Self-Perceived Competence and Prospective Changes in Symptoms of Depression and Social Anxiety

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Abstract

The primary aim of the current study was to replicate and extend previous findings by examining the relation of self-perceived competence with symptoms of depression and social anxiety in older adolescents. Focusing first on cross-sectional relations, we found that older adolescents' depressive symptoms were similarly related to levels of perceived scholastic competence and social acceptance, whereas social anxiety was significantly more strongly related to perceived social acceptance. Next, examining symptom changes over a six-month follow-up, we found that perceived social acceptance and scholastic competence both independently predicted prospective changes in adolescents' depressive symptoms, whereas perceived social acceptance, but not scholastic competence, predicted prospective changes in social anxiety. Although we also examined vulnerability-stress models of symptom change with negative academic and social events, none of these analyses was significant.

Keywords

Self-perceived competence; cognitive vulnerability; depression; social anxiety; vulnerability-stress

According to Cole's (1990, 1991) competency-based model of depression, low self-perceived social acceptance and scholastic competence contribute to the development of depressive symptoms. Self-perceived social acceptance and scholastic competence refer to two domains of self-evaluative thoughts regarding one's own level of social acceptance and academic abilities, respectively (e.g., Cole et al., 2001; Harter, 1999). Given that Cole's model was developed specifically for youth, support for the model is primarily derived from samples of children and young adolescents (e.g., Cole & Turner, 1993; Seroczynski, Cole, & Maxwell, 1997; Tram & Cole, 2000). One unanswered question from this line of research, however, is whether low self-perceived competence also contributes risk to depression in late adolescence. Despite evidence suggesting the significance of self-perceived competence across different developmental stages (Harter, 1999), few studies have examined the role of self-perceived competence in relation to depression in older adolescents (but see also, Uhrlass & Gibb, 2007).

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Another question is whether, in older adolescents, the link between self-perceived competence and depression is best conceived within a vulnerability-stress framework. Specifically, although research with children has focused on the main effects of self-perceived competence on depressive symptom changes, Cole hypothesized that, as children age into adulthood, domains of low self-perceived competence should not only have a main effect on depressive symptom changes, but also moderate the link between negative events and depressive symptoms (e.g., Cole & Turner, 1993; Seroczynski et al., 1997; Tram & Cole, 2000). That is, consistent with cognitive models of depression developed specifically for adults (e.g., Abramson, Metalsky, & Alloy, 1989; Clark, Beck, & Alford, 1999), Cole and his colleagues hypothesized that adults with low self-perceived competence should be more likely to develop symptoms of depression following the occurrence of negative events than should adults with high self-perceived competence.

According to Beck's event congruency hypothesis (Beck, 1983, 1987; Clark et al., 1999), negative events specific to the domain of cognitive vulnerability should be more likely to contribute to the development of depressive symptoms than events in domains that are not vulnerability-specific. For example, individuals exhibiting negative cognitions regarding achievement, but positive cognitions reagarding interpersonal relations, should be more likely to develop depression following negative achievement-related events than negative interpersonal events. Studies focused on events and cognitions in the achievement/academic domain and the social/interpersonal domain have yielded some support for Beck's vulnerability-event congruency hypothesis (e.g., Cole, 1990; Hammen & Goodman-Brown, 1990; Hammen, Marks, Mayol, & deMayo, 1985; Robins, Hayes, Block, & Kramer, 1995). Examining this hypothesis in relation to domains of self-perceived competence, Uhrlass and Gibb (2007) found that self-perceived scholastic competence moderated the cross-sectional relation between negative academic events and young adults' depressive symptoms. In contrast, no support was found for the hypothesis that self-perceived social acceptance would moderate the link between negative social events and depressive symptoms. Given the cross-sectional design of the study, however, conclusions regarding Cole's developmental model remain tentative. In the current study, we sought to build upon the previous cross-sectional findings by integrating Beck's event congruency hypothesis into a longitudinal test of Cole's theory in older adolescents.

