
Depressive Symptoms and Bias in Perceived Social Competence Among Young Adults



Sarah W. Whitton and Justine J. Larson

Judge Baker Children's Center, Harvard Medical School



Stuart T. Hauser

*Judge Baker Children's Center, Harvard Medical School;
and Norwegian Institute of Public Health*

We examined associations between depressive symptoms and young adults' self-perceptions of social competence to explore whether higher symptoms are associated with self-evaluations that are more accurate (i.e., depressive realism), negatively biased (i.e., cognitive distortion), or less accurate (i.e., self-verification perspective). In 133 young adults, depressive symptoms and discrepancies between self- and peer ratings of social competence were assessed. Results demonstrated a linear relationship between depressive symptoms and self-peer discrepancies, such that higher symptoms were associated with underestimation of the self and low symptom levels were linked with overestimation of the self relative to peer evaluations. These findings suggest negative bias in dysphoric's self-perceptions, supporting cognitive distortion models, as well as positive bias in self-perceptions of those with low depressive symptoms. © 2008 Wiley Periodicals, Inc. *J Clin Psychol* 64: 1-15, 2008.

Keywords: depressive symptoms; social competence; self-evaluation; cognitive distortion; depressive realism

Researchers and clinicians have long been interested in the accuracy (or inaccuracy) of depressed individuals' self-perceptions. Currently, the ongoing debate regarding the manner in which depressed individuals evaluate their own competencies, skills, and characteristics can be summarized by three competing perspectives. First, according to the depressive realism hypothesis, depressed individuals are "sadder but

Correspondence concerning this article should be addressed to: Sarah Whitton, who is now at the Center for Anxiety and Related Disorders, Boston University, 648 Beacon Street, Boston, MA 02215; e-mail: swhitton@bu.edu

wiser” (Alloy & Abramson, 1979); that is, they have more realistic self-perceptions than do nondepressed individuals, who are positively biased in their self-evaluations. In fact, Taylor and Brown (1988) proposed that positively distorted and biased judgments (“positive illusions”) are a characteristic of mental health, citing evidence that mentally healthy people tend to make unrealistically positive self-evaluations, perceive themselves as having more control than they actually do, and are unrealistically optimistic. Depression, in contrast, is thought to be characterized by accurate, realistic self-perceptions (Taylor & Brown, 1988). Consistent with this perspective, early studies have demonstrated that dysphoric individuals’ self-evaluations of social competence were in line with external observer’s evaluations while nondepressed individuals overestimated their social competence (e.g., Ducharme & Bachelor, 1993; Lewinsohn, Mischel, Chaplin, & Barton, 1980).

In contrast, Beck’s (1967) cognitive theory of depression suggests that rather than being accurate perceivers of their own abilities and characteristics, depressed individuals have unrealistically negative views of the self. Depression is thought to be characterized by information processing that is systematically negatively biased, selective attention to negative self-referent experiences, and distortion of information relevant to the self in a negative direction (Beck, 1967). In support of this cognitive distortion model, depression has been associated with negative bias in self-ratings of personality (McKendree-Smith & Scogin, 2000), task performance (Fu, Koutstaal, Fu, Poon, & Cleare, 2005), and competence (Cole, Martin, Peeke, Seroczynski, & Hoffman, 1998; Hoffman, Cole, Martin, Tram, & Seroczynski, 2000). The negative distortion of self-perceptions in depression may be particularly salient in the social domain. Dysphoric individuals have been shown to underestimate their social skills and social acceptance whereas nondysphorics’ social self-evaluations were relatively accurate (Cole et al., 1998; Dobson, 1989; Qian, Wang, & Chen, 2002).

More recently, Joiner, Kistner, Stellrecht, and Merrill (2006) put forth a third perspective based on the self-verification principle that individuals seek social feedback that is consistent with their self-views (e.g., Swann & Read, 1981). Self-verification theory states that even those who have negative self-conceptions prefer feedback that confirms their negative views (Giesler, Josephs, & Swann, 1996) because it bolsters their perceived control and psychological needs for consistency (Swann, Stein-Seroussi, & Giesler, 1992). Building upon this theory, Joiner et al. posited that inaccuracy in self-evaluations, which leads to a discrepancy between self-views and others’ views of the self, will threaten perceptions of control and consistency and therefore be associated with psychological distress. That is, because evaluating oneself either too positively or too negatively will create uncomfortable situations in which social feedback does not verify the self-concept, it should be correlated with poorer mental health (Joiner et al., 2006). In support of this theory, these authors found that both overestimation and underestimation of the self (i.e., both positive and negative bias) were correlated with dysphoria.

Clarifying the nature of self-evaluations in depression may have important clinical implications. If the depressive realism hypothesis is correct, then the aim of cognitive therapy should not be increasing the accuracy of depressed patient’s thoughts and self-evaluations (as indicated by Beck’s cognitive distortion model), but developing a positive bias in their self-appraisals that mimics that of mentally healthy people (cf. Ackermann & DeRubeis, 1991). If the self-verification perspective is correct, even though clinical interventions should aim to increase accuracy of self-evaluation, this would not be done solely by targeting a systematic negative cognitive bias; rather, overly positive self-appraisals also would need to be challenged. Applied to

self-appraisals of social competence, if depressed individuals are more accurate than most in assessing their social skills, their reports of social skills should be highly valued when planning treatment strategies. However, if there is a systematic negative bias in depressed patients' perceived social competence, their unrealistically negative self-reports of social functioning may lead clinicians to initiate social skills training when cognitive interventions to improve the accuracy of self-evaluations may be more appropriate.

