Predictions From Early Adolescent Emotional Repair Abilities to Functioning in Future Relationships

Elenda T. Hessel and Emily L. Loeb
University of Virginia

David E. Szwedo
James Madison University

Joseph P. Allen
University of Virginia

This study examined adolescents' ability to utilize emotional repair—to actively change negative moods to more positive moods—as a predictor of the quality of their developing peer and romantic relationships over time. Utilizing observational data and partners' reports, adolescents ($N = 184$), their close peers, and their romantic partners were followed from ages 15–19. Adolescents with initially stronger emotional repair abilities were rated as increasingly socially competent over time, and both displayed and experienced increasingly positive interactive behaviors with close peers over time. These adolescents' romantic partners also reported more positive relationships, with enhanced communication, and fewer critical, blaming, or hostile interactions. Implications for the role of emotional repair abilities in the development of successful relationships during adolescence are discussed.

Across the life span, multiple lines of research have demonstrated links between positive aspects of emotion regulation and adaptive social functioning (Eisenberg et al., 1993; Gross & John, 2003; Lopes, Salovey, Cote, Beers, & Petty, 2005; Zeman, Cassano, Perry-Parrish, & Stegall, 2006). Emotion regulation encompasses a broad set of processes that allow individuals to influence their emotional experiences, often to attenuate the impact or experience of negative emotions (Gross, 1998; Shields & Cicchetti, 2001). Concurrent and long-term links have been observed between emotion regulation abilities and the social relationships of both young children and adults (Gross, 2002; Hanish et al., 2004; Lopes et al., 2005). However, research on emotion regulation and social relationships in adolescence has been far more limited. When adolescent emotion regulation has been considered in relation to social functioning, it has often been assessed only indirectly, that is, not in terms of the process of such emotion regulation, but only in terms of emotional states, such as trait negative emotionality or emotional intensity (Creasey, Kershaw, & Boston, 1999; Kinsfogel & Grych, 2004; Murphy, Shepard, Eisenberg, & Fabes, 2004; Pope & Bierman, 1999).

Although research has established links between successful or unsuccessful outcomes of emotion regulation and several indicators of social competence, it has not yet begun to identify the processes of emotion regulation that can potentially explain those emotional or behavioral outcomes.

One aspect of the *process* of emotion regulation that may be particularly important in influencing interpersonal functioning is emotional repair, or the capacity to successfully improve negative moods (Montes-Berges & Augusto, 2007; Salovey, Mayer, Goldman, Turvey & Palfai, 1995). Emotional repair encompasses the effort individuals exert toward improving negative moods by keeping a positive outlook (Salovey, Stroud, Woolery, & Epel, 2002). Emotional repair is a construct with far-reaching implications for mental health broadly and interpersonal relationships in particular. It has repeatedly been linked to aspects of psychological adjustment, including less depression and anxiety and higher self-esteem for adults and adolescents, and less social anxiety and rumination and greater overall mental health for adults (Extremera & Fernandez-Berrocal, 2002; Fernandez-Berrocal, Alcaide, Extremera, & Pizarro, 2006; Salovey et al., 2002). Emotional repair is also associated with the use of more active and less passive coping strategies, as well as reduced threat reactivity (Salovey et al.,

2002). Given the breadth of these associations, it stands to reason that emotional repair has also been linked to social relationships, with adults high on emotional repair experiencing more social support, greater satisfaction in interpersonal relationships, and better overall interpersonal functioning (Extremera & Fernandez-Berrocal, 2002; Montes-Berges & Augusto, 2007; Salovey et al., 2002). The literature on emotional repair clearly indicates a link between emotional repair and adult functioning in social relationships; however, it is unclear whether these findings extend to other ages, as well as whether emotional repair is a precursor or product of better interpersonal functioning.

Previous work shows that friendships of individuals who are overly focused on their own negative emotions suffer in terms of relationship quality and that these individuals experience more maladaptive social interactions and negative social reputations (Berry, Willingham, & Thayer, 2000; Furr & Funder, 1998). Strong emotional repair abilities may be protective because they help adolescents to not become ensnared by negative emotions, and may help them instead to engage in positive and constructive social behaviors that promote friendship and romantic relationship quality. Strong emotional repair abilities may also help adolescents avoid co-rumination, or repetitive, problem-focused talk, which despite links to relationship satisfaction —particularly for females with their closest friends —is also associated with increased depression, and decreased number of friends and social acceptance (Calmes & Roberts, 2008; Rose, Carlson, & Waller, 2007; Tompkins, Hockett, Abraibesh, & Witt, 2011).

Adolescents with strong emotional repair abilities may, for example, be more comfortable seeking social support for problems, due to greater confidence in their ability to repair negative emotions that may arise when discussing emotionally charged difficulties. Those with strong emotional repair abilities may also be less distracted by their own negative emotions when broaching difficult subjects, and thus they may be more able to engage with and value efforts of their friends to help (Salovey et al., 2002). Similarly, they may excel in providing support to others, because they are unlikely to be overwhelmed by the distress of a friend in need and thus are more able to calmly help without needing to minimize or avoid the emotionally charged aspects of the problem. Their ability to engage positively with peers is likely to bolster the quality of peer relationships, by making peers feel more appreciated, and thus likely to view the friendship more positively (Cillessen, Jiang, West,

& Laszkowski, 2005). Moreover, it is possible that as adolescents with strong emotion regulation abilities engage more positively with their peers, the goodwill and high-quality friendship these behaviors foster may in turn elicit more positive behaviors from peers. Although not previously examined, it is plausible that adolescents who are treated well by and experience high-quality relationships with a peer may themselves become more inclined to act in a similarly positive manner.