A final question regarding Cole's (1990, 1991) model is the extent to which domains of self-perceived competence contribute risk specifically for depression versus other forms of psychopathology, such as social anxiety. Although a number of studies have supported the relation between low perceived social acceptance and social anxiety (e.g. Chansky & Kendall, 1997; Teachman & Allen, 2007), we are aware of only one study that has examined the relative specificity of various domains of perceived competence to symptoms of social anxiety versus depression. In that study, adolescents' levels of perceived social acceptance were cross-sectionally related to their symptoms of both depression and social anxiety (Smári, Pétursdóttir, & Porsteinsdóttir, 2001). In contrast, levels of perceived scholastic competence were significantly related to symptoms of depression but not social anxiety. This suggests that depression may be characterized by deficits across more than one domain of perceived competence, whereas social anxiety might be characterized by specific deficits in perceived social acceptance. However, because Smári et al.'s study was cross-sectional, it

remains unclear whether low perceived social acceptance is purely a correlate of social anxiety or whether it may be a risk factor and actually contribute to prospective changes in levels of social anxiety. In the current study, therefore, we examined the specificity of perceived social acceptance and scholastic competence to symptoms of depression versus social anxiety, both cross-sectionally and prospectively.

The primary aim of the current study was to replicate and extend previous findings by examining the relation of self-perceived competence with symptoms of depression and social anxiety in older adolescents. First, the current study examined the cross-sectional links between self-perceived competence and symptoms of depression and social anxiety. We hypothesized that depressive symptoms and social anxiety symptoms would be significantly and moderately correlated with concurrent levels of social and scholastic competence. In addition, consistent with Smári et al.'s (2001) findings, we hypothesized that social anxiety would be significantly more strongly related to perceived social acceptance than scholastic competence. We also hypothesized that there would be no significant difference in the magnitude of the correlations between depressive symptoms and levels of perceived competence in the social versus the scholastic domains. Next, we tested whether older adolescents' levels of self-perceived competence would predict prospective changes in symptoms of depression and social anxiety. Following from Cole's (1990, 1991) model, we hypothesized that self-perceived social acceptance and scholastic competence would predict prospective changes in depressive symptoms over a six-month follow-up. Extending Smári et al.'s (2001) findings, we hypothesized that self-perceived social acceptance, but not scholastic competence, would predict prospective changes in social anxiety.

Finally, we examined whether domains of self-perceived competence would moderate the link between negative events and depressive symptoms. Given Cole's (1990, 1991) hypotheses regarding the role of perceived competence as children age into adulthood, we hypothesized that domains of perceived competence would moderate the link between negative events and depressive symptoms. In testing the moderation models, we focused specifically on negative academic and social events because, according to Beck's event congruency hypothesis (Beck, 1983, 1987; Clark et al., 1999), negative events specific to the domain of cognitive vulnerability should be more likely to contribute to the development of depressive symptoms than events in domains not specific to the vulnerability. Therefore, we hypothesized that self-perceived competence in the social and scholastic domains would moderate the link between vulnerability-congruent negative events and prospective changes in older adolescents' depressive symptoms. In addition, we conducted exploratory analyses to examine the potential moderating role of perceived competence in the link between negative events and prospective changes in social anxiety symptoms. These analyses were exploratory in nature, because no studies of which we were aware had tested this type of vulnerability-stress interaction in predicting social anxiety.

Method

Participants

Participants were 280 undergraduate students between the ages of 17 and 21 ($M = 19.04$, $SD = 1.02$) and 177 (63.2%) were female. In terms of racial/ethnic composition, 171 (61.1%)

were Caucasian, 58 (20.7%) were Asian/Asian American, 19 (6.8%) were Latino/a, 13 (4.6%) were African American, and the remaining 19 (6.8%) were from other racial/ethnic groups or were of mixed race/ethnicity.

