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When Friendships Surpass Parental Relationships as Predictors of Long-term Outcomes: Adolescent Relationship Qualities and Adult Psychosocial Functioning

Joseph P. Allen, Ph.D., Meghan Costello, Jessica Kansky, Emily L. Loeb, Ph.D.

University of Virginia

Abstract

Perceptions of adolescent-parent and adolescent-peer relationship qualities, and adolescents' attachment states of mind were examined as predictors of adult social and romantic relationship quality, depressive symptoms, and work performance. Adolescents (86 male, 98 female; 58% White, 29% African American, 8% mixed race/ethnicity, 5% other groups) were followed from age 13 to 27 via observational, self-, parent-, and close friend-reports. Adolescent close friendship quality was a significantly better predictor of adult peer and romantic outcomes, work performance, and depressive symptoms than parental reports of the parent-teen relationship; attachment security was also a strong predictor of numerous outcomes. Results are interpreted as reflecting the difficulty for parents judging parent-teen relationship quality and as reflecting the growing importance of close friendships during this period.

A defining characteristic of adolescence is the transition from primary reliance upon parents as sources of support to a steadily increasing reliance upon peers—a transition that anticipates the increasing primacy of peer and romantic relationships in adulthood (Steinberg, 2019). Although parents influence the quality of adolescents' relationships with their peers, particularly early on, as adolescence progresses, the distinct nature of parent and peer relationships make it increasingly likely that parent and peer relationships will proceed on different tracks (Furman & Shomaker, 2008; Furman, Simon, Shaffer, & Bouchee, 2002; Oudekerk, Allen, Hessel, & Molloy, 2015). The parent-teen relationship is obviously of great importance within adolescence, however, whether this relationship is as important in forecasting longer-term outcomes is far from obvious: The challenges of adolescence are not the same as the challenges of adulthood and predictors of success at one developmental stage will not necessarily be the same for predicting success at subsequent stages.

Just as the qualities of an adolescent's relationships are changing as adolescence progresses into adulthood, so too are critical domains of functioning. Extrafamilial relationships, both romantic and non-romantic, are becoming central to functioning and even to physical health (Holt-Lunstad, Robles, & Sbarra, 2017; Holt-Lunstad, Smith, & Layton, 2010). New domains, such as the world of work, emerge and become central to functioning (Pulkkinen, Nygren, & Kokko, 2002). Some domains, such as the quality of relationships with parents,

remain the same in terms of the individuals involved, but change in terms of the nature of the relationships. And of course some areas of functioning, such as the presence vs. absence of mental health symptoms, remain highly relevant across development. This study assessed each of these domains to address the question: To what extent does the quality of the parent-teen relationship and of adolescent close peer relationships forecast long-term developmental outcomes into adulthood? Although not well-studied, understanding these *long-term* implications of parent-teen and teen-peer relationships is essential not only to understanding the lifespan implications of fundamental social developmental processes unfolding during adolescence, but also for considering how and where risk assessment, prevention, and intervention resources should be most effectively deployed during this period.

Given the importance of the parent-teen relationship *within* adolescence, its long-term implications may seem like a given, though such an assumption would ignore the magnitude of the changes that take place from adolescence to adulthood. Within adolescence, of course, the parental relationship clearly has direct day-to-day effects on teens' mood and functioning (Coley, Medeiros, & Schindler, 2008; Mak, Fosco, & Feinberg, 2018). Hostile parental behavior and high levels of parent-teen conflict each have the potential to cause great distress and dysfunction (Dube et al., 2003). In addition, whether teens choose to follow larger social norms, such as those regarding delinquent behavior, is in large part determined by the quality of the parent-teen relationship (Thomas et al., 2018). Further, specific parenting behaviors (e.g., monitoring, autonomy restriction) have been directly linked not only to the quality of future teen-peer relationships (Hare, Szewedo, Schad, & Allen, 2015), but also to teen outcomes such as delinquent behavior, longer term adult romantic and academic outcomes and career success (Bell, Allen, Hauser, & O'Connor, 1996; Loeb, Kansky, Tan, Costello, & Allen, in press; Oudekerk et al., 2014; Tilton-Weaver, Burk, Kerr, & Stattin, 2013). Importantly, however, these behaviors may not always directly translate into good or bad *relationships*. For example, parents low in monitoring may have harmonious relationships with their teen, even though low monitoring is known to be predict future adolescent difficulties.

In the longer term, the parent-teen relationship may model skills, such as managing hierarchical and/or asymmetric relationships, that have value in adult contexts such as the workplace. Similarly, the quality of adults' relationships with parents also seems likely to display at least some continuity with qualities of adolescent-era relationships with parents. Parents' relationships with their teens may also potentially influence longer-term developmental outcomes indirectly via teens' internalized representations of these relationships (Allen, 2021; Allen, Grande, Tan, & Loeb, 2018; Tan et al., 2016). These internalized representations, referred to as attachment states of mind, appear likely to in part reflect the history of parent-child relationships (Main, Hesse, & Kaplan, 2005; Simpson & Rholes, 2010). The degree of security implicit within these states of mind has already been found to be linked to numerous facets of functioning in adolescence, to romantic relationship quality up through age 21, and to hostility in relationships at age 27 (Loeb, Stern, Costello, & Allen, 2020; Tan et al., 2016). Apart from these latter two studies, however, little is known about how these states of mind in adolescence will actually predict longer-term functioning.

As adolescence progresses, however, a key transition in the attachment system is the adolescent's often deliberate decision to *not* seek comfort from parents when under stress, a reflection of the drive to develop an internal sense of self-sufficiency and autonomy (Allen & Tan, 2016). Ultimately, as adolescents move into adulthood and typically stop living with their parents, the parent-offspring relationship tends to become somewhat less central in their lives (Markiewicz, Lawford, Doyle, & Haggart, 2006). Moving into adulthood, parent-offspring relationships may still vary tremendously in the degree to which they are supportive vs. problematic; yet they no longer typically have the capacity to dominate an adult's day-to-day life in the same way that they did during adolescence. Adult offspring now can begin to leave problematic parental relationships behind, certainly physically and to a degree emotionally as well.

Just as teens are working to cut back their reliance upon parents for support, they are also shifting key support roles and attachment behaviors over to their close friends (Rosenthal & Kobak, 2010). Within adolescence, the importance of peer relationships has become well-established. Links of friendship quality to mental health have been repeatedly observed (Allen et al., 2006; Reis, 2014; Van Ryzin, Gravely, & Roseth, 2009). Similarly, although peer influences on risky behavior have often been a source of concern, high quality peer relationships have been found to buffer against both risky behavior and substance abuse (Roseth, Johnson, & Johnson, 2008). Even factors seemingly distal from the peer world and more likely to be related to future work and career domains, such as academic achievement, have been related to the quality of adolescents' relationship with their peers (Crosnoe, 2011; Crosnoe, Cavanagh, Elder, & Crosnoe, 2003). Each of these findings suggests domains in which peer relationship qualities are likely to have continuing influences into adulthood.