Just as skill at emotional repair is likely to contribute to high-quality friendships, it is also likely to be a factor in the quality of developing romantic relationships. Romantic relationships first rise to prominence in adolescence, and by mid-adolescence, teens report seeing romantic partners as a more significant source of support than even their mothers. By late adolescence, these relationships achieve greater stability and lengthen in duration, thus gaining more potential for influence during this time (Brown, Feiring, & Furman, 1999; Connolly & McIsaac, 2011). However, with this prominence comes inevitable stumbling, and romantic relationships in adolescence also bring intense emotional experiences (Furman & Shomaker 2008). Negative qualities of romantic relationships have been associated with depressive symptoms, and the recent loss of a romantic relationship is one of the most commonly cited precipitants of adolescents' first depressive episodes (Monroe, Rohde, Seeley, & Lewinsohn, 1999). Remaining calm and not overwhelmed in the face of strong emotions may bolster adolescents' abilities to communicate effectively within romantic relationships—even about aversive topics—which is an important factor in the overall quality of romantic relationships (Emmers-Sommer, 2004). Strong emotional repair abilities may promote high-quality peer and romantic relationships not only through increased positive behaviors but also by helping adolescents avoid combative or hostile behaviors. In adulthood, emotional repair has been cross-sectionally linked with less engagement in destructive responses to interpersonal conflict (Fitness & Curtis, 2005), as well as increased effectiveness in interpersonal negotiations (Pulido Martos, Lopez Zafra, & Augusto Landa, 2013). In adolescence, learning to manage disagreements adaptively is considered an even more central developmental challenge (Allen, Chango, & Szwedo, 2014; Collins, 2003; Buhrmester, 1996). Teens more skilled at emotional repair may rely less on domineering or aggressive behaviors to distract from or avoid potential distress in the face of disagreements. Conversely, adolescents

unable to engage in emotional repair may have difficulty recovering from social interactions that go poorly. Evidence from research with young children who express anger more often and less appropriately, and who suffer interpersonally as a result, suggests that adolescents with poor emotional repair abilities who direct negative emotions toward peers may face similar consequences (Denham, 1986; Fabes & Eisenberg, 1992). Teens less capable of emotional repair may therefore be at greater risk for damaging or inhibiting growth in peer relationships.

Even more so than with peers, disagreements with romantic partners are likely to bring up particularly strong negative emotions (Creasey et al., 1999). Adolescents overcome by negative emotions in romantic relationships may be more likely to rely on maladaptive behaviors, such as criticism, blaming their partner, or even hostile behaviors, to communicate their displeasure. Being able to stay composed and not be easily agitated in the face of a disagreement with a romantic partner may help to stabilize these early relationships, possibly leading to higher quality relationships with reduced destructive conflict. Although it seems likely that adolescents' emotional repair abilities contribute to these and other behaviors influencing the quality of subsequent peer and romantic relationships and social competence more broadly—and such abilities would be potentially fruitful potential targets of intervention efforts—no research has directly addressed this possibility.

It is also important to consider the possible role that gender and family income might play in relationship quality. Differences in qualities of adolescent friendships—including girls perceiving their friendships to be more supportive than do boys, or middle-class youth reporting more self-disclosure in their friendships than do adolescents from low-income families—suggest that both gender and income may play a role in the development of high-quality relationships during adolescence (Way, Cowal, Gingold, Pahl, & Bissessar, 2001). As such, any examination of the development of relationships should consider the potential role gender and income, as males and individuals from low-income families may be at greater risk of poor-quality relationships.

A combination of survey and observational data from a diverse, community sample of adolescents, their closest peers, and their romantic partners was utilized to assess the contribution of adolescents' abilities to engage in emotional repair to the quality of their relationships as these develop over time. It was first hypothesized that adolescent abilities to engage in emotional repair at age 15 would predict relative increases by age 16, after accounting for baseline levels of social functioning in (1) adolescents' and their close peers' observed positivity in relation to one another; (2) adolescents' and their close peers' observed agreeableness in relation to one another during discussions of disagreements; and (3) adolescents' overall social competence, as reported by their closest peers. Adolescents' abilities to engage in emotional repair at age 15 were also hypothesized to predict differences in the quality of their romantic relationships at age 18, in particular (1) greater use of positive communication strategies; (2) less use of criticism toward partner; and (3) less hostile behavior toward partner. The roles of gender and income were also considered as possible covariates and as possible moderators of effects observed.

