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# Romantic involvement and depressive symptoms in early and late adolescence: The role of a preoccupied relational style

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## Abstract

Two studies examined the association between depressive symptoms and romantic involvement in adolescence and tested the hypothesis that romantic involvement is associated more strongly with symptoms among adolescents who have a more preoccupied style of relating, compared to adolescents who have a less preoccupied style of relating. Study 1 ( $N = 96$  early adolescent females) examined concurrent associations and Study 2 ( $N = 80$  late adolescent males and females) examined longitudinal associations. In both age groups, romantic involvement was associated with greater depressive symptoms and this was most true among adolescents with a preoccupied style of relating. Implications for models of depression and adolescent romantic functioning are discussed.

The association between depressive symptoms and interpersonal, especially romantic, functioning has been well documented among adults. For example, there is a robust bidirectional association between depressive symptoms and marital distress (e.g., Davila, Karney, Hall, & Bradbury, 2003; see Whisman, 2001). Evidence for an association in adolescence is now beginning to emerge, suggesting that depressive symptoms in adolescence are associated with involvement in and quality of romantic relationships, particularly for girls (e.g., Gotlib, Lewihsohn, & Seeley, 1998; Grello, Welsh,

Dickson, & Harper, 2002; Joyner & Udry, 2000; see Welsh, Grello, & Harper, 2003). This is, perhaps, not surprising as depressive symptoms are prevalent in adolescence, especially among girls, and are related to interpersonal impairment in various types of relationships (family, peer; e.g., Garber, Kriss, Koch, & Lindholm, 1988; Puig-Antich et al., 1985, 1993; Rudolph, Hammen, & Burge, 1994; see Davila, 2001). Romantic experiences are an important part of the adolescent self-concept and they are associated with much emotional intensity and variability (e.g., Connolly & Konarski, 1994; Larson, Clore, & Wood, 1999). What happens in young people's romantic worlds may therefore have an effect on their experience of depressive symptoms. In a similar vein, the experience of dysphoria in adolescence may negatively affect romantic competence.

A number of studies have begun to document the association between depressive symptoms in adolescence and involvement in romantic relationships. One particularly

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interesting and puzzling set of findings indicates that depressive symptoms are associated with early romantic relationship involvement. For example, Joyner and Udry (2000) examined longitudinal data from a large, nationally representative sample of adolescents of varying ages. They found that adolescents experience increases in depressive symptoms after they become involved in a dating relationship, and that this is particularly true for girls. What is puzzling about this is that there is no obvious reason why this should be the case. There is no evidence for an association between depressive symptoms and romantic involvement in adulthood. In fact, there is some evidence that just the opposite is true. Romantic involvement (e.g., being married) is often associated with fewer symptoms (for a review, see Umberson & Williams, 1999). So why would simply being in a romantic relationship be associated with greater depressive symptoms in adolescence (or vice versa)? The present studies test one hypothesis that may help to answer this question.

Specifically, drawing on the attachment literature, we proposed that adolescents who reported a preoccupied style of relating to others would be most likely to show associations between depressive symptoms and romantic involvement.<sup>1</sup> In the following paragraphs, we describe our rationale for this hypothesis. In doing so, we discuss why the attachment literature is relevant for understanding associations between depressive symptoms and romantic involvement. We then define the different attachment patterns and briefly review what is currently known about how they are related to depressive symptoms and interpersonal functioning, culminating in a discussion of why we focus specifically on a preoccupied style of relating.

There are growing literatures that document associations between attachment security, depressive symptoms, and romantic relationship functioning. In fact, attachment theory has been used as a model both for understanding the development of depression and for understanding romantic functioning (e.g., Cicchetti, Rogosch, & Toth, 1994; Hazan & Shaver, 1987). This is largely because attachment theory provides a framework for understanding the development of working models (i.e., schemas) of close relationships and emotion regulation strategies (Bowlby, 1969, 1973, 1980). To the extent that attachment theory provides insights into how and why people regulate affect in particular ways and how people think about and behave in close relationships, it may serve as a useful theory from which to understand whether and why depressive symptoms and romantic involvement are related in adolescence.

Attachment scholars have identified a number of prototypical patterns of attachment. Traditional developmental models of attachment suggest that people in attachment relationships may demonstrate secure, preoccupied (also called ambivalent/resistant), and dismissing patterns (e.g., Ainsworth, Blehar, Waters, & Wall, 1978). Adult attachment researchers from the social-personality tradition have added a fourth pattern to the original three: the fearful pattern (Bartholomew, 1990). Across these different traditions, the secure pattern is characterized by a basic trust in the availability of the attachment figure and a sense of self-worth in regard to the attachment figure. Therefore, in relationships, secure people are comfortable being intimate and are able to turn to and effectively use partners for support, yet maintain their autonomy. The preoccupied pattern, an insecure pattern, is characterized by a lack of trust in the availability of the caregiver, low self-worth, and fear of rejection. Preoccupied people tend to desire relationships and seek them out. However, in relationships, they tend to be dependent and clingy with partners, yet have difficulty feeling soothed and supported. The dismissing pattern,

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1. We use the term "preoccupied relational style" to describe an interpersonal and emotion regulation style that we think is relevant to depression and romantic functioning. We do not use the term "attachment style" because it could be argued that our assessment, especially the self-report assessment, is not specific to a well-defined attachment relationship, but rather to a more general interpersonal style.

another insecure pattern, is also characterized by a lack of trust in the availability of the caregiver, but this is defended against in the form of compulsive self-sufficiency. As such, in relationships, dismissing people are often highly autonomous and do not turn to partners for support. They may not even seek out relationships. Finally, the fearful pattern, the third insecure pattern, like the preoccupied pattern, is characterized by a lack of trust in the availability of the caregiver, low self-worth, and fear of rejection. However, unlike preoccupied people, fearful people defend against their fears by avoiding relationships and, if they are in relationships, by avoiding turning to partners for support and intimacy.

