

# The Changing Nature of Adolescent Friendships

## Longitudinal Links With Early Adolescent Ego Development

Penny Marsh

*University of Washington*

Joseph P. Allen

*University of Virginia*

Martin Ho

*University of Denver*

Maryfrances Porter

F. Christy McFarland

*University of Virginia*

*Although success in managing evolving peer relationships is linked to critical adolescent outcomes, little is known about the specific factors that lead to success or failure in peer relationship development across adolescence. This longitudinal study examines the role of adolescents' level of ego development as a predictor of the future course of several facets of friendship development in early adolescence. Ego development was assessed in a community sample of adolescents at age 13. Several facets of adolescent friendship were also assessed at 13 and then reassessed 1 year later, including adolescent intimate behavior during a supportive interaction with their best friends, adolescent reports of psychological security in their friendships, and peer-rated popularity. As predicted, ego development not only explained concurrent levels of peer functioning but also predicted markers of change over time in each of the assessed domains of peer functioning. Implications for ego development in increasing our understanding of individual differences in adolescent friendship development are discussed.*

**Keywords:** *ego development; adolescence; peer relationships; friendships; development*

As children enter into adolescence, the nature of their peer relationships undergoes significant change as teens spend increasingly more time in the company of their same-age friends (Larson & Richards, 1991). Adolescent friendships

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Correspondence concerning this article should be addressed to Penny Marsh, Department of Psychology, University of Washington, Box 351525, Seattle, WA 98195-1525; e-mail: pennym@u.washington.edu.

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then gradually deepen in terms of levels of commitment, intimacy, and acceptance of differences among friends (Berndt & Savin-Williams, 1993; Buhrmester, 1990; Shulman, Laursen, Kalman, & Karpovsky, 1997). Functioning in these evolving friendships has been linked with both negative sequelae ranging from depression to deviance and positive outcomes including prosocial behavior and academic achievement (e.g., Dishion & Owen, 2002; Granic & Dishion, 2003; Laird, Jordan, Dodge, Pettit, & Bates, 2001; Mounts & Steinberg, 1995; Prinstein & La Greca, 2002, 2004; Wentzel & Erdley, 1993). We know little, however, about the specific factors that might explain why some adolescents succeed whereas others struggle to develop increasingly supportive, adaptive friendships during adolescence (Kelly & de Arma, 1989; Kinney, 1993). This study examines the hypothesis that adolescents' capacities to manage impulses, affect, and cognitions regarding self and others—assessed in terms of adolescent ego level—will be predictive of several distinct dimensions of adolescent friendship development.

Ego development as described by Loewinger (1976) reflects the individual's impulsivity, mental preoccupations, and ways of thinking and feeling about the self and others, all of which may influence qualities of deepening social relationships. In early stages of ego development, individuals are ego-centric and impulsive and marked by limited emotional and interpersonal understanding (Labouvie-Vief, DeVoe, & Bulka, 1989; Westenberg & Block, 1993). In later stages, a focus on higher ordered thoughts and emotions becomes central, and an appreciation of subtle differences between people comes to the forefront (McCrae & Costa, 1980; Westenberg & Block, 1993). The capacity for self-reflection, perspective taking, and insight marked by ego development is receiving increasing recognition as meta-analytic work suggests it has robust links to numerous aspects of psychosocial functioning (Cohn & Westenberg, 2004). This in turn suggests that it may hold significant promise for understanding peer relationship development in adolescence.

Ego development has been linked to several qualities of interactions with close friends cross-sectionally. First, high levels of ego development are associated with greater interpersonal sensitivity, emotional insight, and psychological security in close relationships (Hauser, 1976; Hauser, Gerber, & Allen, 1998; Helson & Wink, 1987), all qualities that are linked with more adaptive functioning in peer relationships during adolescence (e.g., Howes & Aikins, 2002; Zimmermann, 2004). Furthermore, higher level ego development is associated with more effective interpersonal conflict strategies and greater valuing of autonomy (Von Der Lippe, 2000), both qualities that are likewise associated with successful peer interactions in adolescence (Vernberg, Ewell, Beery, & Abwender, 1994). Individuals with higher levels of ego development are able to accept differences that exist between people, understand the