METHODS

Participants

This sample was drawn from a larger longitudinal investigation of adolescent social development in familial and peer contexts. Participants in the original study included adolescents ($N = 184$, 86 males and 98 females) who were initially recruited from the seventh and eighth grades of a public middle school drawing from suburban and urban populations in the southeastern United States. Of the original sample, 98% of the participants remained active participants in the phase of data collection during which these data were gathered. The sample was racially, ethnically, and socioeconomically diverse: 107 adolescents (58%) identified themselves as Caucasian, 53 (29%) as African American, 15 (8%) as mixed ethnicity, and 9 (5%) as from other minority groups. As reported by the adolescents' parents, median family income fell in the $40,000–$59,000 range.

Students were recruited via an initial mailing that provided information about the study to parents with follow-up presentations to students at school lunches. Formal recruitment took place via telephone contact with parents of families that indicated interest. Students who had already served as close peer informants in the study were not eligible to serve as primary participants. Of students eligible for participation, 63% agreed to participate when parents were contacted. All participants provided informed assent before each interview

session, and parents provided informed consent. Interviews took place in private offices within a university academic building.

The participants in the current report ($n = 170$—based on the number of target adolescents who provided data for the main construct of interest, emotional repair), along with their closest peer ($n = 164$), and romantic partners ($n = 82$), were assessed over a 4-year period. Adolescents from the original sample of 184 that were not included in the subsample of target participants were significantly more likely to be from a minority group ($\chi^2 = 10.22$, $p < .01$). No other significant differences between the original sample and any subsamples were found on any demographic or baseline measures examined in this study. Target adolescents were assessed along with peers annually for 2 years in mid-adolescence, starting at age 15 ($M = 15.21$; $SD = .81$). At both of these assessments, targets were asked to nominate their closest peer to take part in the study. Close peers were described as "people you know well, spend time with, and whom you talk to about things that happen in your life." For adolescents who had difficulty naming close peers, it was explained that naming their "closest" peer did not mean that they were necessarily close to this peer in an absolute sense, but that they were close to this peer relative to other acquaintances they might have. Only 43% of target adolescents named the same individual as their closest peer across both time points. There was no correlation between an adolescent's bringing in the same peer to both assessments and their emotional repair abilities, lessening the likelihood that those adolescents reporting more emotional repair also had longer lasting closest friendships, and that this association might drive results. Named peers reported that they had known the target adolescent for an average of about five years ($M = 5.1$; $SD = 3.35$) at the first assessment, and six years ($M = 5.72$; $SD = 3.82$) at the second assessment. The average age of the target adolescent at the second assessment was 16 ($M = 16.35$; $SD = .87$). Attrition analyses indicated that there were no significant differences between individuals who did versus did not have close peers included in analyses, or who had close peers included in analyses at one time period but not another. To further ensure that none of the findings were driven by differences between target adolescents who did and did not bring in the same peer across both assessments or by the length of the friendships, all close peer analyses were run with and without controlling for these variables, and no significant differences emerged, so the models without these variables were used for the final analyses.

At a later assessment (age $M = 18.32$, $SD = 1.23$), target adolescents who were in a romantic relationship of 3 months or longer by the end of this wave of data collection were asked to participate along with their romantic partners. Adolescents' relationships with their romantic partners averaged 14 months in duration ($M = 14.24$; $SD = 13.42$). Analyses indicated that individuals who did not have significant romantic relationships were likely to score significantly lower on emotional repair at baseline ($t = -2.22$, $p < .05$), but otherwise there were no significant differences between individuals who did versus did not have significant romantic relationships in this sample.

Missing data. To best address any potential biases due to attrition in analyses of our sample subset, full-information maximum-likelihood (FIML) methods were used to handle any missing data (i.e., where data were not missing completely at random) among the 184 teens, close peers, and romantic partners in the study. 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), the entire original sample of 184 adolescents was utilized for these analyses (Enders, 2001). This larger sample thus provides the best possible estimates of adolescents' emotional repair as well as their own and various relationship partners' levels of relationship qualities and was least likely to be biased by missing data. Alternative longitudinal analyses using just those adolescents without missing data (i.e., listwise deletion) yielded results that were substantially identical to those reported below. In sum, analyses suggest that attrition was modest overall and not likely to have distorted any of the findings reported.

Procedure

At ages 15 and 16, the target adolescent came in with the individual they nominated as their current closest peer. The target adolescent and their peer each filled out a series of questionnaires, before engaging in a joint interaction task. Finally, when targets were on average 18 years old, they were again asked to participate, this time with their romantic partners.

Adolescents and their romantic partners came in and filled out questionnaires about the adolescent and about their romantic relationship.

All interviews took place in private offices in a university academic building. Participating adolescents provided informed assent, and their parents provided informed consent until adolescents were 18 years of age, at which point the adolescents or young adults provided informed consent. The same assent or consent procedures were used for peers and romantic partners. Adolescents, their closest peers, and romantic partners were paid for their participation. If necessary, transportation and childcare were provided.

Measures

Adolescent emotional repair. At age 15, adolescents completed a self-report measure of emotional repair abilities using the "Repair" subscale of the Trait Meta-Mood Scale (Salovey et al., 1995). This subscale has six items, such as "Although I am sometimes sad, I have a mostly optimistic outlook" and "When I become upset I remind myself of all the pleasures in life." The responses were given on a 5-point Likert scale, with possible responses ranging from *strongly agree* to *strongly disagree*. Negatively valenced items were reverse-coded such that higher scores on this scale indicate greater emotional repair abilities. The repair subscale has been well validated in other research (see Fernandez-Berrocal et al. (2006)), and it showed good internal consistency in this sample (Cronbach's α = .82).