Research has documented that characteristics reflective of the different patterns are differentially associated with depressive symptoms, particularly in adolescence. For example, some research indicates that depression in adolescence is most associated with an emotion regulation style consistent with the preoccupied pattern. Cole-Detke and Kobak (1996) have shown that depressed adolescents tend to use hyperactivating strategies of emotion regulation, such as an excessive focus on relationships and relationship information, an excessive focus on attachment concerns, and excessive emotionality. Keys et al. (2002) found a similar pattern of findings that was specific to romantic relationships. Using an experience sampling method, they paged adolescents randomly throughout the day for seven days and asked them to write down their thoughts. Depressive symptoms were associated with high levels of thoughts with romantic content, both positive and negative. Hence, depressive symptoms in adolescence appear to be associated with interpersonal, especially romantic, preoccupation.

Research has also documented that people who report the different attachment patterns think, feel, and behave in relationships as would be predicted by attachment theory (see Cassidy & Shaver, 1999). Although each of the attachment patterns has unique effects on relationships, preoccupation, in particular, has both negative effects on rela-

tionships and is associated with depressive symptoms among people in relationships. People with preoccupied styles of relating, when in relationships, tend to want intense involvement and intimacy, but tend to worry that others do not love them or will abandon them (e.g., Collins & Read, 1990; Hazan & Shaver, 1987). Preoccupied people are, thus, very needy of partners, yet fear rejection. Consequently, preoccupied people are often unhappy in relationships, as they may never feel as though they are fully getting their needs met and are regularly worried about rejection. So a relationship, no matter what its objective qualities, may always feel bad to the preoccupied person and thus result in dysphoria. Research supports this contention. A number of studies have documented an association between preoccupation, romantic distress, and depressive symptoms (e.g., Carnelley, Pietromonaco, & Jaffe, 1994; Davila & Bradbury, 2001). For example, Davila and Bradbury found that spouses who were chronically unhappy in their marriage (over four years) showed the highest levels of fear of abandonment (a key dimension of preoccupation) and depressive symptoms, compared to happy spouses and even spouses who went on to divorce.

Based on the rationale described above, we predicted that adolescents with a preoccupied relational style would show the strongest associations between depressive symptoms and romantic relationship involvement. This may be because preoccupied young people who feel depressed might seek out relationships in an attempt to feel better. One of the main characteristics of a preoccupied style of relating is the use of proximity-seeking as an emotion regulation strategy. People with a preoccupied style will go to others when distressed in an attempt to regulate their emotions. This is a reasonable strategy when engaged in flexibly and not excessively, but preoccupied people tend to be excessive in their use of it and often do not feel soothed. Therefore, young preoccupied adolescents who are dysphoric might seek out relationships in order to feel better (even though it may

not work). Moreover, they might stay in those relationships because of their tendency to be dependent, even if the relationships are of poor quality (e.g., Davila & Bradbury, 2001). The predicted association also may occur because, as described earlier, preoccupied young people in relationships might be more prone to feeling depressed than others, given that they are likely to feel that their needs are never fully met and that they are sure to be rejected.

We did not expect the other insecure attachment patterns to function in a similar manner. This is particularly true for the dismissing pattern. There is no empirical evidence or theory-driven reason to expect dismissing people to feel depressed in the context of relationships or to seek out relationships to manage negative emotion, particularly given that dismissing people tend to defend against negative emotion and to deny their need for intimacy. There is some evidence that people with a fearful style of relating experience depressive symptoms and poor relationship functioning (e.g., Carnelley et al., 1994), which would explain the association between depressive symptoms and romantic involvement if romantic involvement leads to depressive symptoms (e.g., fearful adolescents are unhappy in relationships and consequently feel depressed). However, it would not explain why depressed adolescents might become involved in relationships. In fact, depressed, fearful adolescents should be most likely to avoid or withdraw from relationships, as interpersonal avoidance is employed by fearful people to manage their relationship anxieties.

Two studies were conducted to test the hypotheses. Study 1 was a cross-sectional study of early adolescents. Study 2 was a longitudinal study of late adolescents.

### Study 1

In Study 1, as part of a larger project on early adolescent girls' family and peer relationships, we examined concurrent associations between romantic involvement and depressive symptoms. We studied girls because they are at greater risk for depres-

sive symptoms than are boys, a phenomenon that begins during this age period (e.g., Kandel & Davies, 1982; Petersen, Sarigiani, & Kennedy, 1991), and they tend to be more interested in and attuned to romantic relationships than are boys (e.g., Richards, Crowe, Larson, & Swarr, 1998; Shulman & Scharf, 2000). Hence, girls may be most at-risk for the associations described above (note that both males and females are included in Study 2).

## Method

### Participants

Participants were 96 early adolescent girls from the greater Buffalo, New York, area who were participating with their parents in a larger study of family and adolescent relationships. All girls came from intact two-parent families. They were recruited through advertisements in the local media and recruitment letters sent to parents of children at a local middle school during the spring of 2000. Eligibility criteria included being an intact family with an 8<sup>th</sup> grade daughter with the ability to read and comprehend questionnaires and participate in computer tasks. Families with daughters with severe learning disabilities that would impair their performance were excluded.

The girls' average age was 13.24 years ( $SD = .5$ ). Ninety-one percent described themselves as Caucasian. Their fathers were 43.1 years old on average ( $SD = 4.5$ ) and predominantly Caucasian (97%). Forty-five percent reported graduating high school and 51% reported a college or postgraduate education. Mothers were 41.1 years old on average ( $SD = 4.7$ ) and predominantly Caucasian (98%). Forty-two percent reported graduating high school and 57% reported a college or postgraduate education. Median family income was in the range of \$51,000 to \$60,000.

### Procedure

The families participated in a 3½ hour laboratory session, which took place at the

University at Buffalo, the State University of New York. During the session, the adolescent girls privately filled out questionnaires assessing preoccupied relational style, relationship status, and depressive symptoms. The families were paid \$75 for their participation.