complex nature of relationships, and demonstrate compassion and concern for the important people in their lives. In this way, ego development may seed early friendship formation and enable these adolescents to develop better strategies for interacting with their peers over time. Lower ego development adolescents, in contrast, may have difficulty negotiating friendship development because they ineffectively manage emotions that arise as part of the move toward deepening friendships. In this way, these adolescents may be deprived of opportunities to explore more positive strategies for interacting in relationships over time. This suggests that ego development should predict patterns of development in how teens interact in important social relationships outside the family. The effects of ego development on changes over time in peer interaction qualities have not, however, been examined empirically to date.

Adolescents' perceptions of their close relationships also change with development (Furman & Bierman, 1984), and this change in friendship views might also be expected to vary as a function of ego development level. Ego development is concurrently related to more secure states of mind with respect to attachment (Hauser et al., 1998), and individuals who acquire higher levels of ego development report higher levels of interpersonal understanding and disclosure in their close relationships (Hennighausen, Hauser, Billings, Schultz, & Allen, 2004). The interpersonal insight and cognitive flexibility that go hand in hand with higher ego development may not only allow these youth to have more positive concurrent feelings about their relationships but also enable them to experience greater gains in felt relationship security overtime. No published studies to date, however, have explored whether higher levels of ego development actually predict future growth in adolescents' perceived psychological security in their friendships. This study will also explore links between early adolescent ego development and adolescents' perceived security in peer relationships over time.

Ego development may also be related to the ways that adolescents are perceived by their peers over time. Individuals who attain higher levels of ego development by young adulthood are rated by their young adult peers as less hostile and more flexible (Hennighausen et al., 2004). Furthermore, popularity has been linked in cross-sectional studies with higher levels of social skills, kindness, and trustworthiness (Frentz, Gresham, & Elliott, 1991; Henrich, Blatt, Kuperminc, Zohar, & Leadbeater, 2001), all factors that are demonstrated correlates of ego development. Not surprisingly, then, initial work suggests that ego development and peer-rated popularity are closely tied (Allen, McFarland, Porter, & Marsh, 2005). As adolescents move toward deeper and more intimate friendships, high ego development adolescents, who have more differentiated and insightful views of relationships, may likewise be increasingly valued by their peers. No studies to date, however, have

explored how ego development relates to growth in peer acceptance over time. This study will explore links between early adolescent ego development and growth in adolescent acceptance by their peers over time.

In sum, cross-sectional research to date suggests that adolescents' ego development may play a major role in explaining their capacities to manage the complex demands of growing and changing friendships across adolescence. However, longitudinal data examining ego development in relationship to relative levels of change and development in peer relationships over time are largely lacking. The present investigation sought to provide new information regarding the ways in which ego development is tied into the major peer relationship changes that occur in the adolescent era. First, we hypothesized that teens with higher levels of ego development would demonstrate more intimacy in interactions with their best friend over time relative to teens lower in ego development. Second, we proposed that higher levels of early adolescent ego development would predict relative gains in the adolescents' psychological security in their friendships over time. Finally, we hypothesized that teens higher in ego development would be more accepted by peers over time relative to their same-age peers lower in ego development. Understanding the linkages between ego development and developing peer relationships is critical to understanding the mechanisms by which ego development may display both short- and long-term effects on psychosocial functioning and help to focus intervention efforts that may promote skills necessary for successful adaptation with peers. These hypotheses were assessed using a combination of longitudinal, observational, and multisource data obtained from a community sample of adolescents.

## METHOD

### Participants

Data for the analyses in this study were drawn from a larger longitudinal investigation of adolescent family and social development. Adolescents were recruited from the seventh and eighth grades of a public middle school serving suburban and moderately urban populations in the southeastern United States. The students in this school had been together as an intact group since fifth grade. Recruitment was done in three successive cohorts of students, one cohort of eighth graders and two successive cohorts of seventh graders. Students were recruited via an initial mailing to all parents of students in the school that included postcards families could return if they were interested in participating and fliers distributed during school lunches. Families of adolescents

who indicated they were interested in the study were contacted by telephone. Of all students eligible for participation, 63% agreed to participate either as target participants or as peers.