Quality of relationship with closest peer— observed positivity. At ages 15 and 16, target adolescents and their closest peer were asked to participate in a 6-min supportive behavior task during which target adolescents asked their closest peer for advice about a topic of their choosing. These interactions were videotaped and transcribed. Interactions were coded for the degree of positivity expressed by the adolescent and their closest peer toward each other during the task, using global ratings of adolescents' behavior throughout the course of the 6-min interaction. Positivity was operationalized in terms of the degree of valuing (e.g., clear demonstrations of appreciation, such as a request to spend more time with the other person), engagement (e.g., very clear interest in how the other person responds, such as following up on the other person's remarks in an effort to have a back-and-forth conversation), satisfaction with the interaction (i.e., extent to which the conversation leaves the teen feeling safe, supported, and happy), and

reverse-coded negative effect (e.g., anger, rudeness, and negative statement of other) expressed by each participant. These interactions were coded using the Supportive Behavior Coding System (Allen, Porter, & McFarland, 2001), which was based on several related coding systems designed for adults (Crowell et al. 1998; Haynes and Fainsilber Katz, 1998; Julien et al., 1997).

Behaviors at age 15 were used to establish a baseline measure of the adolescents' displayed positivity in early to mid-adolescence, and their behaviors from age 16 were used to assess displayed positivity in mid- to late adolescence. Two trained coders coded each interaction, and their codes were then summed and averaged. Interrater reliability calculated using intraclass correlation coefficients and across waves was in what is considered *good* to *excellent* range for this statistic for target adolescents' behaviors (intraclass *r*s ranging from .62 to .82) and for close peers' behaviors (intraclass *r*s range from .62 to .78; Cicchetti & Sparrow, 1981).

Quality of relationship with closest peer— observed agreeableness. At ages 15 and 16, adolescents and their closest peer participated in an 8-min videotaped revealed differences task in which they were presented with a hypothetical dilemma. Friend dyads independently chose seven of a possible 12 characters to resolve an imaginary problem and then were brought back together to create a consensus list of characters (Strodtbeck, 1951). The dilemmas varied by age: which characters should be chosen to be left on a deserted island (age 15) or to win the lottery (age 16).

The Autonomy-Relatedness Coding System for Peer Interactions was used to code these interactions (Allen et al., 2001). This coding system is an adaptation of the Autonomy and Relatedness Coding System (Allen et al., 2000). This system is designed to capture various behaviors displaying autonomy or relatedness by assessing individual's ability to state reasons, exhibit confidence, and approach areas of disagreement during a discussion, when defending their position. The coding system yields a rating for the target teen's and their peers' overall behavior toward each other during the interaction. Ratings are molar in nature, yielding overall scores for each individuals' behaviors across the entire interaction; however, these molar scores are derived from an anchored coding system that considers both the frequency and intensity of each speech relevant to that behavior during the interaction in assigning

the overall molar score. To create separate target teen and close peer "Agreeable" scales, specific interactive behaviors, including use of confident tone (reverse-coded), avoidance of disagreements, and pressuring another person to agree other than by making rational arguments (reverse-coded), were coded and then summed together. Behaviors at age 15 were used to establish a baseline measure of the agreeableness in early to mid-adolescence, and their behaviors at age 16 were rated for agreeableness in mid- to late adolescence. Each interaction was reliably coded as the average of scores obtained by two trained raters blind to other data from the study. Interrater reliability was calculated using intraclass correlation coefficients and was in what is considered the *good* to *excellent* range for target adolescents (intraclass *r*s ranging from .72 to .85 and the *excellent* range for close peers (intraclass *r*s = .82 across waves (Cicchetti & Sparrow, 1981)).

Overall social competence. When the target teen was 15 and again at 16, the closest peer was asked to rate the target adolescents' overall social competence using questions from a modified version of the Self-Perception Profile for Adolescents (Harter, 1988) (modified to permit it to be used for peer reports as opposed to self-reports). Overall social competence was assessed as a composite of items from three separate scales, assessing romantic appeal, close friendship competence, and social acceptance. The format of this measure requires peers to choose between two contrasting descriptors of teens and then rate the extent to which their choice is really true or sort of true about the target teen. Responses to each item are scored on a 4-point scale and then summed, with higher scores reflecting higher levels of perceived social competence. The internal consistency of this composite scale was good (α = .82–.83). Sample items included: "Some teens do have a close friend they share secrets with. Other teens don't have a close friend they can share secrets with," "Some teens feel that if they like someone (in a romantic way) that person will like them back. Other teens feel that they won't like them back," and "Some teens are popular with other teens their age. Other teens are not popular with other teens their age." Social competence at age 15 was used to establish a baseline in early to mid-adolescence, and social competence from age 16 was used to establish a social competence rating in mid- to late adolescence.

Relationship quality with romantic partner—communication. When target adolescents were 18, their romantic partners completed the Romantic Experiences Questionnaire (Levesque, 1993) to assess positive dyadic communication. The communication scale included six items, such as "My partner finds it easy to tell me about how (s)he feels," which were rated on a 6-point Likert scale, with choices ranging from *strongly disagree* to *strongly agree*. The scale demonstrated good internal consistency (Cronbach's α = .89).

