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Attachment organization and patterns of conflict resolution in friendships predicting adolescents' depressive symptoms over time

Joanna M. Chango^{*}, Kathleen Boykin McElhaney, and Joseph P. Allen
University of Virginia, Charlottesville, VA, USA

Abstract

The current study examined the moderating effects of observed conflict management styles with friends on the link between adolescents' preoccupied attachment organization and changing levels of depressive symptoms from age 13 to age 18 years. Adolescents and their close friends were observed during a revealed differences task, and friends' behaviors were coded for both conflict avoidance and overpersonalizing attacks. Results indicated that preoccupied adolescents showed greater relative *increases* in depressive symptoms when their friends demonstrated overpersonalizing behaviors, vs. greater relative *decreases* in depressive symptoms when their friends avoided conflict by deferring to them. Results suggest the exquisite sensitivity of preoccupied adolescents to qualities of peer relationships as predictors of future levels of psychological functioning.

Keywords

adolescence; depression; attachment; peer relationships

Introduction

Adolescence brings about a substantial increase in the incidence of depressive symptoms with serious long-term sequelae (Gotlib, Lewinsohn, & Seeley, 1998; Lewinsohn, Hops, Roberts, & Seeley, 1993; Lewinsohn, Rohde, & Seely, 1998). Problems in interpersonal relationships, leading to aversive and non-rewarding experiences in social interactions, have long been identified as risk factors for depressive symptoms (Coyne, 1976a, 1976b). During adolescence, peer relationships are rapidly becoming primary contexts of social interaction and development (Berndt, 1996; Buhrmester, 1998). Further, a developmental psychopathology perspective suggests that areas of greatest vulnerability in interpersonal relationships occur when they potentially interfere with critical developmental tasks at given points in the lifespan (Cicchetti & Toth, 1998; Sroufe, 1997; Zahn-Waxler, Klimes-Dougan, & Slattery, 2000). Several studies have linked depression to overall difficulties in peer relationships, whether assessed as

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chango@virginia.edu.

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rejection, lack of popularity, or lack of interpersonal support (Galambos, Leadbeater, & Barker, 2004; Harter & Whitesell, 1996; Henrich, Blatt, Kuperminc, Zohar, & Leadbeater, 2001; Nolan, Flynn, & Garber, 2003; Prinstein & Aikins, 2004). Yet, we know relatively little about the specific patterns of behavioral interaction in adolescence that predict future depression. In particular, little has been explored with regard to interaction styles within adolescents' relationships with their friends.

In the past few decades, John Bowlby's attachment theory (1969/1982) has greatly enriched our understanding of social development during infancy and early childhood. More recently, attachment theory has provided a theoretical basis for understanding the presence of emotional, behavioral and relationship problems during adolescence (e.g., Allen & Land, 1999; Allen, Moore, & Kuperminc, 1997). Adolescents' use of preoccupied (as opposed to dismissing) strategies in particular has been most closely linked to internalizing problems, including adolescents' self-reports of depression, anxiety disorders and internalizing symptoms and stress during transitions (Bernier, Larose, & Whipple, 2005; Cole-Detke & Kobak, 1996; Kobak, Sudler, & Gamble, 1991; Larose & Bernier, 2001; Rosenstein & Horowitz, 1996). In addition, an emerging pattern of findings suggests that preoccupied attachment interacts with a wide array of psychosocial and environmental factors to predict critical outcomes (Allen, Moore, Kuperminc, & Bell, 1998; Allen, Marsh, McFarland, McElhaney, Land, & Jodl, 2002; Marsh, McFarland, Allen, McElhaney, & Land, 2003; McElhaney, Immele, Smith, & Allen, 2006). Although friendships with peers are not generally considered to be attachment relationships in adolescence, there is considerable evidence that qualities of an adolescent's attachment organization (particularly the presence of preoccupation) have significant influence on the ways in which friendships are organized and understood by the adolescent (Allen, Porter, McFarland, Marsh, & McElhaney, 2005; Cassidy, 2001; Larose & Bernier, 2001; Waldinger, Seidman, Gerber, Liem, Allen, & Hauser, 2003; Zimmermann, 2004).