The final sample of participants at Time 1 included 185 seventh and eighth graders (87 male and 97 female), their best friends, and same-aged peers. Target adolescents in this study were first interviewed when they were 13.4 years ( $SD = 0.7$ ) and again approximately 1 year after they first came into our laboratory (mean age at Time 2 = 14.26,  $SD = 0.8$ ). Of the original 185 adolescents, 179 (97%) participated in at least part of the second time of data collection. The self-identified racial/ethnic background of the adolescents was heterogeneous, 58% European American, 29% African American, and 13% Other. Parents in this sample reported a median family income in the \$40,000 through \$59,999 range (18% of the sample reported annual family income less than \$20,000, and 33% reported annual family income greater than \$60,000).

At each time point, adolescents were asked to name the important friends in their social network by placing names in each of three concentric circles. Adolescents were asked to rank and place the names of their four closest friends in Circle 1, four good friends in Circle 2, and four fairly good friends in Circle 3. The person listed as Peer 1 was invited to come with the adolescent to a visit to our research offices. The students identified as Peers 4 and 8 were invited to fill out questionnaires. Observational interactions of the adolescents with their best friends were available for subsets of the total sample at the first time of data collection and 1 year later at the second time of data collection (179 of 185 teens who participated at Time 1 and 151 of 179 teens who participated at Time 2). Teens were free to nominate whoever they considered to be their closest friend at each time point both because of the changing structure of adolescent friendship circles and because we wanted the best estimate of how each target teen interacted with the person whom they considered their closest friend at each time of measurement. Of the best friends who first came in at Time 1, 36% were invited to come into the study at Year 2, and 64% of the teens nominated new best friends at Year 2. Close friends reported that they had known the adolescents for an average of 4.09 years ( $SD = 3.05$ ) at the first time point and an average of 4.46 years ( $SD = 0.75$ ) at the second time point.

Formal attrition analyses revealed no differences between those adolescents who did versus did not return for the second time of data collection on any of the demographic or primary outcome measures in this study, with the exception of adolescents' ego development (3% of adolescents did not complete any measures at Time 2, and they had lower levels of ego development than the remainder of the sample at Time 1). Analyses also revealed

no differences between those adolescents who did versus those who did not have data available from a close friend at either time point. Analyses of small amounts missing data on other specific variables also revealed no attrition effects related to those data.

Finally, each adolescent, his or her closest friend, and the two other target peers named by the adolescent also completed a measure of sociometric popularity at the first time of data collection and again approximately 2 years later at Time 3 (mean age of target adolescent = 15.22,  $SD = 0.8$ ). Sociometric popularity ratings were available for 185 of the target adolescents at Time 1 and 113 at Time 3.

## Procedure

Parents, adolescents, and peers were all paid for their participation. At each session, active informed consent was obtained from parents and teens. In the initial introduction and throughout both sessions, confidentiality was assured to all family members, and adolescents were told that their parents would not be informed of any of the answers they provided. Participants' data were protected by a Confidentiality Certificate, issued by the U.S. Department of Health and Human Services, that protected information from subpoena by federal, state, and local courts.

## Measures

*Ego development.* Ego development was assessed via an 11-item short form of the full 36-item sentence completion test and theoretically derived scoring system constructed by Loevinger and associates (Hy & Loevinger, 1996; Loevinger & Wessler, 1970; Loevinger, Wessler, & Redmore, 1970). Teens were asked to complete stems such, "I feel sorry . . ." and "My mother and I . . ." There is much evidence for the reliability and validity of this instrument as an index of ego level (e.g., Hauser, 1976), and the validity of using a short form of the latest 36-item measure has been justified elsewhere (Hy & Loevinger, 1996). The 11 items chosen for use in this study were selected based on data from a prior investigation in our lab in which teens were given the full 36-item battery. Cronbach's alphas were obtained using those data to determine which of the items were most highly correlated with the overall 36-item Ego Development score. In the end, 11 items were retained, summed to form an 11-item composite, and then correlated with the overall 36-item score. The resultant 11-item composite correlated .95 with the 36-item composite (in our prior work with this measure), with a subscale alpha reliability in the current study of .70. Thus,

