



# Discrepancies in Mother-Adolescent Reports of Parenting Practices in a Psychiatric Sample: Associations with Age, Psychopathology, and Attachment

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## Abstract

Discrepancies in parent-adolescent reports of parenting practices may reveal important information about parent-adolescent relationship quality. Youth attachment security has been identified as a factor that may explain discrepancies between parents and adolescents in reporting on parenting. However, previous research has not examined this question among clinical samples, and has generally utilized non-optimal analytic strategies in modeling discrepancies. The current study aimed to extend previous work by using latent profile analysis (LPA) to identify patterns of mother-adolescent divergence in reports of parenting in a large clinical sample, examining the characteristics of discrepancy groups in terms of age, gender, and psychopathology, and examining associations between attachment and discrepancies. A sample of adolescents with psychiatric disorders ( $N = 416$ ; ages 12–17) and their mothers completed reports of parenting practices. Adolescents also completed the Child Attachment Interview and a measure of psychopathology. LPA was used to identify groups of mother-adolescent dyads with similar patterns of divergence across domains of parenting. Chi-square, ANOVA, and logistic regression analyses were used to test associations between youth age, gender, psychopathology, and attachment and mother-adolescent discrepancy profile membership. Three discrepancy profiles emerged: Strong Divergence, Moderate Divergence, and Low Divergence. Youth in the Moderate Divergence profile were oldest and had highest levels of externalizing pathology. Youth with insecure (dismissing and preoccupied) attachment, relative to securely attached youth, were more likely to be in the Strong Divergence profile. Securely attached adolescents were more likely to be in Low or Moderate Divergence profiles. Clinical implications are discussed.

**Keywords** Assessment · Attachment · Parenting · Parent-child relationships · Adolescents · Informant discrepancies

Adolescents and their parents commonly disagree in their perceptions of the family, and tend to show only low to moderate agreement on measures of parenting behaviors (De Los Reyes and Ohannessian 2016). Across samples as a whole, adolescents typically rate parenting more negatively than their parents, but within samples, variability exists such that different parent-adolescent dyads vary in the direction (i.e., whether the parent or the adolescent views the family more positively) and

magnitude of their discrepancies in perceptions of parental care (De Los Reyes and Ohannessian 2016; Korelitz and Garber 2016). Differing reports of parenting between parents and adolescents underline the fact that each individual has a unique perception of the family. Discrepancy in parent-child perceptions of the family can, however, be problematic in research and clinical settings because it prevents a clear picture of the family from emerging.

It is possible, though, that these discrepancies reflect meaningful information about adolescents and parent-adolescent relationships. Discrepancies in parent-child dyads have been shown to be stable over time (De Los Reyes et al. 2010), internally consistent (De Los Reyes 2011), and to vary in magnitude and direction across different dyads (De Los Reyes et al. 2010; Lippold et al. 2013). In addition, discrepancies in reports of parental monitoring, nurturance, hostility, and discipline have been shown to predict children's internalizing and externalizing behaviors cross-sectionally and longitudinally (Borelli et al. 2010; De Los Reyes et al. 2010;

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Korelitz and Garber 2016). This predictive ability was shown even when parent or child report did not predict child outcomes (De Los Reyes et al. 2010). Discrepancies may therefore provide unique and reliable information relative to either report individually.

Discrepancies in reports of family functioning are also thought to provide useful information about the parent-child relationship, as greater discrepancy may signal dysfunction, lack of communication, or disagreement in a relationship (De Los Reyes 2011). On the other hand, some level of discrepancy between parents and adolescents in particular may reflect adolescents' autonomy and individuation, and thus be normative (De Los Reyes and Ohannessian 2016; Ohannessian et al. 2000). In order to better understand to what extent discrepancy is normative versus a function of problems in the parent-adolescent relationship, and to help clinicians understand discrepancies in light of the parent-adolescent relationship, it is useful to identify factors that may influence discrepancies.

Attachment security has been implicated as a factor that may influence parent-child discrepancies in reports of family functioning (Ehrlich et al. 2011; Ehrlich et al. 2014; Maurizi et al. 2012). Attachment represents the innate bond between children and their caregivers (Bowlby 1973). Individual differences in the internal working models of attachment that children develop can be described as following one of four different patterns. First, children who develop secure attachment to their caregiver hold an internal representation of the parent as a safe base, offering protection and security (Masten and Cicchetti 2016). Some children, however, may experience their caregiver as inconsistently available or frightening, resulting in insecure or disorganized attachment. One form of insecure attachment is referred to as dismissing/avoidant, in which the child minimizes the impact of attachment relationships, expressed through derogation/dismissal of the caregiver or through unsubstantiated idealization of the caregiver (Target et al. 2007). Insecure attachment may also be characterized as preoccupied/anxious, in which the child demonstrates angry, anxious, or ruminative behavior in response to attachment needs not being met (Target et al. 2007). A small percentage of children may also develop a disorganized attachment, marked by incoherence and confusion in response to the caregiver, in which there is no clear attachment strategy (Target et al. 2007). Meta-analytic studies have shown that secure attachments are associated with healthier psychosocial functioning, whereas insecure attachments are associated with internalizing problems (Groh et al. 2012) and both insecure and disorganized attachment are associated with externalizing problems (Fearon et al. 2010). Critically, children's internal working models of attachment are thought to serve as the schemas through which children process attachment-relevant social behavior (Dykas and Cassidy 2011). Thus, attachment security is likely to influence how children perceive, and subsequently report, their parents' parenting behavior.

Three studies conducted with community samples have examined how youth attachment relates to discrepancies between parent and child reports of parenting. Findings from this small literature suggest that lower attachment security is related to greater discrepancy between parent and child reports. First, using coherence scores from the Adult Attachment Interview (AAI; George et al. 1985) adapted for adolescents, Ehrlich et al. (2011) found that greater attachment security (indexed by the AAI coherence scale) was related to less discrepancy between parent and adolescent reports of conflict. Similarly, Maurizi et al. (2012) found that greater discordance between parents and adolescents in their reports of parenting was associated with lower quality of parent-child relationships, as measured by the adolescent-reported Inventory of Parent and Peer Attachment (IPPA; Armsden and Greenberg 1987). Finally, on the adolescent-reported Experiences in Close Relationships Scale (ECR; Brennan et al. 1998), Ehrlich et al. (2014) found attachment avoidance and anxiety were both related to discrepancies. Attachment avoidance was associated with greater absolute discrepancies between parent and adolescent reports (i.e., considering only magnitude but not direction). Attachment anxiety was related to directional discrepancy: adolescents with higher attachment anxiety reported parenting behaviors more negatively relative to their parents.

From these three studies emerges a consistent message that greater attachment security is related to less discrepancy between parent and adolescent in their reports of parenting, but still there remain crucial gaps in this literature. First, no studies have yet examined this question among youth with psychiatric diagnoses. In their meta-analysis, Korelitz and Garber (2016) found that clinical status moderated parent-adolescent congruence in reports of parenting behaviors, with more congruence in non-clinical samples relative to samples with psychiatric diagnoses. Moreover, there are typically higher proportions of youth with insecure attachments among youth with psychiatric diagnoses (Shmueli-Goetz et al. 2008; Wallis and Steele 2001). This is especially the case for youth with disorganized attachment, which often has base rates too low for analysis in community samples (Shmueli-Goetz et al. 2008; Target et al. 2003) and yet is the form of attachment insecurity more strongly linked with psychopathology (Zeanah et al. 2003). Finally, discrepancies of parenting may arguably be of the greatest importance among youth with psychiatric diagnoses, wherein understanding the family environment has tremendous utility in case conceptualization and treatment planning.