With the exceptions noted below, however, the longer-term implications of the quality of adolescent close friendships for adult functioning have received comparatively little attention. This is somewhat surprising as many of the specific skills and qualities needed to competently manage adolescent friendships seem far more likely to translate to social competence in adulthood than are the skills and qualities involved in managing parental relationships. Skills such as handling conflict in non-familial relationships, learning how to establish and deepen new relationships, and establishing give and take among relative equals are central to adult social functioning. Each of these can be practiced and further developed far more readily in adolescent close friendships than in parent-teen relationships. In addition, friendships in adolescence provide the opportunity to develop and practice establishing and maintaining new close relationships. This has been posited as a key explanation for the finding that close friendship competence in adolescence is predictive of future adult romantic experience (Allen, Narr, Kansky, & Szwedlo, 2020). Adolescent friendship quality has also been found to predict increasing self-worth and decreasing anxiety and depressive symptoms into early adulthood (Allen et al., 2018; Narr, Allen, Tan, & Loeb, 2019).

In assessing the relative predictive utility of parent-teen and teen-peer relationship qualities, an additional issue that comes into play is that the capacity for the participating parties to *assess* these relationships is likely to differ across relationship types. Even if the quality of the parent-teen relationship is predictive of adult outcomes in theory, in practice parents' ability to objectively assess the quality of this relationship may be limited. Several factors

work against parents in their efforts to evaluate the quality of their relationship to their teen. First, there is the longstanding recognition that *all* individuals find it extremely difficult to rate the quality of emotionally intense interactions and relationships accurately (Nisbett & Wilson, 1977). Although early notions of adolescence as a period of ‘storm and stress’ have been largely recognized as overstated, nonetheless the combination of the adolescents’ desire to take increasing control of their lives in a range of areas together with parents’ own midlife transitions and accompanying stresses often leads to conflict and at times heated negotiations (Steinberg, 2001, 2019; Steinberg & Steinberg, 1994). Even if these negotiations—around issues ranging from household chores to more fundamental rules—do not signal deep problems in the parent-teen relationship, they nevertheless may make it difficult for both parties to be dispassionate in their assessments of the relationship. Under these conditions, making an objective determination about the overall quality of a rapidly changing relationship is likely to be difficult at best.

An equally vexing problem is that parents typically lack a meaningful reference point against which to judge the parent-teen relationship. The inner workings of families, especially the more conflictual aspects, are unlikely to be discussed in great detail even among close friends. Even when these are shared, verbal descriptions (e.g., “we had an ugly argument”) can mean radically different things to different parents trying to understand one another’s experiences. Finally, a parents’ own mood state is likely to influence their evaluation of close relationships (Roisman, Padron, Sroufe, & Egeland, 2002). In sum, even though parental perceptions are often critical in guiding their actions, it may be that recognizing just what constitutes a good vs. poor relationship with one’s adolescent will be highly challenging.

An adolescent’s close friends, in contrast, appear far better positioned to assess their friendships with a given teen. Adolescent close friendships are likely to be less inherently conflictual than parent-teen relationships, as they are maintained by choice and there is relatively little high-stakes negotiation to be handled (Furman & Shomaker, 2008). In addition, unlike the relatively insular and singular experience of the parental relationship, teenagers typically have experience with many different friendships, and discussions regarding these relationships are often a topic of interest and conversation. In support of friends’ capacities to evaluate one another there is a long history of peer ratings being sensitive to developmental competencies in ways that surpass adult ratings (Cowen, Pederson, Babigian, Isso, & Trost, 1973). To date, research has found that adolescent friendship qualities can predict self-worth, anxiety and depressive symptoms into late adolescence, and romantic life satisfaction later in adulthood (Allen et al., 2020; Loeb, Davis, Costello, & Allen, 2020; Narr et al., 2019). Friendship qualities have not, however, been examined with regard to prediction of other *long-term* functional outcomes, nor have they been examined in terms of whether they add anything over and above predictions from parent-adolescent relationship qualities.

Overall, there are multiple theoretical reasons to expect that if we are looking for the best predictors of long-term outcomes, relationship ratings by adolescents’ close friends may be more useful than ratings by parents. Comparative studies across a range of developmental epochs support this idea. Prior to adolescence, peer reports, as early as first grade, have

been found more predictive of outcomes ranging from aggression to high school graduation than are parent reports (Clemans, Musci, Leoutsakos, & Jalongo, 2014; Victor, Hipwell, Stepp, & Scott, 2019). Within adolescence, self-reported peer support was more strongly related to levels of overall adjustment and lower depressive symptoms than was self-reported parental support (Laible, Carlo, & Raffaelli, 2000). Within a college student sample, findings mainly relying upon self-reports, have been more mixed, with some studies finding stronger links to adaptation from self-reported peer relationship quality and others finding equivalent predictions from self-reports of parent and peer relationship quality (Li, Albert, & Dwelle, 2014; Schnyders, Rainey, & McGlothlin, 2018). Unfortunately, beyond the early twenties, no research has examined the relative long-term predictive value of adolescent parent and peer relationships in terms of future functioning.

This prospective, multi-method study followed a diverse community sample of adolescents from age 13 to age 27 to examine the long-term predictive utility of parents' ratings of their relationship with their teen, close friends' ratings of the qualities of the friendship, and adolescent states of mind regarding attachment. Although the lack of research in this area of necessity renders this study as relatively exploratory, three specific hypotheses were assessed:

Hypothesis 1: After accounting for the interrelation of peer and parent relationship qualities, peer relationship qualities were hypothesized to be stronger predictors of adult social relationships outside the family; attachment security was, however, expected to predict these outcomes.

Hypothesis 2: In terms of functional domains in adulthood, peer relationship qualities were expected to be the stronger predictors of depressive symptoms and work performance, although given the experience that parental relationships provide in managing hierarchical relationships (e.g., with a work supervisor), predictions with regard to work performance were considered most tentative.

Hypothesis 3: Parent relationship qualities in adolescence were hypothesized to be most predictive of the future quality of parental relationships in adulthood, reflecting likely continuities in these relationships. Attachment security was also expected to be a strong predictor of adult parental relationship quality.

Although existing research was not sufficient to inform specific hypotheses, several research questions were also examined with respect to the hypotheses outlined above: regarding the potential differential utility of reports from mothers vs. fathers, of adolescent vs. parent reports, of the age of adolescents at the time of relationship assessment, and of parental mood states. Finally, given that gender and family income have each been related to numerous adult functional outcomes (Luthar & Ansary, 2005; Nolen-Hoeksema & Hilt, 2009), these were each considered as covariates and potential moderators in all models.

Method

Participants

This report is drawn from a larger longitudinal investigation of adolescent social development in familial and peer contexts conducted from 1998 to 2013 in central Virginia. Participants included 184 seventh and eighth graders (86 male and 98 female) followed over a 14-year period from ages 13 to 27, along with collateral data collected from parents, close friends, and romantic partners of these adolescents. The sample was racially/ethnically and socioeconomically diverse: 107 adolescents (58%) identified as Caucasian, 53 (29%) as African American, 15 (8%) as of mixed race/ethnicity and 9 (5%) as being from other minority groups. Adolescents' parents reported a median family income in the \$40,000 - \$59,999 range at the initial assessment.

