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The Dating Anxiety Scale for Adolescents: Scale Development and Associations With Adolescent Functioning

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Given the importance of romantic and dating relationships during adolescence, the purpose of the study was to develop and evaluate the psychometric properties of the Dating Anxiety Scale for Adolescents (DAS–A). Participants were 757 high school students (56% girls, ages 15 to 18 years). Adolescents completed the DAS–A, the Social Anxiety Scale for Adolescents (SAS–A), a Dating Questionnaire, and the Revised Beck Depression Inventory–II (BDI–II). Factor analysis of the DAS–A yielded a 3-factor solution with acceptable internal consistencies: fear of negative evaluation in dating situations (FNE–Dating); social distress when interacting with real or potential dating partners (SD–Date); and social distress when in a group of mixed-sex peers (SD–Group). Confirmatory factor analysis confirmed the 3-factor solution. Results indicated that younger adolescents reported more dating anxiety than older adolescents, and boys reported more SD–Group than girls. Dating anxiety was associated with peer-related anxiety and depressive symptoms and was a significant predictor of adolescents' current and usual dating status, even when controlling for adolescents' peer-related social anxiety. The findings provide support for the reliability and validity of the DAS–A. Clinical and research implications are discussed.

In recent years, clinical and developmental researchers have begun to examine multiple aspects of adolescents' dating relationships. This accumulating body of work has dispelled the notion that adolescent dating relationships are trivial, transitory, and lacking in importance (Collins, 2003). Based on data from the National Longitudinal Study of Adolescent Health (Carver, Joyner, & Udry, 2003), 25% of 12-year-olds report having had a special romantic relationship, and, by age 16, the majority of adolescents report such relationships. In addition, among adolescents who were dating, a large proportion report that their relationships lasted 11 months or more (e.g., 20% of those 14 years or younger, 35% of the 15- to 16-year-olds, and 60% of the 17- to 18-year-olds). Other recent work by Feiring (1996) revealed that 88% of the 15-year-olds interviewed reported having dated, even though only 21% were currently dating at the time of the interview.

Adding to this literature is evidence that dating relationships have significant implications for adolescents' psychosocial functioning (Collins, 2003). Having a romantic relationship, and the quality of the relationship, have been linked with positive self-concept during adolescence (Connolly & Konarski, 1994). Dating relationships also contribute to adolescents' status and belonging in their peer crowd (Connolly, Craig, Goldberg, & Pepler, 1999; Levesque, 1993) and help to establish interpersonal skills of sharing, negotiation, disclosure, and intimacy (Feiring, 1996; Furman & Shaffer, 2003). At the same time, the *transition* to dating can be distressing to adolescents (Zimmer-Gembeck, 2002). In addition, dating in early adolescence is associated with negative adjustment indicators, such as depression (Davila, Steinberg, Kachadourian, Cobb, & Fincham, in press), poor achievement (Brendgen, Vitaro, Doyle, Markiewicz, & Bukowski, 2002), and problem behaviors (Neemann, Hubbard, & Masten, 1995). In view of these and other findings (Collins, 2003; Zimmer-Gembeck, 2002), dating relationships represents a relatively new, yet important avenue of research for understanding adolescent adjustment.

Within this broader context, the primary goal of this study was to examine adolescents' experiences of anxiety in dating and heterosocial (mixed-gender) situations. At least among older adolescents (15 to 18 years of age), when dating and heterosocial interactions are normative (Carver et al., 2003; Davies & Windle, 2000; Kuttler, La Greca, & Prinstein, 1999), feelings of anxiety and distress in dating situations, or in the presence of potential dating partners, might interfere with teens' ability to develop and maintain close, intimate, romantic relationships. Furthermore, among adolescents who are dating, discomfort and distress in dating situations may be associated with less discussion and use of prophylactics during sexual interactions, placing such teens at increased risk of pregnancy and sexu-

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ally transmitted diseases (Nangle & Hansen, 1998). Thus, this study focused on dating anxiety, a concept related to social anxiety but one that is conceptualized as worry, distress, and inhibition experienced during interactions with dating partners or members of the opposite sex (i.e., *potential* dating partners).

Developmentally, dating typically begins during midadolescence (ages 14 to 15), often emerging from heterosocial peer groups (Connolly et al., 1999; Davies & Windle, 2000; Feiring, 1996). Adolescents may date other-sex peers in their network or may be introduced to potential romantic partners through an other-sex friend in their network (Connolly, Furman, & Konarski, 2000). Furthermore, adolescents who have many other-sex friends engage in romantic interactions more competently (Connolly et al., 2000). Thus, the ability to interact comfortably in heterosocial situations appears to enhance the likelihood of adolescents' engaging in future, successful, dyadic dating interactions. Anxiety in the presence of other-sex peers may inhibit the development of age-appropriate dating and romantic relationships.

Within this context of emerging dating relationships, some level of dating-related anxiety or distress appears normative. Many adolescents report distress and uncertainty regarding how they should behave in romantic relationships (Grover & Nangle, 2003; Neider & Seiffge-Krenke, 2001). However, adolescents also may find that their distress is reduced as they gain greater experience in dating situations (Neider & Seiffge-Krenke, 2001). Although it has not been investigated directly, it is likely that adolescents who avoid dating, or who date infrequently, would continue to feel distressed when faced with a dating situation; over time, this process could contribute to continued dating avoidance and increased feelings of dating-related anxiety. Once dating anxiety develops, it could interfere with dating behavior, resulting in delayed development of intimate, romantic relationships.

From a clinical perspective, dating anxiety has the potential to negatively affect an adolescent's transition to adulthood. Among young adults, anxiety in dating and heterosocial situations has been linked with problems such as depression, substance abuse, and loneliness (e.g., Arkowitz, Hinton, Perl, & Himadi, 1978; Davies & Windle, 2000; Pilkonis & Zimbardo, 1979). In addition, research has linked adolescent dating problems with adult social phobia, in that adults with social phobia report greater self-consciousness and fewer dating partners in adolescence than adults without social phobia (Bruch, Heimberg, Berger, & Collins, 1989). Adults with social phobia also have a lower rate of marriage than the general population, and those who do marry wed later than adults without social phobia (Schneier et al., 1994).