Whereas dismissing teens tend to withdraw from peers and distance themselves from negative interactions, the hyperactivated state of the attachment system in preoccupied adolescents may lead them to be both highly drawn towards peers and also exquisitely sensitive to their social interactions. Adolescents with preoccupied attachment organizations may attend particularly closely to qualities of their friendships, which in turn may have greater influence on their feelings and behaviors (Main, Goldwyn, & Hesse, 2002; McElhaney et al., 2006). More specifically, preoccupied teens seem to be particularly prone to being overwhelmed and/or confused by the demands of intense interpersonal interactions. Studies suggest that when preoccupied teens are exposed to intrapsychic states or environments that are confusing or enmeshed, higher levels of internalizing symptoms are found (Marsh et al., 2003). In such environments, internalizing symptoms may result from preoccupied adolescents' inability to maintain an adequate sense of self and adequate emotion regulation in the midst of interactions that violate boundaries and/or involve attacks on their personal character. Alternatively, preoccupied adolescents may particularly benefit from social interactions that allow them a sense of mastery and control over their environment. More specifically, they may feel more interpersonally competent and successful when peers avoid conflict with them, particularly by deferring to their opinions. Given the tendency for this form of insecurity to be associated with the desire to connect, yet also with ineffective social strategies for doing so, deference from peers may provide preoccupied teens in particular with a sense of control or agency over the environment (Cassidy & Berlin, 1994; Kobak & Sceery, 1988).

Recent research has suggested that a key interpersonal challenge during adolescence involves finding the appropriate balance across dimensions such as dependence vs. independence and dominance vs. submissiveness within friendships. Short-term longitudinal studies utilizing observations of adolescent-peer interactions have found, for example, that low autonomy with peers, trying but failing to influence peers, and high dependence on peers all predict increases

in depressive symptoms over time (Allen, Insabella, Porter, Smith, Land, & Phillips, 2006; Allen, Porter, & McFarland, 2006; Antonishak, Allen, & McElhaney, 2007). These findings are consistent with theories regarding the role of social competition in the development of depression, in which depressive symptoms are seen as an adaptive expression of subordination that facilitates social ranking within peer groups (Price, Sloman, Gardner, Gilbert, & Rohde, 1994). Thus, adolescents who are unable to assert themselves with peers become more depressed over time. However, those whose peers yield to their opinions by deferring to them during conflicts may ultimately experience fewer depressive symptoms: either because they are more successful socially, or via other processes such as increased self-efficacy and self-esteem.

In addition to conflict avoidance and deference, other components of adolescent–peer interactions may also be important markers of autonomy and dominance processes, and thus may contribute to long-term psychosocial outcomes, particularly for preoccupied teens. For example, research on parent–teen interactions has demonstrated that a style of interacting that involves overpersonalizing a disagreement predicts a range of negative outcomes for teens, including depressed affect (Allen, Hauser, Eikholt, Bell, & O'Connor, 1994). Overpersonalizing (defined as turning a disagreement towards negative personal characteristics of the other person) is both hostile and inhibiting of autonomy (Allen, Hauser, Bell, McElhaney, Tate, & Insabella, 2000). Thus, teens who are exposed to challenging personal attacks from peers during conflicts may be more likely to go on to develop depressive symptoms, both because such attacks leave little room for these teens to assert their own positions with their friends and, more broadly, because they are likely to be demoralizing and to undermine the teens' sense of self vis-à-vis their friendships. However, the consequences of this style of conflict negotiation have rarely been examined within adolescent–peer relationships. In addition to further exploring how various more nuanced patterns of interactions with peers may ultimately affect teens' well being, we also need to examine whether different negotiation strategies are more vs. less problematic for some adolescents vs. others.

