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Reporter Discrepancies Among Parents, Adolescents, and Peers: Adolescent Attachment and Informant Depressive Symptoms as Explanatory Factors

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Abstract

The issue of informant discrepancies about child and adolescent functioning is an important concern for clinicians, developmental psychologists, and others who must consider ways of handling discrepant reports of information, but reasons for discrepancies in reports have been poorly understood. Adolescent attachment and informant depressive symptoms were examined as two explanations for absolute and directional discrepancies about adolescent symptoms, relationships, and social behavior in a sample of 189 eleventh-grade students (mean age = 16.5 years). Adolescent attachment predicted absolute discrepancies, with greater attachment coherence associated with fewer discrepancies in reports of adolescent depressive symptoms, parent-adolescent conflict, and adolescent externalizing behavior. Parents' but not adolescents' depressive symptoms and adolescent attachment predicted the *direction* of discrepancies for mother-peer reports only.

Many important insights about child and adolescent development have come from studies using informants' reports, and it is widely accepted that a strong research design involves the use of multiple reporters and multiple methods (Achenbach, 2006; Achenbach, McConaughy, & Howell, 1987; Holmbeck, Li, Schurman, Friedman, & Coakley, 2002). Yet multiple reporters bring with them multiple viewpoints, and discrepant reports often emerge. One aspect of child and adolescent functioning – psychological symptoms – has been the focus of a large body of research that has examined the extent to which different reporters agree. This research has been conducted largely by clinical researchers who rely on informant reports of symptoms for diagnosis and treatment decisions as well as to draw conclusions about treatment effectiveness (Achenbach et al., 1987). De Los Reyes and Kazdin (2005) reviewed this research and noted that the clearest point of convergence across studies is that reporters typically do not agree about child and adolescent symptomatology. Reporter discrepancies such as these are troubling for both researchers and clinicians because their conclusions about treatment or research outcomes may vary considerably depending on which informants' information is used (e.g., Kazdin, 1989).

Despite the fact that the driving force behind previous investigations of reporter discrepancies has been clinical research with a sole focus on different reports of child and

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adolescent psychological symptoms or problematic behavior, the issue of informant discrepancies is also an important concern for developmental psychologists and other basic science researchers who must consider ways of handling discrepant reports of information. The use of multiple informants characterizes many aspects of developmental research. For example, mothers and fathers have reported about children's social competence (Renk & Phares, 2007), peers and teachers have reported about children's academic abilities (Gest, Rulison, Davidson, & Welsh, 2008), and mothers, fathers, and children have rated parenting abilities (Atzaba-Poria & Pike, 2008). An examination of the articles published in *Child Development* and *Developmental Psychology* from mid-2006 to mid-2008 revealed that 78 of the 218 studies that used informants (36%) incorporated reports about the same construct from more than one informant. Moreover, a lack of understanding of why different perspectives exist limits developmental researchers' abilities to make decisions about how to incorporate multiple perspectives into their analytic models (Holmbeck et al., 2002). Thus, attempts to find explanations for reporter discrepancies are as crucial for developmental scientists as they are for clinical practitioners and researchers.

According to De Los Reyes and Kazdin (2005), relatively little is known about why informants' ratings are often discrepant (but see De Los Reyes & Kazdin, 2005, for a theoretical rationale). Considerable attempts have been made to understand why and under what circumstances different informants disagree, and several factors, including informant and family characteristics, have been examined. The factor that has received the most attention in explaining reporter discrepancies is parental psychological functioning – in particular, parental depressive symptoms (Chi & Hinshaw, 2002; Treutler & Epkins, 2003). According to the depression-distortion hypothesis (Chi & Hinshaw, 2002; Richters, 1992), parents' depressive symptoms negatively influence their reports of their children's symptoms, biasing their attention, memory, and interpretation of life events (e.g., considerable research shows that depressed individuals are more likely than non-depressed individuals to focus on and recall negative events; Bower, 1981; Haaga, Dyck, & Ernst, 1991). Indeed, support for this proposed link between parental depressive symptoms and discrepancies in ratings of child and adolescent symptoms or behavior has emerged from numerous studies of clinical samples, and even a few community samples (Chi & Hinshaw, 2002; Chilcoat & Breslau, 1997; Treutler & Epkins, 2003; Youngstrom, Loeber, & Stouthamer-Loeber, 2000). Although the majority of these studies examined only maternal depressive symptoms as a contributor to informant discrepancies, available evidence suggests that the same pattern also exists for fathers (Treutler & Epkins, 2003).

Attachment theory offers another perspective from which to explain discrepancies in reports (e.g., Berger, Jodl, Allen, McElhaney, & Kuperminc, 2005). An important notion within attachment theory is that secure individuals engage in truthful and open communication, particularly about negative emotional experiences (Bowlby, 1988; Cassidy, 1994; Kobak & Duemmler, 1994). Secure individuals are thought to develop a pattern of open and coherent communication as a result of a history of experiences with their caregivers in which they were able to discuss distressing or difficult information, felt comforted during the interaction, and experienced the communication as having ameliorative consequences (Cassidy & Kobak, 1988; Kobak & Duemmler, 1994). Moreover, Main, Goldwyn, and Hesse (2002) describe the construct of "coherence of mind" - an individual's ability to coherently communicate about his/her attachment-related experiences - as a core component of attachment security. Insecure individuals, on the other hand, because they lacked these positive experiences of communication with their caregivers, are thought to be unable or unwilling to discuss topics coherently that might be emotionally distressing, such as those related to reports of psychological symptoms (for empirical evidence, see Berger et al., 2005; Kobak, Cole, Ferenz-Gillies, Fleming, & Gamble, 1993; Oppenheim, Koren-Karie, & Sagi-Schwartz, 2007; see also Thompson, 2000, for a review). Moreover, individual

differences in attachment are associated with attention, memory, and attributions of behavior (Bretherton & Munholland, 2008; Main, Kaplan, & Cassidy, 1985), all of which could influence perceptions of one's own and others' functioning.