for this study, item-sum scores were obtained by summing each participant's 11-item score so as to best approximate adolescents' typical level of ego development. Prior to coding, each protocol was transcribed and divided up into component stems such that coders were blind to all of the other participant's responses. A team of four coders coded all of the transcripts, and each stem was coded by two independent coders who were blind to all other data in the study, yielding a total of 185 protocols (2,035 stems) that were used to compute reliability statistics. Interrater reliabilities within this data set (computed using average measure intraclass correlations) were high ( $r = .93$ ).

*Popularity.* Adolescent popularity was assessed using a limited nomination sociometric measure. Each adolescent, his or her closest friend, and two other target peers named by the adolescent were asked to nominate up to 10 peers in their grade with whom they would "most like to spend time on a Saturday night" and an additional 10 peers in their grade with whom they would "least like to spend time on a Saturday night." Prior research has shown that popularity can be validly assessed by asking youth to identify peers with whom they would like to spend time (Bukowski, Gauze, Hoza, & Newcomb, 1993).

This study used grade-based nominations rather than classroom-based nominations because of the classroom structure of the school at this age. In essence, students could nominate anyone in their grade at their school. This type of grade-based nomination procedure has been employed elsewhere and has been shown to have good predictive validity (Allen et al., 2005). Each student in a given grade who participated in the study thus served as a potential nominator of all other students in that grade. Students were adequately able to do this task, nominating an average of 9.25 out of 10 possible students with whom they would like to spend time. As a result, each teen received nominations from a large number of nominators (every other student who participated in the study as a target teen or peer), which means that this subsample of nominators is likely to yield fairly reliable estimates of popularity for each teen. The raw number of like nominations each teen received was standardized within grade level before being added to the main data set as the primary measure of popularity following the procedure described in Coie, Dodge, and Coppotelli (1982).

*Perceived attachment to peers.* Adolescents completed the Inventory of Peer Attachment (Armsden & Greenberg, 1989). This 32-item measure, completed by target adolescents, assesses adolescents' perceptions of how well their peers serve as sources of psychological security. It has been linked with

measures of psychological well-being, self-satisfaction, and family functioning (Armsden & Greenberg, 1987). Teens respond to items such as "My friend understands me" and "My friend accepts me as I am" on a 5-point, Likert-type scale. Subscale alpha reliabilities were excellent ( $r = .92$ ).

*Observed relatedness in adolescent–best friend interactions.* Adolescents and their best friends participated in a supportive behavior task in which adolescents were asked to discuss a problem they were having about which they wanted to get some help. Best friends were told to just respond naturally to the adolescent. The task was videotaped and lasted 8 minutes. The videotapes and transcripts were then coded on a scale of 0 through 4 for three factors: (a) adolescents' valuing of best friend was operationalized in terms of the extent to which the adolescents demonstrated that they care about, value, and genuinely like their best friend; (b) adolescents' engagement with their best friend captured the extent to which the adolescents appeared to be connected and engaged with their best friend during the interaction; and (c) satisfaction assessed how satisfied the adolescents appeared to be with the interaction. These three factors were averaged to form a composite variable reflecting the degree of intimacy demonstrated by the teen. Subscale reliabilities were excellent at the first ( $\alpha = .85$ ) and second ( $\alpha = .83$ ) time points. A team of four trained coders coded all of the interactions, and each interaction was coded by two independent coders who were blind to all other data in the study. Ratings made by the two coders were then averaged. Each interaction was reliably coded as an average of the scores obtained by two trained raters blind to other data from the study. Interrater reliability statistics were calculated using average measure intraclass correlation coefficients and were in the range of .67 through .72.

## RESULTS

### Preliminary Analyses

*Sample means.* Means and standard deviations for all substantive variables are presented in Table 1.