Adolescents were initially recruited from the 7th and 8th grades of a public middle school drawing from suburban and urban populations in the Southeastern United States. Students and their peers were recruited via an initial mailing to all parents of students in the school along with follow-up contact efforts at school lunches. Families of adolescents who indicated they were interested in the study were contacted by telephone. If a student was identified as a close peer of a participant and agreed to participate in that capacity, they were no longer eligible to participate as primary participants, so as to reduce redundancies in the data. Thus, a 'pure' participation rate for primary participants is not readily obtained, as many of the most interested students were removed from the pool of potential primary participants (thus skewing the potential participation denominator). However, of all students eligible for participation, 63% agreed to participate as either target participants or as peers providing extensive collateral information in a 3-hour session. All participants provided informed assent before each interview session, and parents provided informed consent. Initial interviews took place in private offices within a university academic building. Follow-up assessments were conducted in the same setting, or for participants' living at a distance, were conducted either in local settings (e.g., hotel conference rooms), or via mail.

Participants were first assessed annually over a five-year period across adolescence (at ages 13.35 ($SD = .64$), 14.27 ($SD = .77$), 15.21 ($SD = .81$), 16.35 ($SD = .87$), and 17.32 ($SD = .88$)). For the adult follow-up assessments, data were obtained from participants in the mid-twenties (at ages 24.6 ($SD = 1.01$), 25.7 ($SD = .99$), and 26.6 ($SD = 1.01$)). At each age, participants also nominated the person they currently identified as "the peer to whom they were closest" to be included in the study. In adolescence, close friends came in during a visit along with the target participant. In adulthood, friends completed measures individually. Friends were close in age to participants (i.e., their average age differed by less than a month from target adolescents' ages). Close friends within adolescence were specified to be same-gender friends, but the same friend need not be specified across different waves. Close friends in adolescence reported that they had known participants for an average of 4.3 to 5.7 years ($SD = 3.1$ to 3.8) across the various assessment periods; close friends in adulthood similarly reported that they knew participants for an average of 10.3 to 11.2 years (SD 's = 6.6 to 7.1). Data were obtained at four points from the adolescents' parents (at adolescent ages 13.35 ($SD = .64$), 16.35 ($SD = .87$), 18.29 ($SD = 1.26$), and 25.69 ($SD = .99$)). For

four participants, parent ratings were only available from fathers; for 61 participants, parent ratings were available only from mothers.

Romantic partner observations were obtained for participants who were in a relationship for at least three months' duration and in which the romantic partner was willing to come into our offices for an observational assessment. Romantic relationship assessments were obtained whenever a participant was in such a relationship and willing to participate during two three-year windows. The result was that assessments were obtained at participant ages 23.8 ($SD = 1.12$), and 27.4 ($SD = 1.43$). At each age one participant was in a romantic relationship with a same-gender partner; the remainder of relationships were heterosexual.

Attrition Analyses

Adult follow-up data were obtained from 94% of the original sample ($N = 173$). Attrition analyses comparing those participants with vs. without follow-up data revealed no significant differences on any baseline variables. Slightly more data was missing with regard to adult peer report data (85% data present; $N = 156$). Those who did not have adult peer report data had slightly lower close friendship quality at baseline ($t(184) = 2.01, p = .046$). Data were available from parents of 145 adults (79% of the sample). Adolescents who did not have adult parent data also had slightly lower baseline friendship quality ($t(182) = 2.01, p = .045$) and lower reported attachment security ($t(174) = 2.28, p = .024$). Data were available for romantic partner interactions for 116 participants (63% of the original sample), but attrition analyses revealed no difference between participants who did vs. did not have romantic partner data.

To best address any potential biases due to attrition in longitudinal analyses, full information maximum likelihood (FIML) methods were used with analyses including all variables that were linked to future missing data (i.e., where data were not missing completely at random). Because these procedures have been found to yield the least biased estimates when all available data are used for longitudinal analyses (vs. listwise deletion of missing data) (Arbuckle, 1996), the entire original sample of 184 was utilized for these analyses. This full sample thus provides the best possible estimates of variances and covariances in measures of interest and was least likely to be biased by missing data.

Procedure

In the initial introduction and throughout all sessions, confidentiality was assured to all study participants and adolescents were told that their parents and friends 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, which protected information from subpoena by federal, state, and local courts. Transportation and childcare were provided if necessary. Adolescent/adult participants, their parents, and their romantic partners and peers were all paid for participation.

Measures

Close Friendship Quality (Friend-rated: Ages 13–17).—Each year from age 13 to 17, close friends rated participants on their competence at establishing and maintaining a

strong close friendship, using a version of the 4-item friendship competence scale from the Adolescent Self-Perception Profile modified to obtain ratings of one's friend (vs. oneself, as in the original scale) (Harter, 1988). Although the scale was originally labelled 'close friendship competence,' examination of the items suggests that it is better conceptualized as a measure of the quality and intimacy of the friendship. Items focused, for example, on extent to which teen had 'a close friend they share secrets with,' 'a friend close enough to share really personal thoughts with,' and a 'really close friend to share things with.' Results were averaged across the five years to produce the final scale. Internal consistency was good (Cronbach's α 's ranged from .65 to .74 within years).

Close Friendship Quality (Self-rated: Ages 13–17).—Each year from age 13 to 17, target participants rated the quality of their closest friendship using the Friendship Quality Questionnaire (Parker & Asher, 1993) a 40-item self-report measure using ratings on a 5-point Likert scale of aspects of friendship ranging from companionship and recreation to conflict resolution. Internal consistency was in the "excellent" range across this period (Cronbach's α 's = .95 - .96).

Parent-teen Relationship Quality (Parent ratings: Ages 13, 16, 18; Adult offspring ratings: 25).—The Inventory of Parent and Peer Attachment (Armsden & Greenberg, 1987) was used to assess parents' perceptions of the quality of their overall attachment to their teen. Relationship quality was calculated as the sum of 14 5-point Likert items capturing communication and trust and seven 5-point items capturing alienation in the relationship (reverse scored). Scores were obtained separately from mothers and fathers and were averaged across both parents and across ages 13 to 18 to yield the final score for adolescence. The average of adult offspring ratings of maternal and paternal relationships at 25 was used as the final score for adulthood. If either parent's ratings were missing, then the other parent's ratings were used. Internal consistency was good throughout (Cronbach's α ranged from .88 to .92 for parent ratings and .95 to .96 for adult offspring ratings).

State of Mind Regarding Attachment (Age 14).—The Adult Attachment Interview (George, Kaplan, & Main, 1996; Kobak, Cole, Ferenz-Gillies, Fleming, & Gamble, 1993) was used to probe individuals' descriptions of their childhood relationships with parents in both abstract terms, and with requests for specific supporting memories. For example, subjects were asked to list five words describing their early childhood relationships with each parent, and then to describe specific episodes that reflected those words. Other questions focused upon specific instances of upset, separation, loss, trauma, and rejection. Finally, the interviewer asked participants to provide more integrative descriptions of changes in relationships with parents and the current state of those relationships. The interview consisted of 18 questions and lasted one hour on average. Slight adaptations to the adult version were made to make the questions more natural and easily understood for an adolescent population at age 14 (Ward & Carlson, 1995). Interviews were audiotaped and transcribed for coding.

