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Being Close and Being Social: Peer Ratings of Distinct Aspects of Young Adult Social Competence

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The present study had three main objectives: (1) to develop and validate scales of young adult social competence in two domains, close relationships and social groups, using peer ratings of California Q-sort (Block, 1974; Kremen & Block, 2002) items; (2) to test the hypothesis that social competence is associated with young adult well-being and ego development; (3) to test the hypothesis that close relationship competence aligns more closely than social group competence with young adult functioning. Psychometric data on peer ratings of social competence are presented. For 133 young adults, peer ratings of social competence were correlated in expected directions with indices of functioning (e.g., self-worth, education, psychological distress, criminal behavior, and ego development). Associations were generally stronger for competence in close relationships than in social groups.

Social competence refers to the ability to engage successfully in social interactions and interpersonal relationships, including the ability to express and interpret both verbal and nonverbal communication (e.g., Dodge & Murphy, 1989; Ford, 1982; Friedman, Rapport, & Lumley, 2003). While social competence is known to be important for healthy development in children and adolescents (e.g., Rubin, Bukowski, & Parker, 1998), there is a paucity of research on social competence during young adulthood, despite early evidence that it may be important for well-being in this age group as well (e.g., Masten, Burt, Roisman, Obradovic, Long, & Tellegen, 2004; Schulenberg, Bryant, & O'Malley, 2004; Riggio, Watring, & Throckmorton, 1993). The objective of the present study was to assess young adult social competence using peer ratings and to examine its associations with overall functioning.

MEASURING SOCIAL COMPETENCE

Most studies of social competence have used self-reports (e.g., Riggio et al., 1993), although other approaches have been used as well, including parent reports (Roisman, Masten, Coatsworth, & Tellegen, 2004), teacher reports (Cole, Maxwell, & Martin, 1997), structured role plays (Gaffney & McFall, 1981), peer reports (Eronen & Nurmi, 2001), and

a combination of self- and external raters (Buhrmester, Furman, Wittenberg, & Reis, 1988). Self-reports have both benefits and limitations. For factual information that does not require "interpretation," such as certain explicit behaviors, self-reports can be as accurate as external rater reports and are relatively low cost and easy to obtain (Dodge & Murphy, 1989). The validity of self-reported measures of many social and intellectual abilities, however, is questionable. For example, individuals with social skill deficits may be less aware of what constitutes skillfulness in social situations than are individuals with good social skills and may therefore overestimate their own social competence (Kruger & Dunning, 1999). Additionally, individuals with depressive symptoms or low self-esteem have been shown to have a negative bias in their self-assessments (e.g., Harter, 1990; Phillips & Zimmerman, 1990).

In contrast, external raters may offer a more objective perspective on individual's social competence (Dodge & Murphy, 1989). For this reason, parent reports often have been used to assess social competence in children (Achenbach, 2000). For measuring young adult social behavior, however, peers may be more useful reporters. As individuals move from childhood to adolescence to young adulthood, peers have been shown to play a more primary supportive role (Hazan & Zeifman, 1999), and parents may become less

reliable reporters of their offspring's behavior. Peers may also offer more valid ratings of social competence than other external raters, because this type of competence is context specific and based on the norms of the particular peer group in which social behavior occurs (Dodge & Murphy, 1989). Other external raters, such as parents or clinicians, may not be familiar with the social standards of the young adult peer group, and thus may inaccurately judge an individual's social capacity within that peer group. For example, adolescents rated by peers as very popular may be more likely to have engaged in minor deviant behaviors than unpopular teens, suggesting these behaviors may be valued by the peer group (Allen, Porter, McFarland, Marsh, & McElhaney, 2005). Non-peer raters, unaware of these peer group values, may inappropriately rate an individual with minor deviance as less socially competent.

Despite the theoretical benefit of using peer reports to assess young adult social competence, few researchers have done so. While several studies of young adults have included external raters such as parents or clinical judges (Masten et al., 2004; Roisman et al., 2004), only a small handful have used peer reports to assess social competence (Buhrmester et al., 1988; Eronen & Nurmi, 2001). Several studies have used measures that were adopted for peer reports, but originally were developed and validated as self-report measures (Buhrmester et al., 1988). Other studies have utilized peer ratings of sociometric status (i.e., peers are asked to nominate whom they would most and least like to spend time with) rather than formal rating scales (Eronen & Nurmi, 2001). Our review of the literature did not reveal a psychometrically sound measure developed and validated for peer ratings of young adult social competence. To address this gap in the literature, we developed a measure of social competence in young adults using data from the California Q-sort (Block, 1974; Kremen & Block, 2002). We assessed the convergent and discriminant validity of this measure by assessing its correlations with self- and expert-ratings of similar constructs.

YOUNG ADULTHOOD AND CLOSE RELATIONSHIPS

In order to develop a measure of social competence in young adulthood, we considered the salient features of this particular developmental period, namely, the increasing importance of dyadic relationships. Young adulthood, from the ages of approximately 18 to 25,¹ is a distinct stage in which context and social roles undergo dramatic changes (Masten et al., 2004). One of the most important aspects of development

during young adulthood is the increased emphasis on the formation of intimacy and mating relationships with other young adults (Masten et al., 2004). Dyadic relationships tend to grow in importance in young adulthood, and emphasis shifts away from one's place in the peer group (Buhrmester 1990; Bukowski, Hoza, & Boivin, 1993).

It is important to clarify what is meant by close relationship competence, and how this type of relationship might be differentiated from social group competence. To clarify this distinction, we turned to the child literature, in which a number of researchers have sought to define and differentiate peer dyadic experiences and peer group experiences (e.g. Bukowski, Hoza, & Boivin, 1993; Furman & Buhrmester, 1985; Hartup, 1993). One term describing dyadic relationships in the child literature is *friendship*, which describes a "voluntary, dyadic form of relationship that often embodies a positive affective tie" (Ladd, 1999, p. 337). In contrast, the concept of *peer acceptance* from the child literature describes "a child's relational status in a peer group, as indicated by the degree to which they were liked or disliked by group members" (Ladd, 1999, p. 337). A similar concept, *popularity*, describes how much a child is liked or disliked by his peer group. Bukowski and others differentiate popularity and friendship as being at the level of the group versus the dyad. They describe popularity as a unilateral relationship, the group toward the individual, as opposed to friendship, which is bilateral, a relationship between two individuals (Bukowski et al., 1993). While the peer group may offer companionship, friendship often has additional qualities such as closeness, security, and trust, and implies a more reciprocal relationship than one's relationship with a peer group. There is likely overlap between individuals who are able to maintain and develop close relationships and those who are successful in social groups (Bukowski et al., 1993); on the other hand, there are also clear advantages to distinguishing various domains of competence, particularly given evidence that different competencies are required in different types of relationships (e.g., Buhrmester et al., 1988). While these two domains may require overlapping skills, they can be distinguished from each other conceptually and empirically (Bukowski et al., 1993; Messer & Harter, 1986).

Drawing from these distinctions, we defined close relationship competence as the ability to achieve and maintain emotional intimacy with one individual. Close relationship competence refers to the skills associated with intimate dyadic relationships and friendship, such as warmth, trust, and reciprocity (Messer & Harter, 1986). In contrast, we define social group competence as having skills that lead to being liked and accepted by the group and being at ease with peers; this type of competence is closely linked with popularity in a group (Messer & Harter, 1986).

In measuring close relationship competence, we chose not to distinguish between nonromantic and romantic relationships. While there are important distinctions between romantic relationships and nonromantic friendships in young

¹Other authors have identified the period between the ages of 18 and 25 as a distinct developmental period entitled *emerging adulthood* (Arnett, 2000), arguing that given the experimental and evolving nature of identity during this period, young adulthood has not yet occurred. Still other authors refer to this period as *early adulthood* (e.g., Schulenberg et al., 2004).

adults, we were interested in the aspects of competence that allow one to be close with another individual. In the words of Furman, "friendships and romantic relationships are both egalitarian relationships characterized by features of affiliations, such as companionship and mutual intimacy" (2002, p. 179). The similarities between close friendships and romantic relationships increase as individuals move from early to late adolescence (Furman, 2002), and in young adulthood romantic relationships have many characteristics of close friendships: trust, support, closeness, and friendship (Seiffge-Krenke, 2003; Shulman & Kipnis, 2001).