Accordingly, the purpose of the current study was to assess the manner in which depressive symptoms relate to self-evaluations of social competence. We evaluated three competing perspectives: depressive realism (Alloy & Abramson, 1979; Taylor & Brown, 1988), Beck's (1967) cognitive theory, and the self-verification perspective (Joiner et al., 2006), which make contradicting predictions about how depression and dysphoria (i.e., subclinical, but elevated, depressive-symptom levels) relate to self-evaluations. Depressive realism theory predicts that depressed people will make highly accurate self-evaluations while the nondepressed will show a systematic positive bias in self-ratings. In contrast, Beck's cognitive distortion model predicts that elevated depressive symptoms will be associated with inaccurate self-evaluations that are systematically biased in a negative direction. Finally, self-verification theory predicts that both positively biased and negatively biased self-evaluations (i.e., overestimation and underestimation of one's own abilities, relative to others' evaluations) will be associated with higher depressive-symptom levels.

We chose to examine young adults' self-appraisals in the domain of social competence for several reasons. First, researchers have increasingly called for improving the ecological validity of studies on depressive realism by assessing self-perceptions that are closely related to self-worth, emotionally salient, and clinically relevant, in that they involve potential distortions depressed individuals might make on a daily basis (Ackermann & DeRubeis, 1991; Fu et al., 2005). Perceptions of performance in relationships and social interactions are thought to be commonly distorted in depression (Beck, 1967) and are frequently targeted in cognitive and interpersonal therapy (Beck, Rush, Shaw, & Emery, 1979; Markowitz & Weissman, 1995). Second, perceived social competence is an important component of young adults' overall functioning (Larson, Whitton, Hauser, & Allen, 2007; Roisman, Masten, Coatsworth, & Tellegen, 2004). While it is generally agreed that elevated depressive symptoms are associated with social and relationship problems (Coyne, 1976), we focus on the extent to which individuals perceive their social skills to be worse (or better) than they actually are.

To estimate how accurate or biased individuals may be in their self-perceptions, it is necessary to choose an external criterion or objective standard with which to compare the self-perceptions (see Ackermann & DeRubeis, 1991). Based upon the Realistic Accuracy Model of trait judgment, which emphasizes the importance of external raters' exposure to trait-relevant behaviors (Funder, 1995), we selected peer ratings as our standard of comparison for evaluations of social competence. Although we recognize that peer evaluations are not entirely objective, error-free measures of reality, they nonetheless represent a particularly ecologically valid indicator of social competence. Peers are uniquely situated to have exposure to the individuals' behaviors, abilities, and success in social interactions and relationships. In addition, peers have awareness of the social norms of the individual's particular peer group. Therefore, behavioral cues relevant to making judgments of social competence are readily available to peers, who, given their membership in the same social network as the target individual, should be skilled at detecting those cues and

utilizing them to form evaluations of the target's social competence (Funder, 1995). In addition, peer ratings may be more valid than those of unacquainted, objective observers, who tend to make overly negative judgments of participant social competence (Fu et al., 2005; McNamara & Hackett, 1986). As such, peer ratings provide a reasonable benchmark with which to compare the participants' self-ratings. Therefore, discrepancies between self- and peer ratings of social competence were used to create indices of accuracy versus bias in social self-evaluations.

Finally, we tested for gender differences in levels of discrepancy between self- and peer ratings as well as in the association between depressive symptoms and level of discrepancy between self- and peer ratings. Women have significantly higher rates of major depressive disorder and subdiagnostic depressive symptoms than do men (Kessler, 2003; Kessler, Zhao, Blazer, & Swartz, 1997), and women's depression may be more closely associated with interpersonal difficulties (vs. competence) than is men's (Kendler, Thornton, & Prescott, 2001). It is therefore plausible that dysphoria relates differently to social self-evaluations in men than it does in women. Although potential gender differences are largely ignored in depressive realism research (Beyer, 2002), dysphoria has been associated with more negatively biased predictions of future events (Strunk, Lopez, & DeRubeis, 2006) and social self-judgments (Kistner, Balthazor, Risi, & David, 2001) for women, but not men. Given the paucity of evidence, we did not make directional predictions regarding gender differences in self-appraisal accuracy or its association with depressive symptoms.

In sum, in this study we contribute to the literature on the associations between depressive symptoms and self-evaluations by assessing perceived competence in the emotionally salient and clinically relevant domain of social relationships, and by using an ecologically valid external criterion upon which to compare self-evaluations (i.e., peer ratings of social competence). In addition, because many researchers have noted problems with the frequent reliance on college-student samples with little variance in depressive symptoms (e.g., Ackerman & DeRubeis, 1991), we explored these associations in a sample of young adults (mean age = 25) participating in a longitudinal study of psychosocial development, originally recruited from both clinical and a nonclinical settings, to include individuals with a wide range of psychological and social functioning (discussed next).

Method

Participants

The sample was comprised of 133 young adults originally recruited as adolescents for a longitudinal study of psychosocial development. To capture a wider range of psychosocial functioning than typically observed in community samples, the original sample included two groups: a psychiatrically hospitalized group and a demographically matched high-school group (Hauser, 1991). The hospitalized sample ($n = 70$; 31 females and 39 males; mean age = 14.1 years, $SD = 1.0$) was drawn from consecutive early adolescent admissions to an inpatient psychiatric unit, excluding those with diagnoses of mental retardation, psychosis, or psychiatric symptoms attributable to medical illness. Specific diagnoses at admission, which included anxiety disorders (5.7%) depressive disorders (22.9%), behavioral disorders (50%), and other disorders (20.6%), have not predicted any young adult outcomes (Allen, Hauser, & Borman-Spurrell, 1996). The high-school group ($n = 76$; 41 females and 35 males; mean age = 14.5 years, $SD = .40$) was recruited from the ninth grade of a local public high school. The groups did not differ on any variable other than

socioeconomic status, which was slightly higher for the high-school group, although both groups were in the upper middle class range.