The AAI Q-set (Kobak et al., 1993) was designed to closely parallel the Adult Attachment Interview Classification System (Main, Goldwyn, & Hesse, 2002), but to yield continuous measures of qualities of attachment organization. Each rater read a transcript and provided

a Q-sort description by assigning 100 items into nine categories ranging from most to least characteristic of the interview, using a forced distribution. All interviews were blindly rated by at least two raters with extensive training in both the Q-sort and with formal workshop training and certification for coding using the Adult Attachment Interview Classification System. Q-sorts were then compared with a dimensional prototype sort for *secure vs. anxious interview strategies*, reflecting the overall degree of coherence of discourse, the integration of episodic and semantic attachment memories, and a clear objective valuing of attachment. The individual correlation of the 100 items of an individual's Q-sort with a prototype sort for a maximally secure transcript was then used as that participant's scale security score (ranging from -1.00 to 1.00). Inter-rater reliability, assessed via the intraclass correlation coefficient, for the final security scale score was $.82$, which is considered in the excellent range for this statistic (Cicchetti & Sparrow, 1981). Although this system was designed to yield continuous measures of qualities of attachment organization, rather than to replicate classifications from the Main and colleagues (2002) system, prior work has compared the scores obtained to a subsample ($N = 76$) of adolescent AAI's that were classified by an independent coder with well-established reliability in classifying AAI's. This was done by converting the Q-sort scales described above into classifications using an algorithm described by Kobak (1993). Using this approach, an 84% match for security vs. insecurity was obtained between the Q-sort method and the classification method ($\kappa = .68$). Prior research in adolescent samples has also indicated that security assessed via this interview is relatively stable over a two-year period (i.e., $r = .61$) (Allen, McElhane, Kuperminc, & Jodl, 2004) and to have expected relations to theoretically predictable outcomes including depression, aggression, and romantic behavior within adolescence (Chango, McElhane, & Allen, 2009; Miga, Hare, Allen, & Manning, 2010; van Hoof, van Lang, Speekenbrink, van IJzendoorn, & Vermeiren, 2015).

Peer-rated and Self-rated Adult Peer Relationship Quality (Peer-ratings: Ages 24–26; Self-ratings Ages 24–26).—Adult peer relationship quality was assessed by peers using the Young Adult Adjustment Scale (Capaldi, King, & Wilson, 1992) in which participants were rated by their friends and parents on 7 items using a 5-point scale tapping qualities such as getting along well with friends, and having a hard time finding friends (reverse-scored). For example, one item asks the peer to rate the extent to which the primary participant, “Gets along well with friends or acquaintances.” Cronbach's alpha across time was adequate (α 's ranged from $.59$ to $.76$). Peer ratings were averaged across the three years of ratings to yield the peer measure of youth's global adjustment as rated by parents. Adolescent self-ratings were obtained each year using the 24-item Social Provisions Scale (Cutrona, 1989; Cutrona & Russell, 1987), which captures aspects of relationships including perceived attachment to others, social integration, and opportunities for nurturance. Internal consistency was strong for each year (α 's ranged from $.92$ to $.94$). Scores were summed and averaged across the three years to yield the final self-rating.

Peer-rated and Parent-rated Participant Work Performance (Peer-ratings: Ages 24–26; Parent rating: Age 25).—Work performance was also assessed via the Young Adult Adjustment Scale (Capaldi et al., 1992) in which participants were rated by close friends and parents on 9 items tapping work performance in terms of qualities such as

getting along with supervisors at work and being unable to settle into anything at school or work (reverse-scored). Cronbach's alpha for the combination of these six scales was high for both parent ratings (α 's = .80 and .81 for work performance for mothers and fathers respectively) and peer ratings (α 's for peer competence ranged from .78 to .87). Mothers' and fathers' ratings were averaged (with one or the other used if both were not available) to yield an overall measure of parent-rated work performance (correlation between mother and father ratings: $r = .45$, $p = .005$). Peer ratings were averaged across the three assessments from ages 24 to 26.

Romantic Life Satisfaction (Ages 24–26).—Participants reported their degree of overall satisfaction with their romantic life each year on the Likert-style, 5-item romantic life satisfaction scale of the Adult Romantic Life Satisfaction Measure (Hare & Miga, 2009). This measure has been previously (inversely) linked to levels of blood markers of stress response (Allen, Loeb, Tan, & Narr, 2017) and to the reported duration of the longest relationship during this period. The measure asks participants to address satisfaction and distress with their current romantic life using items such as, “I am very satisfied with my current romantic life” and “I spend a lot of time worrying about my current romantic life” (reverse-coded). The measure displayed good internal consistency across the years of this study (Cronbach's $\alpha = .85$ to .91). Ratings were summed and averaged across ages 24 to 26 to yield the final scale for this measure.

Quality of romantic interactions (Ages 24, 26).—Quality of romantic interactions was coded from two observational tasks (both of which were completed at age 24 and again at age 26) in which participants interacted with a current romantic partner of at least 3 months duration. In an 8-minute supportive behavior task, participants were instructed to ask for help with a “problem they were having that they could use some advice or support about.” These interactions were coded using the Supportive Behavior Coding System (Allen et al., 2001). Constructive engagement in this task was reliably coded for both partners by two trained raters blind to other data from the study, in terms of the extent to which each partner was attentively engaged, actively listening and making a sustained effort to understand and empathize with the other party. Reliability (Intraclass correlation = .60 to .74 across waves and speakers) was in the ‘good’ to ‘excellent’ range for this statistic (Cicchetti & Sparrow, 1981). Results were averaged across partners and across the two waves of the task as a marker of capacity to establish a dyadic relationship characterized by constructive engagement. This dyadic perspective on observed interactions (i.e., considering both partners' behaviors as part of the ‘dyadic dance’) has been repeatedly shown to be both reliable and valid (Allen, Porter, McFarland, McElhaney, & Marsh, 2007; Kansky, 2018).

At age 24 and 26, target participants and their romantic partners also participated in a revealed differences task in which they discussed an issue in their relationship that they had separately identified as an area of disagreement. The discussion began with target participants playing a recording they had made separately with the interviewer describing the problem and their perspective on it. Typical topics of discussion included money, jealousy, moving, friends, and career issues. These interactions lasted 8 minutes and were videotaped, transcribed, and coded with the Autonomy and Relatedness Coding System

for Romantic Partner Interactions (Allen et al., 2005). Partners' overall positive display of autonomy and relatedness in the task was coded using an anchored 0 – 4-point scale with half-point intervals capturing their ability to present reason-based arguments and to be open and responsive to the positions of their partner. Interrater reliability was in the excellent range at both time points (*ICC's* range from .76 to .91). The constructive engagement and autonomy and relatedness scales were both standardized and then summed together to yield the measure of the overall quality of romantic interactions.