Relationship quality with romantic partner—criticism. The Network of Relationships Inventory (Furman, 1996) was completed by the romantic partner and used to assess the criticism the target adolescent displayed toward the partner. This scale included three items such as "How often does this person point out your faults or put you down?," each of which was responded to on a 5-point Likert scale ranging from *never or not at all* to *extremely often*. This scale demonstrated good internal consistency (Cronbach's α = .79).

Relationship quality with romantic partner—hostility. The Conflict in Relationships Questionnaire (Wolfe, Reitzel-Jaffe, Gough, & Wekerle, 1994) was completed by the romantic partner and used to assess the amount of hostile abusive and blaming behaviors that the target adolescent displayed toward their romantic partner. This scale included 27 items such as "My partner hit, kicked, or punched me" and "My partner blamed me for the problem," and was on a 4-point Likert scale, ranging from *never happened* to *happened 6 + times*, over the year previous to the time of the report. This scale demonstrated excellent internal consistency (Cronbach's α = .90).

RESULTS

Preliminary Analyses

Table 1 presents means, standard deviations, and simple intercorrelations among all variables included in the study. Correlations between demographic variables (gender and total family income) and variables of interest were also considered, and both gender and family income were retained as covariates in later analyses to account for any possible effects, as well as to provide maximum information to FIML analyses. Additionally, moderating effects of demographic variables were examined in

TABLE 1
Means, Standard Deviations, and Intercorrelations of Substantive Variables

	Mean	SD	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.
1. Emotional repair (Age 15)	22.26	4.36	02	26**	23**	26**	11	15	−08	04	−04	−20*	32**	−27*	−24*	12	07
2. Social competence (Age 15)	38.54	6.52	—	33***	03	−02	09	−05	08	−07	−18	−05	14	12	06	14	−09
3. Social competence (Age 16)	51.14	7.30		—	22*	33***	15	30**	−16	08	−12	−27**	03	06	−13	13	−02
4. Positivity toward close peer (Age 15)	2.60	0.48			—	36***	.68***	17	−12	−01	−08	−01	16	−12	−02	17*	10
5. Positivity toward close peer (Ages 16)	2.78	0.48				—	28**	77***	−08	−00	−00	−04	02	−13	04	20*	11
6. Close peers' positivity toward adolescent (Age 15)	2.78	0.50					—	16	−07	−04	02	09	−00	−06	−12	13	05
7. Close peers' positivity toward adolescent (Age 16)	2.91	0.52						—	02	03	12	−08	−05	01	16	19*	17*
8. Agreeableness with close peer (Age 15)	2.05	0.65							—	34***	−25**	−14	−12	01	−01	−08	07
9. Agreeableness with close peer (Age 16)	2.08	0.58								—	−17	−33***	18	−06	−26*	02	04
10. Close peers' agreeableness with adolescent (Age 15)	2.19	0.63									—	.37***	−21	11	11	−01	06
11. Close peers' agreeableness with adolescent (Age 16)	1.98	0.58										—	−18	08	17	−04	04
12. Partner–rated dyadic communication (Age 18)	5.21	1.09											—	−41***	−12	08	16
13. Criticism toward romantic partner (Age 18)	4.43	1.91												—	42***	12	−22*
14. Hostility toward partner (Age 18)	40.13	11.22													—	14	−22
15. Adolescent gender (1 = Male 2 = Female)	48.24% Male	51.76% Female														—	−10
16. Family income ($)	43,619	22,420															—

Note: Correlations are all multiplied by 100.
*p < .05; **p < .01; ***p < .001.

each model described below, and no such effects were found.

Primary Analyses

Hypothesis 1: Early adolescent emotional repair abilities will be associated with relative increases in observed friendship quality later in adolescence, as evidenced by relative increases in dyadic positivity and agreeableness.

Observed positivity. Hierarchical regression analyses first examined predictions from adolescents' emotional repair abilities at age 15 to future displayed positivity toward a close peer at age 16, controlling for adolescent gender, family income, and baseline levels of positivity at age 15. This approach of predicting the future level of a variable while accounting for predictions from initial levels (i.e., stability) yields one marker of change in that variable: increases or decreases in its final state relative to predictions based upon initial levels (Cohen & Cohen, 1983). Results are presented in column I of Table 2. A significant effect for emotional repair at baseline was found, such that a greater ability to repair negative emotions at age 15 predicted relative increases in adolescents' overall positivity toward their closest peer by age 16 ($\beta = .18$, $p = .017$). Adolescents with greater emotional repair abilities at 15 demonstrated relative increases in levels of valuing of, engagement with, and satisfaction with, as well as relative decreases in negativity toward their closest peer 1 year later. However, emotional repair did not predict close peers' positivity toward the adolescent ($\beta = .11$, $p = .18$).