Following this theoretical proposition about open communication, one would expect that, compared to insecure individuals, the perceptions of secure individuals would be more similar to the perceptions of other reporters because of this relatively free flow of information. Two previous studies have examined differences in parent and adolescent reports of adolescent psychosocial functioning as a function of adolescent attachment. Berger et al. (2005) found that adolescent attachment security assessed with the Adult Attachment Interview (AAI; George, Kaplan, & Main, 1984, 1985, 1996) predicted the level of discrepancy in reports, such that compared to secure adolescents and their parents, insecure adolescents and their parents were more discrepant in their reports of adolescents' symptomatology. Using a different approach, Barker, Bornstein, Putnick, Hendricks, and Suwalsky (2007) examined adolescents' attachment representations (assessed using the Security Scale; Kerns, Klepac, & Cole, 1996) along with five other predictors as contributors to discrepancies in parent/adolescent reports of internalizing and externalizing symptoms; findings indicated that self-reported attachment representations were not a unique predictor of discrepancies.

Because of the importance of open communication for attachment security, it is reasonable to assume that adolescent attachment would relate not only to reporter discrepancies about adolescent psychological symptoms but also to reporter discrepancies about the parent-adolescent relationship itself. That is, if communication between parents and adolescents is restricted so that certain topics are not discussed, then each member of the dyad may not be fully aware of the other person's views. Yet it is striking that, despite extensive research examining discrepancies about child and adolescent psychological symptoms and behavior, no published study to our knowledge has examined predictors of reporter discrepancies about the parent-child relationship, a substantial gap considering the importance of healthy parent-adolescent relationships for development (Brown, Mounts, Lamborn, & Steinberg, 1993). In fact, few studies have examined discrepancies about variables other than child/ adolescent symptoms.

In addition to considering the role of adolescent attachment as a contributor to reporter discrepancies when the adolescent is one of the reporters, it is important to consider cases when the adolescent is *not* one of the reporters. Several studies have examined such reporter discrepancies (e.g., studies in which mothers and fathers [Duhig, Renk, Epstein, & Phares, 2000] serve as reporters about children and adolescents). No study has examined differences between mother and peer reports, even though several studies have included both of these individuals as reporters of child and adolescent functioning (e.g., Berger et al., 2005; Booth-LaForce, Oh, Kim, Rubin, Rose-Krasnor, & Burgess, 2006). This is perhaps not surprising; given that mothers and peers not only have different types of relationships with adolescents (e.g., hierarchical vs. egalitarian) but also view adolescents in different contexts (e.g., home vs. school), reporter discrepancies may be viewed as largely accounted for by these circumstances.

Despite the complexities of drawing on reporters from the "two social worlds" of home and school (Kerns, Contreras, & Neal-Barnett, 2000; Hartup, 1986), it is possible that consideration of adolescent attachment may shed light on discrepancies between mother and peer reports. At least two reasons underlie the proposition that there will be less discrepancy between mothers and peers for secure adolescents than for insecure adolescents. As described earlier, one reason is that secure adolescents might engage in greater open communication with their parents about their social lives (Kobak & Duemmler, 1994). For

instance, secure adolescents might talk with their mothers more than insecure adolescents about their social experiences, either for seeking advice or simply for updating their mothers about important events in their lives. Thus, mothers of secure adolescents would report more similarly to peers because they would be aware of their adolescents' social experiences, whereas mothers of insecure adolescents would have less knowledge about their children's social lives. Another possibility is that insecure adolescents, compared to secure adolescents, behave differently in different contexts, and thus greater reporter discrepancies would reflect reports of more divergent behavior. This possibility is related to the fact that insecure adolescents are more likely than secure adolescents to exhibit problem behaviors (e.g., Allen, Hauser, & Borman-Spurrell, 1996; for a review, see Dozier, Stovall-McClough, & Albus, 2008), and previous research indicates that it is particularly children's problem behaviors related to emotion regulation difficulties that can vary across contexts (Eisenberg et al., 2001; Eisenberg et al., 2005).

The Present Study

In the present study, we examined reporter discrepancies during the developmental period of adolescence because it is a period marked by decreased communication with parents (Collins, 1990; Holmbeck, 1996), and because data suggest that (perhaps relatedly) reporter discrepancies are particularly high for adolescents (Achenbach et al., 1987; yet see Grills & Ollendick, 2003).

