studies report gender differences (Bartholomew and Horowitz, 1991; Rothstein and Horowitz, 1996), a number of others do not (Allen *et al.*, 1996; 1998; Roberts *et al.*, 1996). Still some have argued that men and women may be differentially disposed towards attachment in social development (Batgos and Leadbeater, 1994). Moreover, it has been suggested that gender role socialization encourages women and girls to resonate to certain attachment relevant themes, such connectedness, bonding, and communion, while boys and men are encouraged to adopt the stance of agentic independence and autonomy (Gilligan, 1982; Chodorow, 1989). If true then perhaps attachment disturbances would be more evident among females than males. Alternatively, perhaps the attachment variables are stronger predictors of adjustment and psychopathology for females than for males, given their presumed greater importance in feminine social development. The extent of gender differences on the attachment measures will be explored in a set of preliminary analyses.

Method

Participants

An initial sample of 252 participants (63 males, 184 females; 5 participants did not report gender) completed the research protocol. However, we restricted our analyses to only those participants who were reported to be in committed relationships. This reduced the sample to 209 late adolescents (52 males, 153 females; 4 participants did not report gender) who were in committed relationships. Participants were recruited from a large regional university in the American Midwest, typically from second- and third-year courses in human development and educational psychology. These courses are required for numerous majors and minors throughout the university, and tend to attract a broad cross-section of students from diverse educational programs. Approximately 35% ($n=71$) of the sample were college freshmen; 32% ($n=66$) were sophomores; 21% ($n=43$) were juniors; and 13% ($n=27$) were college seniors. The mean age of the sample was 20·60 years (S.D.=3·71). About 93% of sample were white Caucasians; 4% African–Americans; 2·5% reported "other". The ethno-racial composition of the sample was broadly comparable to the general student body.

Instruments

Adult attachment style. Both categorical and continuous assessments of adult attachment style were used in this project. A continuous measure of adult attachment developed by Simpson (1990) consists of 13-statements rated on a 7-point scale ranging from "strongly agree" to "strongly disagree". This scale can be decomposed into secure, avoidant and anxious attachment sub-scales, although more recent research (Simpson *et al.*, 1992; Shaver and Hazan, 1993) has settled on a two-factor solution: an avoidant/secure factor and an anxious attachment factor. High scores represent greater avoidance (and lower scores greater security) and more anxiety, respectively. The avoidant/secure scale contained eight items and displayed an internal reliability of $\alpha=0{\cdot}81$ while the *anxious* scale contained 5 items and displayed an internal consistency of $\alpha=0{\cdot}61$.

A categorical methodology designed by Bartholomew and Horowitz (1991) was also used. Four attachment styles are described by brief statements, and participants are required to endorse the statement that is most self-descriptive. The secure attachment style is characterized by a positive sense of self-worth plus an expectation that others are trustworthy, reliable and available. The secure statement is as follows:

> It is easy for me to become emotionally close to others. I am comfortable depending on others and having others depend on me. I don't worry about being alone or having others not accept me.

The dismissing attachment style is characterized by a positive working model of the self, but a highly negative model of others. The dismissing statement is as follows:

> I am comfortable without close relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

The preoccupied attachment style is characterized by a model of the self as unlovable or unworthy, but a positive model of others. The preoccupied statement is as follows:

> I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them. . .

Finally, the fearful attachment style is characterized by a sense of self-unworthiness and a view of others as rejecting, untrustworthy or unavailable. The fearful statement is as follows:

> I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I sometimes worry that I will be hurt if I allow myself to become too close to others.

After endorsing one of these classifications, participants were also asked to rate the self-descriptiveness of each of the four attachment classifications along a seven-step continuum, ranging from "not at all like me" to "very much like me". This rating provides a continuous (or dimensional) score for each participant on each of the four attachment styles. Hence participants self-select a single attachment style classification which best describes his or her pattern of relating to others, and they also provide a continuous rating on each of the four attachment styles.

The validity of these classifications have been demonstrated with theoretically relevant empirical relationships with self-concept and interpersonal functioning, with peer attachment, and with family functioning (Bartholomew and Horowitz, 1991). These attachment styles also differentially predict numerous indices of relationship quality, emotional regulation and coping (see Shaver and Hazan, 1993, for a review). Furthermore, the association of attachment style and indices of symptomatology, risk behaviors and self-concept appear to be largely invariant across age, gender and racial groups (Cooper *et al.*, 1998).

In the present study the distribution of participants in the various attachment categories was as follows: secure, $n=112$ (53·6%); fearful, $n=51$ (24·4%); preoccupied, $n=21$ (10%); and dismissing, $n=24$ (11·5%). This distribution is comparable to that reported by Bartholomew and Horowitz (1991; secure, 47%; fearful, 21%; preoccupied, 14%; dismissing, 18%). Given the relatively smaller sample number in the fearful, preoccupied and dismissing groups, these were combined into an "insecure" group to accommodate certain data analyses, a procedure that mirrors common practice in the infancy literature (e.g. Matas *et al.,* 1978; Arend *et al.,* 1979). Although combining insecure groups into a single category will necessarily obscure possible differences among the three insecure classifications, our interest here is on the broad-band differences between secure and insecure adult attachment.

Pathology of adult attachment (PAA). The West and Sheldon (1988) measure consists of 40 items that are equally distributed among four components of attachment pathology. Participants must rate each item along a five-step Likert-type continuum, ranging from "strongly disagree" to "strongly agree". Higher scores on each component indicate greater attachment pathology.