Depressive Symptoms (Ages 24–26) were self-reported via the Beck Depression Inventory, a 21-item measure designed to assess the degree of depressive symptoms in late adolescents and adults (Beck & Steer, 1987). Items were rated on a Likert scale and summed to yield a total depressive symptoms score. This instrument is a well-validated and widely accepted self-report measure of depressive symptomatology (Kazdin, 1990). Internal consistency for this measure was high (Cronbach's α 's ranged from .86 to .90).

Parent-rated Parent-Offspring Relationship Quality (Offspring Age 26).—

Mothers and fathers separately rated their satisfaction with their relationship with their adult child using the three-item satisfaction scale of the Network of Relationships Inventory (Furman & Burhmester, 1985). Internal consistency for the scale was good (Cronbach's α = .95 for both mother and father), and ratings by mothers and fathers were combined to yield the final scale.

Parent Depressive Symptoms (Parent-report, Adolescent Ages 13, 16, 18).—

Using the Beck Depression Inventory (see above), parents rated their own depressive symptoms. Results were averaged across time and across parents to yield a score for mean parental depressive symptomatology (Cronbach's α 's ranged from .81 to .91)

Adolescent-rated Parent-teen Relationship Quality (Ages 13–17).—Using the Inventory of Parent and Peer Attachment (see above), adolescents rated their relationship with each parent each year from age 13 to age 17. Ratings were averaged across parents and years just as with parent ratings described above. Cronbach's α across these 10 ratings averaged .90.

Results

Preliminary Analyses

Means and standard deviations for all substantive variables and intercorrelations among predictor variables are presented in Tables 1 and 2 respectively. Participant gender and baseline family income were also examined and found linked to several of the outcome variables and were thus included as covariates in all analyses. We also examined possible moderating effects of these factors on each of the relationships described in the primary analyses below. Moderating effects were assessed by creating interaction terms based on the product of the centered main effect variables. No moderating effects of income were found for any of the primary analyses below. A moderating effect for gender in the prediction of self-reported parent-offspring relationship quality was found and is described below.

Analyses of Primary Hypotheses

Analytic Plan.—For all primary analyses, SAS PROC CALIS (version 9.4, SAS Institute, Cary, NC) was employed using full information maximum likelihood handling of missing data for assessment of key relations in hierarchical regression models. Power estimates indicate that 80% power would be obtained for standardized estimates equal to or greater than .21. Participant gender and baseline family income were entered in the first step, parent-teen and close friend-teen relationship quality were entered next. In the final step, security in adolescent state of mind regarding attachment was entered. Follow-up analyses then examined whether the magnitude of predictions to outcomes differed depending upon whether the predictor was the quality of the parental relationship vs. the close friend relationship. Differences were assessed by comparing models in which predictions from these two factors were constrained to be equal vs. allowed to vary. If significant improvement was observed in models where predictions were allowed to vary, this indicated that the estimates from each predictor statistically differed from one another.

Hypothesis 1: Prediction to Extra-familial Social Relationship Quality.—Models first examined predictions to both adult peer relationship quality (assessed via peer-report and self-report) and adult romantic life satisfaction and romantic relationship quality (assessed via self-report and direct observation). Results are presented in Table 3. Comparison of the magnitude of the prediction from adolescent parent-teen relationship quality and friend-rated close friendship quality is provided in the final row of Table 3 for each model. For both peer- and self-report measures of adult-peer relationship quality, adolescent close friendship quality was a significant positive predictor and a significantly stronger predictor than parent-teen relationship quality. Parent-teen relationship quality was not a significant predictor for either outcome. Attachment security added to self-reported peer relationship quality but not to peer-reported relationship quality.

For self-reported romantic life satisfaction, close friendship quality was the only significant predictor identified and follow-up analyses indicated that it was a significantly stronger predictor than parent-teen relationship quality.

For observed romantic relationship behavior, only security in adolescent attachment state of mind was a significant predictor.

Hypothesis 2: Prediction to Functional Outcomes.—Results of models predicting work performance (assessed via both parent- and peer-report), as well as self-reported depressive symptoms are presented in Table 4. Parental reports of adult participant work performance were predicted only by security in attachment states of mind. Peer reports of work performance were predicted only by friend-rated adolescent close friendship quality. The difference between predictions from close friendship quality and parent-teen relationship quality was significant in follow-up analyses for this prediction.

Adult depressive symptoms were predicted by both close friendship quality and attachment security and the difference between predictions from close friendship quality and parent-teen relationship quality was also significant in follow-up analyses.

Hypothesis 3: Prediction to Parent-Adult Offspring Relationship Quality.—

Results are presented in Table 5 for models predicting the quality of the parent-adult offspring relationship when the participant was ages 24 to 26. Participant report of parent-adult offspring relationship quality was predicted by friend-rated close friendship quality and attachment security; however, gender significantly moderated the prediction of the three key predictors ($\chi^2_{(3)} = 13.2, p = .004$). In follow-up analyses conducted separately by gender, close friendship quality was a significant predictor for women; whereas attachment security was a significant predictor for men. Parent-teen relationship quality was not predictive of self-reported parent adult-offspring relationship quality. The difference between predictions from parent-teen relationship quality and close friendship quality was not significant for either gender.

Parent-reported adult-offspring relationship quality was predicted by both close friendship quality and parent-teen relationship quality and the magnitude of predictions from these two factors did not significantly differ in follow-up analyses.

Research Questions

Might predictions from just the maternal teen relationship have been stronger than the combined predictions from both parents' ratings?—To examine the possibility that predictions would have been stronger had we focused just on mothers' ratings of the teen-mother relationship, we reran all analyses above using only maternal ratings. Results, presented in Supplemental Tables 1 – 3, indicated that predictions were typically somewhat weaker (and never significant) when just using maternal ratings vs. when using both ratings.

Might predictions from adolescent reports of the parent-teen relationship quality have been stronger than parental reports?—To examine the possibility that predictions would have been stronger had we examined teens' ratings of their relationships with their parents instead of parents' ratings, we reran all of the analyses above using only teen ratings. These ratings, presented in Supplemental Tables 4–6, only yielded significant predictions in two cases where parent reports did not. These predictions were to measures—self-reported adult-peer relationship quality and adult-parent relationship quality—for which a significant methods confound existed.

Would predictions have been stronger had we just focused earlier (or later) in adolescence?—Neither restricting parental reports to just the age 13 assessment (Supplemental Tables 7 – 9), nor to the average of the age 16 and 18 assessments (Supplemental Tables 10–12) produced any significant change in predictions obtained from parental reports across all of these ages.

Would predictions have differed if we had examined adolescent reports of close friendship quality in lieu of close-friend reports?—Results using adolescent reported close friendship quality are presented in Supplemental Tables 13–15. Although adolescent reports predicted numerous outcomes, predictions were primarily to outcomes in which self-report was used at both time points, and thus presented a potential methods

confound. As with friend-reports, adolescent-reported friendship quality was generally a better predictor of outcomes than parent-reported parent-adolescent relationship quality, with the exception of reports of prediction to parent-reported parent-adult child relationship quality.

Were parental reports potentially biased by parents' own concurrent mood states?—We examined whether parents' own mood states might have influenced their reports by examining the relation between parents' reported levels of depressive symptoms and their reports regarding the quality of the parent-teen relationship. Results indicated a strong inverse relation between parental reports regarding the quality of the parent-teen relationship and average levels of parental depressive symptoms assessed contemporaneously ($r = -.51, p < .001$).