The present study, in which we examined both *absolute* and *directional difference* scores, had three main objectives. First, we sought to replicate and extend previous examinations of the role of adolescent attachment security as a contributor to absolute discrepancies in reports of adolescent depressive symptoms. We began with an examination of whether adolescents' attachment security predicted absolute discrepancies in mother and adolescent reports of adolescent depressive symptoms (see Berger et al., 2005, for a similar examination of this model), and we extended this examination by also considering the role of maternal depressive symptoms, a factor widely considered to influence parental reports of child and adolescent functioning (e.g., Treutler & Epkins, 2003). We hypothesized that both adolescent attachment security and maternal depressive symptoms would uniquely predict absolute discrepancies. We then examined directional differences in mother and adolescent reports of adolescent depressive symptoms, and hypothesized that maternal depressive symptoms would be associated with mothers' over-reporting of her adolescent's depressive symptoms compared to adolescent reports. We also conducted exploratory analyses with adolescent attachment coherence as a predictor of directional discrepancies.

Our second objective was to examine, for the first time, contributors to reporter discrepancies of parent-adolescent conflict, a topic important to developmental psychologists because of links to a variety of negative social outcomes, including aggression toward peers and decreased social competence (McCabe, Clark, & Barnett, 1999; Paley, Conger, & Harold, 2000). Moreover, most research on reporter discrepancies utilizes mother reports, and much less is known about how fathers' perceptions are related to (or discrepant from) adolescents' perceptions. Given the clear indications of the importance of fathers in their children's lives (Parke, 2000; and because father reports were available [only] for this topic), we included fathers in our examination of discrepancies in reports about parentadolescent conflict. In light of the depression-distortion hypothesis, we predicted that both parents' and adolescents' depressive symptoms would serve as predictors of absolute and directional discrepancies in reports of the relationship (De Los Reyes, Goodman, Kliewer, & Reid-Quinones, 2008). Next, attachment theory led us to predict that adolescent attachment coherence would be associated with less absolute discrepancy about parent-adolescent conflict. We also conducted exploratory analyses with adolescent attachment coherence as a predictor of directional discrepancies.

Finally, our third objective was to test whether adolescent attachment security and informant depressive symptoms explain discrepancies in mother- and peer-reported adolescent behavior. We selected externalizing social behaviors because we thought these behaviors would likely be relatively visible to observers (compared to anxious behavior, which can be relatively difficult to detect; Achenbach et al., 1987), and thus comparatively nondiscrepant. As such, our examination of reports of externalizing behavior may be viewed as a particularly stringent test of discrepancy in mother/peer reports. We hypothesized that mothers' depressive symptoms and adolescent attachment insecurity would predict greater absolute discrepancies as well as greater directional mother/peer discrepancies, with mothers over-reporting as compared to peers.

For all analyses, we maximized statistical power by focusing on adolescents' attachment coherence scores (rather than Q-Sort continuous variables, as Berger et al., 2005, used, or attachment classifications). Main et al. (2002) have argued that the coherence of mind subscale on the AAI represents the "best overall predictor [of] a speaker's overall functioning insofar as it is related to attachment" (p. 62). Similarly, Bakermans-Kranenberg and van IJzendoorn (2009) noted that coherence scale scores "should be used routinely in analyzing and presenting data on group differences in future correlational or experimental AAI studies" (p. 242). Given the continued interest in attachment classifications, however, we also conducted analyses using classifications.

Method

Participants

Participants were 189 eleventh-grade students (118 girls and 71 boys; mean age = 16.5 years) and their parents who were part of a larger study of adolescents' family and peer relationships. We recruited adolescents from seven public suburban high schools located in a large metropolitan area. All families were two-parent, English speaking families. Over two-thirds of the families were White (73%), with Black/African American (14%), Asian (10%), and Hispanic (3%) families comprising the next largest ethnic/racial groups. Most mothers (92%) and fathers (96%) reported having at least some college education. Annual household income for most participants (95%) was greater than \$41,000. Families were paid \$125 for their participation in the larger study. Sample sizes vary across analyses due to missing data.

Measures

Adult Attachment Interview (AAI; George et al., 1984, 1985, 1996)—We used this semi-structured interview to tap adolescents' "current state of mind with respect to attachment" through a series of questions focused principally on memories of attachment-related experiences during childhood. Adolescents are asked to give general descriptions of their childhood relationships with their parents (and other attachment figures) and to provide specific supporting memories. For example, adolescents are asked to choose five adjectives that described their childhood relationship with each parent and then to provide specific memories that supported their choices. Interviews lasted approximately one hour and were audiotaped for later verbatim transcription. We modified the interview slightly to make some questions more appropriate for an adolescent population (e.g., the word "recently" replaced the phrase "in adulthood;" Allen, Moore, Kuperminc, & Bell, 1998; Ward & Carlson, 1995). The psychometric properties of the AAI coding system have been well-established (Bakermans-Kranenburg & van IJzendoorn, 1993; Hesse, 2008; van IJzendoorn, 1995).

Using Main and Goldwyn's (1998) classification system, coders rated each transcript on a series of 9-point scales reflecting adolescents' inferred attachment-related experiences (e.g.,

of being parented in a loving way) and "current state of mind with respect to attachment." The principal scale used to assess adolescents' "current state of mind with respect to attachment" was *coherence of mind*, which refers to the degree to which adolescents discussed and evaluated their attachment-related experiences in a "reasonably consistent, clear, relevant, and succinct [manner]" (Hesse, 2008). Our use of the coherence of mind scale as a continuous measure of attachment security reflects the current study's interest in an individual's ability to communicate coherently about attachment-relevant information. In addition, the use of a continuous measure of attachment security is a commonly used technique to enhance statistical power (Hesse, 2008).