Data for the current study were collected during the young adult phase of the study, approximately 11 years after the original assessment. All participants completed a battery of interviews and questionnaires and were paid \$120. Of the original 146 participants, 142 participated, 1 had died, and 3 refused participation. Noncompleters did not differ from completers on any of the demographic or psychiatric measures, although the small number precluded formal attrition analyses (Allen & Hauser, 1996). Average age of participants was 25.4 years ($SD = 1.1$, range = 22–27). Participants were predominantly Caucasian (96.6%); 3.4% were African American. Most participants were single while about one fourth (22%) were married, 5 (3.8%) were separated, 4 (3.0%) were divorced, and 1 (0.8%) was widowed. Median young adult yearly income was in the \$20,000–30,000 range. Educational levels ranged from 10% who did not complete high school to 2.3% who had obtained a doctoral degree.

As part of the young adult assessment, participants provided the names of two peers to complete a peer-rated measure of the participant's personality characteristics (see *Measures*). Peer data were missing from 9 participants who were unable to name peers or whose peers did not agree to provide data, leaving a final sample of 133 young adults (66 females, 67 males). Participants with versus without peer ratings did not differ on any demographic or outcome variable other than they were more likely to be originally recruited from the high school ($n = 74$) than from the hospital site ($n = 59$); $\chi^2(1) = 7.69$, $p < .01$, small effect size, $\Phi = .24$ (Cohen, 1992). There were equal numbers of male and female peer raters; two thirds were of the same gender as the participant. Most peer raters were friends of the participant (69%), 7.5% were relatives of a similar age to the participant (4 siblings, 4 brother- or sister-in-laws, and 2 cousins), and 24% were either boyfriends or girlfriends ($n = 32$) or spouses ($n = 16$). Peer raters had known the participants for an average of 8.25 years (range = 0.08–26 years); 95% had known the participant for 1 year or longer. No peer characteristics, including gender, type of relationship (romantic vs. friendship, same-sex or cross-sex), and duration of relationship, were associated with mean levels of peer-rated social competence, self-peer agreement, or bias in self-ratings compared to peer ratings.

Measures

Demographic variables. A Demographic Information Form was used to gather background information including age, gender, income, occupation, education level, race, and marital status of the participants at the young adult assessment. Dummy variables were created for gender (0 = male, 1 = female), race (White = 0, African American = 1), psychiatric background (0 = high-school sample, 1 = psychiatric hospital sample), and marital status.

Self-rated social competence. Self-ratings of social competence were assessed using a composite of the Intimate Relationships subscale and the Perceived Sociability subscale of the Adult Self-Perception Profile (Messer & Harter, 1986). Together, these subscales create an eight-item measure tapping individuals' perceived competence in social interactions and relationships, including the capacities to form and maintain close dyadic relationships, interact successfully with others, and meet new people. Each item consisted of a forced-choice question on a 4-point scale ranging from 1 (*low perceived competence*) to 4 (*high perceived competence*). For

example: “Some adults find it hard to develop intimate relationships (1 = *really true for me*, 2 = *sort of true for me*) BUT other adults do not have difficulty establishing intimate relationships (3 = *sort of true for me*, 4 = *really true for me*). Other items, in parallel formats, asked about perceived competence in developing close relationships, seeking out close relationships, communicating openly with friends and romantic partners, being liked/enjoyed by others, comfort with meeting new people, being at ease in social situations, and being sociable. The subscales have demonstrated evidence of good reliability (α s = .73–.83) and validity (Donnellan, Trzesniewski, Conger, & Conger, 2007; Messer & Harter, 1986). In this sample, internal consistency of the combined scale was high (α = .82, all item-total correlations > .48).

Peer-rated social competence. The two peers selected by each participant used the California Q-Sort (Block, 1974) to provide a detailed description of the participant. The Q-sort consists of 100 widely ranging statements about the personality and social characteristics of individuals. Peers arranged the 100 items into forced distributions, in which each statement was classified according to how well it characterized the participant on a scale of 0 (*extremely uncharacteristic*) to 9 (*extremely characteristic*). The two peer ratings for each item were averaged to obtain one score. Scores for nine items describing competence in social groups and relationships (“Is warm and has the capacity for close relationships;” “Is liked and accepted by most people;” “Behaves in a way that is sympathetic or considerate of others;” “Is turned to or sought out for advice and reassurance;” “Is basically distrustful of people and in general, questions their motives” [reverse scored]; “Appears poised and comfortable in social situations;” “Is sociable—enjoys and makes a point of being with others;” “Is playful and humorous in social situations;” “Is personally charming”) were averaged to construct the peer ratings of social competence (Larson et al., 2007). Although the response format of this measure (Q-Sort) was different than that of the self-reports, items were highly similar. The peer-rated social competence measure has shown evidence of reliability and validity (Larson et al., 2007). In this sample, internal consistency was good (α = .83).