### Measures

**Depressive symptoms.** Depressive symptoms were assessed with the Inventory to Diagnose Depression (IDD; Zimmerman, Coryell, Corenthal, & Wilson, 1986). The IDD was originally designed to determine whether people met diagnostic criteria for depression, but it also provides a continuous index of symptom severity, which is computed by summing scores on each symptom item (higher scores = greater symptom severity). Scores can range from 0 to 88. The IDD has shown adequate reliability and validity in nonclinical samples of late adolescents and it performs in a manner similar to other self-report depressive symptom scales regularly used with adolescents (e.g., Ackerson, Dick, Manson, & Baron, 1990; Goldston, O'Hara, & Schartz, 1990; Haaga, McDermut, & Ahrens, 1993). We asked participants to report first on their current level of depressive symptoms (coefficient  $\alpha = .96$ ) and then on the worst symptoms they ever experienced during their lifetime (coefficient  $\alpha = .97$ ). On average, they reported mild levels of symptoms ( $M = 7.52$ ,  $SD = 8.3$  for current;  $M = 10.35$ ,  $SD = 11.8$  for lifetime), which is not surprising given that it is a community sample.

**Preoccupied relational style.** The paragraph describing a preoccupied attachment pattern from the Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991) was used to assess preoccupied relational style. The RQ is a self-report measure of current attachment security which contains paragraph descriptions of each of four attachment patterns (secure, preoccupied, fearful, and dismissing). The adolescents were asked to rate themselves on how each

pattern described their "general relationship style." Ratings for each style were made on a 7-point continuous scale ranging from 1 = not at all like me to 7 = very much like me. Average scores on the four patterns were: 5.01 ( $SD = 1.7$ ) for secure, 3.78 ( $SD = 1.8$ ) for preoccupied, 3.58 ( $SD = 2.0$ ) for fearful, and 4.08 ( $SD = 1.8$ ) for dismissing. The paragraph designed to assess a preoccupied pattern states, "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."

The RQ has been widely used in various age groups and has adequate psychometric properties, including good construct validity (e.g., Bartholomew & Horowitz, 1991). However, few data exist on the use of the RQ in an early adolescent sample. As such, we examined associations between the RQ and adolescent reports on two psychometrically sound measures with which the RQ should show convergent validity: The Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987), which assesses three dimensions of mother-child, father-child, and peer security—communication, trust, and alienation—and the self-esteem and romantic esteem subscales of the Harter Self-Perception Profile for Adolescents (Harter, 1988). Both measures have been used extensively with early adolescent samples. Correlations between the variables are shown in Table 1. As can be seen, the preoccupied style, in particular, shows expected associations with the IPPA and the Harter scales. Specifically, higher levels of preoccupation are associated with lower levels of trust and communication with mothers and fathers and with higher levels of alienation from mothers and fathers. Interestingly, higher levels of preoccupation were associated with higher levels of communication with peers, possibly reflecting an increased level of proximity-seeking with peers. Higher levels of preoccupation were also associated with lower levels of romantic- and self-esteem.

**Table 1.** Correlations between the Relationship Questionnaire, the Inventory of Parent and Peer Attachment, and scales from the Harter Self-Perception Profile for Adolescents in Study 1

Variables	RQ secure	RQ fearful	RQ preoccupied	RQ dismissing
<b>IPPA—Mother</b>				
Trust	.05	-.30**	-.25*	-.16
Communication	.07	-.18	-.27**	-.07
Alienation	-.04	.37**	.32**	.06
<b>IPPA—Father</b>				
Trust	.12	-.17	-.26*	-.07
Communication	.18	-.12	-.19	-.03
Alienation	-.17	.21*	.21*	.02
<b>IPPA—Peer</b>				
Trust	.38**	-.12	.16	.13
Communication	.30**	.01	.24*	-.03
Alienation	-.21*	.38**	.15	.00
<b>Harter scales</b>				
Self-esteem	.31**	-.32**	-.30**	.03
Romantic esteem	.43**	-.45**	-.22*	-.13

Notes. *N* ranges from 88 to 94.

RQ = Relationship Questionnaire (Bartholomew & Horowitz, 1991); IPPA = Inventory of Parent and Peer Attachment (Armsden & Greenberg, 1987); Harter scales are from the Harter Self-Perception Profile for Adolescents (Harter, 1988).

\* $p < .05$ , two-tailed. \*\* $p < .01$ , two-tailed.

Therefore, the preoccupied style assessed with the RQ seems to be functioning as would be expected. The other attachment patterns showed less consistent convergence, however. RQ security was associated in the expected direction with peer security as assessed by the IPPA and with the Harter esteem scales, but not with IPPA parent security. The fearful pattern was associated with higher levels of alienation in parent and peer relationships and with lower romantic and self-esteem. The dismissing pattern performed worst of all, showing no significant associations with either the IPPA or the Harter scales. As such, results regarding the dismissing pattern should be treated with caution, as the validity of this pattern in this sample is uncertain.

*Romantic relationship status.* Past relationship status was assessed by asking girls at what age they had begun dating. Responses were coded into two categories: has prior dating experience (coded as 1) and

does not have prior dating experience (coded as 0). Fifty-three girls reported prior dating experience. Current relationship status was assessed by asking girls whether they were currently in a romantic relationship (yes = 1, no = 0). Twenty-one girls reported a current relationship. These relationships ranged in length from 1 week to 12 months. The average length was 3.3 months ( $SD = 3.0$ ). Sixty percent of girls in a relationship reported that their parents had met their partner and 95% said that their friends had met their partner. Ninety percent of girls in a relationship reported that they speak on the phone with their partner at least “a few times per week” and 93% reported that they spend time with their partner after school or on the weekend at least once per week (59% reported at least a few times per week). These data suggest that the relationships reported by the participants are more than fleeting (in terms of length) and are characterized by a significant amount of actual contact.

**Table 2.** Correlations and means and standard deviations of Study 1 variables

Variables	1.	2.	3.	4.	5.	6.	7.	8.
1. RQ secure								
2. RQ fearful	-.29**							
3. RQ preoccupied	.15	.34**						
4. RQ dismissing	-.16	.25*	.12					
5. Current depressive symptoms	.02	.20	.25*	.03				
6. Lifetime depressive symptoms	.00	.23*	.31**	.01	.70**			
7. Current relationship status <sup>a</sup>	.06	.17	.07	-.06	.35**	.19		
8. Past dating status <sup>b</sup>	.07	.01	.12	.02	.18	.22*	.46**	
Mean	5.01	3.58	3.78	4.08	7.52	10.35		
Standard deviation	1.7	2.0	1.8	1.8	8.3	11.8		

Notes. *N* ranges from 90 to 95. RQ = Relationship Questionnaire (Bartholomew & Horowitz, 1991).