In sum, different approaches to resolving conflicts with friends appear potentially likely to promote vs. suppress the development of depressive symptoms during adolescence. These links between approaches to conflict resolution and depressive symptoms appear likely to emerge most clearly among adolescents with preoccupied attachment organizations, as these adolescents are both likely to be highly reactive to qualities of social interactions and at greater risk for depressive symptoms. The current study investigated the links between the quality of adolescents' interactions with their friends during a conflict at age 13 and relative changes in levels of self-reported depression from age 13 to age 18, in the context of the adolescents' attachment organization, as assessed with the Adult Attachment Interview. Consistent with the existing research on autonomy, social dominance and depression, it was expected that friends' deference (defined as avoidance of conflict during interactions with the teen) would predict more positive adolescent psychological functioning, as evidenced by decreases in depression over time. In contrast, it was expected that friends' use of overpersonalizing strategies to resolve conflicts, involving manipulation and personal attacks, would predict increases in adolescents' levels of depression over time. While we also expected that adolescents' level of preoccupation would predict increases in levels of depression over time, it was hypothesized that preoccupied attachment would interact with patterns of adolescent–friend conflict resolution, such that preoccupied teens who experienced high levels of overpersonalizing from friends would demonstrate the greatest *increases* in depression over time, whereas preoccupied teens who experienced deference from their friends during conflicts would demonstrate the greatest relative decreases in depression over time.

Methods

Participants

The sample was drawn from a larger longitudinal study of adolescent development in familial and peer contexts. Participants included 184 adolescents (86 male and 98 female) and their same-sex close friends. Adolescents were recruited from a public middle school drawing from suburban and urban populations in the Southeastern United States. Students were recruited via an initial mailing to parents of students in the relevant grades in the school that gave them the opportunity to opt out of any further contact with the study. Only 2% of parents opted out of such contact. Of all families subsequently contacted by phone, 63% agreed to participate and had an adolescent who was able to come in with both a parent and a close friend. Siblings of target adolescents and students already participating as a target adolescent's close friend were ineligible for participation. This sample appeared generally comparable to the overall population of the school in terms of racial/ethnic composition (42% non-white in sample vs. ~40% non-white in school) and socio-economic status (mean household income = \$43,722 (US\$) in sample vs. \$48,000 (US\$) for community at large).

Friends were recruited by asking adolescents to nominate their closest, same sex friend to be included in the study. Close friends were defined 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 friends, it was explained that naming their "closest" friends did not mean that they were necessarily close to these friends in an absolute sense, just that they were close to these friends relative to other acquaintances they might have. Close friends reported that they had known the adolescents for an average of 4 years, though there was substantial variation in the duration of the friendships ($M = 4.04$, $SD = 2.9$).

Baseline data on adolescents' self-reported depressive symptoms as well as their patterns of interaction with one of their close friends were collected during the first wave of the study, when teens were approximately 13 years old ($M = 13.35$, $SD = 0.64$). The Adolescent Attachment Interview (AAI) was administered approximately 1 year later. Approximately 5 years later, at age 18 years ($M = 18.31$, $SD = 0.98$), adolescents were re-interviewed with regard to their level of depressive symptoms. Occasional missing data at baseline was handled using Full Information Maximum Likelihood (FIML), and overall data coverage was better than 94%. Attrition analyses revealed that individuals who provided complete longitudinal data on depressive symptoms were more likely to come from higher income households than those who did not ($t = -3.23$, $p < .01$). There were no other significant differences on any study variables between those adolescents who did versus did not have complete data at the second time point. Participating adolescents provided informed assent and their parents provided informed consent (when adolescents were under 18) before each interview session, which took place in private offices within a university academic building. Adolescents and their close friends were paid for their participation.

Measures

Adult Attachment Interview (AAI) and Q-set—This structured, semi-clinical interview was administered to adolescents in order to assess the level of adolescent preoccupation (George, Kaplan, & Main, 1996). The AAI probes individuals' descriptions of their childhood relationships with parents in both abstract terms and with request for specific supporting memories. For instance, participants were asked to list five words describing their early childhood relationships with each parent and then asked to describe specific episodes that reflected those words. Other questions focused on specific instance of upset, separation, loss, trauma, and rejection. Finally, interviewers 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 1 hour on average. Slight adaptations to the adult version were made so that questions were more natural for and easily understood by an adolescent population (Ward & Carlson, 1995). Use of this interview with adolescent samples has been validated in previous studies using the current normative sample (Allen et al., 2005), as well with other samples of high-risk teens (e.g. Allen, McElhaney, Kuperminc, & Jodl, 2004; Kobak et al., 1991; Wallis & Steele, 2001; Ward & Carlson, 1995).