The component compulsive self-reliance was defined in these terms: avoids turning to the attachment figure for help (three items; "I feel it best not to depend on my attachment figure"); avoids giving the attachment figure affection or closeness (five items; "I want to get close to my attachment figure, but I keep pulling back"); uncomfortable with attachment figure needing him or her (two items; "I wouldn't want my attachment figure relying on me"). The component compulsive care-giving was defined in terms of three facets: always placing the highest priority on the needs of others (four items; "I put my attachment figure's needs ahead of my own"); having feelings of self-sacrifice and martyrdom (two items; "I don't sacrifice my own needs for the benefit of my attachment figure"); providing care whether or not it is requested (four items; "I try to anticipate my attachment figure's needs"). The component compulsive care-seeking was defined in terms of three facets: defining life in

terms of problems that require assistance to solve (two items; "My life is so full of problems that I have to depend a lot on my attachment figure"); defining attachment relationships in terms of receiving care (four items; "I wish that I could be a child again and be taken care of by my attachment figure"); expecting attachment figures to assume responsibility for major areas of life (four items; "I am never certain about what I should do until I talk to my attachment figure"). The angry withdrawal component was defined in these terms: having negative reactions to perceived unavailability of the attachment figure (three items; "I get frustrated when my attachment figure is not around as much as I would like"); having negative reactions to perceived lack of responsiveness of the attachment figure (four items; "My attachment figure only seems to notice me when I get angry"); having generalized anger toward the attachment figure (three items; "I often feel angry with my attachment figure without knowing why").

West and Sheldon (1988) reported adequate estimates of internal consistency for each component (M_α=0·87). In addition, compulsive care-giving and care-seeking were positively correlated with each other (r=0·57), and each negatively correlated with compulsive self-reliance (M_r=−0·36). The component angry withdrawal was positively associated with compulsive self-reliance (r=0·48), weakly and negatively (r=−0·16) correlated with compulsive care-giving, and virtually uncorrelated with compulsive care-seeking (r=0·09). West and Sheldon (1988, p. 156) interpreted this pattern as evidence "that the relationships agree with theoretical constructs".

Assessments of psychopathology. Symptomatology was assessed by the Hopkins Symptom Checklist (HSCL; Derogatis *et al.*, 1974), the Center for Epidemiological Studies Depression Scale (CES-D), and by a measure of pathology of separation-individuation (PATHSEP, Christenson and Wilson, 1985). These measures were selected because they tap constructs that are theoretically linked to manifestations of attachment pathology.

The HSCL requires participants to report the extent to which they have felt each of 58 symptoms "in the past several days" along a four-step continuum ("not at all" to "extremely"). These items are decomposed into several sub-scales, including *somatization* (α=0·82; complaints of distress arising from perceptions of bodily dysfunction), *obsessive–compulsive* concerns (α=0·82; reports of unremitting thoughts, concerns, impulses, behaviors), *interpersonal sensitivity* (α=0·81; feelings of personal inadequacy and inferiority; self-deprecation; social uneasiness; acute self-consciousness in social settings), *depression* (α=0·86; dysphoria; hoplessness; lack of interest, motivation, vital energy) and *anxiety* (α=0·81; restlessness, nervousness, tension, and other signs of manifest anxiety). Strong evidence of factorial invariance and construct validity is reported by (Derogatis *et al.*, 1974.)

The CES-D is a 20-item scale that is designed to measure depressive mood in non-clinical samples (Radloff, 1977). Participants must rate the frequency with which they have experienced each of twenty depressogenic symptoms "during the past week" along a four-step continuum that ranges from "rarely or none of the time" (less than one day) to "most or all of the time" (5 to 7 days). Internal consistency of this measure within our study was strong (α=0·90). The CES-D is often used in the literature and has strong psychometric properties (Myers and Weissman, 1980; Roberts *et al.*, 1990; Weissman *et al.*, 1977).

Pathology of separation-individuation was assessed by a 39-item scale (denoted here as PATHSEP) developed by Christenson and Wilson (1985). Scale items reflect difficulty in differentiating self from others ("Often, when I am in a close relationship, I find that my sense of who I am gets lost"), splitting of self and other object representations into "good" or

"bad" (I find that people either really like me or they hate me"), and relational disturbances manifested in terms of coercion, concerns about object constancy, and tolerating aloneness ("I need people around me to not feel empty"). Preliminary research demonstrated satisfactory internal reliability and that the scale discriminates normal controls from a sample of patients diagnosed with borderline personality (Christenson and Wilson, 1985). More recent research with a non-clinical university sample showed that PATHSEP discriminates secure and insecure adult attachment, counterindicates college adjustment and perceptions of family cohesion and adaptability (Lapsley and Edgerton, 1988). Additionally, within our study PATHSEP proved to have strong internal consistency (α=0·89).

Assessment of college adjustment. College adjustment was assessed in two ways. First, participants responded to the social adjustment subscale from the Student Adaptation to College Questionnaire (SACQ, Baker and Siryk, 1989). This scale consists of eight items that are responded to on a 7-step Likert-style continuum (α=0·81). Scale items reflect satisfaction with social life in college ("I am quite satisfied with my social life at college") as well as exploring the participant's friendships in the college setting ("I am meeting as many people and making as many friends as I would like.") A second measure explored the participants felt academic pressure and stress. This measure consisted of seven items, four of which were derived from a measure developed by Dunkel-Schetter and Lobel (1990) and three of which were created for the purposes of this study. These items measured the amount of pressure and worry students had concerning academic work (e.g. "I am finding my academic obligations to be very stressful"), and were responded to along a 7-step Likert continuum (α=0.83).

Procedure

These measures were administed in small group settings in a completely randomized order (for each participant). Standard instructions were utilized, with one exception. The items in the West and Sheldon (1988) measure of a adult attachment pathology repeatedly uses the term "attachment figure" (e.g., "I feel it is best not to depend on my attachment figure"). To clarify this terminology we used the following instructions;

> *Not counting family members, is there a "significant other" in your life to whom you feel especially attached?* (Yes or No).
> *The following items pertain to the special relationship you have with the "significant other" or "attachment figure" to whom you feel especially close."*

Of course, only participants who indicated that they did, indeed, have such a person in their life were included in this study.