Depressive symptoms. Using the 13-item Depression subscale of the Symptom Checklist 90-R (Derogatis, 1983), participants indicated how much they were bothered by each of 13 depressive symptoms (e.g., “feeling blue,” “crying easily”) during the last 6 months on a Likert-type scale of 0 (*Not at all*) to 4 (*Extremely*). For ease of interpretation, scores reflect the average rating across items, ranging from 0 to 4. In this dataset, the scale showed good internal consistency (α = .89; all item-total correlations > .35).

Discrepancies between self- and peer ratings, indexing level of positive or negative bias in self-evaluations of social competence. The level of positive or negative bias, versus accuracy, in participants’ social self-evaluations was operationalized by level of discrepancy between self-ratings and peer ratings of social competence. Although we acknowledge that peer ratings are not an error-free or absolute standard against which to determine accuracy of self-evaluations, they do represent an ecologically valid benchmark with which to compare the self-ratings. To compute discrepancy scores, we used standardized differences between self- and peer ratings of social competence. Although residualized differences between two informants’ ratings are commonly used in the literature, standardized difference scores are recommended for measurement of informant discrepancies because in contrast to residualized

differences, they do not correlate more highly with one informant's ratings than the other's and tend to produce more consistent estimates of associations with other variables (De Los Reyes & Kazdin, 2004). To calculate the standardized difference scores, we first transformed the peer and self-ratings of social competence into z scores to place them on the same metric or scale of variability.¹

To create the discrepancy scores (i.e., the index of bias in self-ratings of social competence), we subtracted the standardized peer ratings from the standardized self-ratings. Consequently, scores of zero indicate that self-ratings matched peer ratings of social competence, higher scores (with positive values) indicate positive bias or overestimation of competence relative to peer ratings, and lower scores (with negative values) indicate greater negative bias or underestimation of competence in comparison to peer ratings. As such, this measure captures tendencies to be positively or negatively biased in self-evaluations of social competence, relative to peer ratings.

Results

Overview of Data Analysis

Analyses proceeded in three stages. We first assessed the level of discrepancy between the self- and peer ratings of social competence. Second, we explored potential effects of gender and other demographic variables on key variables and the relations between variables. Third, we investigated the association between depressive symptoms and discrepancies between self- and peer ratings of social competence, controlling for key demographic variables.

Preliminary Analyses

The simple correlation between self- and peer ratings of social competence was in the small to moderate range ($r = .35, p < .001$), consistent with past research (e.g., Cole et al., 1998). Although peer ratings accounted for about 10% of the variance in self-ratings, there was substantial remaining variance in the self-ratings. This indicates that there was variability in the extent to which participants gave self-ratings of social competence that were consistent with the ratings of their peers, or over- or underestimated their social competence relative to peer ratings.

We next explored potential effects of demographic variables including gender, age, income, occupation, education level, race, psychiatric background, and marital status on all other variables. Only psychiatric background and gender showed significant associations with variables of interest. First, because one-way ANOVAs revealed that psychiatric background was associated with most variables, means and SDs of all measures are presented in Table 1 separately for the psychiatric and high-school groups. The previously hospitalized group was rated by self and peers as lower on social competence and had higher levels of depressive symptoms, but did not differ in mean discrepancy between self- and peer ratings. There also was a gender difference: Females had marginally higher average self-reported social competence ($M = 6.26$) than did males ($M = 5.92$; $F = 2.86, p < .10, d = .30$, small effect size). However, males and females did not differ in level of discrepancy

¹To test whether our findings were robust across analytic strategy, we also tested hypotheses using residualized differences between self- and peer-ratings as the estimate of inter-rater agreement. Because results were virtually identical to those using standardized difference scores, these analyses are not presented.

Table 1
Means and SDs of all Variables by Psychiatric Background Group

	High school (<i>n</i> = 59)	Psych. Hospital (<i>n</i> = 74)	<i>F</i> (1, 131)	Effect size (<i>d</i>)
Self-rated social competence	3.21(.54)	2.83 (.60)	14.50***	.67
Peer-rated social competence	6.58 (1.05)	5.81 (1.26)	14.83***	.68
Depressive symptoms	0.77 (.53)	1.00 (.72)	4.53*	.37
Discrepancy between self- and peer ratings	0.14 (.99)	−0.12 (1.32)	0.02	.02

Note. *F* values and effect sizes are from one-way ANOVAs comparing means across groups.

****p* < .001; ***p* < .01; **p* < .05.

between self- and peer-rated social competence. Based on these preliminary findings, gender and psychiatric history were controlled for in models testing hypotheses.

We also conducted preliminary analyses testing for moderating effects of gender and psychiatric background on the associations between bias in self-appraisals of social competence (i.e., discrepancies between self- and peer ratings) and depressive symptoms. Depressive symptoms were regressed onto the demographic variable (i.e., gender or psychiatric background) and the discrepancy score, and then onto an interaction term created by multiplying the demographic variable by the discrepancy score. All variables were centered prior to entry in the regression equation to avoid issues of multicollinearity. Neither the Gender × Discrepancy Score interaction term nor the Psychiatric Background × Discrepancy Score interaction term were significant (*ps* > .10). This finding suggests that the association between depressive symptoms and discrepancy scores did not differ significantly across the psychiatrically hospitalized and high-school samples, or between women and men. Therefore, it is reasonable to assume that combining these groups to maximize power would not obscure meaningful differences in patterns of associations between recruitment groups or genders. Accordingly, we used the full sample for subsequent analyses, although gender and psychiatric background were controlled.