Measures

Self-Perceived Competence—The Self-Perception Profile for College Students (SPPCS; Neemann & Harter, 1986) was used to assess participants' perceived social acceptance and scholastic competence.[1] The SPPCS consists of 54 items, each scored on a 4-point Likert-type scale with higher scores reflecting greater self-perceived competence. Total scores for each subscale range from 1–4. Examples of items from the SPPCS are as follows: "Some students feel they are just as smart or smarter than other students, but other students wonder if they are as smart" and "Some students feel that they are socially accepted by many people, but other students wish more people accepted them". For each item, participants are asked to indicate which type of students they are more like, and then rate whether the chosen statement is "really like me" or "sort of like me." Studies have supported the reliability and validity of the SPPCS subscales in college students (Neemann & Harter, 1986; Masciuch, McRae, & Young, 1990). Specifically, research has supported the SPPCS's factor structure, and both the scholastic competence and social acceptance scales have good internal consistency (αs = .84 and .80, respectively; Neemann & Harter, 1986). In the current study, both subscales of the SPPCS exhibited adequate internal consistency (SPPCS-SC α = .73, SPPCS-SA α = .85).

Life Events—The Life Experiences Survey (LES; Sarason, Johnson, & Siegel, 1978) was used to assess negative life events. In this 60-item survey each item consists of a statement referring to a life event (e.g. *marriage*, *death of a close friend*, *changing majors*), and participants are asked to indicate whether the event occurred in the previous six months. If the event had occurred, they are then asked to rate the impact of the event. Impact ratings are made on a scale ranging from −3 (extremely negative) to +3 (extremely positive). Studies have supported the reliability and validity of the LES (e.g., Sarason et al., 1978). In the current study, levels of negative life events were calculated by summing the number of events endorsed as having a negative impact. Therefore, total negative event scores have a potential range of 0–60. This approach, rather than simply summing the reported impact ratings, was taken so as to reduce the potential influence of current symptoms upon subjective event impact ratings. For the purposes of this study, the LES items were grouped into two main categories: Academic Events (LES-A) and Social Events (LES-S). LES-A was made up of 9 of the 10 items from the School-Related Events section of the LES (e.g., *failing an important exam*, *dropping a course*, and *academic probation*).[2] The LES-S subscale was formed by summing 37 LES items judged by at least 8 of 10 independent raters as interpersonal/social in nature (e.g., *breaking up with boyfriend/girlfriend*, *major change in social activities*, and *serious illness or injury of a close family member*).[3]

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[1]Although the Self-Perception Profile assesses other domains of competence, the current study only focused on self-perceived social acceptance and scholastic competence because a primary aim of the study was to assess domain congruent vulnerability-stress relations and, to our knowledge, there are no measures of negative events specific to the other domains of competence.
[2]Item 59 of the School-Related Events section (i.e., "Joining a fraternity/sorority") was excluded because it more accurately fit the category of social/interpersonal events for the purposes of the current study.

Depressive Symptoms—The Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996) was used to assess depressive symptoms. The BDI-II is a 21-item self-report scale assessing the presence and severity of depressive symptoms over the past two weeks. Total scores range from 0–63, with higher scores indicating more severe symptoms of depression. Studies have supported the validity and reliability of the BDI-II with several different groups including samples of college students (Beck et al., 1996; Beck, Steer, & Garbin, 1988; Storch, Roberti, & Roth, 2004; Whisman, Perez, & Ramel, 2000). For the current study, the BDI-II exhibited excellent internal consistency ($a = .93$ at Time 1 and Time 2).

Social Anxiety Symptoms—The Brief Fear of Negative Evaluation (BFNE; Leary, 1983) questionnaire was used to assess symptoms of social anxiety. The BFNE (Leary, 1983) is a 12-item self-report measure of fear of negative evaluation by others. Each item is rated on a 5-point Likert-type scale (1 = not at all characteristic of me; 5 = extremely characteristic of me) indicating the extent to which the respondent agrees with the item based on their experiences. Total score of the BFNE range from 12–60, with higher scores reflecting greater fear of negative evaluation. The BFNE has been shown to have strong convergent validity with other measures of social anxiety and with the previous longer version of this scale (i.e., the FNE; Leary, 1983). The BFNE was utilized in this study because it provides an index of the core feature of social anxiety, fear of negative evaluation, with relatively few items (i.e., 12 items). In the current sample, the BFNE demonstrated good internal consistency ($a = .91$ at Time 1 and $a = .92$ at Time 2).