\* $p < .05$  two-tailed. \*\* $p < .01$ , two-tailed.

<sup>a</sup> coded 1 = in a relationship; coded 0 = not in a relationship. <sup>b</sup> coded 1 = past dating experience, coded 0 = no past dating experience.

## Results

Correlations between the variables and their means and standard deviations are presented in Table 2.

### *Are depressive symptoms associated with romantic involvement?*

First we attempted to replicate the basic association between depressive symptoms and romantic involvement. We conducted an independent samples *t* test to test the hypothesis that, compared to girls who did not report current romantic involvement, girls who did report involvement would report higher levels of depressive symptoms. This hypothesis was confirmed. Compared to girls who were not currently in a romantic relationship ( $M = 5.92$ ,  $SD = 5.8$ ), girls who were ( $M = 12.81$ ,  $SD = 12.6$ ) reported significantly higher levels of current depressive symptoms,  $t(22.6) = 2.44$ ,  $p = .02$ .<sup>2</sup> We

also examined whether the association held controlling for reports of worst lifetime depressive symptoms and past dating status. Results of a simultaneous regression analysis predicting current depressive symptoms from current relationship status, controlling for past symptoms and dating status, indicated that current relationship status was a significant predictor of current symptoms,  $\beta = .24$ ,  $t = 2.67$ ,  $p = .009$ . Past depressive symptoms were also a significant predictor,  $\beta = .65$ ,  $t = 8.11$ ,  $p < .001$ . Past dating status was not ( $p = .48$ ).

### *Does a preoccupied style of relating moderate the association between depressive symptoms and romantic involvement?*

To test the hypothesis that depressive symptoms and romantic involvement would be more strongly associated among girls with a more preoccupied relational style, we conducted a hierarchical multiple regression analysis predicting current depressive symptoms. Current romantic relationship status and preoccupied self-ratings were each centered and entered first, followed by their interaction. We also controlled for worst lifetime depressive symptoms and past dating status in the first step of the analysis. The first set of variables entered accounted for significant variance in depressive

2. Note that Levene's test of equality for variances indicated that the variances of the two groups were significantly different,  $F = 9.81$ ,  $p = .002$ . Therefore, the *t* test presented does not assume equal variances. Because the variances for the two groups differed, we also examined whether there were outliers that might be driving the results. When potential outliers were deleted, the results held.

symptoms,  $R^2 = .50$ ,  $F(4, 83) = 20.36$ ,  $p < .001$ . Lifetime depressive symptoms ( $\beta = .62$ ,  $p < .001$ ) and current relationship status ( $\beta = .24$ ,  $p = .01$ ) were significant predictors of current depressive symptoms. Past dating status and preoccupied self-ratings were not. The next step of the analysis revealed a significant interaction, change in  $R^2 = .03$ ,  $F(1, 82) = 5.12$ ,  $p = .03$ , between current romantic relationship status and preoccupied ratings predicting current depressive symptoms. Results from this final step in the analysis are presented in Table 3. Following procedures specified by Aiken and West (1991), simple slopes tests were conducted to determine the nature of the interaction. For girls with higher scores on the preoccupied style (specified as 1 *SD* above the mean), being in a relationship was significantly associated with greater depressive symptoms ( $\beta = .40$ ,  $p = .001$ ). However, for girls with lower scores on the preoccupied style (specified as 1 *SD* below the mean), the association between relationship status and symptoms was not significant ( $\beta = .03$ ,  $p = .80$ ). Regression analyses were conducted, using the same procedures as described above, to examine whether any of the other relational (attachment) styles (secure, fearful, dismissing) moderated the association between romantic involvement and depressive symptoms. None of these interactions were significant (all  $ps > .10$ ).

### Summary of results of Study 1

The results suggest that, as predicted, among early adolescent girls with a preoccupied style of relating, being in a romantic relationship is associated with feeling dysphoric. Moreover, there is some evidence that this effect is specific to a preoccupied style of relating, rather than to relational insecurity more broadly defined.

Study 1 had a number of limitations, which should be considered when interpreting the findings. First, the sample size was relatively small and included only girls, which limits ability for generalization. Second, the data were cross-sectional, which does not allow for conclusions about causality. As such, it is unclear whether preoccupied dysphoric girls are seeking out relationships or whether preoccupied girls in relationships develop depressive symptoms. Also, Study 1 relied on a one-item measure of each of the relational styles (the RQ), which limits the conclusions that can be drawn. Study 2 was conducted, in part, to address these limitations.

### Study 2

Study 2 tested the same hypotheses as Study 1, but it built on Study 1 in four ways. First, we conducted a longitudinal study so that we could begin to test the directional associations between romantic involvement and depressive symptoms. Second, we sampled

**Table 3.** Hierarchical multiple regression analysis predicting current depressive symptoms from the interaction between current romantic relationship status and preoccupied relational style in Study 1

Variables entered	<i>B</i>	$\beta$	<i>t</i>	<i>p</i>
1. Lifetime depressive symptoms	.37	.61	7.39	.000
Past dating status	-.82	-.06	-.67	.51
T1 relationship status	3.53	.21	2.47	.02
Preoccupied relational style	.44	.12	1.43	.16
2. T1 relationship status $\times$ Preoccupied relational style	1.69	.17	2.26	.03

Notes.  $N = 87$  (only participants with sufficient data were included in the analysis). Data from the final step in the analysis are shown. Overall  $R^2 = .53$ ,  $F = (5, 82) = 18.12$ ,  $p < .000$ .



late adolescents to examine whether similar associations exist in a different age group. Third, we included both males and females in the sample. Fourth, we included objectively coded interview measures of our variables of interest, making for a more psychometrically strong assessment. This is particularly important for the assessment of relational (attachment) styles, as conclusions of Study 1 are limited by reliance on one-item indicators from the RQ.