These lines of inquiry highlight the potential clinical and developmental importance of understanding adolescent dating anxiety. Thus, as a first step in understanding adolescents' dating-related anxiety, this study developed and examined the utility of a measure of adolescent dating anxiety. At present, no other suitable measures exist. Although several instruments developed for adults indirectly assess heterosocial anxiety, these measures primarily have been used with men and focus on general social anxiety or on dating skills and experiences (e.g., Glass, Merluzzi, Biever, & Larsen, 1982; Twentyman, Boland, & McFall, 1981). Also, a Dating Anxiety Survey was developed by Calvert, Moore, and Jensen (1987), but it was based on specific dating situations that are common among college students and has shown weak associations with young adults' dating histories.

Among adolescents, a measure of social anxiety has been developed (e.g., Social Anxiety Scale for Adolescents [SAS–A]; La Greca & Lopez, 1998), although it focuses on anxiety and distress in general peer interactions, which may not include members of the opposite sex. In contrast, dating anxiety is specific to dating relationships (in dyads or groups) and heterosocial situations that include members of the opposite sex. Differentiating between anxiety in dating situations versus general peer situations may be important for several reasons. First, relative to general peer relations, different relationship qualities appear to be relevant for dating relationships. Connolly et al. (1999) found that adolescents named intimacy, passion, and commitment as characteristics specific *only* to romantic relationships. Thus, adolescents might be nervous or worried about dating interactions because of expectations for passion and sexual intimacy, a novel type of intimacy with which they have had little or no experience. Second, different types of concerns are relevant in dating situations. For example, adolescents' body image and appearance may contribute more to dating anxiety than to general social anxiety, as body image and perceptions of physical attractiveness appear to be especially important for dating (e.g., Paxton et al., 1991; Seiffge-Krenke, Shulman, & Klessinger, 2001). A third distinction between dating and general peer relations involves an adolescent's lack of knowledge of appropriate behaviors for dating interactions (Neider & Seiffge-Krenke, 2001), which may lead to distress or discomfort in dating situations, but not peer relations. Finally, as adolescents get older, they encounter increased expectations and pressures to date or be involved in a romantic relationship to gain social status and fit in with peers (Feiring, 1996; Zimmer-Gembeck, Siebenbruner, & Collins, 2001). This seemingly "raises the stakes" of a date and might increase anxiety specifically in dating situations.

In view of these issues, the question of dating anxiety that is differentiable from peer-related social anxiety is an empirical question. Thus, this study developed and examined a self-report measure, the Dating Anxi-

ety Scale for Adolescents (DAS–A). The conceptual foundation for the DAS–A extends prior conceptualizations of social anxiety to dating and heterosocial situations. Specifically, Watson and Friend (1969) introduced the construct of social anxiety, delineating two distinct aspects: social avoidance and distress (SAD) and fear of negative evaluation (FNE). SAD reflects the avoidance of social situations and feelings of distress and discomfort in social situations. FNE focuses on subjective aspects of anxiety, such as worries or concerns that others will evaluate one negatively. These concepts capture the salient dimensions of adolescents' peer-related social anxiety (La Greca & Lopez, 1998). Socially anxious teens report more negative peer experiences (Inderbitzen, Walters, & Bukowski, 1997) and tend to withdraw from interpersonal interactions, thus hindering friendships (Vernberg, Abwender, Ewell, & Beery, 1992).

The primary goal of this study was to extend the concepts of FNE and SAD to adolescents' heterosocial and dating situations. Specifically, items believed to tap adolescents' FNE and SAD that involved members of the opposite-sex or dating partners were included in the initial item pool. Factor analysis was used to examine construct validity, and the psychometric properties of the resulting factors were evaluated.

A second study goal was to begin to provide a developmental framework for dating anxiety, by examining grade, sex, and ethnic differences in adolescents' dating anxiety. We focused on high school age adolescents (15 to 18 years), as dating experiences are normative during these later adolescent years (Carver et al., 2003); thus, the vast majority of the adolescents in our sample would have some dating-related experiences. Within this age range, we expected that younger adolescents would report greater dating anxiety, as they would have relatively fewer dating experiences than the older adolescents. Age is related to dating experiences, with adolescents reporting an increasing frequency of dating relationships with increasing age (Carver et al., 2003; Laursen & Williams, 1997; Neider & Seiffge-Krenke, 2001).

Sex differences in dating anxiety were also examined but not predicted. Some studies have found adolescent girls report more peer-related FNE than adolescent boys (Inderbitzen et al., 1997; La Greca & Lopez, 1998), perhaps because girls worry more than boys about others' judgments of their behavior. However, it is unclear if girls' greater concerns about negative peer evaluations would extend to dating and heterosocial situations. Among college students, boys report more anxiety than girls in dating situations, possibly because of the pressure to initiate dating interactions (Arkowitz et al., 1978; Pilkonis & Zimbardo, 1979; Twentyman et al., 1981). Thus, this study examined sex differences in dating-related anxiety, but no specific predictions were advanced.

Potential ethnic differences in dating anxiety were also examined. Given the ethnic diversity of the South Florida area, we compared dating anxiety among Hispanic adolescents and non-Hispanic Whites. Little existing research is available to guide hypotheses regarding ethnic differences in dating anxiety. There is some suggestion that Hispanic families may try to limit their youngsters' dating in an attempt to prevent sexual involvement, especially for girls (Raffaelli & Ontai, 2001; Villarruel, 1998). This might increase these adolescents' apprehension about dating, as they may have limited experiences interacting with the opposite sex.

A third study goal was to examine the associations between dating anxiety and measures of social anxiety and depressive symptoms. As discussed earlier, social anxiety and dating anxiety are viewed as conceptually related but distinct constructs (Hope & Heimberg, 1990) and were expected to be moderately to strongly related, as has been the case with college-age students (Calvert et al., 1987). We also expected dating anxiety to be related to adolescents' depressive symptoms—but to a lesser extent than social anxiety. Such a pattern would provide some evidence for the discriminant validity of the DAS–A. Associations between dating anxiety and depression were anticipated because anxiety and depression are often comorbid conditions in adolescence (Brady & Kendall, 1992). Also, feelings of depression interfere with adolescents' interpersonal relationships and have been associated with less participation in social situations and more interpersonal problems (Joiner, 1999; Mufson, Weissman, Moreau, & Garfinkel, 1999; Schwartz, Kaslow, Seeley, & Lewinsohn, 2000).