Procedure

Participants completed the questionnaires in large groups at two assessment points, approximately six months apart. At Time 1, participants completed the SPPCS, BDI-II, and BFNE. At Time 2, participants again completed the BDI-II and BFNE as well as the LES. Although participation was optional, those who did participate received course credit for the initial assessment and monetary compensation for the follow-up assessment.

Results

Preliminary analyses revealed that a number of variables exhibited significant skew. These variables were transformed (e.g., square root, inverse) prior to further analyses to satisfy assumptions of normality. Because 83 participants attrited from the study at Time 2, we next examined whether the data were missing at random in order to assess the justification of the use of data imputation methods for estimating missing values (cf. Shafer & Graham, 2002). Maximum likelihood estimation of missing values is preferable over listwise deletion of missing cases because it provides more accurate parameter estimates (Shafer & Graham, 2002). Thus, as a first step, a series of t-tests was conducted to determine if attriting individuals differed from nonattriting individuals on any of the study variables. Specifically, we compared individuals participating at both time points ($n = 197$) with those who did not participate at Time 2 in terms of demographic (i.e., sex and ethnicity), perceived

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[3]Independent raters were advanced graduate students. They were given instructions to mark each item of the LES as interpersonal/social, achievement/academic, or neither. The specific items composing these subscales can be obtained from the first author.

competence, and symptom variables. The only significant difference to emerge was that men were more likely to attrit than women (40.8% of men versus 23.2% of women), χ^2 (1; $N = 280$) = 9.69, $p = .003$, $r_{effect\ size} = -.19$. This said, Little's MCAR test (Little & Rubin, 1987), for which the null hypothesis is that the data are missing at random, was nonsignificant, χ^2 (4) = 3.28, $p = .51$. Therefore, maximum likelihood estimates of missing data were created and used in all subsequent analyses (see Shafer & Graham, 2002). We note however, that results were virtually identical even when the sample was limited to participants with complete data, and the pattern of significant effects was identical to that reported below.

Intercorrelations and descriptive statistics for all variables are shown in Table 1. To facilitate comparisons with other studies, means, standard deviations, and ranges represent values obtained prior to transformations. Next, we examined whether there were any gender or race/ethnicity differences across any of the variables. In terms of gender differences, women reported higher levels of social anxiety than men at Time 1, $t(278) = 2.05$, $p = .04$, $r_{effect\ size} = .12$, and Time 2, $t(278) = 2.20$, $p = .03$, $r_{effect\ size} = .13$. In addition, men reported higher levels of negative academic events than women, $t(278) = 2.06$, $p = .04$, $r_{effect\ size} = .12$. In terms of racial/ethnic differences, Caucasians reported lower depressive symptom levels than individuals from other racial/ethnic groups at Time 1, $t(278) = 2.89$, $p = .004$, $r_{effect\ size} = .15$, and Time 2, $t(278) = 1.95$, $p = .05$, $r_{effect\ size} = .11$. In addition, Caucasians reported higher levels of self-perceived social acceptance, $t(278) = -2.23$, $p = .03$, $r_{effect\ size} = -.12$, and scholastic competence, $t(278) = -2.35$, $p = .02$, $r_{effect\ size} = -.10$, than individuals from other racial/ethnic groups.

We then examined the cross-sectional relations between perceived competence and symptoms of depression and social anxiety. As can be seen in Table 1, both forms of perceived competence were significantly related to levels of depression and social anxiety. As predicted, however, Time 1 BFNE scores were significantly more strongly related to levels of perceived social acceptance than perceived scholastic competence, $z = 3.20$, $p = .002$. In addition, the magnitude of the relations between participants' Time 1 BDI-II scores and their levels of perceived competence in the social and scholastic domains did not differ significantly, $z = 1.66$, $p = .10$.