Agreeableness.   The role emotional repair at age 15 plays in predicting relative changes in agreeableness that the adolescent and closest peer display toward one another at age 16 during the revealed differences task was also examined. A hierarchical regression analysis predicting adolescents' agreeableness at age 16 from age 15 emotional repair was not significant ($\beta = .06$, $p = .47$). Hierarchical regression analyses next examined agreeableness displayed by close peers to adolescents, as predicted by teens' emotional repair abilities, after controlling for adolescent gender, family income, and baseline levels of the peers' agreeableness at age 15. Results are presented in column II of results in Table 2. A significant effect for emotional repair

was found, such that adolescents' greater ability to repair negative emotions at age 15 predicted, on average, relative increases in the degree to which their closest peer acted agreeably toward them during a revealed differences task at age 16 ($\beta = .19$, $p = .02$). Adolescents with stronger abilities to engage in emotional repair at 15 had close peers who on average over time pressured the adolescent to agree with them less, asserted their opinions less confidently, and were more likely to avoid discussion of disagreements at age 16.

Hypothesis 2: Early adolescent emotional repair abilities will be associated with relative increases in close peer-rated social competence later in adolescence.

Analyses next examined the prediction that adolescent's ability to improve negative moods at age 15 would predict changes in their closest peer's report of their overall social competence 1 year later. Hierarchical regression analyses predicted peer-rated overall social competence at age 16 from adolescent gender, family income, peer-rated social competence at age 15, and emotional repair at 15. Results are presented in Table 3. A significant effect for emotional repair was found, such that a greater ability to improve negative emotions at age 15 predicted relative increases in peer ratings of adolescents' overall social competence ($\beta = .23$, $p = .005$). Emotional repair at 15 predicted higher levels of peer-rated social competence 1 year later.

Hypothesis 3: Early adolescent emotional repair abilities will be associated with partner-reported higher quality romantic relationships—as evidenced by more positive dyadic communication and less critical and hostile behaviors —later in adolescence.

Communication.   The role of emotional repair at age 15 in predicting the level of positive dyadic communication with a romantic partner at age 18 was investigated. Results are presented in column I of Table 4. A hierarchical regression controlling for gender and family income revealed a significant effect for emotional repair, such that a greater ability to improve negative emotions at age 15 predicted higher levels of partner-reported mutual positive communication at age 18 ($\beta = .35$, $p < .001$). Romantic partners of adolescents with stronger emotional repair abilities at 15 reported higher levels of positive dyadic communication

TABLE 2
Emotional Repair at Age 15 Predicting Increases in Quality of Relationship With Close Peer at age 16

	I. Overall Positivity of Teen Toward Close Peer (Age 16)				II. Overall Agreeableness of Close Peer Toward Adolescent (Age 16)			
	β (entry)	β (final)	ΔR²	Total R²	β (entry)	β (final)	ΔR²	Total R²
Step 1								
Gender	.20*	.11			−.04	−.01		
Income	.12	.06		.05	.04	.02		.01
Step 2								
Baseline Measure of outcome variable (Age 15)	.34***	.31***	.09***	.14***	.36***	.35***	.13***	.14***
Step 3								
Emotional repair (Age 15)	.18*	.18*	.06*	.20***	.19*	.19*	.04*	.18***

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

TABLE 3
Emotional Repair at Age 15 Predicting Increases in Close Peer-Rated Social Competence at Age 16

	β (entry)	β (final)	ΔR²	Total R²
Step 1				
Gender	.13	.03		
Income	−.01	−.02		.04
Step 2				
Baseline measure of social competence (Age 15)	.34***	.32***	.09***	.13***
Step 3				
Emotional repair (Age 15)	.23**	.23**	.04**	.17***

Note. *p < .05; ***p < .001.

3 years later, than did romantic partners of individuals who were less able to engage in emotional repair at 15.

Criticism. The role of emotional repair at age 15 in predicting romantic partner–reported criticism by the adolescent at age 18 was investigated using the same approach described above. Results are presented in column II of Table 4. A significant effect for emotional repair was found such that a greater ability to repair negative emotions at age 15 predicted lower levels of partner-reported criticism by the adolescent at age 18 (β = −.29, p = .005). Romantic partners of adolescents who were more able to engage in more emotional repair at age 15 reported that those adolescents engage in less criticism of the partner 3 years later, than do individuals with less ability for emotional repair at age 15.

Hostile behaviors. Hostile behaviors were examined using the same approach described above. Results are presented in column III of

Table 4. A significant effect for emotional repair was found, such that a greater ability to improve negative emotions at age 15 predicted lower levels of partner-reported hostile behaviors by the adolescent at age 18 (β = −.27, p = .016). Adolescents who were more able to engage in emotional repair at age 15 were using fewer hostile behaviors toward their partners 3 years later than were adolescents with less ability to engage in emotional repair at age 15—according to their romantic partners.

DISCUSSION

Adolescents' capacity to repair and recover from negative emotional states was found to have lasting implications for the quality of their social interactions and relationships with close peers and romantic partners. Notably, emotional repair abilities were not simply associated with concurrent levels of functioning; adroitness at emotional repair predicted relative improvements over time (e.g., after accounting for baseline levels) in specific aspects of relationships with close peers as well as in overall social competence. Additionally, adolescents' emotional repair abilities at age 15 predicted higher levels of functioning in later romantic relationships assessed at age 18. These findings are consistent with the adult literature, which suggests that the use of adaptive emotion regulation strategies similar to emotional repair is associated with improved interpersonal functioning (Gross & John, 2003).