A final study goal was to examine the associations between adolescents' dating anxiety and dating experiences. If dating-related anxiety interferes with dating experiences, then dating anxiety should predict adolescents' *current* and *usual* dating status (i.e., whether or not they are dating). Adolescents who are anxious in dating and heterosocial situations are likely to avoid or limit their dating contacts, even at an age when dating is normative (Carver et al., 2003). Further, as a stringent test of the DAS–A as a predictor of dating status, adolescents' peer-related social anxiety was controlled, to determine whether dating anxiety *incrementally* predicted dating status, beyond social anxiety. Such data would help to support the validity of the DAS–A.

Method

Participants

The participants were 757 adolescents (431 girls; 56.9%) enrolled in Grades 10 through 12 at two public high schools in a large metropolitan area in the Southeast. Adolescents ranged from 15 to 18 years of age (M = 16.6, SD = 1.0); 45% were in the 12th grade (n =

340), 25% in 11th grade (n = 192), and 30% in 10th grade (n = 225). The adolescents came from primarily middle-class socioeconomic backgrounds as reflected in the small number of free or reduced lunches provided at the high schools (29.2% and 22.9%, respectively).[1] Middle-class socioeconomic status was confirmed using the Hollingshead Index (father's occupation Mdn = 7.00, SD = 2.18, mother's occupation: Mdn = 6.00, SD = 1.92, where 1 = occupations that require no training and 9 = occupations that require graduate school). The ethnic composition of the sample was similar to that of the surrounding county and consisted of 67.8% Hispanic youth, 16.6% non-Hispanic White youth, 7.1% African American youth, and 8.3% youth of mixed or other backgrounds.

Procedure

Adolescents were recruited as part of a larger study of adolescents' health and peer relationships. A letter describing the study, with an attached parental consent form, was distributed to students by their homeroom teachers. Active parental consent was obtained for students under the age of 18 years; adolescent assent also was obtained. Permission was obtained for 854 study participants. It was difficult to determine the number of forms that were brought home to parents and thus difficult to obtain an exact participation rate; many students reported losing or misplacing the forms. About 2,000 forms were distributed, but fewer than 900 were returned. Of the forms that were returned, the participation rate was over 95%.

Due to time constraints during testing, 80 adolescents (9%) did not complete the DAS–A. An additional 17 adolescents (2%) either reported involvement in homosexual relationships or expressed interest in dating members of the same sex (on the Dating Questionnaire); because this subsample was too small to run meaningful analyses, these adolescents were excluded from the analyses. This led to the final sample of 757 adolescents who completed the DAS–A.

The measures included in this study were the DAS–A, the Dating Questionnaire, the SAS–A, and the Revised Beck Depression Inventory (BDI–II). Adolescents also provided demographic information. Trained graduate and undergraduate assistants administered questionnaires during group testing sessions. All information was provided anonymously.

Due to time constraints, some adolescents (n = 211; 28%) did not complete the BDI–II, which was the last measure. As a result, the full sample was used to factor-analyze the DAS–A, evaluate age, sex, and ethnic differences and examine the prediction of dating status. However, the subsample of adolescents who completed the BDI–II (n = 546) was used to examine the correlations between dating anxiety and depression. Chi-square and analysis of variance (ANOVAs) tests compared those who completed the BDI–II to those who did not; no significant differences emerged on any demographic variable (grade, sex, ethnicity, socioeconomic status) or on the measures of dating anxiety, social anxiety, or dating status.

Measures

DAS–A. This instrument was developed from a pool of items generated by reviewing several anxiety measures: the SAS–A (La Greca & Lopez, 1998), the SAD Scale (Watson & Friend, 1969), the Interaction Anxiousness Scale (Leary, 1983), the FNE Scale (Watson & Friend, 1969), and the Shyness Scale (Cheek & Buss, 1981). Items were selected that reflected either concerns about negative evaluations or SAD and were reworded specifically to focus on heterosocial and dating situations. For example, an item from the FNE Scale, "I often worry that I will say or do the wrong things," was changed to "I often worry that I will say or do the wrong things while out on a date." An item from the SAD Scale, "I often feel on edge when I am with a group of people" was changed to "I often feel on edge when I am with a group of people of both sexes." An item from the Interaction Anxiousness Scale, "I often feel nervous when talking to an attractive member of the opposite sex," was used without adaptation. Items were also modified to make them appropriate for adolescents and to simplify the language.

After the item pool was generated, six psychologists and advanced graduate students in clinical child psychology rated the degree to which the items reflected dating anxiety; only items with high agreement across all raters were retained. Finally, focus groups of adolescents from other high schools reviewed the potential items for relevance and content and were reworded as needed. This produced an experimental form of the DAS–A that contained 49 items plus 5 fillers. Filler items (e.g., "I love to go to parties," "I am talkative and outgoing with everyone I meet") were included to ensure that adolescents read the items and to provide a break from rating anxiety-related items. Each item was rated on a 5-point scale ranging from 1 (*not at all characteristic of me*) to 5 (*extremely characteristic of me*). The content of the DAS–A was at the fourth-grade reading level (Flesch-Kincaid; Schuyler, 1982). Table 1 contains the 21 items retained on the final DAS–A, as described in the Results section.[2]

[1]Under the National School Lunch Program, free lunches are provided only to students from families with incomes at or below 130% of the poverty level, and reduced lunches are provided only to students from families with incomes at or below 185% of the poverty level. Nationally, 57.6% of students receive reduced or free lunches under this program.

[2]A list of items that were eliminated from the DAS–A can be obtained from the first author.