Four coders who were trained and certified as reliable by Mary Main and Erik Hesse and who were blind to any information regarding the adolescents or their families rated AAI transcripts and classified them into four groups. We assessed interrater reliability among these coders continuously throughout the coding period; a randomly selected 29% of cases (n = 55) were coded by at least two coders and satisfactory interrater reliability emerged (ICC = .73 for the coherence of mind scale; 78% agreement, $\kappa = .61$, p < .05 for the classifications). The distribution of the adolescent AAI classifications was: 126 secure/ autonomous (67%), 44 insecure/dismissing (23%), 10 insecure/preoccupied (5%), 6 unresolved (3%), and 2 insecure/cannot classify (1%). (Scheduling difficulties prohibited one adolescent from completing the AAI.)

Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977)— The CES-D is a widely used 20-item self-report instrument designed to detect depressive symptoms in adults. Mothers ($\alpha = .81$) and fathers ($\alpha = .82$) separately filled out the scale by reporting the frequency of behaviors during the past week on four different factors: depressive affect, somatic symptoms, positive affect, and interpersonal relations. We calculated total scores for mother and father CES-D depressive symptoms such that higher scores reflect higher depressive symptoms. Each item was scored from 1 to 4; possible total scores ranged from 0 to 80.

Children's Depression Inventory (CDI; Kovacs, 1985)—We used the 27-item self-report CDI to assess adolescent-reported symptoms of depression (e.g., disturbed mood, negative self-evaluative thoughts). At the request of school administrators, we dropped the item related to suicidal ideation, leaving 26 items ($\alpha = .85$). For each item, adolescents selected one sentence out of three that best described them in the past two weeks (e.g., "I have fun in many things," "I have fun in some things," and "nothing is fun at all.") Each item is scored from 0–2, with higher scores reflecting higher depressive symptoms. Item scores are summed to create a total adolescent CDI depressive symptoms score, which could range from 0 to 52.

Child Behavior Checklist for Ages 6–18 (CBCL; Achenbach, 1991)—Mothers

completed the 118-item CBCL, a well validated measure of child and adolescent internalizing and externalizing problems (see Achenbach & Rescorla, 2007, for a review). In this report, we include only the anxious-depressed (14 items; $\alpha = .86$), aggression (20 items), and delinquency (13 items) subscales. Due to the high correlation between the aggression and delinquency subscales (r = .67, p < .001), we combined these two subscales to create an *externalizing behavior* factor ($\alpha = .89$). For each item, mothers used a 3-point scale ranging from *not true* (0) to *very true* (2) to rate the degree to which a given attribute described their adolescent (e.g., sad, argues). We summed items to calculate anxious-depressed and externalizing behavior scores.

Topics of Conflict Checklist (TCC; Prinz, Foster, Kent, & O'Leary, 1979)—We used a modified version of the TCC to assess levels of conflict related to topics about which

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adolescents and their parents typically disagree (e.g., chores, homework). Because of time constraints, our modified checklist included only 19 of the 44 topics listed on the original TCC. We also modified the response format so that participants rated conflict about each topic using a 5-point Likert-type scale ranging from *do not disagree* (1) to *disagree much* (5). Adolescents completed the checklist twice, once for the adolescent-mother relationship ($\alpha = .82$) and once for adolescent-father relationship ($\alpha = .84$). Mothers ($\alpha = .82$) and fathers ($\alpha = .87$) completed their checklists separately with regard to their adolescent. For each of the four reports, we generated a total disagreement score by summing the 19 topic-items (thus, with a possible range of 19–95).

Peer-Reported Externalizing Social Behavior-To assess peer perceptions of adolescents' externalizing social behavior, we used a modified version of a procedure developed by Parkhurst and Asher (1992). We provided adolescents and their high school classmates with a peer-report packet that contained (among other measures) instructions directing participants to identify whether or not each classmate listed on the unique roster they received was characterized by the statements "This person starts arguments or fights, says mean things, and gets mad easily" (aggressive behavior) and "this person breaks rules, does things you're not supposed to, and gets into trouble at school" (delinquent behavior). Below each of these written instructions was a randomly generated roster of names of 75 of the students who were also participating in this study. The words "yes" and "no" were placed to the right of each student's name so that participants could choose to nominate, or instead chose to not nominate, the student by circling the appropriate response. Participants also had the opportunity to identify students on their rosters whom they did not know (i.e., to the right of the words "yes" and "no" was the phrase "I do not know this person" which could be circled). Each adolescent participating in the study was listed on at least 75 rosters and thus had ample opportunity to be nominated by his/her peers.

Each adolescent's social behavior score was created using the following widely used procedure (see Parkhurst & Asher, 1992). First, we divided the number of nominations adolescents received by the number of possible nominations they could have received from participants who knew the adolescent, yielding proportion scores for aggressive behavior and delinquent behavior. This procedure has been shown to be a valid peer assessment of social behavior (Rose, Swenson, & Waller, 2004). Because the distribution of these scores deviated from normality, we then normalized adolescent's proportion scores using an arcsine square-root transformation (Parkhurst & Asher, 1992). Given the significant overlap in nominations of aggressive and delinquent adolescents ($\alpha = .75$, r = .60, p < .001), we created a composite score for peer-reported externalizing social behavior.