SOCIAL COMPETENCE AND YOUNG ADULT FUNCTIONING

There is a lack of research investigating the association between social competence and young adult functioning. In order to further investigate this issue, we examined associations between peer-rated social competence in both domains (close relationships and social groups) with indices of young adult psychosocial functioning across a broad range of life domains, including psychological distress, self-esteem, criminal behavior, educational attainment, occupational prestige, and ego development.

The first domain, psychological distress, was included because an extensive literature links social difficulties with psychiatric disorders (Blakemore & Frith, 2004; Kiesner, 2002). Associations between psychopathology and lower social competence have been well established in the child literature (Parker & Asher, 1987; Parker, Rubin, Price, & DeRosier, 1995; Rubin et al., 1998). Specific disorders, such as depression, have been noted to be associated with low social competence in adolescents (Kiesner, 2002). In adults, research directly examining social competence has been relatively sparse, although for specific disorders, such as attention deficit hyperactivity disorder (ADHD), associations between lower social competence and increased symptoms have been found (e.g., Barklay, Murphy, & Kwasnik, 1996). Expanding on this literature, we hypothesized that both domains of social competence would be associated negatively with psychological distress.

We also assessed links between social competence and self-esteem. Self-esteem during adolescence is concurrently associated with perceived (self-reported) social competence (Harter, 1990) and prospectively predicts interpersonal competence in young adulthood (Armistead, Forehand, Beach, & Brody, 1995). In the young adult literature, Crocker and Luhtanen (2003) found that low self-esteem predicted social problems in college students. Our review of the literature did not find a study examining the association between self-esteem and social competence in young adults; based on the current literature in other age groups, however, we predicted that self-esteem and social competence would be positively associated.

The third domain, criminal behavior, was included based on previous literature supporting the association between lower social competence and higher levels of criminal behavior. There is an extensive body of literature demonstrating that social skill deficits in childhood and adolescence are associated with juvenile delinquency (Cole, 1989; Marshall, Barbaree, & Fernandez, 1995; Palmer & Hollin, 1999). Problematic peer relationships in childhood have been linked to later adult delinquency (Parker & Asher, 1987). In the adult literature, associations between poor social skills and criminality have been observed within certain criminal populations, such as sex offenders (Emmers-Sommer et al., 2004; Hudson & Ward, 2000). Consistent with this literature, we hypothesized that criminal behavior and social competence would be negatively correlated in our sample.

Educational attainment was also included in our analyses. The relation of educational attainment and overall social competence in children is well established (Rubin et al., 1998; Wentzel & Asher, 1995). Children with poor peer relationships have higher rates of school drop-outs, academic difficulties, and grade failure (Ollindick, Weist, Borden, & Greene, 1992; Parker & Asher, 1987). The relationship between social competence and academic achievement in adults is less well known; however, we hypothesized that higher academic achievement in adults would be associated with higher social competence.

The fifth domain included in our analyses was occupational prestige. Social skills, when combined with basic mental capacity, have been associated with higher salaries and job performance (Ferris, Witt, & Hochwarter, 2001), and social competence has been shown to positively predict job performance (Porath & Bateman, 2006). We hypothesized, then, that social competence would be correlated positively with occupational prestige.

We next investigated the association between peer-rated social competence and ego development. Ego development is a template, or frame of reference, that an individual uses as a framework for his or her experiences and perceptions of the world, people, and events (Hauser, 1993; Loevinger & Wessler, 1970). Individuals can exist along eight stages of ego development, each stage representing a different level of social-cognitive maturity as it relates to relationships, impulse control, motivations, and cognitive style (Bursik & Martin, 2006). Lower levels of ego development include impulsive and self-protective styles, middle levels include conformist and conscientious styles, and higher levels include individualistic and integrated styles (Loevinger & Wessler, 1970). As individuals' ego development increases, they move from concrete understandings of people and events to an increased complexity of understanding (Hauser, 1993). Ego development has been used previously as a measure of social-cognitive maturity, and has been described as "how complexly one thinks about self and others" (Bauer & McAdams, 2004). It has been associated with higher levels of responsibility, tolerance, and achievement (Helson & Roberts, 1994),

greater empathy and ability to recognize multiple perspectives (Hauser, Jacobson, Noam, & Powers, 1983), and fewer antisocial and problem behaviors (Noam et al., 1984). Building upon these findings, we hypothesized that higher levels of ego development would be associated with greater social competence.

Last, we hypothesized that these indices of psychosocial functioning (i.e., low psychological distress, high self-esteem, low criminality, high occupational prestige, high academic achievement, and high ego development) would be aligned more closely with close relationship than with social group competence. As previously described, the formation and solidification of dyadic relationships is an important developmental component of young adulthood (Masten et al., 2004). It follows that in young adulthood, competence in intimate relationships plays an increasingly important role in healthy psychosocial functioning, while the importance of competence in large peer group settings may decrease. Differentiating the two distinct social competence skills sets (social group competence vs. close relationship competence), as well as understanding potential differences in their relations with individual well-being, may be crucial to understanding young adult social functioning.

METHOD

Participants

This study is based on data from 133 young adults, originally recruited as adolescents for a longitudinal study of adolescent psychosocial development. To capture a wider range of psychosocial functioning than normally seen in community samples, the original sample included two groups: a psychiatrically hospitalized group and a demographically matched high school group (Hauser, 1991). Eligibility criteria for the hospitalized sample ($n = 70$; 31 females and 39 males; mean age 14.1 years, $SD = 1.0$) included no diagnoses of mental retardation, psychosis, or psychiatric symptoms attributable to medical illness. Diagnoses at admission included anxiety disorders (5.7%) depressive disorders (22.9%), behavioral disorders (50%), and other disorders, including eating disorders (20.6%). Specific adolescent diagnoses have not predicted any young adult outcomes in this sample (Allen, Hauser, & Borman-Spurrell, 1996). The age and gender-matched high school adolescents ($n = 76$; 41 females and 35 males; mean age 14.5 years, $SD = .40$) were recruited from a local public high school. Regarding socioeconomic status, approximately 40% of the adolescents were recruited from families in which the parents were professionals, 20% of the adolescents' parents were in office/managerial positions, and the remaining 40% were clerical workers, craftsmen, or service industry workers.

Data for the current study were collected during the young adult phase of the longitudinal study, which occurred approx-

imately 11 years after the original assessment. The young adult assessment consisted of a 3-hour battery of interviews and questionnaires, for which they were paid \$120. Nearly all of the original participants (142 of 146) took part in the young adult phase of the study. One participant had died, while 3 refused participation. The 4 participants who did not complete the young adult assessments did not differ from the remaining sample on any of the demographic or psychiatric measures, although the small number precluded formal attrition analyses (Allen & Hauser, 1996). Participants were an average age of 25.4 yrs ($SD = 1.1$) ranging from 22 to 27 years. 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. The vast majority (96.6%) of participants were Caucasian, while 3.4% were African American. Although most of the participants were single, about one fourth (22%) were married, 5 (3.8%) were separated, 4 (3.0%) were divorced, and 1 (0.8%) was widowed.

As part of the young adult assessment, participants provided the names of two peers we could contact to complete a peer-rated measure of the participant's personality characteristics, as described below. Nine participants were missing peer data, either because they were unable to name peers or their peers did not agree to provide data, leaving a final sample of 133 young adults. Participants with peer ratings versus those without peer ratings did not differ on any demographic or outcome variable, other than that they were more likely to be originally recruited from the high school ($n = 74$) than the hospital site ($n = 59$); $\chi^2(1) = 7.69$, $p < 0.01$, small effect size ($phi = .24$; Cohen, 1992). Fifty-one percent of the peer raters were male, and 49% were female. Two thirds were of the same gender as the participant. The majority of peer raters were friends of the subject (69%); 7.5% were relatives of a similar age to the participant (4 siblings, 4 brothers or sisters in law, and 2 cousins); and 24% were either boyfriends/girlfriends ($n = 32$) or spouses ($n = 16$). Peers had known the participants for an average of 8.25 years (range = 0.08–26 years); 95% had known the participant for a year or longer at the time of data collection.