A second gap in this research area is that previous studies examining attachment and parent-child discrepancies in reports of family functioning have typically done so via a recently-criticized data analytic method that involves taking the difference between parent and child scores and using this score as a separate variable indexing parent-adolescent discrepancy (De Los Reyes and Ohannessian 2016). However,

difference scores are problematic in studying discrepancies, as they are often statistically redundant with the original parent and child scores, and may not offer information beyond what either of the individual scores offers (Laird and De Los Reyes 2013; Laird and Weems 2011). More specifically, research has suggested that a difference score often does not provide incremental predictive value over and above either of the individual informant scores (De Los Reyes and Ohannessian 2016). Or, as Laird and Weems (2011) illustrated, the use of a single difference score may provide less or conflicting information versus the individual informant scores: for example, a difference score may represent that one of the informant's prediction was "better" than the other, or that the two reports were in opposite directions. Laird and De Los Reyes (2013) further explain mathematically how the use of a difference score rather than the two informant scores constrains statistical models and, in effect, reduces predictive power compared to better-fitting models (Edwards 1994). One alternative now being recommended over difference scores (De Los Reyes and Ohannessian 2016) is person-centered approaches such as latent class analysis (LCA) or latent profile analysis (LPA), which allow the identification of sub-groups within the sample that are similar in their pattern of discrepancies, in that they have a different distribution (i.e., mean and standard deviation) than the whole sample (Oberski 2016). This approach is thought to incorporate more information to model the discrepancy than difference scores, because both informants' scores are used rather than one difference score. Specifically, LPA identifies subgroups that exist based on the particular combination of the parent and child reports (Lippold et al. 2014), such that a pattern of informant discrepancy is identified, thereby utilizing more information in the identification of subgroup classification relative to a single difference score.

Finally, a third gap in this research area is that this question has not yet been examined using the Child Attachment Interview (CAI; Target et al. 2007) as an assessment of child attachment. The CAI was adapted from the AAI and has been shown to have good reliability and validity as a measure of attachment for children (Shmueli-Goetz et al. 2008) and adolescents (Venta et al. 2014). Previous studies on this topic assessed adolescent attachment using a modified AAI (Ehrlich et al. 2011) and adolescent self-report measures including the ECR (Ehrlich et al. 2014) and the IPPA (Maurizi et al. 2012). Notably, the CAI differs from the AAI, which does not typically utilize non-verbal behavior in coding as the CAI does (Target et al. 2003) and from self-report measures, which are thought to assess conscious attachment styles rather than tapping into internal working models of attachment (Furman et al. 2002). Self-report and interview-based measures of attachment have shown only moderate correlations (Shmueli-Goetz et al. 2008; Venta et al. 2014). In addition, self-report measures may not capture as "insecure" the children who are classified as dismissing on the CAI (Borelli et al.

2016b), which is relevant for the understanding of discrepancies. Finally, attachment representations as assessed by the CAI have shown incremental validity beyond self-report measures in relation to children's internalizing symptoms (Borelli et al. 2016a). Given this evidence, examining the relation between attachment as measured by the CAI and parent-child discrepancies in reports of parenting is a warranted extension of prior research.

Against this background, the current study aimed to extend the current literature on attachment and parent-child discrepancies in reports of parenting in the following ways: 1) by utilizing a sample of youth who were inpatients at a psychiatric hospital, with high psychiatric severity and greater variability in attachment, 2) by using LPA— one approach now being recommended to model discrepancies, and 3) by measuring attachment utilizing the CAI. The current study had three aims. First, the study aimed to model discrepancies between mother and adolescent reports of parenting practices using LPA among youth with psychiatric diagnoses. Second, we sought to further understand the nature of these discrepancy profiles in terms of gender, age, and psychopathology, and in doing so identify any variables that should be controlled in the third study aim, which was to examine the association between attachment and discrepancy profile membership. To capitalize on the data yielded by the CAI, this study used both categorical attachment classifications and dimensional ratings on four CAI scales: coherence (to index attachment security; Shmueli-Goetz et al. 2008), maternal preoccupation, maternal dismissal, and maternal idealization (indices of attachment insecurity).

Past research on parent-child discrepancies in reports of family functioning has found that patterns of discrepancy fall into three categories based on the nature of the discrepancy: parent-adolescent convergence [referred to here as  $PA^{Converge}$ ], and two parent-adolescent divergence categories (parent report of parenting quality > adolescent report of parenting quality [referred to as  $PA^{Diverge}$ ], and adolescent report of parenting quality > parent report of parenting quality [referred to as  $AP^{Diverge}$ ]; De Los Reyes and Ohannessian 2016). We therefore hypothesized that these three classes would be identified in the current sample, following the above patterns (Hypothesis 1). Consistent with previous findings, we further hypothesized that adolescents with secure attachment classification would be more likely to be members of the  $PA^{Converge}$  profile (Hypothesis 2), that adolescents with dismissing attachment would be more likely to be members of either of the divergent profiles than the convergent profile ( $PA^{Diverge}$  or  $AP^{Diverge}$ ; Hypothesis 3), and that adolescents with preoccupied attachment would be more likely to be members of the divergent profile in which teens rated parenting behaviors less favorably than their parents ( $PA^{Diverge}$ ; Hypothesis 4). We hypothesized that CAI dimensional scales would relate similarly to patterns of divergence, such that higher attachment security

would be related to membership in the  $PA^{Converge}$  profile, higher maternal preoccupation would be related to membership in the  $PA^{Diverge}$  profile, and higher maternal dismissal would be related to membership in either the  $PA^{Diverge}$  or  $AP^{Diverge}$  profile. Given that there is no prior research examining maternal idealization or disorganized attachment in relation to discrepancies in parent-adolescent reports of parenting practices, we did not specify a priori directional hypotheses for these, but nonetheless conducted exploratory examinations of both in relation to discrepancies. Age and gender were tested as possible covariates due to evidence that they are related to discrepancies (De Los Reyes & Kazdin, 2005) and adolescent internalizing and externalizing pathology were tested as possible covariates given previously demonstrated associations between internalizing and externalizing and discrepancies in reports of parenting (see Korelitz and Garber 2016, for a review) and attachment (Fearon et al. 2010; Groh et al. 2012).