Results

Instrument reliability

The internal consistency of the four subscales of pathology of adult attachment was adequate. The reliability coefficient (coefficient alpha) for compulsive self-reliance was α=0·78; for compulsive caregiving, α=0·73; for compulsive care-seeking, α=0·77; and for angry withdrawal, α=0·86.

Analysis of gender

We next examined possible gender differences in attachment style, attachment pathology, and adjustment. Pair-wise tests of gender means for indices of pathology of adult attachment, attachment style, and adjustment and psychopathology revealed few significant gender differences. Pair-wise tests of significance of independent correlations (after Fischer's *r*-to-*z* transformation) also revealed few (<8%) significant correlational differences by gender. We also examined the variance–covariance measurement matrices of the gender groups for each set of constructs, in order to determine if the data fit an invariance model (constraining correlations between scales/factors; the loading of each scale; and the error associated with each measure). The Lagrange Multiplier Test was also calculated to determine if relaxing one or more constraints would improve the fit of the model (Bentler, 1995).

For the measures of pathology of adult attachment pathology, the invariance model provided an excellent fit of the data (comparative fix index, CFI=0·99; $\chi^2(6)=7{\cdot}63$, $p<0{\cdot}05$). Similarly, no significant differences in variances and covariances emerged for the measures of adult attachment style (CFI=0·94; $\chi^2(15)=30{\cdot}59$, $p<0{\cdot}01$) and of psychopathology and adjustment (CFI=0·99; $\chi^2(28)=39{\cdot}89$, $p<0{\cdot}07$). The Lagrange Multiplier Test revealed that only three out of 85 possible constraints across the three sets of constructs were different between men and women. Hence, given the paucity of gender differences, the data for men and women were combined for most subsequent analyses.

Correlational Analyses

Attachment pathology and attachment style. Table 1 reports the correlations of the dimensions of adult attachment pathology with indices of adult attachment style. Note that secure adult attachment style (Bartholomew and Horowitz, 1991) is negatively correlated with compulsive self-reliance ($r=-0{\cdot}31$), but is positively (but modestly) correlated with compulsive caregiving ($r=0{\cdot}19$). As expected fearful and preoccupied adult attachment

Table 1 *Correlations among pathology of adult attachment scales and indices of adult attachment style*

	Pathology of adult attachment			
	Compulsive self-reliance	Compulsive caregiving	Compulsive careseeking	Angry withdrawal
Adult attachment style[a]				
Secure	−0·31**	0·19**	0·04	−0·12
Fearful	0·32**	−0·03	0·17*	0·31**
Preoccupied	−0·01	0·22**	0·21**	0·18**
Dismissing	0·07	0·20**	−0·22**	−0·02
Adult attachment style[b]				
Avoidant/secure	0·45**	−0·23**	0·08	0·31**
Anxious	0·27**	0·11	0·36**	0·39**
Pathology of adult attachment				
Compulsive self-reliance		−0·36**	−0·09	0·45**
Compulsive caregiving			0·47**	0·03
Compulsive careseeking				0·30**

*$p<0{\cdot}05$; **$p<0{\cdot}01$.
[a]Bartholomew and Horowitz (1991).
[b]Simpson *et al.* (1992).

styles showed a pattern of significant positive correlations with adult attachment pathology. Interestingly, dismissing adult attachment style was negatively correlated with both compulsive caregiving ($r=-0{\cdot}20$) and with compulsive careseeking ($r=-0{\cdot}22$). Previous research has also shown that a dismissing adult attachment style is not disadvantageous for mental health and adjustment (Bartholomew and Horowitz, 1991).

The pattern of correlations among the PAA scales shows that the various scales are not coextensive, and tend, therefore, to tap somewhat different dimensions of attachment pathology. Hence, compulsive caregiving and careseeking were significantly but moderately correlated ($r=0{\cdot}47$). Similarly, angry withdrawal was positively, but moderately, correlated with compulsive self-reliance and compulsive careseeking. It is of interest to point out the negative correlation ($r=-0{\cdot}36$) between compulsive caregiving and compulsive self-reliance, a pattern that is not theoretically unexpected.

With respect to the two scales derived from the Simpson *et al.* (1992) measure, avoidance in adult relationships was positively correlated with both compulsive self-reliance ($r=0{\cdot}45$) and angry withdrawal ($r=0{\cdot}31$), and negatively correlated, as expected, with compulsive caregiving ($r=-0{\cdot}23$). Similarly, anxiety in adult relationships was positively correlated with compulsive selft-reliance ($r=0{\cdot}27$), compulsive careseeking ($r=0{\cdot}36$) and angry withdrawal ($r=0{\cdot}39$). The magnitude of these correlations suggests that assessments of adult attachment pathology are significantly related to adult attachment style, but cannot be reduced to it.

Attachment pathology and adjustment. The correlation of the PAA measures with psychopathological symptomatology (HSCL, CES-D), pathology of separation-individuation (PATHSEP) and college adjustment is reported in Table 2. Each of the PAA subscales show a pattern of positive correlations with the scales from the Hopkins Checklist, with PATHSEP, and with the CES measure of depression. With respect to the HSCL, compulsive careseeking ($M_r=0.32$) and angry withdrawal ($M_r=0{\cdot}29$) showed the strongest and most consistent correlations with psychiatric symptomatology, although the other dimensions of adult attachment pathology are also pervasively correlated with these symptom patterns.

All of the indices of adult attachment pathology, except compulsive caregiving, were positively correlated with pathology of separation-individuation, especially compulsive careseeking ($r=0{\cdot}42$) and angry withdrawal ($r=0{\cdot}46$). The pattern was also observed with respect to the correlations with the CES-D measure of depression. Here, all of the measures of adult attachment pathology, except compulsive caregiving, were significantly and positively correlated with depression, especially compulsive careseeking and angry withdrawal (both $r=0{\cdot}41$).