Measures

Descriptive statistics for all continuous measures are included in Table 1.

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, race (White = 0, African American = 1), and marital status. As a proxy for socioeconomic status (SES), parent's vocation during the initial adolescent era

TABLE 1
Descriptive Statistics on Key Measures by Original Recruitment Group

	Full Sample (n = 133) Mean (SD)	High School (n = 59) Mean (SD)	Hospital (n = 74) Mean (SD)	F(1, 131)	Effect Size, High school vs. Hospital (Cohen's d)
Peer-Rated Close Relationship Competence	6.16 (1.47)	6.63 (1.25)	5.57 (1.51)	19.70*	.78
Peer-Rated Social Group Competence	6.34 (1.38)	6.52 (1.21)	6.11 (1.46)	3.08	.31
Self-Rated Intimate Relationship Competence	3.04 (.72)	3.22 (.71)	2.83 (.69)	10.09**	.56
Self-Rated Romantic Happiness	3.11 (.69)	3.13 (.70)	3.09 (.68)	< 1	.06
Expert-Rated Relationship Maturity	2.16 (.44)	2.31 (.45)	1.98 (.35)	21.10***	.81
Self-Rated Social Group Competence	3.04 (.71)	3.21 (.65)	2.84 (.73)	9.25**	.53
Self-Rated Social Behaviors	2.58 (.59)	2.73 (.52)	2.39 (.61)	11.87**	.61
Global Self-Worth	3.13 (.66)	3.27 (.58)	2.95 (.71)	8.16**	.50
Psychological Distress	1.53 (.43)	1.40 (.35)	1.70 (.47)	18.27***	-.75
Criminal Behavior	1.85 (1.73)	1.38 (1.28)	2.44 (2.02)	13.67***	-.65
Occupational Prestige	46.35 (13.73)	50.06 (14.70)	41.30 (10.45)	12.92***	.63
Educational Attainment	2.54 (1.63)	3.45 (1.27)	1.41 (1.29)	83.36***	1.61
Ego Development	172.24 (21.46)	180.45 (17.51)	161.95 (21.63)	29.71***	.96

Note. F values and effect sizes refer to group differences on each variable by original recruitment group. * $p < .05$, ** $p < .01$, *** $p < .001$.

was obtained and assigned a score that was calculated using the Duncan Socioeconomic Index (Hauser & Featherman, 1977).

Close Relationship Competence Measures (Non-Peer)

Self-rated Intimate Relationship Competence was assessed with the Adult Self-Perception Profile Intimate Relationships subscale (ASP; Messer & Harter, 1986), composed of four self-report items tapping perceived competence in close, meaningful interactions or relationships with romantic partners and close friends. Each item consisted of a forced-choice question on a 4-point scale, ranging from 1 (*low perceived competence*) to 4 (*high perceived competence*). The item scores were averaged to create a final score; thus, possible scores ranged from 1 to 4. Reliability of the scale has been shown to have α 's ranging from .73 to .81 (Messer & Harter, 1986). In the current sample, internal consistency was acceptable ($\alpha = .80$).

Self-rated Romantic Happiness was assessed using the Love Experiences Questionnaire (LEQ), Happiness Subscale (Hazan & Shaver, 1987). Participants report their level of agreement with each of 56 statements about their most important relationship on a 4-point Likert-type scale (1 = *strongly disagree* to 4 = *strongly agree*). The Happiness subscale is composed of four items (e.g., "My love for ____ was/is an extremely enjoyable experience"). Reliability tests for this data set resulted in an α of .86. The items were averaged to create a final score; the range of possible scores was 1–4. The Love Experiences Questionnaire has shown concurrent validity, correlating in expected ways with romantic attachment styles (Hazan & Shaver, 1987).

Expert-rated Relationship Maturity was assessed using data from the *Close Peer Relationship Interview* (CPRI; Schultz & Selman, 1998), a semistructured interview designed to explore individuals' cognitive and affective styles in close friendships and romantic relationships. Trained interviewers queried participants about two specific relationships, one with a close friend and one with a romantic partner, or, if they had no romantic partner, two close friendships. Questions focused on experiences representing intimacy (e.g., experiences of closeness, self-disclosure) and autonomy (e.g., conflict negotiation). Two trained coders scored the audio-taped and transcribed interviews for relationship maturity using the Developmental Relationship scales (Schultz & Selman, 1998). The relationship maturity score taps individuals' ability to differentiate and coordinate the social perspectives of self and others within close relationships. Coders rate each of four domains of relationship maturity (interpersonal negotiation, shared experience, meaning of interdependence, and interpersonal understanding) on a developmental scale from 0 (*least developed*) to 5 (*most highly developed*). For example, for interpersonal meaning, a rating of 0 was described as "polarized," in which intimacy and autonomy issues are polarized, being either enmeshed or completely lacking of dependence, while a rating of 5 was described as "interdependent," in which limitations in intimacy and autonomy are understood by the person within the context of their partner/friend's history. Scores for each scale were averaged across both relationships. Scores for the four domains then were averaged to yield an overall relationship maturity score; the range of possible scores was 0–5. Preconsensus inter-rater reliability for relationship maturity level was .47–.67; final codes were determined by consensus after the raters met together (Hennighausen, Hauser, Billings, Schultz, & Allen, 2004).

Social Group Competence Measures (Non-Peer)

Self-rated Social Group Competence was assessed using the Perceived Sociability scale of the ASP (Messer & Harter, 1986), a four-item self-report scale tapping perceived competence in being social. Participants rated their sense of how enjoyable they are to be with, how much they like to meet new people, and how at ease they are with others on a 4-point scale, ranging from 1 (*low perceived competence*) to 4 (*high perceived competence*). Items were averaged; the range of possible scores was from 1 to 4. This scale has demonstrated internal consistency ranging from α 's of .73 to .81 (Messer & Harter, 1986). In the current sample, $\alpha = .82$.

Self-rated Social Behaviors were measured with the Texas Social Behavior inventory (TSBI; Helmrich & Stapp, 1974), which consists of 16 items assessing perceived competence in social group situations (e.g., "I'm a good mixer," "I feel confident of my appearance"). Subjects rate each item on a 5-point Likert-type scale (0 = *not at all characteristic of me* to 4 = *very characteristic of me*). Scores for self-rated social behaviors, composed of an average of the 16 items, ranged from 0 to 4. The TSBI has been used widely, and has been shown to be effective in predicting interpersonal attraction (e.g., Kimble & Helmrich, 1972). Reliability tests in the literature have shown α 's of .85 (Russel, Peplau, & Cutrona, 1980). In these data, reliability testing demonstrated an α of .86.

Peer-Rated Social Competence (Close Relationship and Social Group)

Each of the two peer raters used the California Q-sort (Block, 1974) to describe the participant who nominated them. The Q-sort consists of 100 widely ranging statements about the personality and social characteristics of individuals. The peers described the participants by arranging the 100 items into a forced distribution, in which each item (characteristic) was rated according to how well it characterized the participant. Scores ranged from 0 (*extremely uncharacteristic*) to 9 (*extremely characteristic*) for each item. The two peer ratings for each item were averaged to obtain one score for each participant. A measure for peer-rated relationship competence then was developed using these Q-sorts (see the Results section below).

Indices of Young Adult Psychosocial Functioning

Self-esteem. The Global Self-Worth scale of the ASP (Messer & Harter, 1986), although part of the same overall measure as the scales assessing perceived competence in different domains (the ASP), is not an average of perceived competence in specific domains of functioning, but assesses global self-worth directly, using six separate items. Participants rated their overall self-worth using a 4-point scale, ranging from 1 (low self-worth) to 4 (high self-worth). The

six items were averaged, yielding a range of possible scores of 1–4. Reliability tests of this instrument conducted by Messer and Harter (1986) have shown α 's from .87 to .91. In the current sample, reliability tests yielded an α of .88.