## Method

### Participants

This study included a sample of adolescents who were inpatient at a psychiatric hospital and who were 12 to 17 years of age. Study inclusion criteria specified that participants were proficient in English in order to assent to study participation and complete research measures. Exclusion criteria included a diagnosis of schizophrenia or other psychotic disorder, an autism spectrum diagnosis, or an IQ below 70. The sample used for LPA consisted of 416 adolescents ( $M_{age} = 15.25$ ,  $SD = 1.49$ , 63.2% female) whose female caregiver had completed parent-report measures. Maximum likelihood estimation was used to account for missing data in the LPA analyses using MPlus. Of these 416 adolescents, seven did not have a CAI rating due to video/audio malfunction, they could not be coded, or participant refusal, and five adolescents did not have YSR data. These individuals were excluded from the logistic regression analysis, resulting in a final sample for regression analyses of  $N = 404$ . Because the number of individuals excluded for missing data was minimal ( $n = 12$ ; <3%), we do not believe that estimates were biased. Further, because missing data were manifest predictor variables, Mplus could not estimate missing data for logistic regression analyses using maximum likelihood estimation. Data for youth whose male caregivers had completed parent-report measures were not used because the subsample ( $n = 67$ ) was not large enough for the minimum suggested for LPA (Wurpts and Geiser 2014). We chose not to model mother- and father-adolescent discrepancies together due to evidence that mother-adolescent and father-adolescent reporting discrepancies differ (Korelitz and Garber 2016). In the sample, 80.5% of participants identified

as White or Caucasian, 6.5% as Hispanic or Latinx, 4.8% as multiracial or other, 2.9% as Asian, 1.9% as Black or African American, 0.2% as American Indian or Alaskan Native and 9.6% of participants did not report. Based on a structured diagnostic interview at admission, 53.8% of participants met DSM-IV criteria for an anxiety disorder, 52.2% for a mood disorder, 40.6% for an externalizing disorder, and 7.2% for an eating disorder.

### Procedure

Adolescents were recruited from a 16-bed inpatient unit, within a private psychiatric hospital in a large metropolitan area in the Southwestern US, for youth with severe emotional and behavioral disorders. Upon adolescents' admission to the unit, parents were approached for consent; if given, adolescents were then approached for informed assent. All consecutive adolescent inpatient admissions were approached for study participation. Informed consent was obtained from all individual participants included in the study. Clinical research assistants and doctoral students administered measures privately on the unit within the first 2 weeks of each youth admission. The study protocol was approved by institutional review boards at University of Houston and Baylor College of Medicine.

### Measures

**Parenting Practices** The Alabama Parenting Questionnaire (APQ; Frick 1991) is a widely used measure of parenting practices that can be completed by parents and children. Forty-two items load onto six different scales: maternal involvement, paternal involvement, positive parenting, poor monitoring/supervision, inconsistent discipline practices, and corporal punishment. All parent reports were completed by participants' female caregivers. Thus, we used the maternal involvement (10 items), positive parenting (6 items), poor monitoring/supervision (10 items), inconsistent discipline (6 items), and corporal punishment (3 items) scales in the present study. APQ items are scored using a Likert-type scale ranging from 1 (never) to 5 (always). Higher scores on involvement and positive parenting scales indicate greater involvement and positive parenting. Poor monitoring/supervision, inconsistent discipline, and corporal punishment scales were recoded so that higher scores indicated greater monitoring/supervision and consistent discipline and lower corporal punishment. Moderate internal consistency for the five scales of the APQ ( $\alpha = 0.63$ – $0.80$ ) has been shown in a sample of youth ages 6–13 years; in the same sample, APQ scales discriminated between children with disruptive behavior disorders and those without (Shelton et al. 1996). Further, the APQ has been shown to be sensitive to change during parenting interventions in multiple studies (see Essau et al. 2006, for a review).



Evidence supporting the five-factor structure of the APQ has been shown in a sample of 10–14 year old German adolescents (Essau et al. 2006). In the present sample, Cronbach's alpha values ranged from  $\alpha = 0.57$ – $0.82$  for youth reports, and from  $\alpha = 0.57$ – $0.82$  for maternal reports.

**Adolescent Attachment** The Child Attachment Interview (CAI; Target et al. 2007) is an interview-based measure that assesses children and adolescents' attachment security by accessing their mental representations of attachment figures. The 17-question interview was modified from the AAI to be more developmentally appropriate for youth. In the original reliability and validity paper for the CAI (Shmueli-Goetz et al. 2008), inter-rater reliability for the three-way maternal attachment classification ranged from  $\kappa = 0.58$ – $0.84$ , test-retest reliability values for 3 months and 1 year three-way maternal attachment classification were  $r = 0.81$  and  $0.74$ , respectively, and the pattern of insecure versus secure attachment significantly differed between clinically referred and non-referred children, with the referred children having significantly higher scores on scales associated with insecure attachment, and lower coherence. In addition, the CAI showed a 64% agreement with another independently coded measure of attachment, and children rated as secure had highest scores on a measure of adaptation (Shmueli-Goetz et al. 2008).

The interview focuses on primary attachment figures, typically mothers and fathers, and asks youth to describe each attachment figure in three words, and then provide examples, with affective response, for each. The interview also probes for examples and affective response when the adolescent was sick, injured, needed help, experienced a loss, or spent time away from parents. Interviews are video recorded and transcribed, and both video and transcription are used during coding so that verbal content and behavior/affect are considered. The interview is rated on nine-point scales (ranging from 1 to 9) in 11 domains: emotional openness, balance of positive and negative reference to attachment figures, use of examples, preoccupied anger (separate for each parent), idealization (separate for each parent), dismissal (separate for each parent), resolution of conflicts, and overall coherence. Higher ratings in each domain are indicative of greater levels of this behavior observed or described during the interview. Scores in these domains are then used as a basis from which to rate one of three categorical attachment classifications (three-way: secure, insecure-dismissing, insecure-preoccupied) as well as a categorical designation as disorganized or not disorganized, separately for each caregiver. All 11 domains are used in making the categorical designation. Ratings above five on emotional openness, balance of positive and negative references to attachment figures, use of examples, resolution of conflicts, and overall coherence, in combination with ratings below five on preoccupied anger, idealization, and dismissal, are usually the bases for a secure attachment designation for the caregiver.

Insecure attachment classifications are typically given when a youth receives ratings below 5 on emotional openness, balance of positive and negative references to attachment figures, use of examples, resolution of conflicts, and overall coherence, and ratings of 5 or above on preoccupied anger (for youth given the insecure-preoccupied classification), or on dismissal or idealization scales (for youth given insecure-dismissing classification). Disorganized classification is assigned when the youth displays a) attachment behaviors that are disorganized, dysregulated, dissociated or controlling, b) organized controlling behaviors not specific to attachment, or c) atypical or strange behavior reflecting pervasive disorganization during the interview (Shmueli-Goetz et al. 2011). This classification can be assigned regardless of pattern of scores in other domains, though it is most typically accompanied by insecure attachment. Classifications are rated separately for each parent; the present study focused on youths' attachment classifications in relation to mothers. Attachment security can also be indexed dimensionally by scores on the CAI coherence scale, with higher scores indicative of higher attachment security (Shmueli-Goetz et al. 2008). Moreover, scores on preoccupied, dismissing, and idealizing scales (rated separately for each attachment figure) provide more specificity as to the type of insecure attachment. Four dimensional scales (coherence; maternal preoccupation, dismissal, and idealization) were used in the current study.