Next, we examined the main effects of self-perceived social acceptance and scholastic competence on prospective changes in symptoms of depression and social anxiety. To do so, we conducted linear regression analyses in which Time 2 symptoms (BDI-II scores or BFNE scores) served as the criterion variable. In these analyses, Time 1 symptoms (BDI-II or BFNE scores) were entered in the first block of the regressions, and one domain of self-perceived competence (i.e., social acceptance or scholastic competence) was entered in the second block. This approach allowed us to determine whether levels of self-perceived competence predicted residual symptom change over the follow-up. As predicted, self-perceived social acceptance and scholastic competence (in the two separate analyses) contributed to prospective changes in depressive symptoms, $t(276) = -2.96$, $p = .003$, $\beta = -.15$, and, $t(276) = -3.10$, $p = .002$, $\beta = -.15$, respectively. In addition, as hypothesized, self-perceived social acceptance, $t(276) = -4.52$, $p < .001$, $\beta = -.19$, but not scholastic competence, $t(276) = -0.02$, $p = .99$, $\beta = -.00$, predicted residual change in social anxiety

symptoms. Therefore, the results support the hypotheses that in older adolescents, both domains of self-perceived competence contribute significantly to prospective changes in depressive symptoms, but only self-perceived social acceptance contributes significantly to changes in social anxiety symptoms.[4]

Next, we tested the hypothesis that levels of self-perceived social acceptance and scholastic competence would moderate the relation between vulnerability-congruent negative life events and prospective changes in symptoms of depression and social anxiety. Following the suggestions of Aiken and West (1991), all predictor variables were mean centered to reduce multicollinearity prior to analysis. None of the vulnerability-stress relations was significant (lowest $p = .16$).[5]

Finally, we examined the unique influence of each of the self-perceived competence and life event variables on prospective changes in symptoms, statistically controlling for their overlap. First, using Time 2 BDI-II scores as the criterion variable, Time 1 BDI-II was entered in the first block of the regression, and perceived scholastic competence (SPPC-SC), perceived social acceptance (SPPC-SA), negative academic events (LES-A), and negative social events (LES-S) were entered in the second block. In this analysis, SPPCS-SC, $t(274) = -3.17$, $p = .002$, $\beta = -.16$, SPPCS-SA, $t(274) = -2.53$, $p = .01$, $\beta = -.11$, and LES-S, $t(274) = 4.48$, $p < .001$, $\beta = .20$, but not LES-A, $t(274) = 1.25$, $p = .21$, $\beta = .06$, uniquely predicted residual changes in BDI-II scores across the follow-up. Next, using Time 2 BFNE scores as the criterion variable, Time 1 BFNE was entered in the first block of the regression, and SPPCS-SC, SPPCS-SA, LES-A, and LES-S were entered in the second block. In this analysis, SPPCS-SA, $t(274) = -4.43$, $p < .001$, $\beta = -.19$, and LES-S, $t(274) = 2.15$, $p = .03$, $\beta = .08$, but not SPPCS-SC, $t(274) = 1.09$, $p = .27$, $\beta = .04$, or LES-A, $t(274) = .93$, $p = .35$, $\beta = .04$, uniquely predicted residual changes in BFNE scores.[6]

Discussion

The primary goal of this study was to evaluate the role of self-perceived social acceptance and scholastic competence in relation to older adolescents' levels of depressive symptoms and social anxiety. Consistent with previous research (Smári et al., 2001), we found that older adolescents' levels of social anxiety were more strongly related to their levels of perceived social acceptance than perceived scholastic competence. In contrast, levels of depressive symptoms were similarly related to deficits in both domains of perceived self-competence. Extending these cross-sectional findings, we found that levels of perceived social acceptance, but not scholastic competence, predicted prospective changes in levels of

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[4]To provide a stronger test of specificity to each symptom type, Time 1 scores for the alternate symptom type were also entered in the first block of the regression (e.g., when predicting changes in depressive symptoms, Time 1 levels of both depressive symptoms and social anxiety were included in the first block of the regression). All results were maintained even after statistically controlling for Time 1 symptoms in the alternate symptom domain.