## Method

### *Participants and procedure*

The sample was 94 late adolescents (first-year college undergraduates at UCLA; 49 men, 45 women) who were participating in a larger study of risk factors for early romantic dysfunction. They were ethnically diverse (32% Caucasian, 33% Asian American, 15% Latino/Chicano, 9% African American, 5% Middle Eastern, and 6% who indicated other), averaged 18.05 ( $SD = .31$ ) years of age when they began the study, and their median family income ranged from \$51,000–\$60,000 per year. These demographics were comparable to those of the entire UCLA first-year undergraduate class that year and to national norms for students in comparable universities, except that the present sample is more ethnically diverse (Sax, Astin, Korn, & Mahoney, 1997).

The sample was recruited as follows: 1,000 randomly sampled incoming first-year college undergraduates for fall 1997 were sent letters inviting them to participate. To increase chances of obtaining a sample that would show variability on risk factors that might be related to romantic dysfunction (the goal of the larger project), the letter noted that all students were invited to participate, especially students who had experienced some type of adversity (e.g., emotional problems in family or self, death of a parent, parental conflict/divorce, aggression/violence, a traumatic event, a conflictual romantic relationship). Interested students returned a postage-paid post-

card and 290 were returned (158 female, 132 male; 29% total response rate). Project staff screened interested students by phone to select a sample in which (a) at least 50% of participants endorsed at least one of the risk factors (described in the letter) and (b) the majority of participants were not in a committed romantic relationship (to predict entry into new relationships as well as continuation of past ones). Because the study was designed so that all participants began the study at the same transition point (the first quarter of college), only participants who were screened and kept their appointment during the first quarter comprised the sample. Of them, 73% endorsed one or more of the relevant risk factors and 72% were not in a romantic relationship.

Participants completed an initial face-to-face interview session (T1) just prior to or during their first quarter at UCLA. During the session, participants completed questionnaires (not relevant to the present study) and were interviewed regarding their current relationship status, attachment styles, and depressive symptoms. During a telephone interview 6 months later (T2), participants were interviewed regarding depressive symptoms, their relationship status, and their level of romantic chronic stress that had occurred since T1. Six months after T2, participants completed another face-to-face interview session (T3) during which they were again interviewed regarding depressive symptoms, their relationship status, and their level of romantic chronic stress that had occurred since T2. Participants were paid \$25 at T1, \$15 at T2, and \$35 at T3. Participants were interviewed by the same interviewer at T1 and T2 and by a different interviewer at T3. Interviewers included a licensed clinical psychologist (the first author), a postdoctoral clinical psychologist, a clinical psychology graduate student (the fourth author, now a postdoctoral clinical psychologist), and two B.A. level psychology majors. Attachment interviews were coded by people who were unaware of the participants' status on the other variables.

Eighty-seven participants completed T2. Of the 7 participants who did not, one

refused; the other 6 were unable to schedule an appointment during the follow-up period. Participants did not differ from nonparticipants on sex, age, ethnicity, depressive symptoms, T1 relationship status, or attachment style ratings. Nonparticipants were more likely to have family incomes in the range of \$41,000–\$50,000 and less likely to have family incomes above \$61,000. Eighty-six of the T1 participants completed T3 (only 1 person did not participate at both T2 and T3). Of the 8 who did not participate, 4 declined and 4 could not be scheduled during the follow-up period. Participants did not differ significantly from nonparticipants on sex, age, ethnicity, family income, depressive symptoms, T1 relationship status, or attachment style ratings. Only those participants who participated at every time point were included in the present analyses ( $N = 80$ ).

### Measures

**Depressive symptoms.** Depressive symptoms were assessed using the Structured Clinical Interview for DSM-IV (SCID; First, Spitzer, Gibbon, & Williams, 1997). The SCID is a widely used semistructured interview for diagnosing axis I disorders. Because a nonpatient sample was used in this study, we did not assign diagnoses. Instead, depressive symptoms were coded for *severity* on the following scale: 0 = no symptoms, 1 = mild symptoms (1 or 2 symptoms), 2 = moderate symptoms (3 or 4 symptoms; subthreshold disorder), 3 = diagnosable disorder (see also Davila et al., 1995). At T1, participants were rated on level of current depressive symptoms. At T2 and T3, participants were rated on worst level of depressive symptoms occurring currently or during the 6 months prior (since the last interview). Intraclass correlations, from data coded by two raters, ranged from .91 to 1.00 over the assessment points (for 15 to 30 randomly selected participants). At T1, 94% of the sample had no current symptoms of depression, 2.5% had mild symptoms, 2.5% had moderate symptoms, and 1% (1 participant) had a diag-

nosable depression. At T2, 64% of the sample had no symptoms during the 6-month period, 9% had mild symptoms, 15% had moderate symptoms, and 13% (10 participants) had a diagnosable depression. At T3, 60% of the sample had no symptoms during the 6-month period, 19% had mild symptoms, 11% had moderate symptoms, and 10% (8 participants) had a diagnosable depression. These rates indicate that at T2 and T3 approximately 20% of the sample was experiencing clinically significant depressive symptoms (i.e., subsyndromal or diagnosable symptoms). Although not a clinical sample, these rates suggest that our sample does include late adolescents with clinically meaningful levels of depression.

**Preoccupied relational style.** Preoccupied relational style was assessed with the Family and Peer Attachment Interview (FPAI; Bartholomew, 1998; Bartholomew & Horowitz, 1991). The FPAI is a semistructured interview designed to assess attachment patterns based on information about parents, friends, and romantic partners. Its procedures and scoring are similar to those of the Adult Attachment Interview (AAI; George, Kaplan, & Main, 1985), but the FPAI differs from the AAI in three important ways. First, the FPAI takes into account family, peer, and romantic relationships, whereas the AAI focuses exclusively on family relationships. Second, the FPAI codes people on four attachment patterns (secure, fearful, preoccupied, and dismissing) described by Bartholomew (1990), rather than categorizing people into one of three AAI categories. Third, the FPAI focuses on current and past relationships, whereas the AAI focuses largely on past relationships. However, like the AAI, attachment ratings are based on content of reports as well as reporting style (e.g., defensive strategies that emerge during the interview, coherency of the report). Interviews were coded for each attachment pattern on a 9-point scale ranging from 1 = no evidence of characteristics of the prototype to 9 = near perfect fit with the prototype. Coders (who were trained to reliability for

6 months by the fourth author who is one of Kim Bartholomew's former students) were blind to participants' status on all other study variables. The intraclass correlations for 26 randomly selected participants coded by two raters were: .84 for secure, .87 for fearful, .73 for preoccupied, and .89 for dismissing.