The AAI Q-set (Kobak, Cole, Ferenz-Gillies, Fleming, & Gamble, 1993) was designed to closely parallel the Adult Attachment Interview Classification System (Main et al., 2002) but to yield continuous measures of qualities of attachment organization. All interviews were audiotaped and transcribed for coding. 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 on both the Q-sort and the AAI classification system. These Q-sorts were then compared with a dimensional prototype sort for *preoccupied interview strategies*, reflecting either rambling and extensive but ultimately unfocused discourse about attachment experiences or angry preoccupation with attachment figures, suggesting a high level of mental entanglement with attachment figures. An individual's preoccupation score consisted of the correlation of the 100 items of an individual's Q-sort with the prototype sort for the preoccupied dimension (scores ranged from -1.00 to 1.00 , with higher scores indicating greater preoccupation). The Spearman-Brown interrater reliability for the preoccupied scale score was .82.

This system was designed to yield continuous measures of qualities of attachment organization, rather than to replicate classifications from the Main system (Main et al., 2002). However, the data produced by the Q-set system can be reduced via an algorithm to classifications that largely agree with three-category ratings from the AAI Classification System (Borman-Spurrell, Allen, Hauser, Carter, & Cole-Detke, 1995; Kobak et al., 1993). A subset of the AAI transcripts from a prior study was classified using the Main system by an independent coder with well-established reliability (U. Wartner) (Allen et al., 2004). Thus, validity data for the Q-set methodology was obtained by reducing the scale scores to classifications by using the largest Q-scale score above .20 as the primary classification. When these scores were compared to the classification codes, 74% received identical codes ($\kappa = .56$, $p < .001$), and 84% matched in terms of security versus insecurity ($\kappa = .68$) (Allen et al., 2004). However, continuous measures of preoccupation were used in all current analyses.

Self-reported depressive symptoms—At Time 1, adolescents reported the degree of their depressive symptoms using the Childhood Depression Inventory (Kovacs & Beck, 1977). Based on the Beck Depression Inventory, this 27-item inventory yields one total depression score with each item rated on a 0 to 2 scale. It has been well-validated as a measure of depressive symptomatology and has previously been linked with poor self-esteem, hopelessness, and negative cognitive attributions (Kazdin, 1990). Internal consistency for this measure was good (Cronbach's $\alpha = 0.85$). At Time 2, adolescents completed the Beck Depression Inventory, a 21-item inventory designed to assess the degree of depressive symptoms in adolescents and adults (Beck & Steer, 1987). Each item is rated on a 0 to 3 scale, yielding one total depression score with higher scores indicating more severe symptomatology. The BDI is a well-validated and widely accepted self-report measures of depression; internal consistency for this measure was good (Cronbach's $\alpha = 0.87$).

Observations of conflict negotiation—Each adolescent—close friend dyad participated in an 8-minute videotaped task in which they were presented with a revealed differences task. This task involved a hypothetical dilemma requiring them each to decide which seven out of a possible 12 fictional patients with a rare disease should be selected for a limited amount of