What is the relationship between adult attachment pathology and indices of college adjustment? As Table 2 illustrates, social adjustment to college was negatively correlated with compulsive self-reliance ($r=-0{\cdot}24$) and with angry withdrawal ($r=-0{\cdot}21$). Similarly, grades were negatively correlated with compulsive care-seeking. Moreover, three dimensions of adult attachment pathology were positively correlated with perceptions of academic stress/pressure ($M_r=0{\cdot}20$). Two general trends are evident in these correlations. First, compulsive careseeking and angry withdrawal tended to show the strongest correlations with symptomatology and with adjustment. Second, compulsive caregiving showed the fewest significant correlations with adjustment and symptomatology.

Attachment style and adjustment. Do measures of adult attachment style also correlate with indices of adjustment and symptomatology, and, if so, does this pattern compare favourably with the correlations just noted between adjustment and adult

Table 2 *Correlations among adult attachment pathology scales and indices of college adjustment and psychopathological symptomatology*

	Pathology of adult attachment				Adult attachment style	
	Compulsive self-reliance	Compulsive caregiving	Compulsive careseeking	Angry withdrawal	Avoidant/secure	Anxious
Hopkins symptom checklist						
Somatization	0·08	0·15*	0·23**	0·18**	0·31**	0·36**
Obsessive–compulsive	0·25**	0·12	0·37**	0·26**	0·28**	0·46**
Interpersonal sensitivity	0·21**	0·16**	0·33**	0·41**	0·24**	0·50**
Depression	0·22**	0·19**	0·36**	0·36**	0·29**	0·43**
Anxiety	0·19**	0·11	0·29**	0·25**	0·23**	0·38**
Pathology of separation-individuation	0·39**	0·06	0·42**	0·46**	0·38**	0·57**
CES-Depression	0·27**	0·11	0·41**	0·41**	0·35**	0·49**
College adjustment						
Social adjustment to college	−0·24**	−0·01	−0·12	−0·21**	−0·34**	−0·26**
Academic stress/pressure	0·18**	0·12	0·25**	0·16*	−0·06	0·29**

*$p < 0·05$; **$p < 0·01$.

attachment pathology? As can be seen in Table 2, the measure of avoidant/secure attachment style is positively correlated with each dimension of the Hopkins Symptom Checklist, with a mean correlation (M_r=0·27) that compares quite favourably with compulsive careseeking (M_r=0·32) and with angry withdrawal (M_r=0·29), and which is superior to compulsive self-reliance (M_r=0·19) and compulsive careseeking (M_r=0·15). The measure of anxious attachment style shows a similar pattern: its mean correlation with HSCL indices of symptomatology (M_r=0·43) compares favorably or was superior to the mean correlation of compulsive caregiving and angry withdrawal with HSCL measures, and was clearly superior relative to compulsive self-reliance and compulsive caregiving. With respect to pathology of separation-individuation, and with the CES-D measure of depression, it would appear that the two indices of insecure attachment style (avoidant/secure, anxious) and the three measures of attachment pathology (except compulsive caregiving) showed a comparable pattern of correlations. Finally, avoidant and anxious adult attachment style was negatively correlated with social adjustment to college (M_r=−0·30); and anxious attachment style was negatively correlated with perceived academic stress/pressure (r=−0·29).

Regression analyses

A series simultaneous regression analyses were calculated to clarify the predictive relationship between pathology of adult attachment and indices of psychiatric symptomatology (HSCL), depression (CES-D) and pathology of separation-individuation (PATHSEP). Gender and SES (Hollingshead four-factor index) were also included as covariates in each regression analysis. Table 3 reports the summary of regression statistics, and also collinearity diagnostic information, for each analysis.

As can be seen in Table 3, compulsive careseeking emerges as a significant predictor of the various psychopathological symptoms in all six of the possible analyses; angry withdrawal emerges in four of the six analyses, as does compulsive self-reliance. In contrast, compulsive caregiving did not significantly predict any of the various psychopathological symptoms.

A series of hierarchical regression analyses were next conducted in order to clarify the relative contribution of attachment pathology and attachment style to the prediction of symptomatology and adjustment. This was done by generating two regression equations for each dependent variable. In the first analysis attachment style was entered before attachment pathology. In the second analysis the order of entry was reversed. By comparing the change in the amount of variance accounted for the attachment variables in the two analyses one is then able to calculate the R^2 uniquely attributable to attachment pathology, the R^2 unique to attachment style, and the R^2 that is shared by the two attachment constructs. To avoid the interpretive complications that attend possible multicollinearity among the indices of attachment style and of attachment pathology, these measures were entered into the regression analysis as blocks. The first block of variables in each regression analysis consisted of a linear combination of background/demographic variables (gender, SES). The results of this analysis are reported in Table 4.

With few exceptions the attachment style and attachment pathology blocks each make unique significant contributions to the prediction of symptomatology (HSCL), depression (CES-D), pathology of separation-individuation (PATHSEP) and college adjustment (social adjustment, academic stress/pressure). Attachment pathology and attachment style uniquely contributes, on average, 6 per cent and 8 per cent of the variability in HSCL scores, respectively. Moreover, each attachment construct uniquely contributes 9 per cent of the variability in CES-Depression scores; and 10 per cent of the variance in PATHSEP scores.