Table 1. *Factor Structure and Primary Factor Loadings for the Dating Anxiety Scale Items*

	Factor Loadings		
	1	2	3
Fear of Negative Evaluation–Dating			
I am afraid that the person I am dating will find fault with me.	.85		
I am usually worried about what kind of impression I make while on a date.	.81		
I often worry that the person I have a crush on won't think very much of me.	.80		
I often worry about what kind of impression I am making on members of the opposite sex.	.77		
I think I am too concerned with what members of the opposite sex think of me.	.76		
I am frequently afraid that the person I have a crush on will notice my flaws.	.71		
I worry that I may not be attractive to people of the opposite sex.	.61		
I am concerned when I think that a date is forming a negative impression of me.	.57		
I worry about what my date will think of me even when I know it doesn't make any difference.	.56		
I am often afraid that I may look silly or foolish while on a date.	.48		
Social Distress–Dating			
I often feel nervous when talking to an attractive member of the opposite sex.		.78	
I am usually nervous going on a date with someone for the first time.		.77	
It is difficult for me to relax when I am with a member of the opposite sex who I do not know very well.		.72	
I feel tense when I'm on a date with someone I don't know very well.		.66	
I feel nervous in dating situations.		.62	
I become tense and jittery when I feel that someone of the opposite sex is checking me out.		.51	
I am more shy with someone of the opposite sex.		.42	
Social Distress–Group			
It takes me a long time to feel comfortable when I am in a group of both males and females.			.86
I tend to be quieter than usual when I'm with a group of both males and females.			.75
I often feel nervous or tense in casual get-togethers in which both guys and girls are present.			.59
Parties make me anxious and uncomfortable.			.51

SAS–A (La Greca & Lopez, 1998). The SAS–A consists of 18 descriptive self-statements and 4 filler items, which are rated on a 5-point scale ranging from 1 (*not at all*) to 5 (*all the time*). Factor analysis has revealed three distinct factors: FNE (eight items), SAD–New Situations (six items), and General SAD (four items). Scores are obtained by summing the items comprising each subscale, with higher scores reflecting greater social anxiety; the total can range from 18 to 90. Confirmatory factor analysis of the SAS–A has revealed a good fit for the three-factor model of social anxiety (La Greca & Lopez, 1998), and internal consistencies have been reported to be .91 (FNE), .83 (SAD–New Situations), and .76 (General SAD; La Greca, 1999). High socially anxious adolescents have more problems in their peer relationships than low socially anxious teens (Inderbitzen et al., 1997; Vernberg et al., 1992). In this study, the internal consistency of the SAS–A Total was .88.

BDI–II (Beck & Steer, 1987). This 21-item scale assesses severity of cognitive, affective, and somatic symptoms of depression. Items are rated from 0 to 3 based on severity, and total scores can range from 0 to 63. Higher scores reflect greater depressive symptoms. The BDI–II has demonstrated good reliability and validity and has been used with adolescent populations (Beck, Steer, & Garbin, 1988; Kashani, Sherman, Parker, & Reid, 1990). In this study, total scores ranged from 0 to 52 and internal consistency was high (Cronbach's $\alpha = .92$).

Dating Questionnaire (Kuttler & La Greca, 2003). The Dating Questionnaire[3] assessed adolescents' dating status and experiences and was based on several sources: a dating history questionnaire (Furman, 1998), a dating survey (Kuttler et al., 1999), and pilot testing. Dating was defined as "spending time with someone of the opposite sex who you are romantically interested in and who is also romantically interested in you. It can occur in a small group (e.g., double-date) or alone with just the two of you." Items that reflected dating experiences were examined for descriptive purposes, including questions about having ever dated (yes or no); having ever had a boyfriend or girlfriend (yes or no); age at first date; number of boyfriends or girlfriends; and number of dating partners over the past 12 months.

In addition, adolescents' *current* and *usual* dating status were the key variables used in regression analyses predicting dating status. Both current and usual dating status were examined, because it is possible that an adolescent who *usually* dates may not be dating at the time of the study and thus would appear to be "not dating" using only the measure of current dating status.

[3]A copy of the Dating Questionnaire can be obtained from the second author.

The items for current and usual dating status were coded to reflect "dating" versus "not dating."[4] We used a dichotomous distinction for dating status, as we reasoned that "not dating" or "rarely dating" is likely to be related to high dating anxiety—possibly because the person is avoiding dating or has few dating experiences. However, once a teen is dating, it is more difficult to predict how dating anxiety would be related to frequency of dating, as some teens are involved in exclusive relationships and thus may not be dating often, but also may not be anxious about dating. In support of the index of *current* dating status, comparisons of current "daters" and "nondaters" revealed that nondaters reported having had fewer boyfriends or girlfriends ($M = 4.16$, $SD = 4.3$) than daters ($M = 6.23$, $SD = 5.5$, $F = 24.7$, $p < .001$) and dated fewer people in the past 12 months ($M = 1.48$, $SD = 1.8$) than daters ($M = 2.54$, $SD = 3.0$; $F = 24.84$, $p < .001$). Similarly, for *usual* dating status, nondaters reported having had fewer boyfriends or girlfriends ($M = 3.09$, $SD = 3.1$) than daters ($M = 6.48$, $SD = 6.9$, $F = 38.2$, $p < .001$) and dated fewer people in the past 12 months ($M = 1.14$, $SD = 1.4$) than daters ($M = 2.53$, $SD = 2.9$; $F = 35.22$, $p < .001$). Other descriptive information on dating experiences is presented in the Results section.

Results

Psychometric Evaluation of the DAS–A

Principal factors analysis. A primary study goal was to develop and evaluate the DAS–A. To determine the final content of the DAS–A, a principal factors analysis with a promax rotation (Floyd & Widaman, 1995) was conducted, removing the filler items before the analysis. Factors with eigenvalues greater than 1.00 were initially retained; a scree plot confirmed that a three-factor solution appeared optimal. Experimental items were retained on the DAS–A only if they loaded cleanly on one factor at a level of .40 or higher, with no cross-loadings above .40. This reduced the item pool to 25 items. In the interest of having a concise measure, four items that appeared redundant were removed, using the following procedure. Advanced graduate students in psychology reviewed the DAS–A items and identified any sets of items that appeared to be very similar (e.g., "I become tense and jittery when I feel that someone of the opposite sex is checking me out," and "I become tense and jittery when my date picks me up because I feel that he/she is checking me out"). Correlations were computed between items that were judged to be similar, and one item was removed in each pair with the highest correlations (rs = .59 or higher). This eliminated two items from FNE in dating situations (FNE–Dating) and two from SD when interacting with real or potential dating partners (SD–Date).