[5]To provide a more thorough test of the vulnerability-stress hypothesis, we also examined the vulnerability event-incongruent interactions in four additional hierarchical regressions. Specifically, we tested whether scholastic competence moderated the link between social events and changes in depressive symptoms and whether social acceptance moderated the link between academic events and changes in depressive symptoms. We also completed the same analyses testing the event-incongruent interactions in predicting changes in social anxiety symptoms. None of these interactions was significant (lowest $p > .13$). All analyses are available upon request.

[6]Although we also examined whether social acceptance and scholastic competence interacted to predict residual changes in depressive symptoms or social anxiety, neither of these analyses was significant (lowest $p = .68$).

social anxiety. These findings suggest that, rather than simply being a correlate of social anxiety symptoms, levels of perceived social acceptance may contribute risk to future increases in social anxiety. Also, consistent with previous findings in younger samples (e.g., Cole & Turner, 1993; Seroczynski et al., 1997; Tram & Cole, 2000), we found that levels of self-perceived competence in both the social and the academic domains predicted prospective changes in depressive symptoms. Contrary to hypotheses, however, we found no evidence for vulnerability-stress relations. Indeed, levels of perceived competence and negative life events appear to contribute independently to future symptom changes. Specifically, when all predictor variables were included in one analysis, self-perceived scholastic competence and social acceptance, as well as negative social events, independently predicted residual changes in depressive symptoms over the six-month follow-up. In addition, self-perceived social acceptance and negative social events, but not scholastic competence or academic events, independently predicted residual changes in social anxiety symptoms.

This study provides an important extension of Cole's (1990, 1991) competency-based model of depression in a sample of older adolescents. Specifically, the current results support the utility of Cole's model for understanding the development of depressive symptoms in older adolescents and extend the model to the prediction of social anxiety. The results also provide further support for the hypothesis that depressive symptoms are characterized by more general deficits in perceived competence, whereas social anxiety is characterized by specific deficits in the domain of perceived social acceptance. What is particularly notable with regard to depression risk is that perceptions of low social acceptance and low scholastic competence both independently predicted prospective changes in depressive symptoms, suggesting that deficits in either domain may contribute unique risk to depression.

In terms of the event-congruent moderation analyses, the reason for the nonsignificant effects is unclear. It is possible that the effects of low perceived competence on depression in adolescents are relatively independent of the impact of any co-occurring stressor, as has been found in children (e.g., Cole, 1990, 1991; Cole & Turner, 1993; Seroczynski et al., 1997; Tram & Cole, 2000). To the extent that low perceived scholastic competence and social acceptance are independent risk factors for depression, it might be important to consider both domains independently when assessing risk for depression. Similarly, in terms of the nonsignificant interaction between perceived social acceptance and negative social events in predicting changes in social anxiety symptoms, it is possible that perceptions of social acceptance and negative social events do not operate in a vulnerability-stress relationship, but instead independently contribute to social anxiety. To the extent that perceived social acceptance and negative social events independently contribute to changes in social anxiety, it might be important to consider the unique effects of these two vulnerability factors in the assessment and treatment of social anxiety. Similarly, if negative social events independently contribute risk to changes in both depressive symptoms and social anxiety in older adolescents, then perhaps such events are particularly relevant to symptom change, and therefore, should be given particular consideration in assessment and treatment decisions.

It is also possible, however, that the nonsignificant moderation analyses might be due, in part, to certain aspects of the study's design. For example, because our follow-up period was over the summer, there may have been fewer opportunities for negative academic events (and possibly negative social events) to occur (indeed, relatively few negative social or academic events were reported in this sample; see means and ranges in Table 1). If so, this could have reduced our statistical power to detect significant main effects, or moderating effects, for negative academic events. It is also possible that the events assessed by our measure of negative life events did not significantly activate the scholastic and social domains of self-perceived competence. Although a small section of the LES focuses on events relevant to a college population, perhaps a different measure of negative events developed specifically for a college population would provide stronger support for the moderation model. Therefore, future research should continue to examine whether vulnerability-specific events interact with domains of perceived competence to predict changes in depressive symptoms or social anxiety in older adolescents.