Table 3 *Summary of regression statistics and collinearity diagnostics*

	B	std. error	Beta	t	sig.	Tolerance	VIF
d.v.=*somatization*							
Gender	1·12	0·87	0·09	1·29	0·19	0·91	1·09
SES	−0·003	0·03	−0·01	−0·09	0·92	0·97	1·02
Caregiving	−0·09	0·08	0·09	1·21	0·23	0·67	1·48
Careseeking	1·69	0·07	0·18	2·20	0·03**	0·67	1·47
Angry withdrawal	0·06	0·06	0·07	0·90	0·37	0·66	1·51
Self-reliance	0·11	0·08	0·12	1·38	0·17	0·59	1·69
d.v.=*obsessive–compulsive*							
Gender	0·66	0·69	0·06	0·94	0·35	0·91	1·09
SES	−0·01	−0·02	0·02	0·34	0·73	0·97	1·03
Caregiving	0·05	0·66	0·06	0·75	0·45	0·67	1·48
Careseeking	0·29	0·06	0·38	5·04	0·00**	0·67	1·48
Angry withdrawal	−0·01	0·05	−0·002	−0·02	0·98	0·66	1·51
Self-reliance	0·25	0·06	3·29	4·07	0·00**	0·59	1·69
d.v.-*interpersonal sensitivity*							
Gender	0·34	0·58	0·04	0·59	0·56	0·91	1·09
SES	−0·01	0·02	0·03	0·54	0·59	0·97	1·03
Caregiving	0·07	0·08	0·09	1·29	0·19	0·67	1·48
Careseeking	0·14	0·05	0·22	2·96	0·003**	0·68	1·48
Angry withdrawal	0·15	0·04	0·28	3·67	0·00**	0·66	1·51
Self-reliance	0·09	0·05	0·15	1·86	0·06	0·59	1·69
d.v.=*depression*							
Gender	0·16	0·87	0·01	0·19	0·85	0·01	1·09
SES	−0·01	0·03	0·02	0·33	0·74	0·97	1·03
Caregiving	0·15	0·08	0·14	1·82	0·07	0·67	1·48
Careseeking	0·26	0·07	0·27	3·57	0·00**	0·68	1·48
Angry withdrawal	0·14	0·06	0·17	2·30	0·01**	0·66	1·51
Self-reliance	0·21	0·08	0·22	2·75	0·01**	0·59	1·69
d.v.=*CES-Depression*							
Gender	−1·44	1·45	−0·06	−0·99	0·32	0·91	1·09
SES	−0·02	0·05	−0·02	−0·41	0·68	0·97	1·02
Caregiving	0·03	0·14	0·02	0·22	0·82	0·67	1·48
Careseeking	0·61	0·12	0·35	4·95	0·00**	0·68	1·48
Angry withdrawal	0·31	0·10	0·21	2·95	0·00**	0·66	1·51
Self-reliance	0·33	0·13	0·19	2·55	0·01**	0·59	1·69
d.v.=*PATHSEP*							
Gender	−12·52	4·89	−0·14	−2·56	0·01**	0·91	1·09
SES	0·22	0·17	0·07	1·28	0·20	0·97	1·03
Caregiving	−0·07	0·46	−0·01	−0·15	0·88	0·67	1·48
Careseeking	2·44	0·41	0·39	5·89	0·00**	0·68	1·48
Angry withdrawal	1·01	0·36	0·19	2·85	0·00**	0·66	1·51
Self-reliance	1·90	0·43	0·31	4·38	0·00**	0·59	1·69

*$p<0·05$; **$p<0·01$.

Attachment style would appear to be a better predictor of social adjustment to college than attachment pathology, although the latter is a somewhat better predictor of perceived academic stress/worry. In most cases the amount of variability in symptomatology and adjustment scores that is shared by the two attachment constructs is larger than what can be attributed to each of them uniquely.

Tests of means

Another way to assess the measures of adult attachment pathology is to explore possible group differences among categories of adult attachment style. Consequently, an Adult Attachment Classification (2, secure-insecure) × Gender (2) multiple analysis of variance (MANOVA) was calculated on the linear combination of adult attachment pathology scales. A significant multivariate effect for Adult Attachment Classification, and for the interaction term, did not emerge. However, a significant multivariate Gender effect (Pillai=0·086, $F=4·47$, $p=0·002$) was evident. This was accounted for by a significant gender difference for compulsive self-reliance, $F(1,194)=13·96$, $p<0·01$, favoring males.

As a manipulation check a second Adult Attachment Classification (2, secure-insecure) × Gender (2) MANOVA was calculated for the linear combination of the various

Table 4 *Summary contribution of the relative of attachment style and attachment pathology to the prediction of symptomatology, college adjustment and pathology of separation-individuation*

	R^2 unique to			
	Total R^2	Attachment pathology	Attachment style	R^2 shared[a]
Hopkins Symptom Checklist				
Somatization	0·22	0·03	0·13	0·05
Obsessive–compulsive	0·31	0·08	0·08	0·15
Interpersonal sensitivity	0·33	0·07	0·10	0·16
Depression	0·31	0·07	0·07	0·16
Anxiety	0·21	0·04	0·06	0·11
Social adjustment to college	0·17	0·01	0·07	0·05
Academic pressure/worry	0·15	0·06	0·03	0·06
CES-depression	0·39	0·09	0·09	0·18
Pathology of separation-individuation	0·51	0·10	0·10	0·24

[a]Excludes R^2 for the block of demographic variables entered as covariates.