Associations between depressive symptoms and discrepancies between self- and peer ratings of social competence. To test whether depressive symptoms were associated with degree of bias in self-appraised social competence relative to peer ratings, we first calculated the simple correlation between symptom level and the discrepancy scores (see “Simple *r*,” Table 2). The correlation was negative, indicating that higher depressive symptoms were correlated with more negative discrepancy scores, or a greater underestimation of one’s own social competence relative to peer ratings, while lower depressive symptoms were associated with more positive discrepancy scores, or viewing the self more positively than the self is viewed by peers. Next, we conducted a hierarchical regression. Depressive-symptom level was regressed onto control variables (i.e., gender and psychiatric background), the discrepancy scores, and all potential interaction terms between control variables and the discrepancy scores. All predictors were centered to minimize problems associated with multicollinearity. Because no interaction terms were significant, they were not included in the final model. In addition, to provide a direct test of self-verification theory (which predicts that elevated depressive symptoms are associated with both overly positive and overly negative self-appraisals, so that there should be a curvilinear association between the discrepancy scores and depression), we also

Table 2
Prediction of Depressive-Symptom Level With Discrepancy Between Self- and Peer Ratings of Social Competence

Step and predictors	Simpler	Multiple regression results		
		Final model β	Step $R^2 \Delta$	Cumulative R^2
1. Gender ^a				
Psychiatric background ^b	.12	.07		
2. Discrepancy score	.24	.21*	.07*	.07*
3. Squared discrepancy score	-.31***	-.30***	.09**	.16**
score	.16	.10	.01	.11**

^aGender was dummy coded (0 = male, 1 = female).

^bPsychiatric Background was dummy coded (0 = high-school sample, 1 = psychiatric hospital sample).

* $p < .05$; ** $p < .01$; *** $p < .001$.

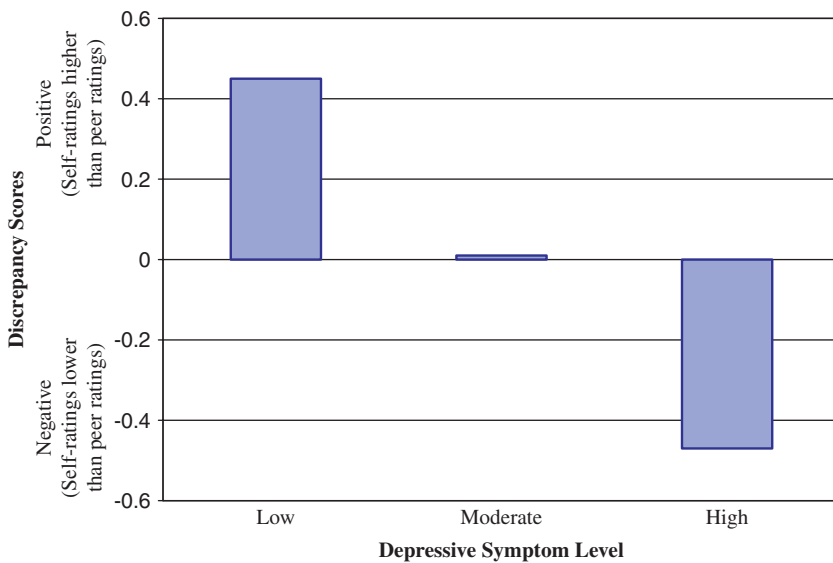


Figure 1. The Association between depressive symptoms and discrepancy between self- and peer-ratings of social competence.

entered a quadratic term (i.e., the discrepancy score squared) into the regression equation.

Results are displayed in Table 2. The significant coefficient for the discrepancy score indicates that even when controlling for gender and psychiatric background, depressive symptoms were negatively associated with the discrepancy scores between self- and peer ratings of social competence, which served as our index of bias in self-evaluations. In contrast, the coefficient for the quadratic term was nonsignificant, giving no evidence for a curvilinear association between depressive symptoms and discrepancy scores.

Together, these results indicated a linear association between depressive symptoms and the discrepancy scores between self- and peer ratings. Recall, however, that high (i.e., positive) values on the discrepancy scores represent overestimation of the self relative to peer ratings and that low (i.e., negative) values represent underestimation

of the self relative to peer ratings. Therefore, this linear association could have been driven by participants with high levels of depressive symptoms demonstrating *negative* bias in their self-appraisals, by individuals with few or no depressive symptoms demonstrating *positive* bias in their self-perceptions, or both. To clarify this issue, we created three groups based on level of depressive symptoms. Participants with depression scores $> 1 SD$ below the mean ($n = 17$) were classified as “low,” those with scores within $1 SD$ above or below the mean ($n = 97$) were classified as “moderate,” and those with scores $> 1 SD$ above the mean ($n = 19$) were classified as “high” in depressive symptoms. We then conducted a one-way ANOVA to compare mean discrepancy scores across the three groups. Consistent with regression results, there was a main effect of depression group on discrepancy scores, $F(2, 129) = 3.10, p < .05$. As illustrated in Figure 1, the moderate dysphoric group showed self-ratings that were relatively consistent with peer ratings ($M = 0.01$) whereas the low dysphoric group evidenced positively biased self-ratings compared to peer ratings ($M = .45$), and the high dysphoric group showed a negative bias in self-perceptions relative to peers ($M = -.47$).

Discussion

In the current study, we examined relations between depressive symptoms and self-evaluations to test the predictive value of three competing theories: depressive realism (Alloy & Abramson, 1979; Taylor & Brown, 1988), negative cognitive distortion (Beck, 1967), and self-verification (Joiner et al., 2006). We focused on how depressive symptoms relate to self-perceptions in the social domain, given the importance of perceived social and interpersonal success to general well-being and psychosocial adjustment (e.g., Larson et al., 2007; Riggio, Watring, & Throckmorton, 1993; Roisman et al., 2004).