antidote, a set up which was based on the “sinking-ship dilemma” (Pfeiffer & Jones, 1974). After making their decisions separately, adolescents and their close friends were then brought together to compare their answers, and were asked to come up with a consensus list of seven patients. The Autonomy-Relatedness Coding System for Peer Interactions was used to code these interactions (Allen, Porter, & McFarland, 2001; Allen et al., 2000). Two continuous scales from this system were utilized in the current study: *friends’ conflict avoidance behaviors* as well as *friends’ use of overpersonalizing strategies* during the conflict; each were rated on a 0 to 4 point scale, with higher scores indicating greater presence of the behavior. In other words, friends in each interaction were assigned a *conflict avoidance* score reflecting the degree to which they engaged in behaviors such as never pushing hard for a position, giving in easily to the other person without much disagreement, and/or ceding the floor to the other person. Persons who scored highly on this scale generally seemed more interested in not disagreeing than in influencing the outcome of the discussion. Scores on the *overpersonalizing* scale were assigned based on the level of explicit references to the other’s personal characteristics, treating the disagreement as a “win–lose situation,” and the use of guilt provoking statements vs. reasoning (Allen et al., 2001). Each interaction was reliably coded by two trained coders who were blind to the rest of the data (intraclass correlation = 0.76 for friends’ conflict avoidance, 0.83 for friends’ use of overpersonalizing strategies).

Results

Preliminary and correlational analyses

Means, standard deviations and ranges for all primary measures are presented in Table 1.¹ For descriptive purposes, simple univariate correlations were also examined between all key variables of interest and are presented in Table 2. Not surprisingly, these analyses indicated a significant correlation between level of depressive symptoms at age 13 (Time 1) and level of depressive symptoms at age 18 (Time 2). Further, depression at age 18 was positively correlated with friends’ use of overpersonalizing strategies at age 13 and negatively correlated with friends’ conflict avoidance at age 13. In addition, level of depressive symptoms at age 18 was positively correlated with adolescent preoccupation. Finally, adolescents’ level of preoccupation was associated with gender (with girls being more likely to exhibit signs of preoccupation), and household income (with adolescents from low income families being more highly preoccupied).

Primary analyses

Analytic strategy—A series of hierarchical regressions was performed to examine the links between preoccupied attachment and qualities of interactions with friends at age 13 and relative changes in depressive symptoms from age 13 to age 18. Given the associations between preoccupation and both gender and income described above, these variables were entered first in all models, followed by depressive symptoms at age 13, followed by the predictor variables (preoccupied attachment and each of the two measures of friends’ behaviors during conflict resolution, in turn). This approach of predicting the future level of a variable while accounting for predictions from initial levels (e.g. 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). In addition, covarying baseline levels of future behavior reduces the likelihood that observed predictions are simply a result of cross-sectional associations among variables that are stable over time. Interaction terms were created by standardizing the independent

¹Given the mild skewness of the distribution of friends’ overpersonalizing behaviors, additional analyses were conducted in order to rule out the possibility that the following results were due to only a few subjects showing high scores on this behavior. All scores of more than 3 standard deviations above the mean of the overpersonalizing scale were trimmed to fall within 3 standard deviations ($N = 4$). All of the models presented below were examined using this trimmed dataset, and the same pattern of results was revealed.

variables and multiplying them together, and these terms were then entered as the final step in the models along with the main effects and demographic variables. Note that interaction effects between each of the demographic variables (gender and household income) and the independent variables were also examined in a final step and no such effects were found.²

Changes in depressive symptoms as predicted by friends' conflict avoidance and adolescents' preoccupied attachment—Table 3 presents results of regression equations predicting depressive symptoms at age 18 from observations of friends' avoidance of conflict during adolescent–friend interactions at age 13 and the level of adolescents' preoccupation, after controlling for gender, income and depressive symptoms at age 13. There was a significant main effect found for friends' avoidance of conflict, such that higher levels of conflict avoidance contributed to relative *decreases* in adolescents' self-reported depressive symptoms over time. There was also a significant main effect for adolescents' level of preoccupation, such that higher levels of preoccupation contributed to relative increases in depression over time. However, this model also revealed a significant interaction between friends' avoidance and adolescents' preoccupation. As can be seen in Figure 1, which presents results using standardized scores for each measure, friends' avoidance of conflict via deference was a strong predictor of relative *decreases* in depressive symptoms only for adolescents who were highly preoccupied. Non-preoccupied adolescents showed relatively low levels of depression across time, regardless of their friends' behaviors.