Table 5 *Means and standard deviations for significant adult attachment classification group differences*

	Adult attachment classification			
	Secure ($n=112$)		Insecure ($n=96$)[c]	
	Mean	std.deviation	Mean	std.deviation
Attachment style[a]				
avoidant/secure	20·78	6·46	28·69	7·43
anxious	13·62	5·06	16·45	5·22
Attachment style[b]				
secure	6·35	0·78	3·77	1·61
fearful	2·64	1·47	4·84	2·02
preoccupied	2·56	1·55	3·69	2·08
dismissing	3·06	1·67	3·95	1·91

[a]Simpson, Rholes and Nelligan (1992).
[b]Bartholomew and Horowitz (1991).
[c]The "Insecure" group is the sum of fearful, preoccupied and dismissing classifications.

rating scales of adult attachment style (including the dimensional scales). A significant multivariate effect emerged for Adult Attachment Classification (Pillai=0·55, $F=39·01$, $p<0·01$). This effect was accounted for by significant group differences on each rating scale of attachment style, in the expected direction. Hence, individuals in the secure attachment classification reported significantly lower scores on the Simpson *et al.* (1992) continuous ratings of avoidant/secure and anxious attachment than did individuals in the insecure adult attachment group. Similarly, participants in the secure attachment group had significantly higher mean scores than did participants in the insecure attachment group on the dimensional rating of secure attachment style, and significantly lower scores on the dimensional ratings of fearful, preoccupied and dismissing attachment. Table 5 reports the means and standard deviations for significant group differences. The multivariate gender and interaction terms were not statistically significant.

Discussion

The purpose of this study was to explore the properties of a promising measure of pathology of adult attachment, using a sample of late adolescents who reported being currently involved in a committed relationship (and for whom the notion of "attachment figure" is therefore sensible). After first examining internal consistency and possible gender differences, we attempted to demonstrate a construct-valid pattern of predictive relationships with indices of psychopathology and adjustment, and with allied measures of adult attachment style. We also attempted to determine the relative contribution of attachment pathology and attachment style to the prediction of symptomatology and adjustment. This data is not currently available in the literature, and hence this project is the first to document the nomological background of this measure, and its implications for clinical work with adolescents.

The results indicate that the internal consistency of the subscales measuring compulsive self-reliance, compulsive caregiving, compulsive careseeking and angry withdrawal was completely adequate. Moreover, significant gender differences were rarely observed. In addition, the indices of adult attachment pathology demonstrated, for the most part, the requisite pattern of correlations with measures of depression, pathology of separation-individuation and psychological symptomatology. One dimension, compulsive careseeking, emerged as a particularly strong and pervasive predictor of symptomatology, although angry withdrawal and compulsive self-reliance were also significant predictors of the majority of mental health indicators. In addition, compulsive self-reliance and angry withdrawal also counterindicated various indices of college adjustment.

The fact that this evidence of external validity is apparent in a community sample of late adolescents indicates that this measure could have broad utility as a screen for the relational sources of adjustment difficulties that might be reported, for example, in the university counseling context. As noted earlier the transition to university life has often been likened to a naturally occurring "strange situation" (e.g. Kenny and Rice, 1995), and the management of its typical stressors might be the sort of challenge that evokes the attachment behavioral system in late adolescents. The present study suggests that when patterns of careseeking, self-reliance, and angry withdrawal are evident in the relational history of clients, it might usefully be recognized by counselors as a potential disturbance of the attachment system. The chief value of the present measure, then, and the theoretical foundation upon which it rests,

is that it increases diagnostic options for therapists, and provides a perspective for understanding the source of adaptational problems for late adolescents.

The present study also explored the relationship between adult attachment pathology and adult attachment style, and their relative contribution to symptomatology and college adjustment. In general, the tendency toward avoidance and anxiety in interpersonal relationships is positively, and often moderately, correlated with various dimensions of adult attachment pathology. Furthermore, compulsive self-reliance seems particularly at odds with secure adult attachment, as measured by the Bartholomew and Horowitz (1991) dimensional rating scale. In addition, both fearful and preoccupied adult attachment styles are positively predicted by various features of adult attachment pathology. Hence there is encouraging evidence of convergent validity with adult attachment style. Yet the correlations between attachment pathology and attachment style are not so large or so pervasive as to support any claim of theoretical identity. Hence, although attachment pathology converges with indices of insecure attachment style, both sets of measures nonetheless appear to point to somewhat different aspects of the attachment system.

In summary, with the possible exception of compulsive caregiving, the various aspects of adult attachment pathology demonstrate an acceptable degree of predictive and convergent-discriminant validity. Even the relatively poorer predictive performance of compulsive caregiving is potentially informative for the diagnostician in the sense that this information allows a counselor to better *triage* the attachment-related dysfunctions that might be part of the presenting problems of adolescent clients. For example, a relational history of careseeking, angry withdrawal, or self-reliance would seem to indicate a greater degree of adaptational risk than would a history of compulsive caregiving.

The encouraging degree of convergent and predictive validity observed here, however, would seem to raise an interesting theoretical issue. The present data suggest that indices of attachment pathology and attachment style are convergent but not coextensive. It also shows that the measures of attachment pathology predict a variety of clinically relevant symptomatology. But the data also show that the indices of attachment *style* also predicts the various indices of psychopathology, and that the magnitude of these predictive relationships either rivals or outpaces the magnitude of the relationship between adult pathology and symptomatology. Hence, insecure attachment style, particularly when conceptualized in terms of the avoidance/secure and anxious factors, appears to predict symptomatology, pathology of separation-individuation, depression and college adjustment at least as well as do the several dimensions of adult attachment pathology, as can be seen in Table 4. Morever, although attachment pathology and attachment style each make significant, unique contributions to the prediction of symptomatology and adjustment, the contribution shared by the two constructs is also considerable. On this basis, then, with respect to the prediction of clinically relevant dysfunction, no firm theoretical distinction between attachment *insecurity* and attachment *pathology* appears to be warranted, at least with respect to the attachment-related functioning of young adults in the general community.

Perhaps this predictive similarity can be traced to the fact that attachment *insecurity*, and attachment *pathology* both reflect dysfunctional internal working models. That is, the same working models that produce patterns of avoidance or ambivalence (or fearful, preoccupied or dismissing attachment styles) in adult relationships also produce compulsive patterns of caregiving, careseeking, self-reliance, or withdrawal. Although a conceptual distinction among these patterns is useful for both theoretical and therapeutic reasons, their consequence for mental health and adjustment is highly similar.