The central finding of this study was a linear association between depressive-symptom level and discrepancies between self- and peer ratings of social competence, reflecting both negative bias in the self-perceptions of individuals with elevated depressive symptoms and positive bias in the self-perceptions of those with few or no symptoms. This association was observed in male and female participants as well as in participants with and without a history of psychiatric hospitalization. Participants with higher depressive symptoms perceived themselves more negatively than their peers perceived them to be, consistent with Beck's (1967) cognitive theory that depression is characterized by systematic negative distortions in self-perceptions. This finding replicates numerous other studies documenting a link between depressive symptoms and cognitive errors in which the self is underestimated; dysphorics have demonstrated negative bias in varying types of self-appraisals, including evaluations of their task performance (e.g., Beyer, 2002; Fu et al., 2005) and competence in various life domains (e.g., academic, athletic; Cole, Martin, Peeke, Seroczynski, & Hoffman, 1998; Cole, Peeke, Dolezal, Murray, & Canzoniero, 1999; Qian et al., 2002).

The linear relationship between depressive symptoms and discrepancy scores also reflected that participants with low depressive symptoms tended to be positively biased in their social self-perceptions, viewing themselves more positively than their peers viewed them. Looked at in this way, the present findings are consistent with one tenet of depressive realism—that nondepressed, nondysphoric individuals tend to overestimate their abilities and be unrealistically positive in their self-evaluations (i.e., “positive illusions;” Taylor & Brown, 1988). Although depressive realism and

Beck's cognitive distortion model can be viewed as competing perspectives, the current findings highlight how there is some extent to which they overlap. Essentially, both perspectives propose a linear relationship between depressive-symptom level and bias in self-evaluations (which we observed in this sample), but focus on a different section of the distribution. Whereas depressive realism emphasizes how low symptom levels are associated with positive bias, Beck's theory emphasizes how high symptom levels are linked with negative bias. The present data provide support for both of these proposals.

Our interpretation of the current findings resonates with Ackerman and DeRubeis' (1991) hypothesis that some of the discrepant findings in depressive realism research could be explained by differences in depressive-symptom level. These authors suggested that while severe depression may be characterized by negatively biased self-views (Beck, 1967) and freedom from any depressive symptoms characterized by a self-enhancing bias (Taylor & Brown, 1988), it may be that individuals with some, but not too many, depressive symptoms are the ones who can form accurate self-judgments. Consistent with this proposal and the current results, a handful of other studies have found evidence that depressive-symptom level is related not only to degree of bias in self-perceptions but also to the direction of the bias. For example, in recall of self-evaluative information, nondepressed students showed positive distortion, "mildly" dysphoric students showed relative accuracy, and moderately dysphoric students showed negative bias (Dennard & Hokanson, 1986). Similarly, McKendree-Smith and Scogin (2000) found that nondepressed participants were positively biased, individuals with mild depressive symptoms were neutral, and moderately to severely depressed participants were negatively biased in their interpretations of their personality.

Despite this overlap between the negative cognitive bias perspective and certain aspects of depressive realism theory (i.e., positive illusions of the mentally healthy), we cannot forget the central hypothesis of depressive realism—that depression is characterized by accurate, realistic self-ratings (Alloy & Abramson, 1979; Taylor & Brown, 1988). This hypothesis was directly contradicted by the current findings. In this sample, depressive symptoms were not correlated with agreement between self- and peer ratings of social competence; rather, higher symptom levels were associated with more negatively biased self-perceptions. Our results also were not supportive of the self-verification perspective (Joiner et al., 2006), which predicts a curvilinear association between depressive symptoms and self-other discrepancies, in which holding either an overly positive or an overly negative view of the self is linked with higher depression. Joiner et al. (2006) demonstrated support for self-verification theory; in their sample, participants who self-evaluated accurately had lower symptoms than did those who either underestimated the self (self-denigrators) or those who overestimated the self (self-enhancers). In contrast, we did not observe depressive symptoms to be associated with a positive, self-enhancing bias. Rather, we found that self-enhancers showed the lowest levels of symptoms. Future research is needed to explain this discrepancy in findings.

Consistent with previous research and theory suggesting a link between depression and interpersonal problems (e.g., Coyne, 1976), there was a small, negative correlation between depressive symptoms and peer-rated social competence ($r = -.17, p < .05$), indicating that peers rated participants with elevated depressive symptoms as less socially competent. Our study suggests, however, that individuals with higher depressive symptoms not only are rated as less socially competent than their peers, they also rated themselves as even lower on social competence than they

were rated by their peers. Thus, dysphoric young adults appear to have small social weaknesses, but they also perceive themselves as being even less socially competent than others report them to be. In a parallel fashion, the present findings suggest that nondysphoric young adults may not only be socially skilled but also make overly self-enhancing judgments of their social competence.

Several limitations of this study should be noted. First, we relied on peer ratings as our indicator of "true" social competence, a strategy that assumes peer ratings are more indicative of reality than are self-ratings (cf. Joiner et al., 2006). Although peer ratings are particularly ecologically valid makers of social abilities, given peers' exposure to the individuals' behaviors in social interactions as well as their awareness of the social norms of the individual's particular peer group, they are nevertheless subject to personal bias. We did not have data on the peers' characteristics, such as their own depressive-symptom levels, that may have influenced their ratings of the participants' social competence. Future research is needed comparing self-reported social competence to other criteria such as observer ratings of participants' peer interactions. Although observer ratings have their own unique limitations, accumulation of findings across studies using different objective standards of comparison will increase confidence in the results.