Factor analysis resulted in a three-factor solution that included 21 items (see Table 1). Separate factor analyses were conducted for boys and girls to determine whether different factors would emerge. Results revealed the same three DAS–A factors with identical item placements on each factor. Due to the similar results for boys and girls, data are presented for the overall sample.

Factor 1 consisted of 10 items that accounted for 47.4% of the DAS–A variance. The items were characterized by concern or worry that a date or a member of the opposite sex would judge the adolescent in a negative manner; this factor was labeled FNE–Dating. The second factor contained 7 items that accounted for 7.7% of the variance. These items focused on inhibition and distress while interacting with a single member of the opposite sex. Three items pertain to distress while on a date and four items pertain to interactions with someone who could be perceived as a potential dating partner. This factor was labeled SD–Date. Finally, the third factor (four items) accounted for 5.0% of the DAS–A variance. It assessed inhibition and distress during heterosocial group situations and was labeled SD–Group.

Based on these results, scores were computed for each of the DAS–A factors by adding the ratings for each of the relevant items. In addition, the subscales were summed to create a score for total dating anxiety (DAS–A Total) that could range from 21 to 105 ($M = 41.00$, $SD = 13.96$). Additional information on the DAS–A and the subscales are presented in a later section of the Results section.

Confirmatory factor analysis. Confirmatory factor analysis (Bentler, 1998) was used to evaluate the "fit" of the conceptually and empirically derived three-factor model of dating anxiety and to compare the three-factor model with a potentially more parsimonious one-factor model. Confirmatory factor analysis revealed a very good fit for the three-factor model of dating anxiety (Hu & Bentler, 1999), with a Goodness-of-Fit Index = .95, a standardized root mean square residual = .039, and a root mean square error of approximation = .057, $\chi^2(186)$

[4] On the Dating Questionnaire, adolescents indicated what best describes their current dating status using the following categories: (a) not dating, (b) dating or seeing a person casually, (c) dating or seeing more than one person casually, (d) mostly going out with one person and dating a few others, (e) have an exclusive relationship with someone, (f) have a very serious relationship with one person, (g) engaged or living with someone, and (h) married. Adolescents who answered "a" were considered "not dating" and all other responses were considered "dating." The categories for usual dating status were (a) have never dated, (b) rarely date, (c) date casually, and (d) date exclusively. For analyses of usual dating status, responses "a" or "b" were considered "usually not dating," and responses "c" or "d" were considered "usually dating." These categories were derived from Kuttler et al. (1999).

= 661.2, $p < .001$. In contrast, the one-factor model did not have a good fit. Specifically, for the one-factor model, the Goodness-of-Fit Index = .84, the standardized root mean square residual = .063, and the root mean square error of approximation = .097, $\chi^2(189) = 1574.3$, $p < .001$. Furthermore, the three-factor model represented a significantly better fit to the data than the one-factor model, $\chi^2(3) = 913.07$, $p < .0001$.

Interscale correlations. The DAS–A factors were intercorrelated, with *r*s ranging from .59 to .73 (see Table 2). Interscale correlations were also calculated separately by sex and grade. Patterns for boys and girls were identical, although for boys, FNE–Dating was more strongly related to SD–Date ($r = .77$ for boys, .70 for girls; Fisher's $z = 2.40$, $p < .01$), and to SD–Group ($r = .64$ for boys, .55 for girls, $z = 3.43$, $p < .001$). The patterns also were identical across the grades, although 12th graders had a lower correlation between SD–Date and SD–Group than 10th or 11th graders ($r = .74$ for 10th grade, .69 for 11th grade, .60 for 12th grade; *z*s = 3.08, 1.71, respectively, $p < .05$).

Internal consistencies. The internal consistencies of the three DAS–A factors, as well as the total, were calculated using Cronbach's α. Alpha coefficients were .94 for Total DAS–A, .92 for FNE–Dating, .88 for SD–Date, and .81 for SD–Group. Thus, all scales had high internal consistency.

Grade, Sex, and Ethnic Differences in Dating Anxiety

A second study goal was to evaluate grade, sex, and ethnic differences in dating anxiety.

Grade and sex were evaluated first, using two-way (Grade × Sex) ANOVAs (see Table 3). The analyses revealed a significant main effect for Grade on Total DAS–A ($p < .01$), FNE–Dating ($p < .05$), and SD–Date ($p < .05$). As predicted, adolescents in the younger grades reported more dating anxiety than older adolescents. Specifically, based on Tukey honestly significant difference post hoc tests ($p < .05$), 10th graders were significantly higher on Total DAS–A than 11th and 12th graders. For FNE–Dating and SD–Date, the

Table 2. *Means, Standard Deviations, and Correlations Between the Dating Anxiety, Social Anxiety, and Depression*

	Total DAS–A	FNE–Dating	SD–Date	SD–Group	*M*	*SD*
Total DAS–A	—				41.00	13.96
FNE–Dating	.93	—			20.46	7.65
SD–Date	.91	.73	—		12.79	4.68
SD–Group	.77	.59	.67	—	7.75	3.47
Total SAS–A	.73	.69	.62	.61	39.34	12.28
FNE	.63	.66	.48	.46	17.11	6.56
SAD–New	.67	.56	.65	.60	15.08	4.87
SAD–General	.57	.50	.49	.59	7.15	2.83
BDI Total[a]	.36	.38	.27	.30	11.30	9.74

Note: All correlations are significant at $p < .001$. DAS–A = Dating Anxiety Scale for Adolesents; FNE–Dating = Fear of Negative Evaluation–Dating; SD–Date = Social Distress–Dating; SD– Group = Social Distress–Group; SAS–A = Social Anxiety Scale for Adolescents; FNE = Fear of Negative Evaluation; SAD–General = Social Avoidance and Distress–General; SAD–New = Social Avoidance and Distress–New; BDI = Beck Depression Inventory.
[a] $N = 549$

Table 3. *Means and Standard Deviations of DAS–A Scores by Grade and Gender*

		Total DAS–A		FNE–Dating		SD–Date		SD–Group	
	n_1	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Grade									
10	225	43.36_a	14.67	21.71_a	7.91	13.51_a	4.89	8.14	3.85
11	192	39.36_b	14.09	19.54_b	7.50	12.39_b	4.62	7.43	3.58
12	340	40.37_b	13.21	20.15	7.47	12.54	4.52	7.67	3.12
Gender									
Male	326	41.29	14.26	20.57	7.61	12.67	4.79	8.05_a	3.55
Female	431	40.79	13.74	20.38	7.69	12.88	4.59	7.53_b	3.40
Total	757	41.00	13.96	20.46	7.65	12.79	4.68	7.75	3.47
F_{gender}		.04		.00		.66		3.98*	
F_{grade}		4.90**		4.33*		4.01*		2.69	

Note: Column subscripts with different letters indicate significant group differences $p < .05$. Total DAS–A = Total Dating Anxiety; FNE–Dating = Fear of Negative Evaluation–Dating; SD–Date = Social Distress–Dating; SD–Group = Social Distress–Group.
*$p < .05$. **$p < .01$.