Despite the strengths of this study, there were also some limitations that should be acknowledged. First, all measures relied on individuals' self-report, which may have been subject to response or recall biases. That is, depressed or socially anxious individuals might be more likely to respond negatively on all measures. We attempted to minimize the likelihood of any response bias in the assessment of negative events by focusing on the number of negative events reported, rather than the subjective impact ratings of each negative event. This said, future studies should seek to include multi-method assessments of these constructs (e.g., questionnaire and interview-based assessments). A second limitation was that our sample was limited to undergraduate students. Given this, it is unclear whether these results would generalize to other, more severely symptomatic samples. Future studies should seek to determine whether current results extend to the prediction of diagnosable episodes of depression and social anxiety. Another limitation was the amount of attrition from Time 1 to Time 2 (29.6% of the sample), which may limit the generalizability of the findings. Importantly, however, each of the significant findings was maintained even when analyses were limited to participants with complete data, which gives us additional confidence in our results. This said, it will be important to determine whether the current prospective results replicate in future studies.

Despite these limitations, this study had several strengths including a strong basis in the theory of cognitive vulnerability to depression, the examination of specific domains of vulnerability and events in older adolescents, and its prospective design. Indeed, this was the first prospective study of which we are aware to examine the relations among domains of negative life events, perceived competence, and changes in depressive symptoms in older adolescents. Furthermore, this is the first prospective study with participants of any age to test the specificity of perceived competence to symptoms of depression versus social anxiety. The current results lend support to the hypothesis that depression is in part distinguished from social anxiety in terms of broader deficits in perceived competence. Given these findings, one important direction for future research will be to examine the development of perceived competence deficits to determine if this might account, in part, for the development of comorbid depression in socially anxious individuals (comorbid social phobia is present in approximately 27% of individuals with a mood disorder; Kessler, Stang,

Wittchen, Stein, & Walkters, 1999). That is, if an individual with social phobia reports generally low levels of perceived competence across domains (i.e., not circumscribed to the social domain), he or she may be at an increased risk to develop subsequent symptoms of depression. In addition, although we have preliminary evidence that low levels of perceived competence independently predict changes in depressive and social anxiety symptoms (rather than moderate the link between events and symptoms), future longitudinal research that follows children as they age into young adulthood is needed to clarify the role of these domains of perceived competence in the development of depression versus social anxiety. Specifically, these types of longitudinal studies with multiple assessment points will help clarify whether the role of self-perceived competence over the course of development. Although Cole (1990, 1991) and others have found evidence for the mediating role of self-perceived competence in children and adolescents, it is unclear how this role shifts as children age into adulthood. Identifying the relations among these variables will potentially pinpoint critical periods of vulnerability, lead to the development of vulnerability-specific interventions, and provide direction for more targeted prevention programs.

Acknowledgments

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Table 1

Correlations and Descriptive Statistics for Study Variables

	1	2	3	4	5	6	7	M	SD	Range
1. SPPCS-SA	-							2.86	0.82	1–4
2. SPPCS-SC	.26**	-						2.71	0.63	1–4
3. T1BDI-II	−.30**	−.41**	-					10.23	9.64	0–46
4. T2BDI-II	−.33**	−.40**	.66**	-				8.76	8.63	0–48
5. T1BFNE	−.46**	−.25**	.40**	.29**	-			35.09	9.95	13–60
6. T2BFNE	−.50**	−.18**	.29**	.37**	.78**	-		35.59	10.49	12–60
7. LES-S	−.11	−.01	.29**	.37**	.21**	.25**	-	0.83	1.14	0–6
8. LES-A	−.04	−.28**	.22**	.25**	.02**	.06**	.19**	0.44	0.88	0–5

Note. SPPCS-SA = Self-Perception Profile for College Students-Social Acceptance; SPPCS-SC = Self-Perception Profile for College Students-Scholastic Competence; T1BDI-II = Time 1 Beck Depression Inventory-II; T2BDI-II = Time 2 Beck Depression Inventory-II; T1BFNE = Time 1 Brief Fear of Negative Events; T2BFNE = Time 2 Brief Fear of Negative Events; LES-S = Life Experiences Survey-Social Events; LES-A = Life Experiences Survey-Academic Events.

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$p < .01$.