Changes in depressive symptoms as predicted by friends' overpersonalizing behaviors and adolescents' preoccupied attachment—Table 4 presents results of the regression equations predicting depressive symptoms at age 18 from observations of friend's use of overpersonalizing strategies during adolescent–friend interactions at age 13 and adolescents' level of preoccupied attachment, after controlling for gender, income, and depressive symptoms at age 13. There was a significant main effect found for friends' overpersonalizing behaviors, such that higher levels of overpersonalizing by friends contributed to relative increases in depressive symptoms over time. There was also a significant main effect found for adolescents' level of preoccupation, such that higher levels of preoccupation contributed to relative increases in depressive symptoms over time. However, this model also revealed an interaction between friends' use of overpersonalizing behaviors and adolescents' preoccupation. As can be seen in Figure 2, friends' overpersonalizing behaviors strongly predicted relative *increases* in depressive symptoms only for adolescents who were more highly preoccupied. Non-preoccupied adolescents showed relatively low levels of depression across time, regardless of their friends' behaviors.

Discussion

Although several recent studies have linked depression during adolescence to difficulties in peer relationships, we know relatively little about the predictive value of specific types of interactions with peers with regard to the development of depression during adolescence. Adolescents' level of preoccupation has also been linked to a range of internalizing problems, including depression; however, recent research has only just begun to map out ways in which the relationship patterns that preoccupied teens experience can either increase or decrease the risk for future internalizing symptoms (e.g. Marsh et al., 2003). The current study expanded this work by examining two specific patterns of interaction with peers in combination with

²Given that data was also available for adolescents' levels of conflict avoidance and overpersonalizing, and that their scores were moderately correlated to their friends' scores on these measures, all subsequent models were also examined using only adolescents' behaviors. However, no significant effects of teens' behaviors were found. An additional set of models was examined in which effects of friends' behaviors were tested while also controlling for adolescents' behaviors. These models yielded the same basic pattern of results as those presented here (not depicted).

adolescents' preoccupation with attachment in predicting relative changes in levels of self-reported depressive symptoms from age 13 to age 18. Consistent with past research, the current study revealed that preoccupied teens were more at risk for developing depressive symptoms than non-preoccupied adolescents. However, results also suggested that certain patterns of interactions with friends may either exacerbate or protect against such risk. More specifically, preoccupied teens reported *decreases* in their levels of depression when they experienced interactions in which their friends avoided conflict by deferring to them, whereas they reported relative *increases* in their levels of depression when their friends used overpersonalizing tactics by turning a conflict based on an abstract, hypothetical topic into a discussion of personal characteristics. Adolescents who were not preoccupied reported relatively low levels of depression over time, regardless of the pattern of their friends' behaviors. Overall we view these findings as suggesting that the diathesis of a preoccupied attachment organization is most likely to lead to depression in the context of the stress of overpersonalizing and conflictual relationships with peers.

Adolescents reported relative decreases in depressive symptoms from age 13 to age 18 when their friends avoided conflict with them during a revealed differences task at age 13. This effect was moderated by level of preoccupation, such that highly preoccupied teens particularly benefited from their friends' deference. When these teens had friends that ceded the floor to them, were hesitant to disagree, and/or used conflict averse approaches during the disagreement, they became relatively less depressed over time. Whether or not friends involuntarily or knowingly subordinate, they may be signaling to the teens that they have "won," and are in effect giving the teen more power and control of the situation. This pattern of interaction not only allows the teen to feel dominant (and perhaps more socially successful), but also it may provide a boost to his or her level of confidence and/or self-worth, all of which may ultimately contribute to lower levels of reported depression. Having friends who defer to your opinions might be especially helpful in buffering depressive symptoms for highly preoccupied teens, who have been shown to be more sensitive to their social environments due to the hyperactivated state of their attachment systems (Allen et al., 2002; Cassidy & Berlin, 1994; Marsh et al., 2003). Thus, preoccupied teens might especially benefit from experiences in which they feel that they have mastery over their social relationships.