10th graders were significantly higher than 11th graders. Analyses of effect sizes indicated that these differences were small, as reflected by Cohen's *d* (Total DAS–A, $d = .28$; FNE–Dating, $d = .29$; SD–Date, $d = .24$). As can be seen in Table 3, a significant main effect for sex was obtained only for SD–Group ($p < .05$). Boys reported greater distress in heterosocial group situations (SD–Group) than girls, although the effect size was small, $d = .15$. No interactions between sex and grade emerged.

Potential ethnic differences were examined next, although no specific hypotheses were advanced. These analyses compared Hispanic youth with non-Hispanic Whites; these were the two largest ethnic groups and together comprised 86% of the sample. Three-way ANOVAs (Grade × Sex × Ethnicity) were conducted for the DAS–A Total and subscales. No significant main effects for ethnicity were obtained for any of the DAS–A scores (all *p*s > .10), nor were there any interactions between ethnicity and grade or sex. The scores for Hispanic adolescents were similar to those reported for the full sample and specifically were DAS–Total ($M = 40.00$, $SD = 13.3$); FNE–Dating ($M = 19.98$, $SD = 17.3$); SD–Date ($M = 12.56$, $SD = 4.6$); and SD–Group ($M = 7.5$, $SD = 3.3$).

Relations Between the DAS–A and Measures of Social Anxiety and Depression

A third study goal was to examine associations between adolescents' dating anxiety and their reports of social anxiety and depressive symptoms. Adolescents high in dating anxiety were expected to report more social anxiety and depressive symptoms than adolescents low in dating anxiety. It was also expected that dating anxiety would be more strongly related to social anxiety than to depressive symptoms, supporting the convergent and discriminant validity of the DAS–A. Means for adolescents' reports of social anxiety and depression are in Table 2. These scores appear to be within the normal range based on other community samples reporting adolescents' social anxiety (e.g., La Greca & Lopez, 1998) and depressive symptoms (e.g., Interbitzen & Hope, 1995).

Social anxiety. Using the full sample, correlations were computed between the scores of the DAS–A and SAS–A. Because separate analyses for boys and girls yielded highly similar results, Table 2 reports combined data. Results also were identical using the subsample of adolescents who completed the BDI–II ($n = 546$). The DAS–A and SAS–A Total scores correlated strongly ($r = .73$); as expected, adolescents who reported greater dating anxiety also reported greater social anxiety. The FNE–Dating, SD–Date, and SD–Group subscales of the DAS–A also correlated strongly with social anxiety and its subscales (*r*s = .45 to .66). In addition, FNE–Dating correlated highest with the FNE scale on the SAS–A; SD–Date was most highly correlated with SAD–New Situations; and SD–Group was most highly correlated with General SAD. When corrected for attenuation, the DAS–A and SAS–A totals correlated strongly ($r = .80$). As seen in Table 2, all correlations were significant, with $p < .001$.

Depressive Symptoms. For adolescents who completed the BDI–II, separate analyses for boys and girls yielded identical results; therefore, the combined data are presented in Table 2. Dating anxiety was moderately related to depression ($r = .36$; see Table 2); adolescents who reported high levels of dating anxiety also reported more depressive symptoms. Fisher's *z* test compared the correlations between the DAS–A and the BDI–II versus between the DAS–A and SAS–A totals, for the subset of adolescents who completed the BDI–II. As expected, total dating anxiety (DAS–A) was more strongly related to social anxiety (SAS–A Total; $r = .73$) than to depressive symptoms (BDI–II; $r = .36$; Fisher's $z = 9.75$, $p < .001$). The same pattern of correlations was obtained for the DAS–A subscales. All the subscales were significantly correlated with the BDI–II (*r*s ranged from .27 to .38; see Table 2). However, the three DAS–A subscales were more strongly related to social anxiety (SAS–A Total) than to depressive symptoms (BDI–II; Fisher *z*s ranged from 6.85 to 7.95; all *p*s < .001). These data provide support for the convergent and discriminant validity of the DAS–A.

DAS–A and Adolescents' Dating Experiences

A final study goal was to examine linkages between adolescents' dating anxiety and their dating experiences. In terms of descriptive information regarding dating experiences, 94% of the adolescents reported having ever dated or having had a boyfriend or girlfriend. On average, adolescents reported having their first date at age 13 years ($M = 13.6$, $SD = 1.8$), having had five boyfriends or girlfriends ($M = 5.65$, $SD = 6.2$), and having dated two people in the past 12 months ($M = 2.19$, $SD = 2.7$). In terms of dating status, 58% reported that they were currently dating and 68% reported that they usually are dating.

For the key variables of current and usual dating status, sex, grade, and ethnic differences were also examined. Girls (64.7%) were more likely to be currently dating than boys (52.2%), $\chi^2(1) = 11.72$, $p < .001$, but the distribution of those currently dating did not differ by grade. In contrast, there were no sex differences for usual dating status, but more adolescents in the upper grades reported that they usually date (10th = 56.9%, 11th = 68.8%, 12th = 75.9%; $\chi^2(2) = 22.6$, $p < .001$). In terms of ethnicity, more Hispanic boys (57.1%) than

non-Hispanic White boys (35.2%) were currently dating, $\chi^2(1) = 8.37$, $p < .01$, and more Hispanic boys (75.6%) reported usually dating than did non-Hispanic White boys (50.9%), $\chi^2(1) = 12.96$, $p < .001$. No ethnic differences in current or usual dating status were found for girls. Given the various sex, grade, and ethnic differences in dating status, demographic variables were controlled in regression analyses predicting dating status.