*Romantic relationship status.* Relationship status was assessed at each phase of the study. Participants were coded as being in a romantic relationship if they reported either dating or a serious relationship (coded as 1 in the data set). Participants were coded as not being in a romantic relationship if they reported no dating/relationship activity (coded as 0 in the data set). Twenty-six participants were coded as in a relationship at T1. These relationships ranged in length from 1 to 65 months. The average length was 17 months. Forty-seven participants were coded as in a relationship at T2 or as having been in a relationship during the initial 6 months of the study. These relationships ranged in length from 1 to 68 months. The average length was 12.3 months. Thirty-two participants were coded as in a relationship at T3 or as having been in a relationship during the second 6 months of the study.

These relationships ranged in length from 1 to 48 months. The average length was 12.3 months.

## Results

Correlations between the variables and their means and standard deviations are presented in Table 4.

### *Does romantic involvement predict subsequent depressive symptoms and is this association moderated by a preoccupied style?*

These analyses tested the hypotheses that romantic involvement would be associated with subsequent depressive symptoms and that this would be most true among adolescents with a preoccupied style. This hypothesis was largely supported. We first conducted a simultaneous regression analysis predicting T2 depressive symptoms from T1 relationship status, controlling for T1 depressive symptoms and T2 relationship status. The overall model was significant,  $R^2 = .14$ ,  $F(3, 76) = 4.21$ ,  $p = .008$ . T1 relationship status was a significant predictor ( $\beta = .28$ ,  $p = .02$ ), indicating that participants in a relationship at T1 experienced a

**Table 4.** Correlations, means, and standard deviations of Study 2 variables

Variables	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. FPAI secure									
2. FPAI fearful	-.58**								
3. FPAI preoccupied	-.24*	.10							
4. FPAI dismissing	-.38*	-.14	-.35**						
5. T1 depressive symptoms	-.27*	.15	.30**	-.06					
6. T2 depressive symptoms	-.22*	.16	.21	.02	.27*				
7. T3 depressive symptoms	-.18	.27*	.10	-.02	.22*	.77**			
8. T1 relationship status <sup>a</sup>	.23*	-.08	.07	-.23*	-.11	.17	.04		
9. T2 relationship status <sup>a</sup>	.15	-.03	.06	-.10	-.12	-.11	-.04	.42**	
Mean	3.95	3.88	2.84	3.30	0.11	0.76	0.71		
Standard deviation	1.4	1.7	1.5	1.7	0.5	1.1	1.0		

Notes.  $N = 80$ . FPAI = Family and Peer Attachment Interview (Bartholomew & Horowitz, 1991); T1 = Time 1; T2 = Time 2.

<sup>a</sup> = coded 1 = in a relationship, coded 0 = not in a relationship.

\* $p < .05$ , two-tailed. \*\* $p < .01$ .

greater increase in depressive symptoms by T2. T1 depressive symptoms ( $\beta = .27, p = .01$ ) were also a significant predictor, but T2 relationship status was not ( $\beta = -.20, p = .10$ ).

To examine whether a preoccupied style moderated the association between T1 relationship status and T2 depressive symptoms, a hierarchical regression analysis was conducted predicting T2 depressive symptoms. T1 relationship status and preoccupied ratings were centered and entered into the analysis first, followed by their interaction. T1 depressive symptoms and T2 relationship status were included as covariates in the first step of the analysis as well. The first set of variables entered accounted for significant variance in T2 depressive symptoms,  $R^2 = .16, F(4, 75) = 3.51, p = .01$ . T1 depressive symptoms ( $\beta = .23, p = .05$ ) and T1 relationship status ( $\beta = .27, p = .02$ ) were significant predictors. T2 relationship status ( $\beta = -.21, p = .09$ ) and preoccupied ratings ( $\beta = .13, p = .25$ ) were not. The next step of the analysis revealed a significant interaction, change in  $R^2 = .05, F(1, 74) = 4.48, p = .04$ , between T1 relationship status and preoccupied ratings predicting T2 depressive symptoms. Results from this final step in the analysis are presented in Table 5. Following procedures specified by Aiken and West (1991), simple slopes tests were conducted to determine the nature of the interaction. For participants with higher scores on the preoccupied style (specified as 1 *SD* above the mean), being in a relationship was

significantly associated with greater depressive symptoms ( $\beta = .47, p = .002$ ). However, for participants with lower scores on the preoccupied style (specified as 1 *SD* below the mean), the association between relationship status and symptoms was not significant ( $\beta = -.02, p = .93$ ). To examine whether the findings were specific to preoccupied rating, regression analyses were conducted, using the same procedures as described above, to examine whether any of the other relational (attachment) styles (secure, fearful, dismissing) moderated the association between romantic involvement and depressive symptoms. None of these interactions were significant (all  $ps > .10$ ).