Post-hoc Analyses

To follow up questions potentially raised by the findings above, several post-hoc analyses were also performed:

Did overlap in peer reporters between adolescence and adulthood bias results for peer-reported outcomes?—One-third of participants had a peer reporter at some point during adolescence who also appeared as a peer reporter in at least one assessment point in adulthood. Because even in these cases, there were many assessment points where non-overlapping peers also contributed to assessments there was only a 13% overlap in the number of peer reports from adolescence to adulthood. Moderation analyses using the product of standardized variables examined whether the amount of overlap in peers interacted with any of the three primary predictors in predicting the two outcomes that utilized peer reports. No significant interactions were observed.

Is there any other evidence of the validity of parental reports of parent-teen relationship quality?—We examined the relation of parent reports of the parent-teen relationship to teens' reports of the same relationship and found a significant positive correlation between the two ($r = .34, p < .001$).

Were predictions to adult depressive symptoms possibly just an artifact of stability from depressive symptoms experienced during adolescence?—To examine this possibility, we entered mean level of adolescent depressive symptoms as a covariate and reran our primary analyses predicting adult depressive symptoms. Results reflected stability in depressive symptoms over time ($\beta = .28, p < .001$) but that close friendship quality remained a strong predictor of adult depressive symptoms ($\beta = -.27, p < .001$). Parent-teen relationship quality was still not a predictor and attachment security was no longer a significant predictor in models that accounted for baseline levels of depressive symptoms.

Discussion

The results of this study suggest that close friends' perceptions of the quality of their relationships with adolescents were robust predictors of a wide array of long-term outcomes

for those adolescents, especially when considered relative to predictions from parents' perceptions of the quality of the parent-teen relationship. The only domain in which parental reports were stronger predictors than close friend reports was regarding future parent-adult offspring relationship quality, and in this case only when this quality was reported by parents. Although parental reports of parent-teen relationship quality were generally not found predictive of future functioning, security in adolescents' states of mind regarding attachment relationships was often predictive of long-term outcomes, suggesting that internalized representations of past relationships with parents may be more important than current parent-adolescent relationship quality as a predictor of longer-term functioning. Each of these findings is discussed in turn below.

We begin with two important caveats. First, the continuities observed do not establish that adolescent friendships are causally linked to the outcomes examined. Although the existence of such causal links would be one interpretation of the findings, it is also quite plausible that friendship qualities reflect pre-existing competencies that were the actual drivers of future outcomes. Second, our focus on the parent-teen *relationship* should be recognized as distinct from prior research on specific parenting *behaviors*. Indeed, a range of studies, particularly of negative behaviors, such as authoritarian, neglectful, abusive, or over controlling parenting, has established both short- and long-term links to functional outcomes (Dube et al., 2003; Loeb et al., in press; Oudekerk et al., 2014; Tilton-Weaver et al., 2013). Finding that the quality of the current parent-teen relationship in adolescence is often not predictive of future outcomes is *not* the same as showing that parenting behaviors don't matter.

In terms of adolescent close friendship quality, the breadth of adult outcomes predicted by close friend ratings suggests just how central these friendships have become in adolescence. Notably, the outcomes tracked in adulthood were observed by a range of different reporters (adult peers, parents, and self-reports) and were assessed nearly a decade removed from the close friendship assessments. The findings are consistent with, but now place in greater context, emerging work linking friendship quality to romantic life satisfaction (Allen et al., 2020). What is completely new in these data, however, is the finding that friend ratings also predict qualities of adult peer relationships, adult work performance, and (inversely) adult levels of depressive symptoms.

The centrality of social relationships in adulthood, for both mental and physical health, is now widely recognized. Indeed, poor social relationship quality has now been identified as a larger risk to health and even lifespan than factors such as heavy drinking and cigarette smoking (Holt-Lunstad et al., 2010). The current data suggest that we can clearly see the roots of positive adult social relationships in adolescent close friendships, most likely because these friendships require many of the same skills as those which are needed to establish positive relationships later in adulthood.

The prediction from close friendship quality to future work performance was somewhat unexpected as many important work relationships (e.g., with bosses and managers) are often more hierarchical than egalitarian. Predictions from prior friendship competence were less robust in this domain, appearing only as zero-order correlations with respect to parental

reports of work performance, but nevertheless appearing in both simple correlations and regression models with respect to adult peers' reports. Nonetheless, the finding that these predictions existed at all suggests that perhaps some of the skills needed to maintain close friendships—loyalty, trustworthiness, collegiality—may also set adolescents up for future success in the workplace. Alternatively, it may be that academic attainment, which has been previously found to be predictable from adolescent-peer interactions, may partly mediate this modest link to work performance (Loeb, Davis, et al., 2020).

Predictions from peer-rated close friendship quality to lower levels of adult depressive symptoms are consistent with research on adult depression highlighting the role of problematic social relationships in depressive symptomatology (Santini, Koyanagi, Tyrovolas, Mason, & Haro, 2015). Notably, *post-hoc* analyses found that these predictions remained even after accounting for baseline levels of depressive symptoms in adolescence. This indicates that the long-term predictions observed were not simply an artifact of depressed adolescents having poorer relationships and then simply remaining depressed into adulthood.

The breadth of outcomes predicted and robustness of these findings in *post-hoc* analyses suggests the importance of looking more closely at exactly what was being assessed in adolescent close friendships. The items on the Harter (1988) scale are particularly oriented toward capturing the degree of intimacy within the friendship. Items included emphases on having a close friend 'to share secrets with,' and 'to share really personal thoughts with.' This focus suggests not just that teens have found someone with whom they get along well, but that they are moving toward establishing intense, close, and open relationships with that person—the precursors of adult attachment relationships (Allen, 2021; Allen & Tan, 2016). Taken together with the observed power of attachment states of mind as predictors, these results suggest the centrality of attachment-like processes as a cornerstone of adolescent social development. In adolescence, the evidence from this study suggests that the energy of this process may be transferring from parents to peers. These findings also make clear that adolescents' degree of preoccupation with their peer relationships is anything but irrational: Instinctively, teens may recognize that these peer relationships embody key elements of competencies that will be critical to their future success.

In contrast to predictions from friendships, the relative lack of predictions from qualities of parent-teen relationships was striking. This study found that parents' relationship perceptions were significantly less predictive of a range of outcomes than were close friends' relationship perceptions. One possibility had been that parents were simply poorly positioned to objectively assess their relationships with their teens, given both their own emotional involvement in them and their lack of objective reference points against which to compare them. This notion finds some support in the finding that parental ratings of their relationship with their teen were also linked to levels of parental depressive symptoms, suggesting that the ratings may reflect the parents' mental state as much as they reflect the quality of their relationship with their teen. This participant-bias explanation also finds some support in *post-hoc* analyses looking at predictions from adolescent reports of their close friendship quality, which were somewhat weaker than predictions from close friend reports of the relationship.