To evaluate the incremental validity of the DAS–A, logistic regression analyses were used to predict adolescents' current dating status (dating or not dating; see Table 4). Grade, sex (boys = 1), and ethnicity (Hispanic = 1, all others = 0) were entered on the first step, followed by social anxiety (SAS–A Total) on the second step, and then dating anxiety (DAS–A Total) on the third step.

Demographic variables were significant predictors of dating status, χ^2 Step = 25.66, $p < .001$; boys, 10th graders, and non-Hispanic adolescents were less likely to be currently dating. In the next step, social anxiety was a significant predictor of current dating status; teens with more social anxiety were less likely to be dating, χ^2 Step = 16.21, $p < .001$. In the third step, dating anxiety significantly increased the prediction of adolescents' dating status, χ^2 Step = 27.31, $p < .001$; adolescents who reported more dating anxiety were less likely to be currently dating. Specifically, for each unit increase in dating anxiety, the likelihood of currently dating decreased by 4%. Moreover, social anxiety was no longer a significant predictor of adolescents' current dating status when dating anxiety was entered.

Although there is no statistic analogous to the R^2 measure in linear regression, several psuedo-R^2 statistics have been proposed for use with logistic regression (Nagelkerke, 1991). Utilizing the Nagelkerke R^2, a measure of pseudo-variance that ranges from 0 to 1 (Nagelkerke, 1991), the addition of social anxiety into the model increased the Nagelkerke R^2 by 3.0%; the addition of dating anxiety increased the Nagelkerke R^2 by an additional 4.7%. These results indicate dating anxiety is a better predictor of adolescent's current dating status than social anxiety.

Similar analyses were used to predict adolescents' usual dating status, yielding identical and even stron-

Table 4. *Logistic Regression Predicting Current Dating Status and Usual Dating Status*

Variables	Logistic Coefficient (*B*)	Odds Ratio Exp(*B*)	95% CI of the Odds Ratio	χ^2 Step	χ^2 Model
Analysis for current dating status					
Step 1					
Grade*	.23	1.25	1.05–1.50		
Boys**	–.53	.59	.43–.80		
Hispanic**	.46	1.59	1.15–2.19	25.66***	25.66***
Step 2					
Grade*	.20	1.22	1.02–1.46		
Boys**	–.55	.58	.42–.78		
Hispanic*	.41	1.51	1.09–2.09		
SAS–A**	–.03	.97	.96–.99	16.21***	41.87***
Step 3					
Grade*	.19	1.21	1.01–1.46		
Boys**	–.54	.59	.43–.80		
Hispanic**	.40	1.49	1.07–2.08		
SAS–A	.01	1.01	1.00–1.03		
DAS–A**	–.04	.96	.94–.97	27.31***	69.18***
Analysis for usual dating status					
Step 1					
Grade**	.45	1.56	1.29–1.88		
Boys	–.05	.95	.69–1.32		
Hispanic**	.68	1.97	1.41–2.74	39.84***	39.84***
Step 2					
Grade**	.41	1.51	1.25–1.83		
Boys	–.07	.93	.67–1.30		
Hispanic**	.61	1.84	1.31–2.59		
SAS–A**	–.04	.97	.95–.98	26.39***	66.22***
Step 3					
Grade**	.41	1.51	1.24–1.84		
Boys	–.02	.98	.70–1.38		
Hispanic**	.60	1.82	1.29–2.58		
SAS–A	.00	1.00	.98–1.02		
DAS–A**	–.05	.95	.94–.97	28.85***	95.08***

Note: Dating status was coded as 1 = dating, 0 = not dating. CI = confidence interval; SAS–A = Social Anxiety Scale for Adolescents; DAS–A = Dating Anxiety Scale for Adolescents.
*$p < .05$. **$p < .01$. ***$p < .001$.

ger results (see Table 4). After demographics, social anxiety predicted dating status, χ^2 Step = 26.39, $p < .001$, but was no longer significant when dating anxiety was entered. The addition of dating anxiety significantly increased the prediction of adolescents' usual dating status, χ^2 Step = 28.85, $p < .001$, accounting for 5.0% additional "variance." Moreover, when the analyses predicting current and usual dating status were repeated, entering dating anxiety on Step 2 and social anxiety on Step 3, social anxiety did not add to the prediction of adolescents' current or usual dating status.

Discussion

This is the first study to report on the development of a measure of dating anxiety for adolescents, the DAS–A, and to examine the linkages between adolescents' dating anxiety and dating status. In general, the results provide initial support for the reliability and validity of the DAS–A. Additionally, the findings suggest adolescents' dating anxiety may interfere with their dating experiences, in that adolescents' who reported higher levels of dating anxiety were less likely to be dating than those with lower levels of dating anxiety.

Regarding the DAS–A, three conceptually and empirically derived factors emerged that reflected FNE and SAD, which are also central aspects of peer-related social anxiety (La Greca & Lopez, 1998). Specifically, adolescents reported concerns about being judged by others in heterosocial and dating-specific situations. Adolescents also reported distress and discomfort specific to interactions with a dating partner or a member of the opposite sex and in heterosocial group situations. The confirmatory factor analyses supported the construct validity of the DAS–A and its factors. In fact, the three-factor model of dating anxiety represented a significantly better fit to the data than a more parsimonious one-factor model. Although it was not possible to evaluate test–retest reliability in this sample, due to the limited time the schools could devote to data collection, this would be important to evaluate in future work. However, the DAS–A and the three subscales appeared to have good internal consistency. In addition, evidence for the discriminant validity of the DAS–A was obtained, in that dating anxiety was significantly less related to adolescents' reports of depressive symptoms than it was to peer-related social anxiety. Overall, the data provided support for the psychometric properties of the DAS–A.

The findings from this study further suggest that dating anxiety (on the DAS–A) is related to, but differentiable from, peer-related social anxiety (on the SAS–A). Although the two instruments were strongly correlated, dating anxiety was a significantly better predictor of adolescents' dating experiences. In fact, peer-related social anxiety did not predict dating experiences when dating anxiety was first considered; in contrast, dating anxiety incrementally predicted adolescents' dating experiences, beyond the variance accounted for by social anxiety. These patterns of findings suggest that peer-related social anxiety is related to adolescents' dating experiences only because of its shared variance with dating anxiety. It is important to note that it is not possible to determine whether dating anxiety leads to not dating, or whether the lack of dating experiences contribute to dating anxiety. Future longitudinal research is necessary to better understand the directionality of these relationships.