One overarching explanation for the current findings is that adolescents who are more in control of their negative emotions make for more attractive and responsive social partners. They may have less negative effect and less volatility in

TABLE 4
Emotional Repair at Age 15 Predicting Differences in Quality of Relationship With Romantic Partner at Age 18

	I. Romantic Partner Report of Positive Dyadic Communication (Age 18)			II. Romantic Partner Report of Adolescent Criticism (Age 18)			III. Romantic Partner Report of Adolescent Hostility (Age 18)		
	β	ΔR^2	Total R^2	β	ΔR^2	Total R^2	β	ΔR^2	Total R^2
Step 1									
Gender	.09			.10			.13		
Income	.17		.03	−.17		.04	.20*		.06
Step 2									
Emotional repair (Age 15)	.35***	.14***	.17*	−.29**	.09**	.13	−.27*	.07*	.13

Note. All β's reported are the final β's for the analysis.
*$p \leq .05$, **$p < .01$, ***$p \leq .001$.

response to emotional situations, both of which may free them up to attend more to their social partner, resulting in greater social competence and stronger peer and romantic relationships. This is in line with the research and theory regarding young children, wherein individuals high on negative emotionality and low on emotion regulation are often found to experience more difficulties in their social functioning (Eisenberg, Fabes, Guthrie, & Reiser, 2000). Peers who recognize these traits may see these adolescents as particularly socially desirable and turn to them more often for support, allowing these teens not only to build increasingly high-quality relationships but also allowing them more opportunities to hone and improve their interpersonal skills as they progress through adolescence.

In support of this possibility, is the broad relationship that emotional repair abilities appear to have with many aspects of adolescent interpersonal functioning, including relationships with both close peers and romantic partners. Not only do adolescents high in emotional repair abilities engage more positively with peers, but also their peers view them as having become more socially competent overall, implying that the changes predicted by strong emotion regulation abilities affect not only specific close interpersonal relationships but also perhaps overall interpersonal functioning. Moreover, the romantic partners of adolescents who reported strong emotional repair abilities reported more harmonious relationships, with greater communication and less conflict and hostility, indicating that the influence of emotional repair may have be even broader than friendships alone. This is similar to findings with a college-aged sample, wherein it was found that individuals who self-reported stronger emotion regulation abilities

were rated by their peers as concurrently more interpersonally sensitive, having more prosocial tendencies, being more widely liked, and having more reciprocated friendships (Lopes et al., 2005). As such, this study provides a developmental link, showing how emotion regulation earlier on in adolescence may contribute to the development of these interpersonal qualities.

Adolescents' abilities to repair negative emotions at age 15 were predictive of the future quality of their relationships with their closest peer—as manifested by independent observations of positive behaviors when interacting with the peer—indicating these adolescents may be poised to develop higher quality friendships than those with less developed emotional repair abilities. Specifically, they became relatively more demonstrative of how much they cared for and valued their peer, engaged more with their peer, and showed more satisfaction and less negativity toward their peer. Moreover, they did so while discussing a problem about which they were asking for support without becoming overwhelmed by any negative emotions associated with their own concerns. This relative increase in positivity occurred irrespective of peers' behavior (which did not display any changes over time on these measures). These demonstrations of friendship quality—which occur as adolescents are asking their peers for help or advice—suggest that adolescents who early on are more capable of emotional repair are able to extend their prowess over time into the increasingly important domain of handling their emotions in their interpersonal interactions. This also might suggest that adolescents more capable of emotional repair may also be less inclined to fall prey to co-rumination when discussing difficulties with their friends, which may allow them to focus on the relationship rather

than on the emotions stirred up by the problems they discussed (Rose et al., 2007). By simply displaying more positivity adolescents may be bolstering their relationships, as lower levels of personal negativity have been found to be associated with more adaptive interpersonal interactions and a more positive social reputation (Furr & Funder, 1998).

Similarly, use of more emotional repair at age 15 also predicted relative increases in peers' displays of agreeable behaviors during disagreements with teens at age 16. Peers were less likely to bring up disagreements, were more conciliatory in the statement of their positions, and were less likely to try to pressure the adolescent into agreeing with them. This meshes well with findings that adults who display less negativity—perhaps due to stronger emotional repair abilities—experience fewer negative behavioral responses from interaction partners (Furr & Funder, 1998). These findings were observed even after controlling for earlier levels of these behaviors by close peers at prior ages, thus again suggesting that emotion repair abilities are predicting changes in relationship qualities or in relationship partners over time. This may reflect a peer selection effect, or a change in the behaviors teens evoke from their peers, or a combination of the two. Adolescents who themselves are able to repair negative emotions may attract peers who are able to do the same, whereas adolescents who are poor at emotional repair may find themselves rejected by more positive peers and left to affiliate with peers who are volatile, argumentative, or pushy (Patterson, DeBaryshe, & Ramsey, 1989). Alternatively, it could be that adolescents who are more in control of their emotions are seen by their peer group at large as being more socially competent, and thus they may influence their friends to behave more agreeably toward them in order to gain or keep their approval.