In this study, interviews were conducted in private and video/audio recorded, then transcribed and coded by an independent rater. Raters had undergone training and shown 80% reliability with CAI authors on a set of training videos in order to be certified coders. A subset of interviews (16% of sample) were coded by two independent raters to determine interrater agreement. Agreement for the three-way attachment classification was  $\kappa = 0.60$  ( $p < 0.001$ ). Significant two-way random intraclass correlations (single measure) were found between raters on all dimensional scales (values ranging from 0.54–0.64,  $p < 0.001$ ).

#### **Adolescent Internalizing and Externalizing Psychopathology**

Adolescents completed the 112-item Youth Self Report, a widely used measure of emotional and behavioral problems with well-established reliability and validity. Specifically, a mean test-retest reliability of 0.82 on the problem scales of the YSR has been demonstrated, as well as internal consistency reliability values of 0.55–0.75 (Achenbach & Rescorla, 2001). Regarding validity, significant differences have been found on YSR scales between youth ages 6–18 referred and non-referred for treatment, and YSR scales have shown significant correlations with related DSM diagnoses as well as other dimensional scales of psychopathology (Achenbach & Rescorla, 2001). Two broadband scales of internalizing and externalizing problems, in addition to several narrowband scales, can be calculated from the YSR. In this study, *T*-scores from the Internalizing

Problems and Externalizing Problems scales were used. Internal consistency for the YSR was  $\alpha = 0.94$ .

## Data Analytic Plan

To identify distinct subgroups among mother-adolescent informants, Latent Profile Analysis (LPA) was performed using M-Plus 7 (Muthén & Muthén, 1998–2014). LPA is a type of mixture modeling that uses continuous indicator variables to find subgroups with different distributions than the sample as a whole. The present LPA used both mother- and adolescent-report scores on five parenting scales of the APQ (involvement, positive parenting, monitoring/supervision, consistent discipline, and corporal punishment) to identify distinct profiles. Maximum likelihood estimation was used to account for missing data on the APQ. To assess model fit, we examined several criteria, including Akaike's information criteria (AIC; Akaike 1987), the Bayesian information criterion (BIC; Schwarz 1978), Entropy values, the Lo-Mendell-Rubin Adjusted (LMR) Likelihood Ratio tests, and average latent class probabilities. Better model fit is indicated by lower AIC and BIC values, higher entropy values that are preferably above 0.70 (Muthén 2000), significant chi-square values ( $p < 0.05$ ) on the LMR test indicating that the  $k-1$  class model is rejected in favor of the  $k$  class model (Lo et al. 2001), and average latent class probabilities above 0.70 (Nagin 2005).

To examine associations between adolescent gender, age, internalizing and externalizing psychopathology and discrepancy profiles, SPSS 24 was used to perform chi-square and one-way ANOVA analyses. Finally, we performed multinomial logistic regression analyses using SPSS 24 in order to evaluate associations between discrepancy profile membership and both categorical and dimensional attachment indices, while controlling for covariates.

## Results

### Preliminary Analyses

Means, standard deviations, and skewness and kurtosis statistics were calculated for continuous study variables (Table 1). Skewness and kurtosis values, which were approximately within the range of  $-1$  to  $1$ , indicate that continuous study variables were roughly normally distributed and could be analyzed using parametric tests. Based on the CAI, 29.2% ( $n = 118$ ) of adolescents received a secure attachment classification with respect to their mother, and 70.8% received insecure attachment classifications, which included 48.3% ( $n = 195$ ) of the sample who received a dismissing attachment classification, and 22.5% ( $n = 91$ ) who received a preoccupied classification. In addition, 16.1% ( $n = 65$ ) of the sample received a

disorganized classification with respect to their maternal attachment.

Paired  $t$ -tests were conducted to examine mean differences between mother and adolescent reports on the five APQ scales. Results revealed that mothers had significantly higher scores than adolescents for maternal involvement ( $t(348) = 15.57$ ,  $p < 0.001$ ,  $d = 0.94$ ), maternal positive parenting ( $t(358) = 14.12$ ,  $p < 0.001$ ,  $d = 0.96$ ), monitoring/supervision ( $t(358) = 13.33$ ,  $p < 0.001$ ,  $d = 0.74$ ), and low corporal punishment ( $t(357) = 6.64$ ,  $p < 0.001$ ,  $d = 0.41$ ). Mother and adolescent reports on the consistent discipline scale did not differ ( $t(358) = 0.90$ ,  $p = 0.37$ ,  $d = 0.06$ ). In sum, mothers and adolescents had small to large differences in reports of parenting practices with the exception of consistent discipline, and mothers tended to have the more positive report. Largest differences were observed for parental involvement and positive parenting.

Next, bivariate relations (Table 1) were tested using Pearson correlations to evaluate the correspondence between mother and adolescent reports on the five APQ scales. Correlations were small to medium ( $r = 0.19$ – $0.47$ ). These correlation strengths are in line with previous studies examining parent-child reports of family functioning (De Los Reyes and Ohannessian 2016).

### Aim 1. Latent Profile Analysis of Mother-Adolescent Reports of Parenting Practices

Based on previous research (e.g. De Los Reyes et al. 2016), we tested an LPA model ranging from one to four profiles. For this analysis,  $N = 416$ ; missing data on the APQ was estimated in Mplus using maximum likelihood estimation. Model fit statistics (Table 2) suggested that the two and three profile solutions were best fitting. However, the three-profile solution resulted in lower AIC, BIC, and adjusted BIC values than the two-profile solution, and an entropy value of 0.71, higher than the entropy of 0.66 for the two-profile solution and above the suggested 0.70 threshold. Further, average posterior probabilities in the three-profile solution ranged from 0.84–0.89 and therefore were also above the preferred 0.70 level, indicating that groups were well separated. Therefore, the three-profile solution was chosen. Figure 1 displays the mean values on each APQ scale, by informant, for each of the three profiles. Table 3 shows descriptive information about each profile, including means, mean differences, and directionality of discrepancies.

Profile 1 (Moderate Divergence,  $P_A^{\text{Diverge}}$ ; 35.6% of sample) was characterized by moderate discrepancy between mother-adolescent reports, with mothers reporting more positively than adolescents, and with the most negative maternal reports of parenting across APQ scales. In addition, adolescents in this profile reported lowest levels of consistent discipline and monitoring relative to the two other profiles. Profile 2 (Strong Divergence,  $P_A^{\text{Diverge}}$ ; 23.8%) was