Absolute and Directional Discrepancy Score Calculations

To calculate discrepancy scores, we first standardized adolescent, mother, and father reports of conflict scores, and adolescents' CBCL anxious/depressed and externalizing behavior subscale scores, as recommended by De Los Reyes and Kazdin (2004). Rather than standardizing peer reports (which would have been problematic because the scores came from seven different schools), we centered the scores within each school by subtracting the school mean for peer-reported externalizing behaviors. This approach allowed us to retain meaningful information about adolescents' actual levels of externalizing behaviors as reported by their peers. Then, we calculated absolute discrepancy scores by computing the absolute difference between (a) mother/adolescent reports of adolescent depression, (b) mother/adolescent and father/adolescent reports of conflict, and (c) mother/peer reports of adolescent externalizing behavior, yielding four absolute discrepancy scores. When testing hypotheses related to directionality of discrepancy, we calculated directional discrepancy scores by subtracting adolescent (or peer) reports from parent reports, yielding four

directional discrepancy scores. Based on this procedure, negative discrepancy scores indicated that parents were under-reporting and positive discrepancy scores indicated that parents were over-reporting compared to adolescent or peer reports.

Procedure

We gathered data during three data collection sessions. First, in the spring of adolescents' junior year, we collected data on peer-reported aggressive and delinquent behavior and self-reported depressive symptoms during a classroom data collection session. Then, adolescents visited our university laboratory in the summer and completed the TCC. Mothers and fathers accompanied their adolescents to the laboratory and completed their respective versions of the TCC and CES-D. Additionally, mothers completed the CBCL and fathers provided demographic information. Finally, one month after their first laboratory visit, adolescents visited our laboratory again and completed the AAI. Trained graduate students supervised data collection.

Results

We first present descriptive statistics and intercorrelations for the core study variables and findings from preliminary analyses. We then present analyses focusing on the study's three key components: prediction of (a) discrepancy between mother/adolescent reports of adolescent depressive symptoms, (b) discrepancy between parent/adolescent reports of parent-adolescent conflict, and (c) discrepancy between mother/peer reports of adolescent externalizing social behavior. As noted above, the core attachment variable was the continuous AAI attachment coherence score; very similar findings emerged with the use of AAI secure/insecure classifications, and are available from the first author.

Descriptive Statistics and Preliminary Analyses

We present the means, standard deviations, and intercorrelations for the core study variables in Table 1. Sufficient variability in these variables was evident. Because preliminary analyses revealed no significant correlations between any of the discrepancy scores and adolescents' age, race, gender, or family socio-economic status, none of these demographic variables was included in subsequent analyses. For all pairs of reporters, responses were significantly correlated at p < .001 (see Table 1). Because parents and adolescents used the same measure when reporting about parent-adolescent conflict, we were able to examine whether one reporter systematically over-reported conflict. No systematic differences between mothers' (M = 35.07, SD = 10.23) conflict with their adolescents (M = 36.15, SD = 10.23) 9.98) emerged, t (186) = 1.42, ns, but we found that fathers (M = 35.76, SD = 11.23) reported greater father-adolescent conflict than their adolescents reported (M = 33.08, SD =10.09), t(172) = -2.99, p < .01. In addition, previous findings that adolescents report more conflict with their mothers than with their fathers (e.g., Larson & Richards, 1994: Montemavor, 1983) led us to examine this comparison in our sample; converging findings emerged (conflict with mothers, M = 36.27, SD = 10.17 vs. conflict with fathers, M = 32.86, *SD* = 9.98; *t* [179] = 7.38, *p* < .001).

Discrepancy in Adolescent/Mother Reports of Adolescent Depressive Symptoms

Absolute discrepancy—First, following Berger et al. (2005), we regressed the absolute discrepancy scores on adolescent AAI coherence of mind scores. As expected, results mirrored Berger et al.'s findings: Adolescents' AAI coherence of mind scores predicted discrepancy scores, such that as adolescents' AAI coherence of mind increased, the discrepancy between adolescents' and mothers' reports of adolescent depressive symptoms decreased ($\beta = -.16$, p < .05, $sr^2 = .03$). Next, we regressed absolute discrepancy scores for adolescent/mother reports of adolescent depressive symptoms on adolescent AAI coherence

of mind scores and mother depressive symptoms. Results indicated that both maternal depressive symptoms and adolescent AAI coherence of mind scores accounted for unique variance in discrepancies in adolescent/mother reports of adolescent depressive symptoms (see Table 2). As expected, as adolescent AAI coherence of mind scores increased and maternal depressive symptoms decreased, the discrepancy between adolescent and mother reports of adolescent depressive symptoms decreased.

Directional discrepancy—Next we regressed the directional discrepancy scores for mother/adolescent reports of adolescent depressive symptoms on mother depressive symptoms and adolescent attachment coherence; no significant links emerged (See Table 2).

Discrepancy in Adolescent/Parent Reports of Adolescent-Parent Conflict

Absolute discrepancy—We regressed the absolute discrepancy scores for adolescent – parent conflict on adolescent and parent depressive symptoms scores and adolescent AAI coherence of mind scores. With respect to the adolescent-mother relationship, neither adolescent nor maternal depressive symptoms accounted for a unique amount of variance in discrepancy scores for reports of adolescent–mother conflict (all p's > .05). As expected, adolescent AAI coherence of mind contributed to discrepancies in adolescent/mother reports of conflict, such that as AAI coherence of mind increased, discrepancies in reports decreased. For the adolescent-father relationship, adolescent AAI coherence of mind scores and father (but not adolescent) depressive symptoms significantly contributed to discrepancies in reports of adolescent-father conflict – as adolescent AAI coherence of mind increased and father depressive symptoms decreased, discrepancy in father/adolescent reports of conflict decreased (see Table 3).