Psychological distress. The *Hopkins Symptom Checklist 90-R* (Derogatis, 1983) is a self-report measure of psychological distress and associated symptoms in adults. Participants indicated how much they were bothered by each of 90 psychiatric symptoms during the last 6 months on a 4-point Likert-type scale (0 = *not at all* to 4 = *Extremely*). The SCL-90 includes nine primary symptom dimensions and three global indices, and has been used extensively in the literature (e.g., Fridell & Hesse, 2006; Wijnberg-Williams, Kamps, Klip, & Hoekstra-Weebers, 2006). The average level of distress experienced by the subject among the items endorsed in the checklist was used (i.e., the Positive Symptom Distress index); possible scores ranged from 0 to 4. Reliability testing demonstrated an α of .96 in this data set.

Criminal behavior. Criminal behavior was assessed using an interview-based measure that was validated and normed in a national probability sample (Elliot, Ageton, Huizinga, Knowles, & Canter, 1983). Criminal behavior was operationalized as the total number of times a participant reported engaging in any of 30 nonoverlapping classes of illegal behavior, which were designed to cover all significant areas of criminal behavior and to tap a wide range of severity (ranging from failing to return someone's change to threatening/hitting someone to auto theft), in the past year. Self-report measures of this kind, when obtained by interviewer with whom a rapport has been established, have been found to yield sufficiently reliable scores and to correlate with other external measures of delinquency (Allen et al., 1996; Farrington, 1973). Because the scores were highly skewed, they were transformed using a logarithmic function prior to analyses.

Occupational prestige. Two raters assigned prestige scores, taken from the 1989 General Social Survey update of the National Opinion Research Center (NORC) scale scores (Nakao, Hodge, & Treas, 1990), to each participant's self-reported current job (Bell, Allen, Hauser, & O'Connor, 1996). Disagreements between raters were resolved by conferencing (for details, see Bell et al., 1996).

Educational attainment. Participants' self-reported educational level was coded on a 0–6 scale (0 = *did not complete high school*, 1 = *high school completion/GED*, 2 = *some college, no degree*, 3 = *Associates degree*, 4 = *Bachelor's degree*, 5 = *Master's degree*, 6 = *doctoral degree*).

Ego development. Ego Development was assessed using the Washington University Sentence Completion test (Loevinger & Wessler, 1970). Participants completed 36

sentence stems, for example, “My conscience bothers me if . . .” and “The thing I like about myself is . . .” Each of the 36 items is scored for ego stages, then the results are summed to obtain an item sum score (ISS), which was used in our analysis as a continuous variable to examine correlations. An overall stage score, the Total Protocol Rating (TPR), also can be derived from the distribution of ego stages across items using the ogive rules presented in the scoring manual (Hy & Loevinger, 1996; Loevinger & Wessler, 1970). The TPR stages include Impulsive, Self-Protective, Conformist, Self-Aware, Conscientious, Individualistic, Autonomous, and Integrated (Hy & Loevinger, 1996; Loevinger & Wessler, 1970). Although Loevinger has cautioned against using ISS in lieu of TPR scores, which account for the potential greater variability in item scores of higher levels of ego development, the ISS and TPR ratings have been noted to be very highly correlated in the literature (e.g., Pearson $r = .91$; Cramer, 1999). In our own data set, the correlation between ISS and TPR was found to be .89. The ISS as a continuous measure of ego development has been used extensively in the literature (e.g., Bursik & Martin, 2006; Kang & Shaver, 2004). The scoring guidelines have shown high levels of reliability (Loevinger & Wessler, 1970; Redmore & Waldman, 1975; Westenberg, Hauser, & Cohn, 2004). In this data set, tests of inter-rater reliability revealed intraclass correlations for stage scores ranging from .70 to .92 (Allen & Hauser, 1996).

RESULTS

The Development of Peer-Rated Measures of Social Competence

To create a measure of peer-rated relationship competence, we selected a set of items from the peer Q-sort ratings that were relevant to social competence. This strategy has precedence in the literature; averaged ratings for sets of Q-sort items have been used effectively to assess particular characteristics, including hostility, anxiety, and effective instrumentality (Kobak & Sceery, 1988; Stewart & Vandewater, 1999). To generate the peer-rated measure of social competence, 10 Q-sort items that fit the construct of social competence according to two independent raters were identified (listed in Table 2 and corresponding to items 15, 17, 28, 29, 35, 48, 49, 54, 88, and 92 from the California Q-sort). These items were submitted to principal components analysis (PCA) to evaluate the unidimensionality of the items and detect potential subscales. Parallel analysis and Velicer’s Minimum Average Partial (MAP; Velicer, 1976) test were used to guide factor extraction. Parallel analysis revealed that only the first two eigenvalues from the data were larger than the corresponding 95th percentile eigenvalues generated from random data. Similarly, Velicer’s MAP indicated that the number of components was two. Therefore, a PCA analysis was computed with a forced two-factor solution, which accounted for 57%

TABLE 2
Factor Loadings of Peer-Rated Social Competence Q-sort Items on Two Principal Components

<i>Item</i>	<i>Close Relationship</i>	<i>Social Group</i>
Behaves in a way that is sympathetic or considerate of others	.90	-.03
Is warm; has the capacity for close relationships; compassionate	.84	-.23
Is liked and accepted by most people	.72	.27
Is turned to or sought out for advice and reassurance	.71	.14
Is basically distrustful of people and, in general, questions their motives (–)	.62	.23
Keeps people at a distance; avoids close relationships (–)	.54	.31
Is playful and humorous in social situations	-.21	.85
Appears poised and comfortable in social situations	.13	.70
Is sociable, enjoys and makes a point of being with others	.10	.65
Is personally charming	.20	.62

Note. Loadings represent pattern matrix coefficients generated using principal components analysis extraction and oblimin rotation with Kaiser normalization. Loadings in boldface indicate items that were averaged to create the measures of Peer-rated Close Relationship Competence and Social Group Competence.

of the variance. Oblique (oblimin) rotation was used because the factors were not expected to be orthogonal. Table 2 presents the resulting factor loadings. One item (Keeps people at a distance; avoids close relationships; Item 48) was eliminated because it cross-loaded on the two factors. The lowest factor loading was .62, in the “good” range according to Comrey and Lee (1992).

Based on the results of the factor analysis, two relationship competence scales were created. First, a peer-rated *close relationship competence* scale was created by averaging scores on the five items that loaded highly on the first factor and had low loadings on the second factor. Internal consistency showed an α of .82 for the high school recruitment group and an α of .81 for the hospital group. These items, which tapped interpersonal warmth, consideration, trust, and the capacity to have close relationships, were consistent with the characteristics of close dyadic relationships described above, particularly the reciprocal and positive affective characteristics of such relationships. Second, a peer-rated *social group competence* scale was created by averaging scores on the four items with high loadings on the second factor and low loadings on the first. These items, which tapped interpersonal charm, sociability, and social confidence/poise, are characteristic of popularity and being liked by the social group. Internal consistency of this subscale yielded an α of .73 for the high school group and an α of .72 for the hospital group. The close relationship competence and social group competence subscales were moderately correlated ($r = .45$,

$p < .001$), demonstrating that while these domains are related, they may represent distinct domains of competence.

Because this sample originally was recruited in two cohorts (high school vs. hospitalized), we conducted analyses to determine whether the new measure functioned equivalently across groups. Principal component analyses of the nine final items conducted separately for the two recruitment groups yielded factor loadings for each item that were virtually identical across the two subsamples, suggesting that the factor structure of the measure was consistent across individuals with and without a history of psychiatric hospitalization. Further, because each participant was rated on the Q-sort by two peers, we were able to test whether the factor structure and subscale reliabilities were consistent across the two sets of peer raters. Again, factor loadings were consistent across the two groups. Results of these analyses are not presented for lack of space but are available upon request.