Second, peer ratings and self-ratings were not made on the same scale, prohibiting the exploration of mean differences between self- and peer reports in raw social-competence scores. Rather, because we standardized peer and self-reports from different scales to create discrepancy scores, the discrepancy scores were based on relative rank within the current sample. Third, we assessed level of depressive symptoms rather than diagnostic depression. Therefore, our results speak only to how increased levels of depressive symptoms relate to greater negative bias in self-appraisals, not to differences between depressed and nondepressed individuals. However, Beck's (1967) proposal that negatively biased self-views may develop as depression becomes more severe suggests that the association between symptoms and negative bias would only be attenuated in our less severe, nonclinical sample. In addition, other studies comparing individuals with major depression to nondepressed people have demonstrated similar findings supporting the negative cognitive bias perspective (Fu et al., 2005). Finally, we assessed self-evaluations only in the social domain; future research is needed to assess how depressive symptoms relate to potential bias in perceived competence in other life domains that are highly salient to an individual's self-worth.

Keeping these limitations in mind, and recognizing that replication of these results is needed before confident conclusions are drawn, we offer some clinical implications of the present findings. Together with a wealth of other studies documenting a negative cognitive bias in depressed and dysphoric individuals (e.g., Cole et al., 1998; Cole et al., 1999; Fu et al., 2005; Qian et al., 2002), these findings bolster the empirical foundation for cognitive therapy for depression (Beck et al., 1979), which directly targets unrealistic, negative thoughts and attempts to replace them with more realistic, positive thoughts and evaluations. In fact, the association between positively biased self-perceptions and very low depressive symptoms suggests that it may be clinically indicated to promote positive illusions, or slightly overoptimistic and overly positive self-views, in clients to promote mental health (Taylor & Brown, 1988). Additionally, the current results suggest that clinical assessment of social skills and relationship competencies via self-report methods may be problematic with depressed clients. Therapists may wish to consider that the reports of clients with elevated depressive symptoms may be unrealistically negative. Although clinical

interventions to augment social skills may well be appropriate among such clients, given the interpersonal difficulties that often characterize depression (e.g., Coyne, 1976), cognitive interventions aimed at reducing negative bias in social self-evaluations also may be warranted. Moreover, gathering information about clients' social competency from other sources such as peers or family members might improve the accuracy of assessment results and shed light on the extent to which clients' self-perceptions are self-denigrating.

In conclusion, this study further informs the literature regarding the associations between depression and accuracy of self-appraisals by demonstrating a linear relationship between levels of depressive symptoms and discrepancies between young adults' social self-perceptions and how they are perceived by close peers. The observed links between high symptom levels and tendencies to underestimate the self relative to peers as well as between low symptom levels and tendencies to overestimate the self call for an integration of theories proposing cognitive errors of underestimation in depressed persons' self-appraisals (Beck, 1967; Beck et al., 1979) and errors of overestimation in mentally healthy individuals (Taylor & Brown, 1988).

References

- Ackermann, R., & DeRubeis, R.J. (1991). Is depressive realism real? *Clinical Psychology Review*, 11(5), 565–584.
- Allen, J.P., & Hauser, S.T. (1996). Autonomy and relatedness in adolescent–family interactions as predictors of young adults' states of mind regarding attachment. *Development & Psychopathology*, 8(4), 793–809.
- Allen, J.P., Hauser, S.T., & Borman-Spurrell, E. (1996). Attachment theory as a framework for understanding sequelae of severe adolescent psychopathology: An 11-year follow-up study. *Journal of Consulting & Clinical Psychology*, 64(2), 254–263.
- Alloy, L.B., & Abramson, L.Y. (1979). Judgment of contingency in depressed and nondepressed students: Sadder but wiser? *Journal of Experimental Psychology*, 108(4), 441–485.
- Beck, A.T. (1967). *Depression: Clinical, experimental and theoretical aspects*. New York: Harper & Row.
- Beck, A.T., Rush, A.J., Shaw, B.F., & Emery, G. (1979). *Cognitive therapy of depression*. New York: Guilford Press.
- Beyer, S. (2002). The effects of gender, dysphoria, and performance feedback on the accuracy of self-evaluations. *Sex Roles*, 47(9), 453–464.
- Block, J. (1974). *The Q-Sort method of personality assessment and psychiatric research*. Palo Alto, CA: Consulting Psychologists Press.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112(1), 155–159.
- Cole, D.A., Martin, J.M., Peeke, L.G., Seroczynski, A.D., & Hoffman, K. (1998). Are cognitive errors of underestimation predictive or reflective of depressive symptoms in children: A longitudinal study. *Journal of Abnormal Psychology*, 107(3), 481–496.
- Cole, D.A., Peeke, L., Dolezal, S., Murray, N., & Canzoniero, A. (1999). A longitudinal study of negative affect and self-perceived competence in young adolescents. *Journal of Personality and Social Psychology*, 77(4), 851–862.
- Coyne, J.C. (1976). Toward an interactional description of depression. *Psychiatry: Journal for the Study of Interpersonal Processes*, 39(1), 28–40.
- De Los Reyes, A., & Kazdin, A.E. (2004). Measuring informant discrepancies in clinical child research. *Psychological Assessment*, 16(3), 330–334.