In particular, the findings suggest the DAS–A may be the preferred instrument to use in studies that focus on adolescent dating and romantic relationships, whereas for studies that focus generally on adolescents' interpersonal functioning, the SAS–A may be the preferred instrument. The availability of a measure of adolescent dating anxiety, such as the DAS–A, may benefit the developing and burgeoning research on adolescent romantic relationships (Collins, 2003) and open up new avenues for examining psychosocial aspects of adolescent adjustment. Dating anxiety focuses on distress experienced during other-sex interactions that may lead to intimacy and passion (Connolly et al., 1999), a necessary step in the development of healthy adult romantic relationships. During adolescence, peer groups transition from same-sex cliques to heterosocial crowds, thus facilitating dating initiation and the emergence of romantic relationships (Connolly et al., 1999). As these cross-sex interactions initially are novel to adolescents, it is not surprising that some level of dating anxiety is normative. However, the degree to which high levels of dating anxiety interfere with adolescents' ability to initiate and maintain successful romantic relationships is an important issue for further study.

Moreover, it will be important for future research to explore how problems in dating and romantic relationships contribute to adolescents' feelings of anxiety. For example, it is likely that aversive dating experiences, such as dating violence, might contribute to adolescents' dating-related anxiety (but not necessarily to peer-related social anxiety). Some studies estimate that 15% to 42% of high school students have encountered at least one violent episode with a dating partner (Bergman, 1992; Smith & William, 1992). Thus, for several reasons, the study of dating anxiety as a clinical phenomenon warrants further investigation.

Aside from developing and evaluating the DAS–A, a key study goal was to examine grade, sex, and ethnic differences in dating anxiety. As expected, younger adolescents reported more dating anxiety than older adolescents, probably because younger adolescents have had fewer dating experiences. However, the effect sizes of these differences were small, suggesting that other variables are likely to be more important in under-

standing adolescents' dating-related anxiety. For example, the quality and type of adolescents' dating experiences may be important for understanding dating anxiety. Adolescents who have extended, high-quality dating relationships might be considerably less anxious about dating than adolescents who have had a series of brief and unsuccessful dating interactions. Thus, future research might examine how the number, duration, and quality of adolescents' dating relationships are related to dating anxiety,

The only significant finding for sex was that boys reported more distress than girls when interacting in heterosocial groups. Perhaps boys are more distressed in mixed-group situations because of perceived pressure to initiate interactions with girls (e.g., start up a conversation, ask a girl out on a date), or because of uncertainty about how to behave. Other work suggests that adolescent girls are more likely to have cross-sex friendships than boys (Kuttler et al., 1999), so girls may feel more comfortable in mixed-sex situations. However, the effect size of this sex difference was small.

Ethnic differences were evaluated for the two largest ethnic groups in the sample, Hispanics and non-Hispanic Whites. No ethnic differences in dating anxiety emerged, nor did any interactions of ethnicity with age or sex. This is consistent with prior work on adolescents' peer-related social anxiety, which has not revealed any differences between Hispanic youth and non-Hispanic Whites (Ginsburg, La Greca, & Silverman, 1998; La Greca, 1999). Interestingly, however, it was the case that proportionately more Hispanic boys were dating than were non-Hispanic White boys; for girls, no ethnic differences in dating experiences emerged. Thus, the data suggest that Hispanic boys may be somewhat precocious, relative to other adolescent boys, in their engagement in dating activities. This is consistent with research indicating that more Hispanic adolescent boys have sexual intercourse than do boys of other ethnicities (Sonenstein, Ku, Lindberg, Turner, & Pleck, 1998).

Despite the important contributions of this study, several caveats and directions for future research are noted. First, this study focused only on heterosexual dating anxiety, primarily because very few adolescents reported an interest in dating members of the same sex. Nevertheless, it is important to include sexual-minority adolescents in the study of adolescent romantic relationships (Diamond, 2003; Goldfried & Bell, 2003). Recent work by Russell and Consolacion (2003) found that sexual-minority youth who were not dating or who were involved in heterosexual relationships reported high levels of generalized anxiety. Thus, future research on adolescent dating anxiety might examine whether the DAS–A, or a modification of the instrument, could be used with gay, lesbian, and bisexual adolescents. In general, the development of dating and romantic relationships among gay, lesbian, and bisexual youth is an important but neglected area of research.

Second, the information obtained in this study was based on adolescents' self-reports.

Adolescents are considered to be the best informants, relative to parents and teachers, of internalizing difficulties and interpersonal functioning (Loeber, Green, & Lahey, 1990). Nevertheless, in future work it could be useful to obtain input from significant others. Moreover, the inclusion of behavioral data, such as the number of times in the past month that an adolescent has called a member of the opposite sex, asked someone out on a date, or was the recipient of an invitation for a date, would provide information about specific behaviors that may be associated with dating anxiety.

Another issue concerns the ethnic composition of the sample, which contained many Hispanic youth. Very little attention has been directed to the dating behaviors of adolescents of Hispanic background aside from examinations of parent–child discussions about sexuality. Thus, at this point, little data are available to guide ethnic-specific predictions. Although no ethnic differences in dating anxiety were observed in this study, differences in dating experiences were noted for Hispanic boys. Further examination of dating anxiety and experiences across ethnic groups would be desirable. In this regard, it is noteworthy that rates of teenage pregnancy are significantly higher for Black and Hispanic girls than for non-Hispanic Whites (Ventura, Hamilton, & Sutton, 2003).

In conclusion, the results provide good initial support for the validity of the DAS–A, and suggest that the DAS–A may be useful for examining adolescent anxiety in the context of dating and heterosocial situations. Further research aimed at cross-validating the findings and extending the validation of the DAS–A will be important. Moreover, a better understanding of the nature of dating anxiety in adolescents and of the factors that differentiate normative from pathological dating anxiety will help to more effectively intervene with adolescents experiencing interpersonal difficulties and potentially prevent serious social and emotional impairments in adulthood.

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