**Table 1** Descriptive statistics and bivariate correlations between main study variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Gender																		
2. Age	0.14**																	
3. Involvement (Mother)	0.03	-0.16**																
4. Involvement (Youth)	-0.08	-0.11*	0.40**															
5. Positive Parenting (Mother)	0.04	-0.03	0.48**	0.20**														
6. Positive Parenting (Youth)	-0.08	-0.07	0.20**	0.68**	0.19**													
7. Monitoring (Mother)	-0.14**	-0.47**	0.31**	0.17**	0.14**	0.12**												
8. Monitoring (Youth)	-0.12**	-0.30**	0.24**	0.38**	0.09	0.27**	0.47**											
9. Consistent Discipline (Mother)	0.01	-0.04	0.22**	0.15*	0.17**	0.11*	0.32**	0.16**										
10. Consistent Discipline (Youth)	-0.06	-0.04	0.11*	0.13*	0.02	0.08	0.18**	0.50**	0.25**									
11. Low Corporal Punishment (Mother)	-0.003	0.10	0.07	0.05	0.15**	0.05	0.13**	0.02	0.38**	0.05								
12. Low Corporal Punishment (Youth)	0.04	0.10*	0.04	0.21**	0.08	0.31**	-0.01	0.19**	0.19**	0.14**	0.33**							
13. Maternal Preoccupied Anger	-0.08	0.03	-0.17**	-0.35**	-0.09	-0.32**	-0.01	-0.16**	-0.05	-0.15**	-0.03	-0.21**						
14. Maternal Idealizing	-0.04	-0.14**	0.12*	0.26**	0.09	0.26**	0.12**	0.15**	0.07	0.10*	0.02	-0.002	-0.31**					
15. Maternal Dismissal	0.14**	-0.03	-0.13*	-0.28**	-0.04	-0.21**	-0.12*	-0.13**	-0.14**	-0.10*	-0.14*	-0.17**	0.02	-0.17**				
16. Attachment Coherence	-0.06	0.18**	0.09	0.22**	0.05	0.17**	-0.03	0.04	0.13*	0.08	0.10*	0.19**	-0.24**	-0.23**	-0.52**			
17. Internalizing	-0.05	-0.08	0.08	0.06	0.04	0.03	0.15**	-0.05	0.08	-0.20**	0.17**	-0.08	0.05	0.03	-0.12*	-0.05		
18. Externalizing	0.06	0.11*	-0.18**	-0.22**	-0.07	-0.14**	-0.31**	-0.48**	-0.26**	-0.42**	-0.17**	-0.21**	0.19**	-0.11	0.14*	-0.17**	0.26**	
Mean (SD)	15.25 (1.49)	37.98 (4.32)	32.31 (7.24)	23.56 (3.05)	19.50 (5.19)	40.59 (5.72)	35.80 (6.83)	20.55 (3.60)	20.27 (4.36)	12.84 (1.52)	12.09 (2.00)	2.62 (2.26)	2.45 (1.94)	3.99 (2.57)	4.36 (1.87)	65.91 (12.22)	61.13 (10.72)	
Range	12–17	18–49	10–50	14–30	6–30	24–50	10–50	10–30	7–30	8–15	3–15	1–9	1–9	1–9	1–9	27–92	17–92	
Skew	-0.48	-0.46	-0.16	-0.36	-0.50	-0.42	-0.29	0.05	-0.21	-0.85	-0.83	1.29	1.12	0.33	0.33	-0.60	-0.28	
Kurtosis	-0.78	-0.86	0.04	-0.14	-0.43	-0.42	-0.29	0.05	-0.21	0.61	0.99	0.48	-0.01	-1.21	-0.44	-0.08	0.43	

N = 416. Missing data estimated using maximum likelihood estimation in Mplus. \*\*Correlation is significant at the 0.01 level (2-tailed); \* Correlation is significant at the 0.05 level (2-tailed)

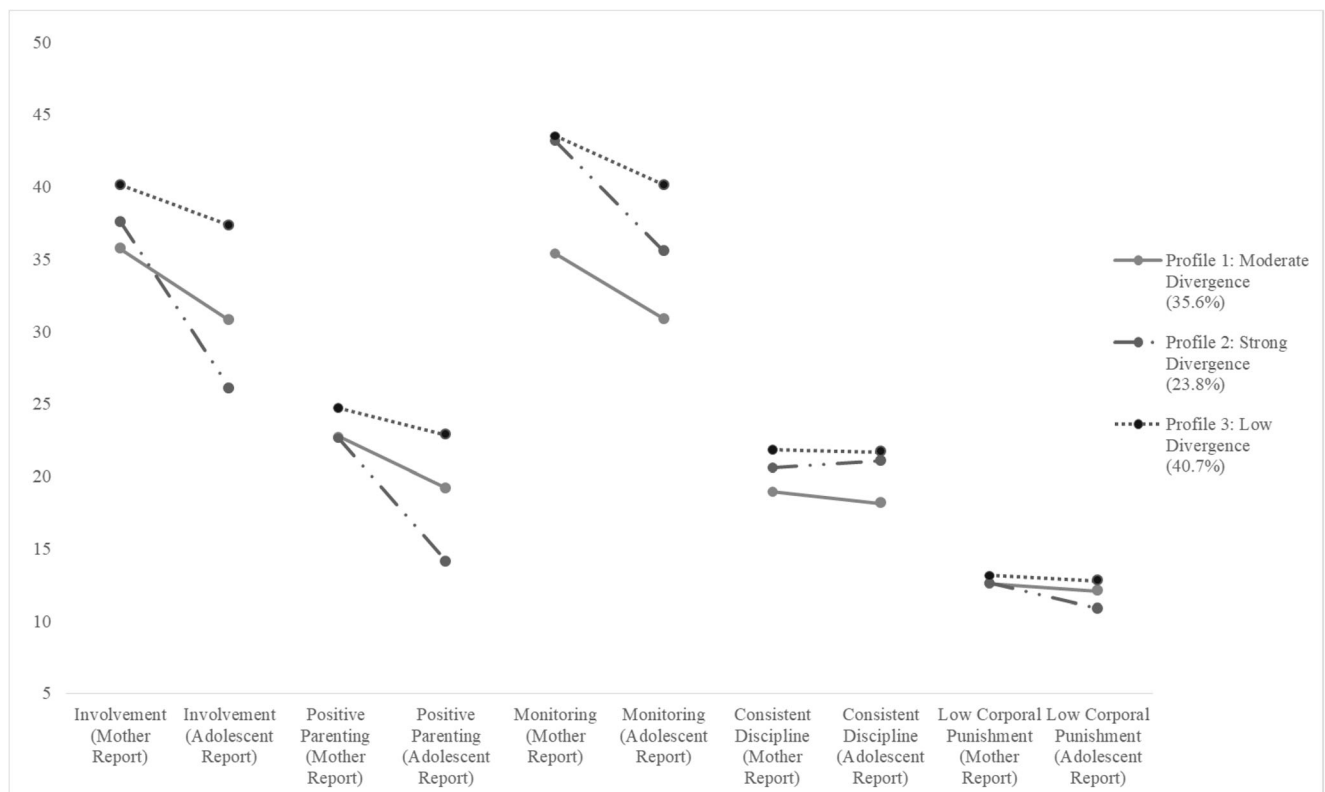
**Table 2** Model fit statistics for latent profile analysis of mother-adolescent reports in five domains of parenting practices

	Profiles			
	1	2	3	4
AIC	21,553.92	21,228.89	21,124.56	21,048.86
BIC	21,634.53	21,353.84	21,293.84	21,262.49
Sample Size Adjusted BIC	21,571.07	21,255.47	21,160.57	21,094.31
Entropy	na	0.66	0.71	0.72
Lo, Mendell, Rubin Test	na	341.87	124.46	96.24
		$p = 0.007$	$p = 0.02$	$p = 0.21$
Average Latent Class Probabilities		$ps \geq 0.89$	$ps \geq 0.84$	$ps \geq 0.82$
<i>N</i> for each profile (class)	C1 = 416	C1 = 228 C2 = 188	C1 = 148 C2 = 95 C3 = 173	C1 = 45 C2 = 104 C3 = 145 C4 = 122

AIC Akaike’s information criterion, BIC Bayesian information criterion

characterized by the greatest discrepancy in reports of involvement, positive parenting, monitoring, and corporal punishment, and again by mothers having more positive reports than adolescents (except consistent discipline, for which there was no difference). Adolescents in this profile reported lowest levels of involvement, positive parenting, and highest levels of corporal punishment relative to adolescents in the other two profiles. Profile 3 (Low Divergence;  $PA^{Converge}$ ; 40.7%) was characterized by the least divergence between mothers and

adolescents, though mothers still had the more positive report on all domains except consistent discipline (no difference), and the most positive reports of parenting by both mothers and adolescents across APQ domains, relative to the other two profiles. In contrast to previous studies that have mostly been conducted among community youth (see De Los Reyes and Ohannessian 2016, for a review), results did not yield a distinct discrepancy profile in which teens were consistently more positive in their report than their parents across scales.