To assess the convergent and discriminant validity of the new peer-rated measures of social competence in close relationships and social groups, we calculated correlations between the peer ratings and other measures of social competence in these two domains. Specifically, we obtained correlations with two self-report measures of close relationship competence and functioning, two self-report measures of social group competence, and an expert-rated measure of close relationship competence. Results are shown in Table 3. Correlations between peer ratings and self- or expert ratings of competence within domain were significant and in the small to moderate range (.24–.37), indicating convergent validity.

To assess the *discriminant* validity of the peer ratings of social competence for each domain, dependent correlation comparisons (Cohen & Cohen, 1983) were used to determine whether the peer ratings of social competence in close relationships were more strongly associated with self- and expert ratings of close relationship competence than were the peer ratings of social group competence (and vice versa). Results are presented in the right column of Table 3. As expected, self-ratings of romantic relationship happiness and expert ratings of close relationship maturity were each more strongly associated with the new peer ratings of competence in close relationships than with peer-rated competence in social groups. Also as expected, self-rated sociability and social behavior were more strongly associated with peer-rated social group competence than peer-rated close relationship competence. Self-reported intimate relationship competence, however, showed equivalent correlations with peer ratings of competence in close relationships and social groups. In sum, five of the six measures of social competence in particular domains demonstrated hypothesized differences in their correlations with the new peer ratings of intimate relationship competence versus social group competence. These results are supportive of the discriminant validity of the peer-rated measures.

Finally, univariate ANOVAs indicated that gender of the peer rater, whether the rater was same-sex or cross-sex, type

of relationship (romantic versus friendship) of the peer to the participant, and duration of relationship were not associated with mean levels of peer-rated social competence (for all F s, $p > .05$). To assess whether any of these peer characteristics affects the validity of the peer ratings, we tested for moderating effects of the peer characteristics on the associations between peer ratings and self-ratings of social competence in each domain using hierarchical linear regression. We regressed the self-report measures of competence onto the peer characteristic (either peer-rater gender, cross- or same-sex relationship, romantic vs. friendship, or duration of relationship), the peer-rated measure, and an interaction term created by multiplying the peer characteristic and the peer rating together. All variables were first centered to avoid issues associated with multicollinearity. There was only one significant interaction, which was below the number expected by chance, suggesting that the peer ratings were equally valid across the types of peers chosen in this study.

Associations Between Peer-Rated Social Competence and Young Adult Functioning

Prior to testing the associations between peer ratings of competence and the indices of functioning in various life domains, we assessed for potential main or moderating effects of demographic factors that might obscure any observed relations. As expected, recruitment site (high school vs. hospital) was associated with differences in many of the variables representing social competence and psychosocial functioning. As shown in Table 1, the high school sample was rated by peers as significantly higher than was the hospital sample on close relationship competence (this was a large effect), but not social group competence. In addition, the high school sample rated themselves as more socially competent than did the hospital group on all but one measure (romantic happiness) and showed scores indicative of better functioning on each psychosocial index. Specifically, the high school group had significantly higher average global self-worth, occupational prestige, ego development, and education levels as well as lower psychiatric distress and criminal behavior levels than the hospital group (see Table 1; all were medium to large effect sizes). These results reflect that recruitment was conducted intentionally at the two sites to maximize the variance in psychosocial functioning. Therefore, we did not control for recruitment site in estimations of the associations between social competence and individual functioning because to do so essentially would eliminate the sought-after variance in the functioning indices. This strategy has been laid out in previous studies using this data set (Allen, Hauser, O'Connor, & Bell, 2002).

Nevertheless, because it is important to determine whether observed associations between social competence and functioning are applicable across groups of adolescents (particularly those recruited from the hospital versus high school), we did examine whether recruitment site or any other

TABLE 3
Comparisons of Self- and Expert Ratings of Social Competence with Peer-Ratings in Close Relationships vs. Social Groups

	Peer Ratings of Competence		Difference in r with Peer-Rated Close Relationship vs. Social Group Competence
	Close Relationships	Social Groups	
Close Relationships			
Self-rated Intimate Relationship Competence	.25**	.20*	ns
Self-rated Romantic Happiness	.24*	-.01	$p < .001$
Expert-rated Relationship Maturity	.35**	.20*	$p < .05$
Social Groups			
Self-rated Social Group Competence	.14	.37**	$p < .01$
Self-rated Social Behaviors	.12	.32**	$p < .01$

Note. * $p < .05$, ** $p < .01$. Dependent correlation comparisons were used to calculate differences between the correlations of each relationship measure with peer-rated close relationship competence vs. social group competence.

demographic variables moderated the associations between the social competence variables and indices of functioning using multiple regression. Each index of functioning was regressed onto the demographic variable of interest, social competence, and an interaction term created by multiplying the demographic variable by the social competence variable. All variables were first centered to avoid issues of multicollinearity. Only one interaction term was significant; the interaction between family-of-origin SES and peer-rated close relationships competence significantly predicted delinquency; $b = -.28$; $p < .01$. This finding is discussed below. Importantly, whether an individual originally was recruited from the hospital or from the high school did not moderate the associations between either of the social competence variables and any of the outcome variables. This indicates that the patterns of associations between peer ratings of social competence and the other variables did not differ significantly across the two groups, suggesting that combining these groups in our analyses to maximize power would not obscure differences in patterns of associations between groups. That is, although the subsamples generally differ in their mean levels of social competence and psychosocial functioning, the relations between the social competence variables and the psychosocial functioning variables are not significantly different across groups.

We also examined the correlations among the six indices of functioning (global self-worth, psychological distress, criminal behavior, education level, occupational status,

and ego development) and found modest associations (see Table 4). The generally low to moderate correlations indicate that although related to one another, the measures represented level of functioning in distinct domains.

Next, as shown in Table 5, we calculated simple correlations between the peer ratings of social competence in two domains and indices of individual functioning. As hypothesized, higher peer-ratings of competence in close relationships and in social groups were associated with higher self-esteem and lower psychological distress. These correlations represent small effect sizes, accounting for about 4% of the variance in self-esteem and distress. Peer-rated social group competence was not related to any other index of functioning. In contrast, close relationship competence was associated with fewer criminal behaviors, greater educational attainment, and higher ego development level, accounting for approximately 4%, 8%, and 6% of the variance, respectively. Close relationship competence was not associated with occupational prestige.

Because family-of-origin SES moderated the association between close relationship competence and criminal behavior, we calculated this association separately for two groups of young adults: (1) those below the mean SES level, who were brought up in families whose parents did clerical work, were craftsmen, worked as operatives or in the service industry, versus (2) those young adults brought up in families above the mean SES level, whose parents were in managerial or professional positions. For the higher

TABLE 4
Intercorrelations Among Indicators of Functioning

	Global Self Worth	Psychological Distress	Criminal Behavior	Occupational Prestige	Education Level
Psychological Distress	-.43				
Criminal Behavior	-.18	.33			
Occupational Prestige	.25	-.12	-.37		
Education Level	.32	-.37	-.40	.48	
Ego Development	.22	-.26	-.38	.38	.52

Note. All correlations are significant at the $p < .05$ level.

TABLE 5
Correlations Between Peer-Rated Social
Competence and Indices of Psychosocial
Functioning

<i>Indices of Functioning</i>	<i>Close Relationship Competence</i>	<i>Social Group Competence</i>	<i>t(130)</i>	<i>Effect Size (d)</i>
Self-esteem	.19*	.18*	0.11	.01
Psychiatric Distress	-.21*	-.19*	-0.23	.03
Criminal Behavior	-.19*	.08	-3.05*	.38
Occupational Prestige	.14	-.02	1.76	.22
Educational Attainment	.29**	.08	2.37*	.29
Ego Development	.24**	.04	2.23*	.27

Note. * $p < .05$, ** $p < .01$.