But this conclusion needs to be qualified, however. It should be reiterated that the measures of adult attachment style did not predict psychopathology equally well. The dimensional indices of secure, fearful and preoccupied attachment (Bartholomew and Horowitz, 1991), for example, did not predict symptomatology as well as did the two-factor measures of attachment style (Simpson *et al*., 1992), nor did they outperform the indices of attachment pathology in this respect. And one aspect of insecure adult attachment style, the dismissing style, did not counterindicate positive adjustment at all. Add to this the finding that a two-fold (secure–insecure) classification of attachment style did not differentiate the various attachment pathologies, then it seems clear that apparent predicitive comparability of indices of attachment style and attachment pathology might be specific to how attachment style is operationalized. The measurement of attachment style utilizing the internal working models classifications (e.g. Bartholomew and Horowitz, 1991) certainly have therapeutic utility. It would seem to matter that a client habitually displays a pattern of fearful, preoccupied or dismissing attachment in his or her relational field. But knowing that internal working models of the self-in-relationship also yield the sort of relational patterns tapped by the West and Sheldon (1988) measure would seem to add greatly to a therapist's assessment of psychopathological risk. A therapist should also note that the assessment of attachment style requires a person to make a broad judgement about relational tendencies with individuals-in-general (e.g. "I am comfortable with close relationships"). In contrast, the measure of adult attachment pathology requires judgements about a specific individual (the "attachment figure"). Apart from its possible clinical relevance, this difference in focus may account for the unique variation accounted for by the attachment style and attachment pathology constructs.

In summary, the present study reports an encouraging degree of empirical support for the psychometric integrity of the West and Sheldon (1988) measure of pathology of adult attachment. It appears to be a reliable scale, and, within the limits of the measures used here, construct-valid as well. Construct validation is, of course, an on-going project, and there are a number of avenues of future research that would extend the present effort in useful directions.

For example, one possible limitation of this study is that our clarification of "attachment figure" in terms of a close, special relationship with a "signification other" may not have sufficiently distinguished an attachment figure from a close friend. Although we of confident that our clarification does indeed convey the proper meaning of attachment, this distinction is nonetheless important insofar as West and Sheldon (1987) argue that disorders of the attachment system (e.g. inability to experience security in a relationship) may be quite different from disorders of the affiliative system (e.g. inability to experience intimacy). Future research should examine this question. Moreover, further evidence of convergent validity should be established with other measures of adult attachment style (e.g. Feeney *et al*., 1994). In addition, the predictive validity of the West and Sheldon (1988) measure needs to be further examined with a wider range of indices of college adjustment than was the case in the present study, along with other indices of adult symptomatology. Although previous research has not documented age differences in attachment styles across adolescence (Cooper *et al*., 1998), similar data for the four pathological attachment styles tapped by the West and Sheldon (1988) measure are not yet available. A finer-grained analysis than was possible in this study of how specific insecure attachment styles (preoccupied, fearful, dismissing) relate to attachment pathology is also of interest. Furthermore, insofar as the data in this study was derived from self-reports, it would be desirable in future research to compare patterns of

careseeking, caregiving, angry withdrawal and self-reliance from both parties to a coupleship. Finally, longitudinal studies which attempt to predict relational status on the basis of attachment style and attachment pathology scores would also be welcome additions to this literature.

Acknowledgement

We are grateful to Dr Ken Rice for his helpful suggestions and advice.

References

Ainsworth, M. D. S. (1989). Attachments beyond infancy. *American Psychologist*, **44**, 709–716.

Allen, J. P. Hauser, S. T. and Borman-Spurrell, E. (1996). Attachment theory as a framework for understanding sequelae of severe adolescent psychopathology: an 11-year follow-up study. *Journal of Consulting and Clinical Psychology*, **64**, 254–263.

Arend, R., Gove, F. L. and Sroufe, L. A. (1979). Continuity of individual adaptation from infancy to kindergarten: a predictive study of ego-resiliency and curiosity in preschoolers. *Child Development*, **50**, 950–959.

Aspinwall, L. G. and Taylor (1992). Modeling cognitive adaption: a longitudinal investigation of the impact of individual differences and coping on college adjustment and performance. *Journal of Personality and Social Psychology*, **63**, 989–1003.

Baker, R. W. and Siryk, B. (1989). *Student adaptation to college questionnaire manual.* Los Angeles, Western Psychological Services.

Bartholomew, K. and Horowitz, L. (1991). Attachment styles among young adults: a test of the four-category model. *Journal of Personality and Social Psychology*, **61**, 226–245.

Bartholomew, K. and Perlman, D. (Eds) (1994). *Attachment processes in adulthood*. London and Bristol, PA: Jessica Kingsley Publishers.

Batgos, J. and Leadbeater, B. J. (1994). Parental attachment, peer relations and dysphoria in adolescence. In M. B. Sperling and W. H. Berman (Eds), *Attachment in Adults: Clinical and Developmental Perspectives* (pp. 155–178). New York: Guilford.

Bentler, P. M. (1995). *EQS structural equation program manual*. Encinco, CA: Multivariate Software, Inc.

Bowlby, J. (1958). The child's tie to his mother. *International Journal of Psychoanalysis*, **39**, 350–373.

Bowlby, J. (1960). *Attachment and Loss: Vol. 1: Attachment*. New York: Basic Books.

Bowlby, J. (1980). *Attachment and Loss: Vol. 3: Loss, Sadness and Depression*. New York: Basic.

Bowlby, J. (1978). Attachment theory and its therapeutic implications. In S. C. Feinstein and P. Giovacchini (Eds), *Adolescent Psychiatry: Developmental and Clinical Studies. Vol. VI* (pp. 5–23). Chicago: University of Chicago Press.