The results of the current study indicate the opposite pattern of effects when adolescents' friends used overpersonalizing strategies during conflict. This style of adolescent–friend interaction was generally linked with *increases* in levels of self-reported depression over time, with preoccupied teens who experienced over-personalizing attacks from their friends reporting the greatest relative increases in depressive symptoms over time. In other words, the teens who became the most depressed over time were those who were both preoccupied and who had friends who made references to personal characteristics, voiced judgments about what kind of person they were, and/or demonstrated high levels of emotionally charged and guilt-invoking behaviors during the revealed differences task. Consistent with similar research on parent–teen interactions, friends' use of overpersonalizing strategies may undermine autonomy within the dyad by making it extremely difficult for teens to assert themselves during conflict (e.g. Allen et al., 2000). Being on the receiving end of such strategies may ultimately contribute to increased depression by triggering a strong sense of helplessness, and/or undermining the adolescents' sense of self, both of which are factors that have previously been linked to the development of depression (e.g. Seligman, Abramson, Semmel, & von Baeyer, 1979). As stated previously, preoccupied teens may be particularly affected by this interaction style due to their tendency to be highly tuned in and sensitive to their social environments. Consistent with past research on mother–adolescent interactions, more intense and enmeshing interactions with *peers* that violate boundaries may be particularly problematic for highly preoccupied teens (Marsh et al., 2003).

These results suggest specific pathways by which different types of interactions with friends can promote vs. undermine adolescents' psychological well being, and also further explain why preoccupation does not inevitably lead to depression. The data used in this study are longitudinal (collected over a 5-year period), utilizing multiple methods including a structured, semi-clinical interview and observations of peer interactions. By starting in early adolescence and examining levels of depression at more than one time point, we were able to predict which teens show increasing levels of depression over time, rather than merely documenting which were higher at any given time point. However, because there are very few studies to date that focus on how adolescent attachment interacts with particular types of ongoing relationship patterns, it is difficult to know exactly *why* preoccupied teens particularly do well psychologically when they have friends that defer to them, yet show difficulties when they have friends that personally attack them during conflict. As suggested above, several possible mediating factors exist, including social status, self-worth, and self-efficacy. Further, it should be noted that interactions involving conflict avoidance may be marked by lower negativity, whereas those that involve overpersonalizing are likely to be relatively more negatively charged. Thus, another possible explanation for the above patterns of findings is that preoccupied teens benefit from participating in interactions that overall are less emotionally charged. Thus, future research is clearly needed that extends the present work to further highlight the complex ways that attachment state of mind and patterns of relationships with friends may ultimately contributed to adolescents' psychosocial adjustment.

It should also be noted that the current sample represents an average cross-section of middle to late adolescents. Thus, although as many as 45% of participants demonstrated depressive symptoms in at least the mild to moderate range at some point during the study, the participating teens were not selected to be particularly high in psychopathology. Similarly, while there was significant preoccupation present in our sample, the percentage of participants who would ultimately be classified as preoccupied was relatively low. Thus, the current results cannot reliably be generalized to major depression as a clinical phenomenon, but rather highlight patterns relevant to those teens who struggle the most with regard to depressive symptoms by late adolescence and who also evidence preoccupied traits. Furthermore, given that the study included adolescents who were able to find a friend to participate with them, the sample is not likely to include those teens who are completely socially isolated and thus potentially at the highest risk for depression. While the current study is longitudinal in nature, it should be noted that the final data collection point of age 18 may fail to capture those teens that go on to develop depressive symptoms in their early to mid 20s. Thus, additional research that is more targeted at teens at high-risk for depression, and/or that contains data on adjustment into early adulthood will be needed to more thoroughly explore how and to what extent friendship patterns during early adolescence can account for levels of psychopathology later in life.

While this longitudinal dataset allows us to demonstrate relative changes in levels of depression from age 13 to age 18, the approach used here to measure changes in depression (predicting future levels of behavior while covarying baseline levels of that same behavior) is but one possible measure of change over time. This measure of change is distinct from identifying normative change in the sample as a whole and from trajectories of growth over longer time periods; further research employing these methods will be important to conduct in the future. In addition, given the high stability of adolescent's internal organization of attachment states-of-mind measured by the AAI (Allen et al., 2004), adolescent's attachment insecurity (i.e., their level of preoccupation) in this study was assessed once and treated as a stable construct. Further, the use of the Q-sort methodology has numerous practical and statistical advantages, but it does preclude examination of the unresolved attachment classification, which has been found to covary with preoccupied attachment. Thus, future research might consider both possible changes in attachment organization and the role of unresolved attachment, as these are potentially linked to changes in levels of psychosocial functioning.