*Demographic effects.* Analyses examined the relation of adolescent ego development and the assessed measures of adolescent functioning with adolescents' age, gender, and parents' income. These results are presented in the first three columns of Table 2. Results indicated several main effects for gender, family income, and age on the assessed variables. Thus, these three variables were entered into all primary analyses so as to assure that

**TABLE 1: Means and Standard Deviations of Ego Development and Outcome Variables**

	$\bar{X}$	SD
Teen ego development Time 1	4.20	0.42
Teen attachment to peers Time 1	102.14	13.92
Teen attachment to peers Time 2	103.26	12.98
Teen intimacy with best friend Time 1	2.43	0.68
Teen intimacy with best friend Time 2	2.27	0.75
Teen popularity Time 1	0.95	1.35
Teen popularity Time 3	0.82	1.31

NOTE:  $n$  range = 113-178.

any effects obtained were not simply artifacts of these demographic effects. We also examined possible moderating effects of these demographic factors on each of the relationships described in the primary analyses below. No moderating effects were found beyond what would be expected by chance.

*Intercorrelations among measures of functioning.* Simple univariate correlations were also examined between all variables of interest and are also presented in Table 2. Adolescents' level of demonstrated intimacy in the interaction tasks with best friends, attachment security in peer relationships, and peer-rated popularity were positively intercorrelated at each time point, as expected, though correlations were not so high as to suggest that they reflected one single construct.

As also indicated in Table 2, ego development was significantly related to all of the assessed facets of peer relationships at Time 1. Ego development was concurrently linked to higher levels of intimacy within the supportive interaction with a best friend, the adolescents' self-reported psychological security in friendships, and peer-rated popularity.

Preliminary analyses also examined changes over time in the variables that were assessed at multiple time points and revealed that markers of peer functioning did not change significantly during this period in the sample as a whole. Thus, all primary analyses (see below) are predicting increases or decreases relative to a flat overall trend in the data.

### Primary Analyses

*Ego development and adolescent–best friend interactions.* We first examined whether adolescents with higher levels of ego development demonstrated

**TABLE 2: Correlation of Adolescent Ego Development, Indices of Psychosocial Functioning, and Demographic Characteristics**

Variable	1	2	3	4	5	6	7	8	9	10
Teen age										
Teen gender (0 = male, 1 = female)	-.19***									
Family income	.01	-.08								
Ego development (Time 1)	-.02	.08	.31***							
Attachment to peers (Time 1)	-.02	.18**	.25***	.22***						
Attachment to peers (Time 2)	-.07	.18**	.05	.31***	.55***					
Intimacy with best friend (Time 1)	-.12	.00	.18**	.26***	.16**	.13*				
Intimacy with best friend (Time 2)	.02	.07	.19**	.33***	.19**	.22***	.40***			
Popularity (Time 1)	-.08	.05	.39***	.28***	.12	.10	.26***	.17**		
Popularity (Time 3)	-.01	-.18*	.42***	.30***	.09	.17*	.21**	.13	.66***	

NOTE:  $n$  range = 113-185.

\* $p < .10$ . \*\* $p < .05$ . \*\*\* $p \leq .01$ .

more intimacy over time with their best friend relative to their same-age peers who were lower in ego development. We addressed this question using a series of hierarchical regression analyses to predict observed qualities of adolescents' behavior in the interaction task at Time 2 after first entering into the model demographic factors, followed by the level of behavior at Time 1. In a final step, we entered adolescent ego development at Time 1. Because initial levels of the outcome of interest (i.e., teens' intimacy) are entered first into all equations predicting the final level of the outcome, the predictor variable of interest (ego development) is being tested for its relation to the residual variance of the outcome variable. Predicting future levels of a variable (i.e., ego development at Time 2) while accounting for initial levels (e.g., accounting for stability from Time 1 to Time 2) in this way yields one marker of change, that is, increases or decreases relative to initial levels (Cohen & Cohen, 1983). Results are presented in Table 3. These results indicate that ego development is a significant predictor of adolescent intimate behavior ( $\beta = .23, p < .01$ ) with the best friend interaction at Time 2, even after accounting for these behaviors at Time 1. These findings indicate that adolescents higher in ego development make more gains in relationship quality during a 1-year period relative to same-age peers lower in ego development. These results are presented in Step 3 of Table 3.