Directional discrepancy—We regressed the directional discrepancy scores for parent/ adolescent reports of parent-adolescent conflict on informant depressive symptoms and adolescent attachment coherence; no significant links emerged (See Table 3).

Discrepancy in Mother/Peer Reports of Adolescent Externalizing Social Behavior

Absolute discrepancy—We regressed the discrepancy scores for mother/peer reports of adolescent behavior on maternal depressive symptoms and adolescent AAI coherence of mind scores (see Table 4). As expected, with respect to adolescent externalizing behavior, adolescent AAI coherence of mind scores and maternal depressive symptoms accounted for unique variance in the absolute discrepancy between mother and peer reports. As adolescent AAI coherence of mind scores increased and maternal depressive symptoms decreased, the absolute discrepancy between mother and peer reports decreased, the absolute discrepancy between mother and peer reports of adolescent externalizing behavior decreased.

Directional discrepancy—We regressed the directional discrepancy scores for mother/ peer reports of externalizing behavior on adolescent AAI coherence of mind scores and mother depressive symptoms. Results indicated that adolescent AAI coherence of mind and mother depressive symptoms uniquely predicted the direction of discrepancies in reports (see Table 4). As expected, mothers' tendency to over-report her child's externalizing behavior (as compared to peer reports) was associated with lower adolescent attachment coherence and higher maternal depressive symptoms.

Discussion

This study responds to a long-standing call by researchers and clinicians to examine conceptual explanations for reporter discrepancies (De Los Reyes & Kazdin, 2005; Holmbeck et al., 2002; Kazdin, 1994), and thereby advances the field in several ways. First,

our study is consistent with the theoretical notion that adolescent attachment security explains absolute discrepancies in reports of adolescent depressive symptoms, and meshes with research in which parental depressive symptoms contribute to absolute discrepancies about adolescent depressive symptoms. Second, by examining discrepancies in reports about parent-adolescent *relationships*, our study moves beyond the previous focus on reports about adolescent symptoms and extends the research of informant discrepancies to reports about both mother-adolescent and father-adolescent interactions. Third, the examination of discrepancies in mother and peer reports provides an initial look at how these two informants from widely different social contexts report about adolescent social behavior. Finally, across all analyses, our study provides information about the roles of informant depressive symptoms and adolescent attachment security as *unique* contributors to absolute and directional discrepancies.

Our finding that, as expected, greater adolescent attachment security was associated with lower absolute discrepancies in mothers' and adolescents' reports of adolescent depressive symptoms converges with the finding of Berger et al. (2005) who similarly used the Adult Attachment Interview to assess adolescent attachment. This finding is consistent with the idea that secure individuals engage in open communication with significant relationship partners (Bowlby, 1988; Bretherton, 1990; Kobak & Duemmler, 1994), suggesting that mothers of secure adolescents have a greater understanding of their children's negative emotional experiences.

Moreover, the present study extended the Berger et al. study by also including maternal depressive symptoms and showing that they too predicted absolute discrepancies about adolescent depressive symptoms. The finding that both predictors uniquely contributed to absolute discrepancies in reports suggests that it is useful to consider both factors when trying to understand the presence of informant discrepancies for adolescents' depressive symptoms. It may be that mothers' depressive symptoms interfere with their reporting as a result of their own emotional distress. In addition, it could be that adolescents of mothers with higher depressive symptoms are aware of their mothers' negative affect, and as a result, are less likely to tell their mothers about their own depressive symptoms because they do not want to add to her distress or because they do not find discussion with her to be helpful. Thus, it may be that when mothers with elevated depressive symptoms are asked to report on their adolescent's depressive symptoms, they have less familiarity with their adolescent's functioning. Interestingly, however, maternal depressive symptoms were not associated with mothers' over-reporting her adolescent's depressive symptoms compared to adolescent reports, a finding that is in contrast to the depression-distortion hypothesis and to findings with samples of clinically depressed mothers (e.g., Youngstrom, Izard, & Ackerman, 1999). It may be that mothers in our community sample lack sufficient depressive symptoms to bias their reporting of their adolescents' depressive symptoms. Similarly, adolescent attachment coherence was not associated with systematic over-or under-reporting in comparison to mothers' reports; future work with a larger sample may be able to detect directional differences in reports of depressive symptoms.

Unlike the methodology of the Berger et al. (2005) study, our approach of using AAI coherence scores precluded the examination of differences associated with different types of insecure states of mind (e.g., insecure-dismissing and insecure-preoccupied). It may be that different patterns of insecurity are associated with differences in the amount or direction of reporter discrepancies. Indeed, Berger et al., who used the AAI Q-set (Kobak et al., 1993) to create dimensional scores for insecure-dismissing and insecure-preoccupied strategies, found a link between adolescents' dismissing subscale scores and absolute discrepancies in reports of psychosocial functioning, a finding that may reflect the inability of dismissing individuals to discuss painful feelings openly (see Cassidy & Kobak, 1988, for a review). In

terms of directional analyses, Berger et al. found that insecure-dismissing scores were not associated with either under-reporting or over-reporting symptoms compared to mother reports, but did find that insecure-preoccupied scores were associated with adolescent overreporting of their symptoms. (In the present study, even when analyses were conducted with AAI classification groups, most insecure adolescents, as is commonly the case with adolescent samples [Bakermans-Kranenberg & van IJzendoorn, 2009], were classified insecure/dismissing, leaving too few adolescents in some of the insecure groups to shed light on this question by examining these groups separately.) Thus, given that most of the adolescents with low coherence scores in our sample were classified as insecure/dismissing, it is not surprising that findings for adolescents low on attachment coherence in the present study mesh with findings for adolescents high on the dismissing dimension in the Berger et al. study; in both cases, higher scores related to greater absolute but not greater directional discrepancies.