SES group, close relationship competence was, as expected, negatively associated with criminal behavior ($r = -.32$, $p < .05$), while this association did not hold true for the lower SES group ($r = .22$, *ns*). The difference between these correlations was significant ($z = 12.89$, $p < .01$). The effect size of this difference, calculated with the formula $q = Z_A - Z_B$ (Cohen, 1992), was .55, indicating a large effect. To clarify this finding, we conducted follow-up analyses examining the associations between close relationship competence and specific crimes, as indicated by individual items from the criminal behavior interview. Two particular crimes showed significantly different correlations with close relationship competence across the two groups. Close relationship competence was (a) more positively associated with selling pot or hash in the lower SES group ($r = .23$) than in the high SES group ($r = -.20$), $z = 2.27$, $p < .05$; and (b) more positively associated with disorderly conduct in the lower SES group ($r = .27$) than in the higher SES group ($r = -.09$), $z = 1.95$, $p < .05$. Effect size $qs = .43$ and .37, respectively, indicating medium-sized effects.

Comparisons of Associations Between Indices of Functioning and Social Competence in Close Relationships Versus Social Groups

Finally, we tested the hypothesis that close relationship competence would be more strongly linked with young adults' overall well-being than competence in social groups. The overall pattern of findings in Table 5 demonstrates that, in general, competence in close relationships shows significant correlations with more of the indices of psychosocial functioning than did competence in social groups. Dependent correlation comparisons indicated that ego development, criminal behavior, and educational level were more strongly associated with peer-rated close relationship than with social group competence; all effect sizes were small (.27-.38). The association of occupational prestige with close relationship competence was marginally stronger than with social group competence. Global self-worth and psychological distress did not show significantly different associations with the two domains of social competence.

DISCUSSION

A key goal of the current research was to develop and assess a peer-rated measure of social competence that attends to the particular developmental characteristics of young adulthood by assessing competence in two important domains, close dyadic relationships and social groups. Results provided initial evidence supporting the internal consistency and validity of our newly developed peer ratings of competence in each of the two social domains. Peer ratings of close relationship competence and social group competence were moderately correlated, consistent with evidence that, in children and adolescents, friendship and popularity are moderately related (Bukowski et al., 1993). Tests of discriminant validity, however, suggest that the measures tap two distinct types of social competence.

In evaluating the convergent validity of the newly constructed peer ratings of young adult social competence, we assessed their associations with self-reported competence. Overall, correlations between self-reports and peer reports within the social competence domains were in the low to moderate range, consistent with the small to moderate associations between cross-informant ratings of various behaviors and characteristics, including social competence, observed in the literature (e.g., Achenbach, McConaughy, & Howell, 1987; Renk & Phares, 2003). In the current data, the different modes of measurement (Q-sort vs. questionnaire) used for peer- and self-ratings may have attenuated correlations between them. Further, it should be noted that participants' self-ratings are not a "gold standard" measurement of social competence. Rather, previous research has shown that individual factors such as self-esteem and depression can bias self-reports of personal characteristics (Harter, 1990; Phillips & Zimmerman, 1990), potentially lowering correlations between self- and peer reports for some individuals.

Another goal of the current study was to test the hypothesis that social competence is linked with healthy psychosocial functioning during young adulthood. Results generally supported this hypothesis. Young adult social competence was associated with various indices of functioning, including higher self-esteem, educational attainment, and ego development and lower psychological symptoms and criminal behavior. Specifically, results suggest that social competence in both close dyads and social groups is associated with emotional well-being, as indexed by high self-esteem and low psychological distress. This finding is consistent with the well-documented social difficulties that characterize psychiatric disorders (e.g., Kiesner, 2002). In addition, competence in close relationships, but not social groups, was linked with high educational attainment by young adulthood, extending previous evidence of links between social competence and educational success in children (Rubin et al., 1998; Wentzel & Asher, 1995).

Consistent with the adolescent delinquency literature (Marshall et al., 1995; Palmer & Hollin, 1999), we observed an overall negative association between close relationship

competence and criminal behavior in the young adults. This association held only for young adults from families above the mean SES level in this sample (i.e., those whose parents were in managerial or professional occupations), but not for young adults from lower SES families. Follow-up analyses showed that specific crimes, selling marijuana or hashish and disorderly conduct, were actually *positively* associated with close relationship competence in the lower SES group, while negatively associated with close relationship competence in the higher SES group. Given that social competence is dependent on the norms of the particular social group (Dodge & Murphy, 1989), this finding possibly reflects that certain crimes such as selling light drugs or disorderly conduct may be valued and viewed as “socially competent” by young adults who have grown up in lower SES households. As such, these results demonstrate the context-specific nature of social competence and support the idea that socially successful individuals in specific groups, in this case the lower SES group, actually may face higher risk for deviant behavior than their less socially successful counterparts (cf. Allen et al., 2005).

Contrary to our hypotheses, we did not find significant correlations between occupational prestige and either domain of social competence. Many individuals in young adulthood have not yet taken on enduring career responsibilities reflective of their future career course (Arnett, 2000); around 20% of the current sample was still in graduate or vocational training at the time of the assessment. We speculate that occupational prestige and social competence may be more closely correlated later in adulthood, when career trajectories are more firmly established.

Our hypothesis that close relationship competence would be more important than social group competence to the well-being of young adults was supported only for certain domains of functioning, namely, criminal behavior, educational attainment, and ego development. The relation between ego development and close relationship competence is not surprising, given previous evidence of associations between higher ego development and relationship skills, including greater social sensitivity, empathy, psychological mindedness, and capacity to recognize the experience of others (Hauser et al., 1983; Vaillant & McCullough, 1987). It may be that whereas intimate dyadic relationships require empathy and recognition of the other person’s perspective, such skills may be less important for social success in group contexts. Further research is required to better elucidate the factors that make criminal behavior and educational attainment more closely linked with close relationship competence than social group competence.

There are several limitations of this study. The sample was predominantly White and of overall higher SES than the general population, limiting generalizability to other ethnic and socioeconomic groups. The sample size was relatively small, diminishing the power of our study to detect small effects. The cross-sectional data used in this analysis do not allow for

inferences about causality; further longitudinal analyses are planned to better understand the patterns of social competence into later adult years, as well as the predictors of social competence from the adolescent years. The original recruitment of participants from two sites, resulting in two subsamples with significantly different backgrounds and levels of functioning, raises the possibility of different associations between social competence and the young adult characteristics for each group. This concern was mitigated, however, by our finding no significant differences between associations by recruitment site. In addition, the greater variance in functioning in this sample as a result of the recruitment strategy may have allowed for the detection of associations that would not be observed in a community-only sample, where less variance is expected.

Despite these limitations, the current findings provide initial support for the validity and utility of the new peer-rated measures of young adult social competence. The measures have potential for use in future research investigating young adult social functioning, as well as in clinical work to help identify individuals with deficits in social competence. Given that the ability to recruit and maintain relationships is an important predictor of well-being into late adulthood (e.g. Holahan & Holahan, 1987), it may be clinically useful to identify individuals struggling socially at an earlier adult age. Moreover, identifying specific social domains (close relationships vs. social groups) in which clients are struggling could help guide clinicians to help their clients develop the social skills particular to either close relationships or to social groups.

To obtain peer ratings of social competence in future studies, researchers ideally would administer the California Q-sort to subjects’ peers and then extract and average the items included on the new measures of close relationship competence and social group competence. Doing so additionally would allow for the gathering of peer-rated data on many other constructs tapped by the Q-sort (e.g., anxiety, hostility). We recognize, however, that there are multiple constraints including time, practicality, and subject burden that would make obtaining peer-rated Q-sorts difficult. To avoid these issues, it is possible that the items from the peer-rated Q-sort measure could be administered as a brief, peer-report measure, with each item rated on a Likert-type scale. Because this would change the context and the procedure of the measure assessment of its psychometric properties when administered in this manner would be needed.

In conclusion, this study adds to our understanding of social competence in young adulthood by demonstrating the utility of peer-rated measures of young adult social competence in two domains (social groups and close relationships) and by presenting initial evidence that social competence is an important marker of young adult psychosocial functioning. Further, close relationship competence may have a particularly important role in young adult well-being.