**Fig. 1** Latent profile analysis three-profile model based on mother and adolescent reports of parenting practices (APQ),  $N = 416$



**Table 3** LPA profile means by informant, differences between informants, and descriptive data on magnitude and direction of discrepancies in reports of parenting practices, across the three profiles

Profile	Involvement	Positive parenting	Monitoring/supervision	Consistent discipline	Low corporal punishment	Average difference	APQ ratings relative to other profiles	Qualitative description
1	Parent (35.73) > Child (30.76) 4.97	Parent (22.77) > Child (19.19) 3.58	Parent (35.43) > Child (30.88) 4.55	Parent (18.96) > Child (18.14) 0.82	Parent (12.58) > Child (12.08) 0.5	2.88	Lowest maternal reports across domains <sup>a</sup> ; lowest adolescent reports on Monitoring and Discipline	Moderate divergence; parent more positive in ratings of parenting practices
2	Parent (37.61) > Child (26.09) 11.52	Parent (22.66) > Child (14.14) 8.52	Parent (43.23) > Child (35.56) 7.67	Parent (20.60); Child (21.06) No significant difference	Parent (12.66) > Child (10.87) 1.79	5.99	Lowest adolescent reports on Involvement, Positive Parenting, and Corporal Punishment	Strong divergence; parent more positive in ratings of parenting practices
3	Parent (40.13) > Child (37.37) 2.76	Parent (24.73) > Child (22.86) 1.87	Parent (43.54) > Child (40.16) 3.38	Parent (21.86); Child (21.69) No significant difference	Parent (13.16) > Child (12.79) 0.37	1.71	Highest mother <sup>b</sup> and adolescent <sup>c</sup> reports across APQ domains	Low divergence; parent more positive in ratings of parenting practices

Cell values include the means as well as the mean difference and direction of discrepancy between mothers and adolescents. Results are based on paired *t*-tests of mother and adolescent Alabama Parenting Questionnaire (APQ) scores by profile and one-way ANOVA with Tukey post-hoc tests evaluating differences in APQ scores across profiles. All APQ subscales were recorded so that higher scores indicate higher quality parenting (i.e. lower corporal punishment, and greater levels of consistent discipline, monitoring, positive parenting, and parental involvement)

<sup>a</sup> No significant difference between Profile 1 and 2 maternal reports on positive parenting and low corporal punishment. Both are significantly lower than Profile 3

<sup>b</sup> No significant difference between Profile 2 and 3 maternal reports on monitoring; both are significantly greater than Profile 1

<sup>c</sup> No significant difference between Profile 2 and 3 youth reports on consistent discipline; both are significantly greater than Profile 1

## Aim 2. Gender, Age, and Psychopathology in Relation to Discrepancy Profiles

Relations between profile membership and age, gender, and internalizing and externalizing psychopathology were examined to further understand the nature of the discrepancy profiles and to evaluate potential covariates for Aim 3 analyses. Chi-square analyses indicated there were no differences in gender across groups ( $\chi^2(2, N=416) = 5.08, p = 0.08$ ). One-way ANOVA results showed that there were significant differences across groups based on adolescent age and externalizing psychopathology. Profile 1 (Moderate Divergence,  $M = 15.79, SD = 1.35$ ) was significantly older than Profile 2 (Strong Divergence,  $M = 14.96, SD = 1.40, d = 0.60$ ) and Profile 3 (Low Divergence;  $M = 14.94, SD = 1.53, d = 0.59$ ),  $F(2, 413) = 16.55, p < 0.001$ . Profile 1 ( $M = 66.23, SD = 9.62$ ) also reported significantly higher externalizing psychopathology than Profile 2 ( $61.23, SD = 10.01, d = 0.51$ ) and Profile 3 ( $M = 56.72, SD = 10.11, d = 0.96$ ), and Profile 2 reported significantly higher externalizing psychopathology than Profile 3 ( $d = 0.45$ ),  $F(2, 408) = 36.33, p < 0.001$ . Groups did not differ in internalizing psychopathology,  $F(2, 408) = 1.00, p = 0.37$ . Given these results, both age and externalizing psychopathology were controlled for in Aim 3 analyses.

## Aim 3. Attachment and Discrepancy Profiles

**Categorical Attachment and Discrepancy Profile Membership**  
Multinomial logistic regression ( $N = 404$ ) was used to test associations between adolescents' maternal attachment classification (independent variable) and discrepancy profile membership (dependent variable), controlling for age and externalizing psychopathology. Results (Table 4) demonstrate that the odds of being a member of the Strong Divergence versus the Moderate Divergence profile were 3.16 times higher for youth with dismissing attachment than for youth with secure attachment, and 5.28 times higher for youth with preoccupied attachment than for securely attached youth. Similarly, the odds of being a member of the Strong Divergence rather than the Low Divergence profile were 2.97 times higher for youth with dismissing than secure attachment, and 4.29 times higher for youth with preoccupied attachment than for securely attached youth. Attachment classification did not significantly predict whether adolescents were members of the Moderate Divergence versus the Low Divergence profile.<sup>1</sup> To evaluate the relation between disorganized attachment and discrepancy profile membership, a separate multinomial logistic regression model was tested. In addition to

<sup>1</sup> These findings were replicated when excluding adolescents rated as disorganized.