*Ego development and changes in attachment to peers.* The next question we addressed was whether ego development was a predictor of changing levels of the adolescents' reports of attachment to peers. We addressed this question using a hierarchical regression analysis, similar to that described above, to explore whether adolescents higher in ego development made relatively more gains over time in attachment to peers (see Table 3). Ego development is a significant predictor of adolescent attachment to peers at Time 2 ( $\beta = .22, p < .001$ ), even after accounting for attachment to peers at Time 1. Adolescents who are higher in ego development make more gains in friendship security during a 1-year period relative to same-age peers lower in ego development.

*Ego development and changes in peer group popularity.* The final question we addressed was whether ego development was a predictor of changing levels of the adolescents' popularity with their peers. We addressed this question using a hierarchical regression analysis, similar to that described above, to explore whether adolescents higher in ego development made relatively more gains over time in peer-rated popularity (see Table 3). These results indicate that ego development is a significant predictor of adolescent popularity with peers at Time 3, even after accounting for popularity with

**TABLE 3: Ego Development Predicting Change Over Time in Friendship Qualities**

	Observed Intimacy With Best Friend (Age 14)			Self-Reported Attachment to Peers (Age 14)			Peer-Rated Popularity (Age 15)		
	$\beta$	$\Delta R^2$	R <sup>2</sup>	$\beta$	$\Delta R^2$	R <sup>2</sup>	$\beta$	$\Delta R^2$	R <sup>2</sup>
Step 1									
Gender (1 = male, 2 = female)	.10			.21**			-.13		
Family income	.20**			.06			.39*****		
Age (Time 1)	.05	.05**	.05	-.03	.05**	.05**	.00	.18*****	.18*****
Step 2									
Variable at Time 1	.42*****	.14*****	.19*****	.56*****	.27*****	.32*****	.56*****	.27*****	.45*****
Step 3									
Ego development Time 1	.23***	.05**	.24***	.22*****	.04****	.36*****	.18**	.03**	.48*****

NOTE: *n* range = 113-151.  $\beta$  weights are from the variable's entry into model.

\**p* < .10. \*\**p* < .05. \*\*\**p* ≤ .01. \*\*\*\**p* < .001.

peers at Time 1 ( $\beta = .18, p < .05$ ). Adolescents who are higher in ego development make more gains in popularity during a 1-year period relative to same-age peers lower in ego development.

## DISCUSSION

This study found that adolescent ego development was linked with relative increases in a constellation of behaviors related to adolescent friendship development during a 1-year period. In interactions that called for adolescents to elicit support from their closest friends, ego development predicted relative increases over time in levels of adolescent behaviors that served to increase intimacy with their best friends. Ego development also predicted relative increases over time in adolescents' sense of psychological security in their friendships and relative increases over time in popularity among their same-age peers. These findings were highly robust statistically and were obtained with multiple methods (i.e., test, questionnaire, and observational data) and multiple reporters.

Taken together, these results suggest that relatively higher levels of ego development are tied not only to concurrent aspects of adolescent peer relationships but also to gains in peer functioning over time in comparison to same-age peers lower in ego development. These findings provide an example of the importance of exploring the role of ego development in social relationships outside of the family during adolescence and also demonstrate a potential role for ego development processes to increase our understanding of individual differences in friendship development throughout the course of adolescence. Each of the findings is discussed in turn below, followed by a discussion of the findings' limitations.