Chodorow, N. J. (1989). *Feminism and psychoanalytic theory.* New Haven, CT: Yale University Press.

Christenson, R. M. and Wilson, W. P. (1985). Assessing pathology in the separation-individuation process by means of an inventory: a preliminary report. *Journal of Nervous and Mental Disease*, **173**, 561–565.

Cooper, M. L., Shaver, P. R. and Collins, N. L. (1998). Attachment styles, emotion regulation, and adjustment in adolescence. *Journal of Personality and Social Psychology*, **74**, 1380–1397.

Derogatis, L. R., Lipman, R. S., Rickels, K. Ulenhuth, E. H. and Covi, L. (1974). The Hopkins Symptom Checklist (HSCL): a self-report symptom inventory. *Behavioral Science*, **19**, 1–15.

Dunkel-Schetter, C. and Lobel, M. (1990). Stress in college students. In H. Pruett and V. Brown (Eds), *Crisis prevention and intervention on campus: new directions for student services* (pp. 17–34). San Francisco: Jossey-Bass.

Feeny, J. A., Noller, P. and Hanrahan, M. (1994). Assessing adult attachment. In M. B. Sperling and W. H. Berman (Eds), *Attachment in adults: clinical and developmental perspectives* (pp. 128–154). New York: Guilford Press.

Gilligan, C. (1982). *In a different voice: psychological theory and women's development*. Cambridge, MA: Harvard University Press.

Griffen D. and Bartholomew, K. (1994). The metaphysics of measurement: the case of adult attachment. In K. Bartholomew and D. Perhman (Eds), *Attachment process in adulthood: advances in personal relationships. Vol. 5* (pp. 17–52). London and Bristol, PA: Jessica Kingsley Publishers.

Hazan, C. and Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*, **52**, 511–524.

Kenny, M. E. and Rice, K. G. (1995). Attachment to parents and adjustment in late adolescent college students: Current status, applications and future considerations. *The Counseling Psychologist*, **23**, 433–456.

Lapsley, D. K. and Edgerton, J. (1998). *Pathological and Normal Separation-individuation in Late Adolescence: Implications for Adult Attachment and College Adjustment*. Paper presented at the biannual meeting of the Society for Research on Adolescence, San Diego, CA.

Lopez, F. G. (1995). Contemporary attachment theory: an introduction with implications for counseling psychology. *The Counseling Psychologist*, **23**, 395–415.

Lyddon, W. J., Bradford, E. and Nelson, J. P. (1993). Assessing adolescent and adult attachment: A review of current self-report measures. *Journal of Counseling and Development*, **71**, 390–395.

Matas, L., Arend, R. A. and Sroufe L. A. (1978). Continuity of adaptation in the second year: the relationship between quality of attachment and later competence. *Child Development*, **49**, 547–556.

Myers, J. K. and Weissman, M. M. (1980). Use of a self-report scale to detect depression in a community sample. *American Journal of Psychiatry*, **137**, 1081–1084.

Radloff, E. S. (1977). The CES-D Scale: a self-report depression scale for research in the general population. *Applied Psychological Measurement*, **1**, 385–401.

Roberts, R. E., Andrews, J. A., Lewinsohn, P. M. and Hops, H. (1990). Assessment of depression in adolescents using the Center for Epidemiological Studies Depression Scale. *Journal of Consulting and Clinical Psychology*, **2**, 122–128.

Roberts, J. E., Gotlib, I. H. and Kassel, J. D. (1996). Adult attachment security and symptoms of depression: The mediating roles of dysfunctional attitudes and low self-esteem. *Journal of Personality and Social Psychology*, **70**, 310–320.

Rothbard, J. C. and Shaver, P. (1994). Continuity of attachment across the lifespan. In M. B. Sperling and W. H. Berman (Eds), *Attachment in adults: clinical and developmental perspectives* (pp. 31–71). New York: Guilford Press.

Shaver, P. R. and Hazan, C. (1993). Adult romantic attachment: theory and evidence. In D. Perlman and W. Jones (Eds), *Advances in personal relationships* (Vol. 4, pp. 29–70). London: Jessica Kingsley.

Shaver, P. R., Collins, N. and Clark, C. (1996). Attachment styles and internal working models of self and relationship partners. In G. J. O. Fletcher and J. Fitness (Eds), *Knowledge structures in close relationship: a social-psyhological approach* (pp. 26–61). Mahwah, NJ: Lawrence Erlbaum Associates.

Simpson, J. A. (1990). The influence of attachment styles on romantic relationships. *Journal of Personality and Social Psychology*, **59**, 971–980.

Simpson, J. A., Rholes, W. S. and Nelligan, J. S. (1992). Support seeking and support giving within couples in an anxiety-provoking situation: the role of attachment styles. *Journal of Personality and Social Psychology*, **62**, 434–446.

Sperling, M. B. and Berman, W. H. (Eds), (1994). *Attachment in adults: clinical and developmental perspectives*. New York: Guilford.

Weiner, I. B. (1992). *Psychological disturbances in adolescence*. New York: Wiley.

Weissman, M. M., Scholomskas, D., Pottenger, M., Prusoff, B. A. and Locke, B. (1977). Assessing depressive symptoms in five psychiatric populations: a validation study. *American Journal of Epidemiology*, **106**, 203–213.

West, M. and Sheldon, A. E. R. (1987). Attachment dynamic in adult life. *British Journal of Psychiatry*, **150**, 408–409.

West, M. and Sheldon, A. E. R. (1988). Classification of pathological attachment patterns in adults. *Journal of Personality Disorders*, **2**, 153–159.

West, M. and Sheldon-Keller, A. E. (1994). *Patterns of relating: an adult attachment perspective*. New York: Guilford Press.