**Table 4** Multinomial logistic regression model testing associations between three-way attachment classification and discrepancy profile membership, controlling for age and externalizing psychopathology

	<i>b</i> ( <i>SE</i> )	<i>p</i>	Odds ratio	95% CI for odds ratio	
				Lower OR	Upper OR
Strong divergence vs. Moderate divergence					
Age	−0.42 (0.10)	<0.001	0.66	0.54	0.80
Externalizing Psychopathology	−0.07 (0.02)	<0.001	0.94	0.91	0.97
Dismissing (vs. Secure)	1.15 (0.39)	0.004	3.16	1.46	6.85
Preoccupied (vs. Secure)	1.66 (0.44)	<0.001	5.28	2.22	12.54
Preoccupied (vs. Dismissing)	0.51 (0.34)	0.13	1.67	0.86	3.23
Moderate divergence vs. Low divergence					
Age	0.41 (0.09)	<0.001	1.50	1.25	1.80
Externalizing Psychopathology	0.10 (0.01)	<0.001	1.11	1.08	1.14
Dismissing (vs. Secure)	−0.06 (0.30)	0.83	0.94	0.53	1.68
Preoccupied (vs. Secure)	−0.21 (0.37)	0.57	0.81	0.40	1.67
Preoccupied (vs. Dismissing)	−0.14 (0.34)	0.67	0.87	0.45	1.68
Strong divergence vs. Low divergence					
Age	−0.01 (0.09)	0.90	0.99	0.83	1.18
Externalizing Psychopathology	0.04 (0.01)	0.01	1.04	1.01	1.06
Dismissing (vs. Secure)	1.09 (0.37)	0.003	2.97	1.44	6.13
Preoccupied (vs. Secure)	1.46 (0.42)	<0.001	4.29	1.89	9.74
Preoccupied (vs. Dismissing)	0.37 (0.32)	0.26	1.45	0.77	2.73

$R^2 = 0.24$  (Cox & Snell), 0.27 (Nagelkerke). Model  $\chi^2(8) = 112.02$ ,  $p < 0.001$ .  $N = 404$  for logistic regression analyses

Externalizing psychopathology = YSR *T*-scores on the Externalizing Problems scale; Dismissing, Preoccupied, Dismissing, Secure attachment = CAI classification to maternal attachment figure

being rated as secure, insecure-dismissing, or insecure-preoccupied on the CAI, all adolescents were dichotomously rated as disorganized or not disorganized. In this analysis, a dichotomous rating (disorganized or not disorganized) was used as the independent variable and discrepancy profile as the dependent variable, controlling for age and externalizing psychopathology. Results demonstrated that disorganized attachment was not significantly associated with any discrepancy profile membership ( $\chi^2(2) = 4.93$ ,  $p = 0.09$ ).

#### Dimensional Attachment Indices and Discrepancy Profile Membership

To test whether dimensional scales of the CAI that index attachment security (coherence) and attachment insecurity (maternal preoccupation, dismissal, and idealization) were associated with profile membership, four multinomial logistic regression models ( $N = 404$ ) were tested with profile membership entered as the dependent variable. The four dimensional attachment scales were entered separately (one in each model), in addition to age and externalizing psychopathology, as independent variables. Results indicated that adolescents with higher attachment coherence were significantly less likely to be

members of the Strong Divergence profile than either the Low Divergence ( $b = -0.24$ ,  $SE = 0.08$ ,  $p = 0.002$ ,  $OR = 0.79$ ) or the Moderate Divergence ( $b = -0.24$ ,  $SE = 0.08$ ,  $p = 0.003$ ,  $OR = 0.79$ ) profiles. Adolescents rated as having higher levels of maternal preoccupation were significantly more likely to be members of the Strong Divergence profile than either the Low Divergence profile ( $b = 0.31$ ,  $SE = 0.06$ ,  $p < 0.001$ ,  $OR = 1.10$ ) or the Moderate Divergence profile ( $b = 0.21$ ,  $SE = 0.06$ ,  $p < 0.001$ ,  $OR = 1.23$ ). Adolescents rated as having higher levels of idealization of their mothers were significantly less likely to be members of the Strong Divergence profile than the Low Divergence profile ( $b = -0.30$ ,  $SE = 0.08$ ,  $p < 0.001$ ,  $OR = 0.74$ ) or the Moderate Divergence profile ( $b = -0.13$ ,  $SE = 0.09$ ,  $p = 0.12$ ,  $OR = 0.88$ ). Adolescents rated as having higher levels of maternal dismissal were significantly more likely to be members of the Strong Divergence ( $b = 0.25$ ,  $SE = 0.05$ ,  $p < 0.001$ ,  $OR = 1.28$ ) or Moderate Divergence ( $b = 0.15$ ,  $SE = 0.05$ ,  $p = 0.003$ ,  $OR = 1.17$ ) profiles than the Low Divergence profile. Overall, results demonstrated that youth with higher preoccupation, lower attachment coherence, and lower idealizing were more likely to be in the Strong Divergence profile than

the other two profiles, and youth with higher levels of dismissal were more likely to be in either the Strong or Moderate Divergence profiles than the Low Divergence profile.

## Discussion

The current study sought to extend previous work examining the relationship between youth attachment and parent-child discrepancies in reports of parenting. The study was the first to utilize LPA to examine discrepancies between mother and adolescent reports of parenting practices among a sample of youth with psychiatric diagnoses. Another central contribution of this study was the examination of how adolescent gender, age, psychopathology, and maternal attachment, as measured by the Child Attachment Interview, related to these discrepancies.

### Patterns of Discrepancy among Youth with Psychiatric Diagnoses

Our results differed from previous studies, conducted with community youth, which have commonly found three patterns of discrepancy in parent-child reports of the family ( $PA^{Diverge}$ ;  $AP^{Diverge}$ ;  $PA^{Converge}$ ). In our sample, no distinct profile emerged in which adolescents consistently reported parenting more favorably than their mothers. This result suggests that, on the whole, youth with psychiatric diagnoses may view their mothers' parenting more negatively than community samples of youth, which could be due to psychiatric symptoms negatively biasing adolescents' general reporting style (i.e., the depression distortion hypothesis; Richters 1992). Or, it could be that these youth have actually experienced more negative parenting compared to community samples of youth. As attachment research has shown, sensitive and responsive caregiving is associated with secure attachment relationships, and it also serves a function of promoting children's emotion and behavior regulation abilities and thereby reducing their risk of psychopathology (Masten and Cicchetti 2016). It is therefore consistent with attachment theory that adolescents with high levels of psychopathology may have experienced, and subsequently report, less favorable parenting, relative to community youth. Further, it is possible that the dyads in which adolescents perceive caregiving problems that are not detected by parents are the most likely to lead to mental health crises – in cases such as these, parents' perceptions are out of step with their adolescents' (Borelli et al. 2010), and adolescents may be more likely to suffer without mental health support if parents are unaware of their perceptions, which could increase the likelihood of a mental health crisis necessitating inpatient care. Family climates in which youth carry more of the concern than caregivers have long been the focus of psychologists' concern, under the idea that youth may carry the distress of the family (Minuchin 1974).

Another possible reason for more negative reports of parenting seen in this sample compared to community samples is that parents may be reacting to their child's symptoms of psychopathology. In particular, children with externalizing symptoms such as ADHD, oppositional-defiant behavior, or conduct problems may elicit more negative parenting behaviors (Burke et al. 2008; Lifford et al. 2008, 2009). Present results support this idea, in that the group with highest externalizing (Moderate Divergence profile) had lowest mother-reported parenting across APQ domains and lowest adolescent-reported monitoring and consistent discipline, relative to the other two groups. The group with the second highest externalizing (Strong Divergence profile) had lowest adolescent-reported involvement, positive parenting, and highest adolescent-reported corporal punishment. Current results were likely influenced by bidirectional relationships between negative parenting behaviors, as reported by both mothers and adolescents, and adolescent symptomatology; however, given the cross-sectional nature of the study, we are not able to parse directionality of these effects.