- Dennard, D.O., & Hokanson, J.E. (1986). Performance on two cognitive tasks by dysphoric and nondysphoric students. *Cognitive Therapy and Research*, 10(3), 377–386.
- Derogatis, L.R. (1983). *SCL-90 Administration, Scoring and Procedures Manual*. Towson, MD: Clinical Psychometric Research.
- Dobson, K.S. (1989). Real and perceived interpersonal responses to subclinically anxious and depressed targets. *Cognitive Therapy and Research*, 13(1), 37–47.
- Donnellan, M.B., Trzesniewski, K.H., Conger, K.J., & Conger, R.D. (2007). A three-wave longitudinal study of self-evaluations during young adulthood. *Journal of Research in Personality*, 41(2), 453–472.
- Ducharme, J., & Bachelor, A. (1993). Perception of social functioning in dysphoria. *Cognitive Therapy and Research*, 17(1), 53–70.
- Fu, T., Koutstaal, W., Fu, C.H.Y., Poon, L., & Cleare, A.J. (2005). Depression, confidence, and decision: Evidence against depressive realism. *Journal of Psychopathology and Behavioral Assessment*, 27(4), 243–252.
- Funder, D.C. (1995). On the accuracy of personality judgment: A realistic approach. *Psychological Review*, 102(4), 652–670.
- Giesler, R.B., Josephs, R.A., & Swann, W.B.J. (1996). Self-verification in clinical depression: The desire for negative evaluation. *Journal of Abnormal Psychology*, 105(3), 358–368.
- Hauser, S.T. (1991). *Adolescents and their families: Paths of ego development*. New York: Free Press.
- Hoffman, K.B., Cole, D.A., Martin, J.M., Tram, J., & Seroczynski, A.D. (2000). Are the discrepancies between self- and others' appraisals of competence predictive or reflective of depressive symptoms in children and adolescents: A longitudinal study, Part II. *Journal of Abnormal Psychology*, 109(4), 651–662.
- Joiner, T.E.J., Kistner, J.A., Stellrecht, N.E., & Merrill, K.A. (2006). On seeing clearly and thriving: Interpersonal perspicacity as adaptive (not depressive) realism (or where three theories meet). *Journal of Social & Clinical Psychology*, 25(5), 542–564.
- Kendler, K.S., Thornton, L.M., & Prescott, C.A. (2001). Gender differences in the rates of exposure to stressful life events and sensitivity to their depressogenic effects. *American Journal of Psychiatry*, 158(4), 587–593.
- Kessler, R.C. (2003). Epidemiology of women and depression. *Journal of Affective Disorders*, 74, 5–13.
- Kessler, R.C., Zhao, S., Blazer, D.G., & Swartz, M. (1997). Prevalence, correlates, and course of minor depression and major depression in the national comorbidity survey. *Journal of Affective Disorders*, 45(1), 19–30.
- Kistner, J., Balthazor, M., Risi, S., & David, C. (2001). Adolescents' perceptions of peer acceptance: Is dysphoria associated with greater realism? *Journal of Social & Clinical Psychology*, 20(1), 66–81.
- Larson, J.J., Whitton, S.W., Hauser, S.T., & Allen, J.P. (2007). Being close and being social: Peer ratings of distinct aspects of young adult social competence. *Journal of Personality Assessment*, 89, 136–148.
- Lewinsohn, P.M., Mischel, W., Chaplin, W., & Barton, R. (1980). Social competence and depression: The role of illusory self-perceptions. *Journal of Abnormal Psychology*, 89(2), 203–212.
- Markowitz, J.C., & Weissman, M.M. (1995). Interpersonal psychotherapy. In E.E. Beckham & W.R. Leber, (Eds.), *Handbook of depression* (2nd ed., pp. 376–390). New York: Guilford Press.
- McKendree-Smith, N., & Scogin, F. (2000). Depressive realism: Effects of depression severity and interpretation time. *Journal of Clinical Psychology*, 56(12), 1601–1608.

- McNamara, K., & Hackett, G. (1986). Gender, sex-type and cognitive distortion: Self-perceptions of social competence among mild depressives. *Social Behavior and Personality*, 14(1), 113–121.
- Messer, B., & Harter, S. (1986). Manual for the Adult Self-Perception Profile. Unpublished manuscript.
- Qian, M., Wang, A., & Chen, Z. (2002). A comparison of classmate and self-evaluation of dysphoric and nondysphoric Chinese students. *Cognition & Emotion*, 16(4), 565–576.
- Riggio, R.E., Watring, K.P., & Throckmorton, B. (1993). Social skills, social support, and psychosocial adjustment. *Personality and Individual Differences*, 15(3), 275–280.
- Roisman, G.I., Masten, A.S., Coatsworth, J.D., & Tellegen, A. (2004). Salient and emerging developmental tasks in the transition to adulthood. *Child Development*, 75(1), 123–133.
- Strunk, D.R., Lopez, H., & DeRubeis, R.J. (2006). Depressive symptoms are associated with unrealistic negative predictions of future life events. *Behaviour Research and Therapy*, 44(6), 861–882.
- Swann, W.B., & Read, S.J. (1981). Self-verification processes: How we sustain our self-conceptions. *Journal of Experimental Social Psychology*, 17(4), 351–372.
- Swann, W.B., Stein-Seroussi, A., & Giesler, R.B. (1992). Why people self-verify. *Journal of Personality and Social Psychology*, 62(3), 392–401.
- Taylor, S.E., & Brown, J.D. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin*, 103(2), 193–210.