Several aspects of the current findings undercut this explanation, however. First, parents' perceptions were not completely unrelated to future outcomes. Indeed, they were predictive of the quality of their future relationship with their teen as an adult. In addition, *post-hoc* analyses indicated that these perceptions were also related to their adolescents' contemporaneous perceptions of their relationship with their parents. Together, these findings suggest that there is indeed validity to parents' perceptions. This leads to what may seem like a more surprising conclusion: that the current state of the parent-teen relationship in adolescence, at least as observable by parents and their teens, was simply not particularly predictive of most longer-term outcomes. This conclusion gains support from the finding that even adolescents' own perceptions of the parent-teen relationship were not particularly predictive of the outcomes assessed (especially those outcomes that didn't depend on the confound of using participant self-reports at both time points). It is also notable that there was no relation between parents' perceptions of their relationship with their teens and close friends' perceptions of the friend relationship, further suggesting that these two types of relationships may be on entirely different developmental tracks.

Several additional possible explanations exist for the relative weakness of perceptions of the quality of the parent-child relationship as a predictor of longer-term outcomes. One is that the quality of this relationship has already had its influence established prior to adolescence (and indeed may have influenced the quality of the teen-friend relationship). Although adolescent-parent and adolescent-peer relationship qualities were not cross-sectionally related in this study, consistent with the idea that by adolescence, these relationships are on somewhat independent tracks, there is substantial evidence that the quality of teen-peer relationships is predicted by qualities of prior parent-teen relationships (Furman & Shomaker, 2008; Furman et al., 2002; Oudekerk et al., 2015). Findings of robust predictions from adolescent states of mind regarding attachment to future outcomes are also consistent with this view. These qualities of internalized models of the relationship with attachment figures predicted future depressive symptoms, peer relationship, romantic relationship, and parental relationship qualities, even after accounting for friendship and parent-teen relationship qualities in adolescence.

This explanation leaves open the question, however, of *why* current parent-teen relationship qualities would not be more predictive, even just to the extent that they displayed continuity with prior parent-child relationship qualities. One likely possibility involves the degree of renegotiation and transformation that must take place in the parent-child relationship across adolescence. From age 13 to age 18, this relationship transitions from one in which the parent is the primary director and limiter of adolescent activities, and likely a primary source of support, to one in which the adolescent is largely self-directing their activities, setting their own limits and learning to turn to peers for support. The renegotiations entailed by such a large change in such a short period of time invariably will be challenging even in healthy families. These renegotiations may create a degree of conflict and uncertainty that makes even strong underlying relationships appear more problematic at the time. Conversely, adolescents who shy away from the central task of establishing their autonomy and independence may appear particularly docile and friendly to their parents—yet ultimately be likely to fare less well in adulthood. In short, adolescence may be a particularly challenging period during which to judge the health of the underlying parent-child relationship.

Related to this explanation, and consistent with findings about the predictive power of attachment states of mind, prior research has found that secure adolescents tend to *de*-idealize their parents (albeit in an overall positive context) (Allen et al., 2003). Part of the adolescent transition toward functional independence and greater maturity is coming to see parents as separate, complex individuals with both strengths *and* weaknesses. Although deidealization has been identified as a marker of security, deidealization is not a process likely to leave the parent feeling particularly uplifted by the relationship. Thus, even strong underlying relationships are likely to be left appearing less than ideal during adolescence. Taken together, these findings suggest that parents need not feel panicked if their relationship with their teen seems rocky; nor, however, should they feel that the appearance of a good or unruffled relationship will necessarily be a strong predictor of a positive longer-term outcome for their teen.

One other finding of note was regarding the role of adolescent gender. Females reported better adult-peer relationship quality than males and there was also evidence of a moderating effect of gender in prediction of parent-adult child relationship quality: For females (but not males), close friendship quality in adolescence was predictive of the quality of the relationship with parents as an adult, whereas for males (but not females), it was attachment security that predicted quality of the parental relationship as an adult. Taken together, these findings are relevant to the debate about whether female friendships are stronger or more central than male friendships {Lempers, 1993 #9444; Rose, 2017 #9445}. In this case, there is slight evidence that females see these friendships as stronger in adulthood, as well as some evidence that they are more closely tied to success in other relationships (i.e., with parents).

Beyond those limitations already noted above, several others also warrant consideration. Because this study focused on long-term outcomes, its findings should not be taken as implying that parent-teen relationships are not important to functioning *within* adolescence. Parent-teen relationship difficulties can and do predict more short-term and transient problems in functioning without necessarily having large implications for long-term outcomes (Allen, Loeb, Narr, & Costello, in press). The idea that different factors may predict concurrent vs. longer-term outcomes is fundamental to a developmental perspective (Roisman, Masten, Coatsworth, & Tellegen, 2004) and the results of this study fully support this notion. Also, given the modest sample size, person-centered analyses were not conducted, but future research might well use these to explore important differences among the young people in the sample (e.g., those married vs. not married, pursuing higher education vs. working full-time, etc.). Additionally, because the study focused on close friendship quality in adolescence, it leaves open the question of whether broader peer relationships would have the same predictive capacity, with some research on this topic suggesting that this would not be likely (Narr et al., 2019).

There were also important long-term outcomes that could not be assessed. In particular, we did not examine one of the most important long-term life outcomes—competence in parenting the next generation—and this seems among the outcomes most likely to be related to qualities of the prior parent-teen relationship (Kerr, Capaldi, Pears, & Owen, 2009). Overall, the present findings suggest not that parent-teen relationships do not matter, but

rather that there are a number of discrete, but important, areas in which they did not show predictive capacity within the power limits of this study.

The strongest implication of these findings, though, is not about parents but about the need to give greater attention to the quality of the adolescents' closest friendships as a marker of developmental competence with substantial long-term implications. Within the realm of peer relationships, the present findings are in line with increasing evidence that it is close friendship quality that is single the best marker of adolescents' developing social competence (Narr et al., 2019). These friendships likely develop quietly and largely out of the view of the adult world and as a result, may fly under the radar of both researchers' and parents' attention. Nonetheless, the current data suggest that these friendships may well function as perhaps *the* critical zone of proximal social development in the process of learning to manage a broad range of future adult social challenges. These findings also suggest the likely potential of intervention efforts helping adolescents develop the capacities embodied in these friendships and the need to increase our attention to the development of such efforts.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Table 1

Means and Standard Deviations of Primary Measures and Demographic Variables

	Mean	s.d.
Close Friendship Quality (Ages 13–17; frnd rept)	13.44	1.70
Parent-teen relationship Quality (Ages 13,16,18; parnt rept)	102.8	8.47
Security of Attachment State of Mind (Age 14; coded interview)	0.25	0.42
Adult-Peer Relationship Quality (Ages 25–27; frnd rept)	28.1	3.99
Adult-Peer Relationship Quality (Ages 25–27; slf rept)	13.7	1.57
Romantic Life Satisfaction (Ages 25–27; slf rept)	15.0	3.08
Adaptive Romantic Behavior (Ages 24, 27; obsrvd)	.01	0.92
Adult Work Performance (Age 26; parnt rept)	36.8	3.84
Adult Work Performance (Ages 25–27; frnd rept)	34.9	4.23
Depressive Symptoms (Ages 25–27; slf rept)	5.33	5.05
Adult-Parent Relationship Quality (Age 26; parnt rept)	13.2	2.21
Adult-Parent Relationship Quality (Ages 25; slf rept)	101.0	15.71