Parallel analyses were conducted predicting T3 depressive symptoms from T2 relationship status (and from the covariates). In the first analysis, T2 relationship status did not predict T3 depressive symptoms ( $\beta = .09, p = .26$ ). T2 depressive symptoms were the only significant predictor ( $\beta = .77, p < .001$ ). However, the next analysis revealed that, consistent with the prior findings, there was a marginally significant interaction between T2 relationship status and a preoccupied style when predicting T3 depressive symptoms ( $\beta = .14, p = .06$ ). Simple slopes tests indicated that, as expected, among participants rated as more preoccupied (specified as 1 *SD* above the mean), being romantically involved at T2 was associated with greater depressive symptoms at T3 ( $\beta = .23, p = .03$ ). However, among adolescents rated as less preoccupied (specified as 1 *SD* below the mean),

**Table 5.** Hierarchical multiple regression analysis predicting T2 depressive symptoms from the interaction between T1 romantic relationship status and preoccupied relational style in Study 2

Variables entered	<i>B</i>	$\beta$	<i>t</i>	<i>p</i>
1. T1 depressive symptoms	.62	.27	2.39	.02
T2 relationship status	-.37	-.16	-1.41	.16
T1 relationship status	.58	.24	2.11	.04
Preoccupied relational style	.13	.17	1.54	.13
2. T1 relationship status $\times$ Preoccupied relational style	.39	.23	2.12	.04

Notes.  $N = 80$ . Data from the final step in the analysis are shown. Overall  $R^2 = .21, F(5, 74) = 3.83, p = .004$ .

relationship status at T2 was not significantly associated with depressive symptoms at T3 ( $\beta = -.04, p = .73$ ). Analyses were also conducted to examine whether any of the other relational styles moderated the association between T2 romantic involvement and T3 depressive symptoms. None of these interactions were significant (all  $ps > .05$ ).<sup>3,4</sup>

*Do depressive symptoms predict subsequent romantic involvement and is this association moderated by a preoccupied style?*

These analyses tested whether depressive symptoms are associated with subsequent romantic involvement and whether this association is moderated by a preoccupied style. Results of logistic regression analyses did not support this. These analyses were conducted using the same logic and procedures as described in the previous section. Because of this and because the results were largely nonsignificant, only a summary of the analyses will be presented. In the first analysis, we predicted T2 relationship status (*in vs. not in*) from T1 depressive symptoms, controlling for T1 relationship status and T2 depressive symptoms (all variables entered simultaneously). T1 depressive symptoms were not a significant predictor (Wald = .02,  $p = .90$ ), nor were T2 depressive symptom (Wald = 2.91,  $p = .09$ ). Only T1 relationship status was significant (Wald = 11.92,  $p = .001$ ). In the next analy-

sis, preoccupied style did not moderate the association between T1 symptoms and T2 relationship status (Wald = .08,  $p = .77$ ). A comparable set of analyses was conducted predicting T3 relationship status from T2 depressive symptoms. These analyses yielded the same pattern of results as in the first set. In sum, there was no evidence that depressive symptoms predicted subsequent romantic involvement on its own or in interaction with a preoccupied style. Logistic regression analyses were also conducted to examine whether any of the other relational styles moderated the association between romantic involvement and depressive symptoms. None of these interactions were significant (all  $ps > .05$ ).

*Summary of results from Study 2*

In sum, consistent with the findings of Study 1, Study 2 revealed that romantic involvement predicted subsequent depressive symptoms among late adolescents with a preoccupied style of relating. This appeared to be specific to a preoccupied style of relating compared to the other styles (dismissing, fearful, secure). However, depressive symptoms did not predict subsequent entry into a romantic relationship.

**General Discussion**

Two studies were conducted to examine the association between romantic involvement and depressive symptoms during adolescence. In addition to attempting to replicate this association, we wanted to begin to answer the question of why being in a romantic relationship during adolescence would be associated with feeling dysphoric. Consistent with prior research, the association between romantic involvement and depressive symptoms was replicated in both the early and late adolescent samples. Furthermore, like Joyner and Udry (2002), we found that late adolescents in romantic relationships experienced more dysphoria over time.

The finding that romantic involvement is associated with depressive symptoms in

- 
3. These analyses were reconducted controlling for whether participants experienced a romantic relationship breakup. Prior research suggests that breakups are a predictor of depression among adolescents (Monroe, Rohde, & Seeley, 1999). As such, we wanted to rule out the possibility that it is the breakups of relationships, rather than the involvement in relationships, that is associated with increases in depressive symptoms. Two sets of analyses were conducted. In the first, the analyses presented were reconducted with breakup status as a covariate. In the second, the interaction between breakup status and preoccupied ratings was examined. Neither controlling for breakup status nor including its interaction changed the nature of the results. Therefore, our findings are not due to the experience of a relationship breakup.
  4. Supplementary analyses revealed no gender differences in the findings.

adolescence stands in stark contrast to the idea that, in adulthood, being in a romantic relationship is beneficial for well being (for a review, see Umberson & Williams, 1999). One possible explanation for why romantic involvement and depressive symptoms are related in early adolescence may have to do with the developmental appropriateness of romantic involvement at different phases of development. A number of studies indicate that when adolescents engage in behaviors that are not normative for their age group they experience greater distress. For example, Connolly and Williams (2000) found that among early adolescents, those who were engaging in dyadic dating showed greater distress (e.g., higher levels of internalizing and externalizing behavior) than those who were not engaging in dyadic dating. Connolly and Williams (2000) suggested that in early adolescence it is more normative to not be in a romantic relationship than to be in one. Adolescents engaging in the nonnormative behavior should therefore show the poorest adjustment. If the developmental appropriateness hypothesis is accurate, then the association between depressive symptoms and romantic involvement should emerge in early adolescence where being in a romantic relationship is not normative. Of course, our study did not directly test this hypothesis, which would be best tested with a longitudinal design from early adolescence to adulthood. However, the results do provide an intriguing hypothesis for future research. In addition, the developmental appropriateness hypothesis would not explain why the late adolescents in Study 2 experienced depressive symptoms following entry into a romantic relationship. Presumably, romantic involvement is more normative in late adolescence. Therefore, continued research is needed to explain this phenomenon. We return to these ideas later when we discuss mediators of the association between romantic involvement and depressive symptoms.

Our primary hypothesis was that a preoccupied relational style would moderate the association between romantic involve-

ment and depressive symptoms. Specifically, adolescents with a preoccupied relational style should be most likely to show an association between romantic involvement and depressive symptoms. This hypothesis was largely supported. In Study 1, although there was a concurrent association between romantic involvement and depressive symptoms, this association was most strong among those girls who reported a more preoccupied relational style. In Study 2, there was a longitudinal association, such that romantic involvement predicted subsequent depressive symptoms most strongly among those adolescents who were rated as having a more preoccupied relational style.