REFERENCES

- Achenbach, T. M. (2000). Child behavior checklist. In E. Kazdan (Ed.), *Encyclopedia of psychology* (pp. 69–70). Washington, DC: American Psychological Association.
- Achenbach, T. M., McConaughy, S. H., & Howell, C. T. (1987). Child/adolescent behavioral and emotional problems: Implications of cross-informant correlations for situational specificity. *Psychological Bulletin*, *101*, 213–232.
- Allen, J., & Hauser, S. T. (1996). Autonomy and relatedness in adolescent–family interactions as predictors of young adults’ states of mind regarding attachment. *Development and Psychopathology*, *8*, 793–809.
- Allen, J., Hauser, S. T., & Borman-Spurrell, E. (1996). Attachment insecurity and related sequelae of severe adolescent psychopathology: An 11-year follow-up study. *Journal of Consulting and Clinical Psychology*, *64*, 254–263.
- Allen, J., Hauser, S. T., O’Connor, T. G., & Bell, K. L. (2002). Prediction of peer-rated adult hostility from autonomy struggles in adolescent–family interactions. *Development and Psychopathology*, *14*, 123–137.
- Allen, J. P., Porter, M. R., McFarland, F. C., Marsh, P., & McElhaney, K. B. (2005). The two faces of adolescents’ success with peers: Adolescent popularity, social adaptation, and deviant behavior. *Child Development*, *76*, 747–760.
- Armistead, L., Forehand, R., Beach, S. R., & Brody, G. H. (1995). Predicting interpersonal competence in young adulthood: The roles of family, self, and peer systems during adolescence. *Journal of Child and Family Studies*, *4*, 445–460.
- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, *55*, 469–480.
- Barklay, R. A., Murphy, K., & Kwasnik, D. (1996). Psychological adjustment and adaptive impairments in young adults with ADHD. *Journal of Attention Disorders*, *1*, 41–54.
- Bauer, J. J., & McAdams, D. P. (2004). Growth goals, maturity, and well-being. *Developmental Psychology*, *40*, 114–127.
- Bell, K. L., Allen, J., Hauser, S. T., & O’Connor, T. G. (1996). Family factors and young adult transitions: Educational attainment and occupational prestige. In J. Graber, J. Brooks-Gunn, & A. C. Petersen (Eds.), *Transitions through adolescence: Interpersonal domains and context* (pp. 345–366). Mahwah, NJ: Erlbaum.
- Blakemore, S. J., & Frith, U. (2004). How does the brain deal with the social world? *Neuroreport*, *15*, 119–128.
- Block, J. (1974). *The Q-Sort Method of Personality Assessment and Psychiatric Research*. Palo Alto, CA: Consulting Psychologists Press.
- Buhrmester, D. (1990). Intimacy of friendship, interpersonal competence, and adjustment during preadolescence and adolescence. *Child Development*, *61*, 1101–1111.
- Buhrmester, D., Furman, W., Wittenberg, M., & Reis, H. (1988). Five domains of interpersonal competence in peer relationships. *Journal of Personality and Social Psychology*, *55*, 991–1008.
- Bukowski, W. M., Hoza, B., & Boivin, M. (1993). Popularity, friendship, and emotional adjustment during early adolescence. *Close friendships in adolescence* (vol. 60). San Francisco: Jossey-Bass Publishers.
- Bursik, K., & Martin, T. (2006). Ego development and adolescent academic achievement. *Journal of Research on Adolescence*, *16*, 1–18.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, *112*, 155–159.
- Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences*. Hillsdale, NJ: Erlbaum.
- Cole, D., Maxwell, S., & Martin, J. (1997). Reflected self-appraisals: Strength and structure of the relation of teacher, peer, and parent ratings to children’s self-perceived competencies. *Journal of Educational Psychology*, *89*, 55–70.
- Cole, P. (1989). Perceived competence and juvenile delinquents and non-delinquents. *Journal of Special Education*, *23*, 294–302.
- Comrey, A. L., Lee, H. B. (1992). *A first course in factor analysis*. Hillsdale, NJ, England: Lawrence Erlbaum Associates, Inc.
- Cramer, P. (1996). *Storytelling, narrative, and the Thematic Apperception Test*. New York: Guilford Press.
- Crocker, J., & Luhtanen, R. K. (2003). Level of self-esteem and contingencies of self-worth: Unique effects on academic, social, and financial problems in college students. *Personality and Social Psychology Bulletin*, *29*, 701–712.
- Derogatis, L. R. (1983). *SCL-90 Administration, Scoring and Procedures manual*. Towson, MD: Clinical Psychometric Research.
- Dodge, K. A., & Murphy, R. (1989). The assessment of social competence in adolescence. In P. Karoly & J. J. Steffan (Eds.), *Adolescent behavior disorders: Foundations and contemporary concerns* (pp. 61–96). Lexington, MA: Lexington Books.
- Elliot, D. S., Ageton, S. S., Huizinga, D., Knowles, B. A., & Canter, R. J. (1983). *The prevalence and incidence of delinquent behavior: 1976–1980*. Boulder, CO: Behavioral Research Institute.
- Emmers-Sommer, T. M., Allen, M., Bourhis, J., Sahlstein, E., Laskowski, K., Falato, W., et al. (2004). A meta-analysis of the relationship between social skills and sexual offenders. *Communication Reports*, *17*, 1–10.
- Eronen, S., & Nurmi, J. E. (2001). Sociometric status of young adults: Behavioral correlates, and cognitive-motivational antecedents and consequences. *International Journal of Behavioral Development*, *25*, 203–213.
- Farrington, D. (1973). Self reports of deviant behavior: Predictive and stable? *Journal of Criminal Law, Criminology, and Police Science*, *61*, 99–110.
- Ferris, G. R., Witt, L. A., & Hochwarter, W. A. (2001). Interaction of social skill and general mental ability on job performance and salary. *Journal of Applied Psychology*, *86*, 1075–1082.
- Ford, M. E. (1982). Social cognition and social competence in adolescence. *Developmental Psychology*, *18*, 323–341.
- Fridell, M., & Hesse, M. (2006). Psychiatric severity and mortality in substance abusers: A 15-year follow-up of drug users. *Addictive Behaviors*, *31*, 559–565.
- Friedman, S. R., Rapport, L. J., & Lumley, M. (2003). Aspects of social and emotional competence in adult attention-deficit/hyperactivity disorder. *Neuropsychology*, *17*, 50–58.
- Furman, W. (2002). The emerging field of adolescent romantic relationships. *Current Directions in Psychological Science*, *11*, 177–180.
- Furman, W., & Buhrmester, D. (1985). Children’s perceptions of the personal relationships in their social networks. *Developmental Psychology*, *21*, 1016–1024.
- Gaffney, L. R. & McFall, R. M. (1981). A comparison of social skills in delinquent and nondelinquent girls using a behavioral role-playing inventory. *Journal of Consulting and Clinical Psychology*, *49*, 959–967.
- Harter, S. (1990). Self and identity development. In S. S. Feldman & G. R. Elliott (Eds.), *At the threshold: The developing adolescent* (pp. 352–387). Cambridge, MA: Harvard University Press.
- Hartup, W. W. (1993). Adolescents and their friends. *New Directions for Child Development*, *60*, 3–222.
- Hauser, S. T. (1991). *Adolescents and their families: Paths of ego development*. New York: Free Press.
- Hauser, S. T. (1993). Loevinger’s model and measure of ego development: A critical review. *Psychological Inquiry*, *4*, 23–30.
- Hauser, S. T., & Featherman, D. L. (1977). *The process of stratification*. New York: Academic Press.
- Hauser, S. T., Jacobson, A. M., Noam, G., & Powers, S. (1983). Ego development and self image complexity. *Archives of General Psychiatry*, *40*, 325–332.
- Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*, *52*, 511–524.
- Hazan, C., & Zeifman, D. (1999). Pair bonds as attachments: Evaluating the evidence. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 336–354). New York: The Guilford Press.
- Helmrich, R., & Stapp, J. (1974). Short form of the Texas Social Behavior Inventory: An objective measure of self-esteem. *Bulletin of the Psychonomic Society*, *4*, 473–475.