Note: frnd rept = close friend report; parnt rept = combined maternal and paternal report; slf rept = self-report; obsrvd = coded from videorecorded interactions

Table 2

Correlations Among Primary Constructs

	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. Close Friendship Quality (Ages 13–17; fnd rept)	.11	.15	.23**	.25**	.19*	.04	.18*	.24**	-.26***	.27***	.21**
2. Parent-teen relationship Quality (Ages 13,16,18; pamt rept)	--	.25**	.02	.14	-.01	-.04	.16	-.04	.00	.31***	.09
3. Security of Attachment State of Mind (Age 14; coded interview)	--	--	.15	.36***	.05	.38***	.31***	.07	-.13	.25**	.22**
4. Adult-Peer Relationship Quality (Ages 25–27; fnd rept)	--	--	--	.14	.08	.25*	.17	.52***	-.10	.06	.14
5. Adult-Peer Relationship Quality (Ages 25–27; sif rept)	--	--	--	--	.38***	.26**	.24**	.07	-.33***	.238*	.39***
6. Romantic Life Satisfaction (Ages 25–27; sif rept)	--	--	--	--	--	.04	.12	.03	-.46***	.17*	.19*
7. Adaptive Romantic Behavior (Ages 24, 27; obsrvd)	--	--	--	--	--	--	.29	.13	.05	.12	.09
8. Adult Work Performance (Age 26; pamt rept)	--	--	--	--	--	--	--	.29**	-.20*	.32***	.16
9. Adult Work Performance (Ages 25–27; fnd rept)	--	--	--	--	--	--	--	--	-.17*	.16	.14
10. Depressive Symptoms (Ages 25–27; sif rept)	--	--	--	--	--	--	--	--	--	-.15	-.32***
11. Adult-Parent Relationship Quality (Age 26; pamt rept)	--	--	--	--	--	--	--	--	--	--	.23**
12. Adult-Parent Relationship Quality (Ages 25; sif rept)	--	--	--	--	--	--	--	--	--	--	--

Note:

**
*
p < .001.

.05
* p
.10
** p

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Table 3

Regressions Predicting Adult Extra-Familial Relationship Outcomes from Adolescent-era Relationship Qualities and Attachment States of Mind

	Non-Familial Relationship Outcomes											
	Adult- Peer Relationship Quality				Romantic Relationship Quality				Romantic Relationship Quality			
	Model 1a: Adult Close Friend Report (Age 24–26)		Model 1b: Self-report (Age 24–26)		Model 1c: Romantic Life Satisfaction Self-report (Ages 24–26)		Model 1d: Observed Romantic Relationship Behavior (Ages 23–26)		Model 1e: Observed Romantic Relationship Behavior (Ages 23–26)		Model 1f: Observed Romantic Relationship Behavior (Ages 23–26)	
	β entry	β final	R^2	β entry	β final	R^2	β entry	β final	R^2	β entry	β final	R^2
Step I.												
Gender (1=M; 2=F)	.16	.11		.21**	.09		.02	-.01		-.05	-.08	
Adol. Family Income	.03	-.01		.19**	.10		-.08	-.13		.36***	.27**	
R^2 for Step		.024				.066**			.008			.137***
Step II.												
Close Friendship Quality (13–17)	.22**	.22**		.21**	.17*		.23**	.22**		.03	-.06	
Parent-Teen Relationship Quality (13,16,18)	-.01	-.02		.11	.06		-.02	-.02		-.03	-.10	
R^2 for Step		.044*				.060**			.048*			.001
Step III.												
Attachment Security (14)	.05	.05		.30***	.30***		.02	.02		.37***	.37***	
R^2 for Step		.002				.071***			.000			.137***
Total R^2 for Model		.070+				.197***			.056+			.275***
<i>Likelihood Ratio Difference in Step II. β weights: Cls, Frd Cmp vs. Pami-Tn Rel Qual.</i>		6.21*						7.69**				0.17

Note:

*** $p < .001$.

** $p < .01$.

* $p < .05$.

Close friendship quality was rated by the close friend; Parent-teen relationship quality was rated by parents.

Table 4
 Regressions Predicting Adult Functional Outcomes from Adolescent-era Relationship Qualities and Attachment States of Mind

	Functional Outcomes					
	Adult Work Performance			Depressive Symptoms		
	Model 1a: Parental Report (Age 26)	Model 1b: Peer-report (Age 24-26)	Model 1c: Self-report (Ages 24-26)			
	β entry	β final	R^2	β entry	β final	R^2
Step I.						
Gender (1=M; 2=F)	.12	.00		.19*	.26***	
Adol. Family Income	.14	.04		.00	.08	
<i>R² for Step</i>			.030			.035*
Step II.						
Close Friendship Quality (13-17)	.14	.11		.27***	.27***	
Parent-Teen Relationship Quality (13,16,18)	.15	.10		-.07	-.06	
<i>R² for Step</i>			.043			.071**
Step III.						
Attachment Security (14)	.31***	.31***		.02	.02	
<i>R² for Step</i>			.076***			.000
<i>Total R² for Model</i>			.149**			.077+
<i>Likelihood Ratio Difference in Step II. β weights: Cls. Frd.Cmp vs. Parnt-Tn Rel Qual.</i>			1.38		9.35**	15.67***

Note:

*** $p < .001$.

** $p < .01$.

* $p < .05$.

Close friendship quality was rated by the close friend; Parent-teen relationship quality was rated by parents.

Table 5

Regressions Predicting Adult-Parent Relationship Outcomes from Adolescent-era Relationship Qualities and Attachment States of Mind

	Parent Relationship Quality					
	Model 3a: Self-report (Age 25)			Model 3b: Parent-report (Age 26)		
	β entry	β final	R^2	β entry	β final	R^2
Step I.						
Gender (1=M; 2=F)	.12	.03		.20	.12	
Adol. Family Income	.12	.07		.26*	.16	
<i>R² for Step</i>			.024			.090*
Step II.						
Close Friendship Quality (13–17)	.25*	.18* (M: .11 F: .35**)		.19*	.24*	
Parent-Teen Relationship Quality (13,16,18)	.08	.04 (M: -.06; F: .13)		.28**	.27**	
<i>R² for Step</i>			.045*			.121**
Step III.						
Attachment Security (14)	.18*	.18* (M: .41***; F: .02)		.07	.07	
<i>R² for Step</i>			.031*			.000
<i>Total R² for Model</i>			.100*			.231**
					2.59	
<i>Likelihood Ratio Difference in Step II. β weights: Cls.</i>						
<i>Frd.Cmp vs. Parnt-Tn Rel Qual.</i>						

Note:

 $p < .001$.

**
 $p < .01$.

*
 $p < .05$.

Close friendship quality was rated by the close friend; Parent-teen relationship quality was rated by parents. Results of follow-up analyses separately by gender for Model 3a are presented separately for males and females.