The first portion of our investigation of ego development and adolescent friendship explored links between ego development and adolescent behaviors in a task where the adolescents were asked to talk to their best friend about a problem in which they could use some support or advice. Adolescent ego development was concurrently linked with relatively higher levels of intimacy within the close friend interaction. Furthermore, adolescent ego development predicted relatively more gains in intimacy over time. These findings fit within a network of related findings suggesting that individuals marked by higher levels of ego development are able to demonstrate openness and connectedness in interpersonal interactions (e.g., Hauser, 1976; Hennighausen et al., 2004). One explanation for these findings is that these interpersonal styles may enable adolescents with relatively higher levels of ego development to pursue increasingly intimate interactions with their peers over time relative to lower ego

development adolescents. Further research might explore whether these high ego development adolescents are also able to avoid some of the demonstrated negative sequelae of failure to establish supportive friendships with peers, ranging from anxiety disorders to depression and suicidal behavior (Harter & Whitesell, 1996; Prinstein, Boergers, Spirito, Little, & Grapentine, 2000; Williams, Connolly, & Segal, 2001).

The results of this study also show that adolescents' sense of psychological security in their friendships is both concurrently and longitudinally related to adolescent ego development. Thus, adolescents who had higher levels of ego development not only demonstrated relatively higher levels of peer attachment at the first time point of measurement but also experienced relatively greater gains in peer relationship security over time relative to adolescents with lower levels of ego development. These findings fit with findings from young adulthood that suggest links between ego development and mental representations of relationships (Hauser et al., 1998; Henninghausen et al., 2004). These findings are consistent with the notion that ego development may influence future social development and peer relationships via its influence on internal models of friendships. If this idea is confirmed in further research, then interventions aimed at strengthening ego development by, for example, focusing on socioemotional and identity development may be particularly valuable given that positive models of peer relationships also appear to buffer effects of negative parent child interactions (McElhaney & Immele, 2001).

Finally, this study also demonstrated links between ego development and growth in adolescent popularity over time. Although concurrent links between ego development and popularity have been demonstrated previously (Allen et al., 2005), this study is the first to demonstrate links between ego development and relative growth in adolescents' acceptance by same-age peers over time. This finding is significant given the demonstrated links between peer acceptance and a range of adaptive outcomes, including higher levels of social skills, lower levels of depression (Frentz et al., 1991; Henrich et al., 2001), and the potentially negative consequences of peer rejection, including anxiety, depression, and problem behaviors (Inderbitzen, Walters, & Bukowski, 1997; Patterson, DeBaryshe, & Ramsey, 1989; Prinstein et al., 2000; Williams et al., 2001). This study provides some of the first evidence that adolescent ego development is directly related to relative gains in friendship development during adolescence. Considered collectively, the results of the present investigation highlight the value of examining the relation of ego development to interpersonal outcomes beyond the mother-teen relationship during adolescence and tracking changes in these relational outcomes over time. Indeed, our results suggest that ego development is related to theoretically predictable developmental changes in friendship competence over time. Had we examined

only the assessed relational outcomes at one time point, these patterns would not have been evident.

Although this study advances our understanding of the relation of ego development to the development of several dimensions of social adaptation in adolescence by using multiple methods—including observations, self-reports, and peer reports—there are nonetheless a number of limitations to these findings that bear consideration. First, although longitudinal studies help eliminate some causal hypotheses, even longitudinal data are not sufficient to draw causal conclusions. Second, this study focused on a small period of adolescence, although one during which peer relationships begin to undergo significant transformations (Larson & Richards, 1991). Further research will be needed to establish whether and how the particular relations between ego development and patterns of friendship development observed in this study are maintained over time. Third, this study does not provide information about the mediating mechanisms that may have led to the observed developmental changes in friendship development. Further research is now needed to clarify the mechanisms by which ego development may influence the development of social relationships during the course of adolescence. Fourth, in the current study, ego development was only evaluated when the adolescent was age 13, and thus the majority of adolescents had ego development scores at or around a score of 4, which corresponds to the conformist level of ego development (Loevinger & Wessler, 1970). Hennighausen and colleagues (2004) have demonstrated the utility of assessing ego-development trajectories that capture patterns of growth. Further research addressing longitudinal change in early adolescent ego development will be critical to understanding how developmental trajectories in ego development affect the nature of adolescent friendship development. Finally, it is important to note that although ego development was significantly related to relative changes in peer relationship qualities over time, it was only able to account for a modest amount of unique variance in these variables. This suggests that further research might explore other factors that moderate the impact of ego development over time and other constructs that predict the changing nature of peer relationships in adolescence.

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