- Helson, R., & Roberts, B. W. (1994). Ego development and personality change in adulthood. *Journal of Personality and Social Psychology, 66*, 911–920.
- Hennighausen, K. H., Hauser, S. T., Billings, R. L., Schultz, L. H., & Allen, J. (2004). Adolescent ego-development trajectories and young adult relationship outcomes. *Journal of Early Adolescence, 24*, 29–44.
- Holahan, C. K., & Holahan, C. J. (1987). Self-efficacy, social support, and depression in aging: A longitudinal analysis. *Journal of Gerontology, 42*, 65–68.
- Hudson, S. M., & Ward, T. (2000). Interpersonal competency in sex offenders. *Behavior Modification, 24*, 494–527.
- Hy, L., & Loevinger, J. (1996). *Measuring ego development* (2nd ed.). New York: John Wiley & Sons.
- Kang, S., & Shaver, P. R. (2004). Individual differences in emotional complexity: Their psychological implications. *Journal of Personality, 72*, 687–726.
- Kiesner, J. (2002). Depressive symptoms in early adolescence: Their relations with classroom problem behavior and peer status. *Journal of Research on Adolescence, 12*, 463–478.
- Kimble, C., & Helmrich, R. (1972). Self esteem and the need for social approval. *Psychonomic Sciences, 26*, 339–342.
- Kobak, R. R., & Sceery, A. (1988). Attachment in late adolescence: Working models, affect regulation, and representations of self and others. *Child Development, 59*, 135–146.
- Kremen, A. M., & Block, J. (2002). Absorption: Construct explication by Q-sort assessments of personality. *Journal of Research in Personality, 36*, 252–259.
- Kruger, J., & Dunning, D. (1999). Unskilled and unaware of it: How difficulties in recognizing one's own incompetence lead to inflated self-assessments. *Journal of Personality and Social Psychology, 77*, 1121–1134.
- Ladd, G. W. (1999). Peer relationships and social competence during early and middle childhood. *Annual Review of Psychology, 50*, 333–359.
- Loevinger, J., & Wessler, R. (1970). *Measuring ego development* (Vol. I). San Francisco: Jossey-Bass.
- Marshall, W. L., Barbaree, H. E., & Fernandez, Y. M. (1995). Some aspects of social competence in sexual offenders. *Sexual Abuse: Journal of Research and Treatment, 7*, 113–127.
- Masten, A. S., Burt, K. B., Roisman, G., Obradovic, J., Long, J. D., & Tellegen, A. (2004). Resources and resilience in the transition to adulthood: Continuity and change. *Development and Psychopathology, 16*, 1071–1094.
- Messer, B., & Harter, S. (1986). *Manual for the Adult Self Perception Profile* (unpublished manuscript).
- Nakao, K., Hodge, R. W., & Treas, J. (1990). *GSS Methodological Report* (69). Chicago: National Opinion Research Center.
- Noam, G., Hauser, S., Santostefano, S., Garrison, W., Jacobson, A., & Powers, S. et al. (1984). Ego development and psychopathology: A study of hospitalized adolescents. *Child Development, 55*, 184–194.
- Ollindick, T. H., Weist, M. D., Borden, M. G., & Greene, R. W. (1992). Sociometric status and academic, behavioral, and psychological adjustment: A five-year longitudinal study. *Journal of Consulting and Clinical Psychology, 60*, 80–87.
- Palmer, E. J., & Hollin, C. R. (1999). Social competence and sociomoral reasoning in young offenders. *Applied Cognitive Psychology, 13*, 79–87.
- Parker, J., & Asher, S. (1987). Peer relations and later personal adjustment: Are low-accepted children at risk? *Psychological Bulletin, 102*, 357–389.
- Parker, J., Rubin, K., Price, J., & DeRosier, M. (1995). Peer relationships, child development and adjustment: A developmental psychopathology perspective. In D. Cicchetti & D. Cohen (Eds.), *Developmental psychopathology* (pp. 96–161). New York: J. Wiley.
- Phillips, D. A., & Zimmerman, M. (1990). The developmental course of perceived competence and incompetence among competent children. In R. J. Sternberg & J. Killigan, Jr. (Eds.), *Competence considered* (pp. 41–66). New Haven, CT: Yale University Press.
- Porath, C. L., & Bateman, T. S. (2006). Self-regulation: From goal orientation to job performance. *Journal of Applied Psychology, 91*, 185–192.
- Redmore, C., & Waldman, K. (1975). Reliability of a sentence completion measure of ego development. *Journal of Personality Assessment, 39*, 236–243.
- Renk, K., & Phares, V. (2003). Cross-informant ratings of social competence in children and adolescents. *Clinical Psychology Review, 24*, 239–254.
- Riggio, R. E., Watring, K. P., & Throckmorton, B. (1993). Social skills, social support, and psychosocial adjustment. *Personality and Individual Differences, 15*, 275–280.
- Roisman, G., Masten, A., Coatsworth, D., & Tellegen, A. (2004). Salient and emerging developmental tasks in the transition to adulthood. *Child Development, 75*, 123–133.
- Rubin, K. H., Bukowski, W. M., & Parker, J. G. (1998). Peer interactions, relationships, and groups. In W. Damon (Ed.), *Handbook of child psychology* (vol. 3: Social, Emotional and Personality Development, pp. 619–700). New York: John Wiley & Sons, Inc.
- Russel, D., Peplau, L. A., & Cutrona, C. E. (1980). The revised UCLA Loneliness Scale: Concurrent and discriminant validity evidence. *Journal of Personality and Social Psychology, 39*, 472–480.
- Schulenberg, J. E., Bryant, A. L., & O'Malley, P. M. (2004). Taking hold of some kind of life: How developmental tasks relate to trajectories of well-being during the transition to adulthood. *Development and Psychopathology, 16*, 1119–1140.
- Schultz, L. H., & Selman, R. L. (1998). Ego development and interpersonal development in young adulthood: A between-model comparison. In P. Westenberg, A. Blasi, & L. D. Cohn (Eds.), *Personality development: Theoretical, empirical, and clinical investigations of Loevinger's conception of ego* (pp. 181–202). Mahwah, NJ: Lawrence Erlbaum Associates.
- Seiffge-Krenke, I. (2003). Testing theories of romantic development from adolescence to young adulthood: Evidence of a developmental sequence. *International Journal of Behavioral Development, 27*, 519–531.
- Shulman, S., & Kipnis, O. (2001). Adolescent romantic relationships: A look from the future. *Journal of Adolescence, 24*, 337–351.
- Stewart, A. J., & Vandewater, E. A. (1999). "If I had it to do over again." Midlife review, midcourse corrections, and women's well-being in midlife. *Journal of Personality and Social Psychology, 76*, 270–283.
- Vaillant, G. E., & McCullough, L. (1987). The Washington University Sentence Completion Test compared with other measures of ego development. *The American Journal of Psychiatry, 144*, 1189–1194.
- Velicer, W. F. (1976). Determining the number of components from the matrix of partial correlations. *Psychometrika, 41*, 321–327.
- Wentzel, K. R., & Asher, S. R. (1995). The academic lives of neglected, rejected, popular and controversial children. *Child Development, 66*, 754–763.
- Westenberg, P. M., Hauser, S. T., & Cohn, L. D. (2004). Sentence completion measurement of psychosocial maturity. In M. J. Hilsenroth & M. J. Segal (Eds.), *Comprehensive handbook of psychological assessment, Vol. 2: Personality assessment* (pp. 595–516). Hoboken, NJ: John Wiley & Sons, Inc.
- Wijnberg-Williams, B. J., Kamps, W. A., Klip, E. C., & Hoekstra-Weebers, J. E. (2006). Psychological adjustment of parents of pediatric cancer patients revisited: Five years later. *Psycho-oncology, 15*, 1–8.

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