In addition to changes in specific behaviors within friendships, predictions were found from adolescents' abilities to repair negative emotions at age 15 to relative increases (i.e., after accounting for baseline competence at age 15) in their overall social competence as rated by their closest peers 1 year later. Notably, this suggests not simply that emotion repair abilities are associated with social competence, but that they actually predict the development of relatively greater competence over time, after accounting for baseline levels. Adolescents who earlier have more highly developed emotional repair skills may build upon their ability to improve negative moods to become increasingly

calm, happy, and less emotionally volatile as development progresses. One possibility is that this reflects a form of cumulative continuity (Caspi, Bem, & Elder, 1989), in which positive effects of early emotional repair capacities, such as better peer relationships, in turn lead to association with more competent peers, which leads to further enhancements to peer competence over time.

Importantly, these findings are unlikely to be due solely to adolescents high on emotional repair building increasingly strong relationship with a single close peer, as target adolescents bringing in the same peer for multiple assessments were uncorrelated with emotional repair at baseline. Similarly, the results are unlikely to be due simply to adolescents high on emotional repair being able to attract increasingly high-quality close peers over time, as the average length of friendships at the second time point was approximately six years (a 1-year increase over the baseline assessment), suggesting that although shifts in who was deemed an adolescent's closest peer were normative and that these shifts might have occurred among a larger group of close peers that remained more stable over time.

Ability to engage in emotional repair not only predicted qualities of relationships with friends. There was also evidence of prospective links to higher levels of positive dyadic communication and lower levels of maladaptive relational behaviors toward romantic partners at age 18. In romantic relationships, emotional repair may be linked not only to adolescents' abilities to communicate effectively with a partner, but also to fewer instances of negative behaviors, such as hostility and criticism, that could undermine relationships. Given that romantic relationships often bring with them both new highs and lows on the emotional roller coaster of adolescence (Larson, Clore, & Wood, 1999), emotional repair may be of crucial importance in helping adolescents develop abilities to successfully navigate the intense emotions that accompany these relationships. Adolescents with deficits in emotional repair abilities may be less able to respond appropriately to negative emotions and more likely to direct negativity toward their romantic partners. This may be especially important in late adolescence when romantic relationships become more serious and begin to more strongly resemble adult relationships, and potentially lay the groundwork for the way individuals will approach romantic relationships later in life.

One particularly striking aspect of these findings is that adolescents' emotional repair abilities

appear to predict not only the adolescents' own social behaviors but also those of the people with whom they surround themselves. In this sample, strong emotional repair abilities predicted close peers engaging more agreeably with well-regulated adolescents during a disagreement and more dyadic communication in relationships with romantic partners. This is one of the first studies to demonstrate links of adolescent emotional repair not only to the adolescents' own behavior but also to the behavior of their peers and romantic partners. This indicates that adolescents' abilities to repair or regulate their emotions may influence their peer and romantic relationships not only through the teens directly but also by effecting changes in their relational partners, or in the partners that they affiliate with.

Overall, the findings of this study indicate that the role of emotional repair abilities in adolescence extends broadly to predicting outcomes across a broad array of measures of interpersonal functioning, both over time and across relational partners. Most of the research to date on adolescent emotional processes and their sequelae has focused on what are likely to be the outcomes of emotion regulation processes—such as negative emotionality or emotional intensity—rather than the processes of emotion regulation that lead to these outcomes (Creasey et al., 1999; Kinsfogel & Grych, 2004; Murphy et al., 2004). And much of this prior research has focused on emotional states as they relate to mental health outcomes of adolescents, rather than upon the ways in which emotion repair may be linked to interpersonal functioning (Gardner, Dishion, & Connell, 2008; Silk, Steinberg, & Morris, 2003). By examining both processes of emotion regulation and links to social functioning, this study moves much closer to examining the specific mechanisms by which adolescents' management of their own emotions may ultimately lead to positive or negative longer term social functioning outcomes.

A number of limitations should be kept in mind when interpreting these results. First, although this study is longitudinal and assessed relative changes in several constructs over time, its design can only potentially disconfirm, and cannot directly confirm the presence of hypothesized causal pathways from emotion repair capacities to future functioning. For example, it remains possible that the links between emotion repair and the outcomes identified here were actually mediated by a third unmeasured variable that influenced both emotion repair capacities and future outcomes. Relatedly, there was no baseline measurement of romantic relationship

functioning, so it cannot be ruled out that differences observed in romantic relationships were preexisting, rather than due to differences in the construct of interest. Additionally, although the sample size allowed for the detection of significant effects of emotional repair, there may not have been enough power to detect possible moderating effects within the data, such as for gender or socioeconomic status. The current sample is also not a clinical sample, and as such it remains unknown how individuals falling at the extreme low end of emotional repair abilities may fare. Another limitation is that the amount of variance accounted for in the outcomes tested in the study's models was relatively small, suggesting that the models are capturing a part of the variation in these peer and romantic partner outcomes, but that other variables also play a large part. Finally, it may be important to look further ahead in development to see whether social relationships continue to be predicted by early adolescent emotion repair beyond late adolescence. Future research should continue to explore the role that adolescents' abilities to repair negative emotions have on their subsequent social relationships, and work to elucidate more broadly the precise mechanisms by which this ability may influence future social development.

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