Overall, the current study moves beyond identifying concurrent main effect markers of adolescent depression by addressing the development of depressive symptoms over a 5-year time period and considering theoretically predictable interactions among risk factors for depressive symptoms. These results allow us to develop a more comprehensive picture of adolescent depression by identifying how specific risks factors such as teen preoccupation might operate in the context of adolescents' social relationships. Knowing which friendship patterns potentially exacerbate struggles with depression vs. which ones may protect against such difficulties also provides a basis for fine-tuning our attempts to help depressed teens. Specifically, we have suggested that the types of friends that preoccupied adolescents choose helps to predict the course of their future psychosocial development. These specific relationship patterns highlighted in the current study may well hold important implications for psychosocial interventions that seek to improve adolescents' mental health by addressing their social skills, social interactions, and social decision-making.

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Figure 1.

The interaction between friends' conflict avoidance and adolescents' preoccupation predicting relative change in depressive symptoms from age 13 to age 18.

Figure 2.

The interaction between friends' overpersonalizing behaviors and adolescents' preoccupation predicting relative change in depressive symptoms from age 13 to age 18.

Table 1

Means, standard deviations, and ranges of primary measures.

	<i>M</i>	<i>SD</i>	Range
Depression, age 13 (SR)	5.07	4.30	0.00 to 26.25
Depression, age 18 (SR)	5.01	5.83	0.00 to 30.55
Teens' preoccupation (I)	0.03	0.23	−0.37 to 0.76
Friends' conflict avoidance (O)	1.47	0.14	0.00 to 4.00
Friends' overpersonalizing (O)	0.52	0.86	0.00 to 4.00

Note: SR = self report, I = structured interview, O = observed.

Table 2

Intercorrelations among variables.

	1.	2.	3.	4.	5.	6.	7.
1. Gender	–						
2. Income (SR)	-.11	–					
3. Depression, Time 1 (SR)	.06	-.10	–				
4. Depression, Time 2 (SR)	.12	.08	.30***	–			
5. Teens' preoccupation (I)	.19**	-.31***	.33***	.24**	–		
6. Friends' conflict avoidance (O)	-.09	.00	-.04	-.19*	-.13 ⁺	–	
7. Friends' overpersonalizing (O)	.03	.08	.02	.20**	.03	-.11	–

Note: SR = self report, I = Interview, O = observed.

⁺ $p < .10$;* $p < .05$;** $p \leq .01$;*** $p < .001$.

Table 3

Friends' conflict avoidance and adolescents' preoccupation predicting relative changes in depression from age 13 to age 18.

		β	ΔR^2	Total R^2
Step 1.	Income	.12		
	Gender	.09	.02	.02
Step 2.	Depression (age 13)	.30***	.08***	.10***
Step 3.	Friends' conflict avoidance	-.18*	.04*	.14***
Step 4.	Adolescents' preoccupation	.16*	.02*	.16***
Step 5.	Friends' conflict avoidance	-.16*	.03*	.19***
	X Adolescents' preoccupation			

Note:

*
 $p \leq .05$;

 $p < .001$; $N = 184$.

β s are from entry into model.

Table 4

Friends' overpersonalizing and adolescents' preoccupation predicting relative changes in depression from age 13 to age 18.

	β	ΔR^2	Total R^2
Step 1. Income	.12		
Gender	.09	.02	.02
Step 2. Depression (age 13)	.30***	.08***	.10***
Step 3. Friends' overpersonalizing	.18*	.03*	.13***
Step 4. Adolescents' preoccupation	.18*	.03*	.16***
Step 5. Friends' overpersonalizing X Adolescents' preoccupation	.15*	.03*	.19***

Note:

* $p \leq .05$;

*** $p < .001$; $N = 184$.

β s are from entry into model.