A different pattern emerged for analyses related to our second objective, which was to examine absolute and directional discrepancies in reports of parent-adolescent conflict. For mother-adolescent reports of conflict, adolescents' attachment security, and not informant depressive symptoms, contributed to absolute reporter discrepancies, a finding that is consistent with the idea that adolescents' attachment security reflects the extent to which they are able to openly communicate with their mothers about difficult topics. According to this thinking, the tendency for less secure adolescents to lack full communication with their parents would result in a gap in the dyad's mutual understanding about disagreements within the relationship. For father-adolescent reports of conflict, adolescent attachment security and fathers' depressive symptoms uniquely contributed to absolute discrepancies. Future examination of reporter discrepancies in parent-adolescent dyads is needed to determine whether this pattern is consistent across samples. In the present study, we used AAI attachment coherence as an overall marker of adolescent attachment security; in future work examining discrepancies in reports about interactions with a parent, it will be useful to examine adolescents' attachment to that particular parent. Even though attachment organization in adolescence is likely to be a blend of experiences with multiple attachment figures (e.g., mothers, fathers, romantic partners; see Allen, 2008), it may be that variations in the attachment relationship with a particular caregiver will result in variations in the amount of reported discrepancy within that dyad. For instance, an adolescent who has a secure attachment to his mother but not to his father may be less discrepant from his mother when reporting about their conflict than he is from his father when reporting about conflict with his father. By examining attachment to specific caregivers, future work may be able to establish whether the nature of reporter discrepancies reflects the variability in attachment relationships. Our finding that informant depressive symptoms did not serve as a contributor to directional differences in reports of parent-adolescent conflict was unexpected given the depression distortion hypothesis; as noted earlier, findings consistent with this hypothesis may be more likely to emerge for participants characterized by clinical depression than by non-clinical levels of depressive symptoms.

Our third objective was to examine factors that influence mother/peer discrepancies in reports of adolescents' externalizing social behavior. Our finding that adolescent attachment security predicted absolute discrepancies offers insight into the ways in which mothers and peers view adolescent social behavior, *despite* their differing interactions and relationships with the adolescent, and the differing context in which these occur. Future research is needed to determine *why* it is that mothers and peers report more similarly for secure adolescents than for insecure adolescents. Consistent with attachment theory and the depression-distortion hypothesis, directional analyses revealed that both maternal depressive symptoms *and* adolescent attachment were associated with mothers' over-reporting her adolescent's externalizing behavior, relative to peer reports. These findings shed light on the

quality of the mother-adolescent relationship, despite the fact that adolescents were not one of the reporters. It may be that mothers' negative perceptions of their adolescents contribute to adolescents' attachment insecurity (for data showing that negative maternal perceptions during infancy predict the child's attachment insecurity, see Benoit, Parker, & Zeanah, 1997; Broussard & Cassidy, in press). Additionally, our finding that mothers' depressive symptoms contribute to their over-reporting of their adolescents' negative behavior converges with previous research indicating that mothers' negative affect is associated with a tendency to view their adolescents with a negative bias.

Several additional areas remain for investigation in future research. Importantly, we identified modest effect sizes across analyses, and it will be interesting for future studies to investigate other sources of informant variability. In addition, the present study was conducted using a community sample of adolescents from two-parent, middle-class families. Future research incorporating families with different demographic characteristics, including those who exhibit greater depressive symptoms, might shed light on whether informant symptoms must pass a certain threshold in order to influence reports. Sample characteristics limited our investigation of reporter discrepancies in two additional ways: (a) our study did not include information about parent attachment coherence, and it will be noteworthy to determine whether the same pattern emerges for adolescent and parent attachment coherence as predictors of reporter discrepancies; and (b) due to time constraints, fathers did not report on adolescent depressive symptoms or externalizing behaviors, and so we were unable to compare mother-adolescent and father-adolescent discrepancies in reports of adolescent depressive symptoms or mother-peer and father-peer discrepancies in reports of externalizing behaviors.

Our study focused on examining the role of attachment as an explanation for reporter discrepancies during the developmental period of adolescence, and it will be useful for future research to examine whether attachment security predicts reporter discrepancies during other developmental periods, such as childhood. Because all existing work examining the role of attachment has focused on adolescents, researchers know nothing about how the connections between reporter discrepancies and attachment may be similar or different for younger children. On the one hand, attachment may influence reporter discrepancies at any age, because attachment is a lifespan construct and some of its properties are consistent across development (Bowlby, 1969/1982). On the other hand, the developmental periods of childhood and adolescence are marked with distinct characteristics (Collins, 1990), and it is possible that attachment security might not explain reporter discrepancies for younger children. For instance, because parents spend more time with children than with adolescents (Larson & Richards, 1991) and thus have greater opportunities to view child functioning in a variety of contexts, it may be that parents of children are relatively less reliant on the open communication associated with attachment security for gaining information about their child, and for that reason would be relatively less subject to reporter discrepancies that vary as a function of children's attachment security. (See also Holmbeck et al., 2002, for a discussion of why parent-child discrepancies might be lower than parent-adolescent discrepancies in general.) These possibilities merit empirical investigation in future work.