These results suggest that a preoccupied relational style renders adolescents vulnerable to dysphoria when in a romantic relationship. Although the extent to which involvement led to depressive symptoms or vice versa among preoccupied girls could not be determined from the cross-sectional analyses in Study 1, the longitudinal analyses in Study 2 suggested that preoccupied adolescents in a romantic relationship are at risk for feeling dysphoric later on. We suggest that this may be because preoccupied people in relationships tend to chronically fear rejection and feel as if their needs for intimacy are not being met. This is likely to result in distress in the form of dysphoria (although other types of distress may result as well, including anxiety and anger, but this remains to be tested).

Unfortunately, we were not able to conduct a direct test of the above hypothesis. However, examining mechanisms that can explain why preoccupied adolescents in relationships tend to experience depressive symptoms, both concurrently and over time, is an important goal for future research. To this end, we conducted a set of supplementary analyses in both samples to examine whether relationship quality (using self-report and interview measures of satisfaction and stress) mediated the association between scores on the preoccupied relational style and depressive symptoms among adolescents in a romantic

relationship; specifically, whether more preoccupied adolescents reported lower relationship quality and, in turn, greater depressive symptoms. Unfortunately, relationship quality did not emerge as a mediator, although a number of associations were marginally significant. This may have been due to the fact that our analyses were underpowered given the small samples of adolescents in romantic relationships (21 in Study 1 and 26 at T1 in Study 2).

Although romantic involvement was associated with increases in dysphoria among preoccupied adolescents, there was no evidence that depressive symptoms led to entry into romantic relationships among more preoccupied adolescents. We had suggested this might occur because preoccupied adolescents who were dysphoric might seek out relationships as a way to regulate negative emotions. However, it may be that depressive symptoms in late adolescence are more likely to inhibit people from entering relationships, even among preoccupied people. It is possible that preoccupied and dysphoric adolescents (or people more generally) only engage in romantic proximity seeking as an emotion regulation strategy when already in a relationship. These, of course, are speculations that await further empirical examination.

This set of studies had a number of important strengths, including the inclusion of early and late adolescents, the use of longitudinal data in Study 2 to examine temporal associations, and the use of multiple methods to examine the variables of interest (including reliably coded interviews in Study 2). That the moderation results largely replicated across the two studies, which included very different samples and were methodologically diverse, supports the robustness of the findings and gives us greater confidence in our conclusions.

Nevertheless, the results should be interpreted with the following in mind. First, the extent to which the findings generalize to clinical levels of depression is unknown. Second, both samples were relatively small and limited to fairly well-educated, middle- to upper-middle-class people. In addition,

the samples may be biased by self-selection and low response rates and they differ on a number of factors that limit their comparability (e.g., different developmental phases, different measures). Third, we used measures of a “general” preoccupied style in an attempt to capture the most trait-like assessment of this style. However, the extent to which a trait assessment can be made from a one-time assessment may be questionable. In addition, in light of the fact that people may have different styles in different relationships (e.g., Cook, 2000; LaGuardia, Ryan, Couchman, & Deci, 2000), it would be important to examine a “romantic” preoccupied style, which may be most relevant to the present hypotheses. Also, our Study 1 assessment of preoccupied style was limited by reliance on a one-item measure.

Fourth, the early adolescents in Study 1 provided self-reports of relationship status. Because we cannot be certain of the criteria they used to determine their relationship status, we cannot say with certainty that our results refer to actual romantic involvement, although the data on length and time spent together suggest that these were actual involvements. An alternate explanation of our results may be that adolescent girls who think they are in relationships but actually are not (i.e., their “partners” do not identify them as their girlfriend or do not reciprocate their feelings) may be prone to feeling depressed because of the lack of reciprocation in the relationship. However, Carlson and Rose (2002) found that youth in reciprocated (both members in a dyad agreed that they were dating) and nonreciprocated (only one member of a dyad said they were dating) relationships did not differ on level of depressive symptoms. This suggests that our results are not likely to be due to being in a nonreciprocated romance. Finally, our data are correlational and should not be viewed as providing evidence of causal relationships.

In closing, we highlight four implications of our findings. First, they point to the importance of considering how individual differences in interpersonal styles during adolescence may affect romantic functioning

and consequent well being. By using theory driven models of interpersonal functioning to understand how different adolescents may experience and behave with regard to romantic relationships, we will be better able to understand who is at greatest risk for failing to develop romantic competence.

Second, the findings suggest that, like in adulthood, what happens in adolescents' romantic lives matters to their psychological well being, in this case to their experience of depressive symptoms. Despite the fact that large literatures exist on the association between adolescent depressive symptoms and interpersonal dysfunction in family and peer relationships, relatively few studies have examined how adolescent depressive symptoms are associated with interpersonal dysfunction in romantic relationships. The present findings indicate that this is an important oversight that needs to be corrected.

Third, and related to the above point, our findings raise the issue that the development of depression and the development of romantic relationship dysfunction may occur in parallel (see Davila, 2001). From a developmental psychopathology perspective, having a preoccupied relational style may render adolescents less able to successfully negotiate early romantic relationships and consequently make adolescents vulner-

able for depressive symptoms in the face of romantic circumstances over the life course. Such a perspective helps us to understand why depression and marital dysfunction are related in adulthood and suggests that what happens in adolescent romantic relationships may set the stage (at least for people with a preoccupied relational style) for dysfunctional adult relationships and depression.

Finally, our findings highlight the need for early intervention with adolescents to help them with both interpersonal/relationship skills and depressive symptoms. Attempts have been made to target each of these. For example, early cognitive-behavioral training in optimistic thinking has been shown to reduce risk for depression among young people (Gillham, Reivich, Jaycox, & Seligman, 1995). The present results suggest that a more specific focus on cognition about and behavior in interpersonal situations, particularly romantic situations, may be helpful in such programs. In addition, a number of places in the country have instituted education about relationship skills in high school. Our findings suggest that a focus on how interpersonal styles, such as a preoccupied style, affect relationships and how they are linked to individual well being may be an important emphasis for such programs.

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