In summary, the present study offers insight into basic processes underlying reporter discrepancies about adolescent symptoms, relationships, and behavior, and adds to an understanding of the ways in which individual differences in discrepancies are lawful. We identified a striking pattern in which adolescent attachment reliably explained absolute reporter discrepancies across variables and across types of informant comparisons. We join others (e.g., De Los Reyes & Kazdin, 2005) in urging researchers not to disregard informant discrepancies as measurement error, but instead to consider reporter discrepancies as unique

information that can provide important details about the perceptions of adolescent functioning and relationships.

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Table 1

Descriptive Statistics and Intercorrelations Among Primary Study Variables

Variable (Measure, Reporter)	Μ	SD	1	17	e	4	w	9	7	8	6	10	11
1. Adolescent Attachment Coherence (AAI, AR)	5.51	1.92		16*	10	05	07	31 ***	19*	29 ***	25 **	24	12
2. Adolescent Depressive Symptoms (CDI, AR)	9.80	6.32		ī	.34***	.28***	.13	.34***	.20**	.21 ^{**}	.20**	.30***	H.
3. Adolescent Depressive Symptoms (CBCL, MR)	3.11	3.81			ī	.35***	60.	.13	.21 ^{**}	.14	60.	.57***	.14
4. Mother Depressive Symptoms (CES-D, MR)	27.25	6.17				ī	II.	.18*	.12	.20**	.05	.30***	.10
5. Father Depressive Symptoms (CES-D, FR)	27.23	6.39					·	.10	.03	60.	.22**	.05	02
6. Adolescent-Mother Conflict (TCC, AR)	36.32	10.21						ı	.49***	.81	.46***	.30***	.27***
7. Adolescent-Mother Conflict (TCC, MR)	34.80	9.70							,	.41	.49***	.38***	.30***
8. Adolescent-Father Conflict (TCC, AR)	32.86	9.98								ı	.42***	.23**	.20**
9. Adolescent-Father Conflict (TCC, FR)	35.87	11.38									ı	.33***	.20*
10. Adolescent Externalizing (CBCL, MR)	6.14	6.43											.47***
11. Adolescent Externalizing (PR)	.33	.20											,

ation. AR = Adolescent Report, MR = Mother Report, FR = Father Report, PR = Peer Report.

 $_{p < .05.}^{*}$

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 $^{**}_{p < .01.}$

 $^{***}_{p < .001.}$

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Table 2

Summary of Two Regression Analyses Predicting Absolute and Directional Discrepancies in Mothers' and Adolescents' Reports of Adolescents' Depressive Symptoms from Adolescents' AAI Coherence of Mind and Mothers' Depressive Symptoms

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	Adolescent Depres	Adolescent Depressive Symptoms (Absolute Discrepancy)	dute Discrepancy)	Adolescent Depressi	Adolescent Depressive Symptoms (Directional Discrepancy)	ional Discrepancy)
Variable	В	β	<i>S1</i> ²	В	β	<i>S1</i> ²
Mother Depressive Symptoms	.03	.22**	.05	.01	.07	.01
AAI Coherence Score	05	14 *	.02	03	.05	.00
* p = .06.						
p < .01.						
p < .001.						

Table 3

Summary of Two Regression Analyses Predicting Discrepancies in Adolescents' and Parents' Reports of Conflict from Parents' Depressive Symptoms and Adolescents' AAI Coherence of Mind

	Adolesce	int-Mother	Conflict	Adolesc	Adolescent-Mother Conflict Adolescent-Father Conflict	onflic
Variable	В	В	sr^2	В	β	sr ²
Adolescent Depressive Symptoms	00.	.01	00.	00.	03	0.
Parent Depressive Symptoms	.01	80.	00.	.02	.16*	.03
AAI Coherence Score	07	22*	.05	10	30***	60.

Note. For the analyses examining adolescent-mother conflict, we used mothers' CES-D depressive symptoms scores. For the analyses examining adolescent-father conflict, we used fathers' CES-D depressive symptoms scores.

 $_{p < .05.}^{*}$

p = .001.

Table 4

Summary of Two Regression Analyses Predicting Absolute and Directional Discrepancies in Mothers' and Peers' Reports of Adolescents' Externalizing Social Behavior from Mothers' Depressive Symptoms and Adolescents' AAI Coherence of Mind

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	Adolescent Externa	Adolescent Externalizing Behavior (Absolute Discrepancy)	lute Discrepancy)	Adolescent External	Adolescent Externalizing Behavior (Directional Discrepancy)	onal Discrepancy)
Variable	В	В	<i>Sr</i> ²	В	ß	<i>SI</i> ²
Mother Depressive Symptoms	.02	.15*	.02	.05	.31***	60.
AAI Coherence Score	067	20 **	.04	10	21 **	.04
* p = .05.						
** p < .01.						
p < .001.						