### Gender, Age, and Internalizing and Externalizing Psychopathology and Discrepancies

Results of Aim 2 analyses add to the findings of Korelitz and Garber (2016), who discussed the need for more research examining discrepancies in perceptions of parenting among samples of youth with psychiatric diagnoses. Our findings showed that, in our sample of youth with psychiatric diagnoses, youth with highest levels of externalizing psychopathology were in the Moderate Divergence profile. This profile was also characterized by the oldest adolescents, the lowest quality parenting as assessed by maternal reports, and the lowest adolescent-reported monitoring and consistent discipline. Therefore, the Moderate Divergence group may be indicative of mother-adolescent dyads in which there was lower quality parenting, particularly for parenting practices related to managing adolescent misbehavior, which would align with this group having the highest level of adolescent externalizing problems. The Strong Divergence profile also had higher externalizing symptoms than the Low Divergence profile, though these profiles did not differ in age. Previous studies have also found an association between externalizing problems and parent-child divergence in reports of parenting practices (Borelli et al. 2010; De Los Reyes et al. 2010; Ohannessian 2012), though it is important to note that in this sample there was not a linear relationship between externalizing symptoms and level of discrepancy, as the highest levels of externalizing was seen in the Moderate Divergence profile. These results also suggest that there may be a normative developmental trend toward moderate levels of divergence among youth with psychiatric diagnoses, since the oldest adolescents were in the Moderate Divergence group. This differs

somewhat from previous studies, conducted with community youth of similar age to this sample (Ohannessian and De Los Reyes 2014; Ohannessian 2012), which found that divergence in reports of family functioning decreased with age. Theory suggests that later in adolescence as teens gain more autonomy, they often experience realignment with the family that results in less divergence with parents in their perceptions of the family (Ohannessian and De Los Reyes 2014). It is possible that there is a diverging developmental pathway for adolescents with psychiatric diagnoses, in that realignment (and therefore convergence) with parents occurs later in development, or that only moderate divergence with parents is achieved during adolescence.

Internalizing symptoms were not associated with discrepancy profile membership in this sample. This result was surprising given that a prominent perspective on informant discrepancies, the depression distortion hypothesis (Richters 1992), suggests that reporters with depressive symptoms are more negatively biased in their reports, leading to more negative directional discrepancies. This hypothesis has been supported in studies of parent-child discrepancies in reports of parenting behavior (De Los Reyes & Kazdin, 2005; Ehrlich et al. 2014). It is possible that, given the high level of internalizing symptoms in this sample (YSR Internalizing *T* Score Mean = 65.92), internalizing symptoms were associated with a general negative bias regardless of discrepancy profile. This is in line with the generally negative pattern of youth responding relative to mothers in the LPA findings.

### Attachment and Mother-Adolescent Discrepancies in Reports of Parenting

Current findings using LPA are in line with previous research using difference scores that found that attachment anxiety (i.e., preoccupied attachment) and attachment avoidance (i.e., dismissing attachment) are related to greater parent-adolescent divergence relative to secure attachment (Ehrlich et al. 2014). Additionally, our findings are in line with previous results using difference scores in finding that higher attachment security, measured dimensionally, is related to increased convergence between parent and child reports (Ehrlich et al. 2011). However, our results also add new evidence to this research area in four ways. First, previous research (Ehrlich et al. 2014) found that dismissing attachment (attachment avoidance on the ECR) was related to the magnitude of discrepancies, but not the direction. Present results evidenced three profiles of discrepancies in which youths' reports of parenting behaviors were *consistently more negative* than mothers', therefore finding that dismissing attachment was related to both magnitude and direction (i.e., child < parent) of discrepancies.

Second, our study was the first to examine disorganized attachment in relation to mother-adolescent discrepancies in

reports of parenting practices. Results did not show a clear association between disorganized attachment and mother-child reporting discrepancies. This result is not entirely surprising given that previous studies report conflicting evidence on the relation between disorganized attachment and parent-child discrepancies, depending on the outcome variable (Borelli et al. 2017; Uccula and Nuvoli 2017). Disorganized attachment reflects a lack of coherent attachment strategy, and thus adolescents who are disorganized are unlikely to have a stable schema through which to process attachment-related social behavior (Target et al. 2007). This suggests that all youth with disorganized attachments are likely not to follow the same general pattern of divergence or convergence with their mothers' account of parenting. Youth categorized as disorganized were also given a secondary classification as secure, dismissing, or preoccupied, and were included in analyses using those classifications. Results therefore suggest that the three-way classification may be a better predictor of discrepancy profile membership than disorganized status for these youth.

Third, our study was first to examine two CAI dimensional scales associated with dismissing attachment—dismissal and idealization—in relation to discrepancies in reports of parenting. Our findings revealed opposite patterns with respect to idealization and dismissal. Youth with higher idealization scores were more likely to be in the Low or Moderate Divergence profiles. Idealization is thought to be normative to an extent during youth, but is typically the basis for a “dismissing” attachment classification overall when CAI idealizing scores are five and above; when the scores are at this level, idealizing may be a way in which youth emphasize independence and downplay attachment needs by presenting the caregiver as “perfect” without providing substantiated examples (Target et al. 2007). In our sample, the average maternal idealization score was below five, however. Notably, we found the opposite pattern of effects with regard to the dismissing scale, as adolescents characterized as having higher dismissal were significantly more likely to be members of the Strong or Moderate Divergence groups (though again, average dismissal ratings were below five). Taken together, these results suggest that there may be inconsistencies in the degree of discrepancy between dismissing adolescents and their mothers based on whether the dismissing attachment style is expressed more through dismissal or idealization. It is worthwhile to note, however, that youth rated *categorically* as having dismissing attachment (which can be rated based on scores of 5 or more on either the idealization or dismissing scales) were more likely to be members of the Strong Divergence profile.

Fourth, results suggest overall that strong divergence is associated with attachment patterns that are problematic, and that low or moderate divergence are both associated with secure attachment. Notably, in the Strong Divergence profile,



mothers and teens had greatest disagreement on involvement, positive parenting, and monitoring, and teens in this profile reported lowest parental involvement and positive parenting, and highest corporal punishment, relative to youth in other profiles. Insecure attachment to mothers was therefore significantly associated with these reporting patterns. The finding that *either* low or moderate divergence between mother and adolescent could reflect secure attachment is notable. The moderate divergence between mothers and adolescents even in secure attachment relationships may be due to the normative need for autonomy and individuation from the parent during adolescence, which can result in diverging reports that are nevertheless still associated with adaptive family processes (De Los Reyes and Ohannessian 2016). These adolescents may have secure attachments yet may be more independent from their mothers in terms of sharing or spending time together, which may lead to differing perceptions of parenting behavior. Or, it may be that adolescents who have a secure attachment to their parents but rate their parenting more negatively are youth who experienced less favorable parenting, but have been able to make sense of this experience and maintain a representation of their mother as a secure base (the so-called “earned secure” version of attachment security; Pearson et al. 1994).

### Current Findings Compared to a Difference Score Approach

Not only have these results yielded additional findings that extend previous research, but results also offer an alternative to the difference score approach of testing discrepancies. The LPA method of testing divergence takes into account *the pattern* of parent and child scores across all five domains of parenting, which includes the discrepancy between parent-child scores as well as the level of scores for parent and child, and therefore is a more nuanced method to examining discrepancies than difference scores. In contrast, a difference score approach would produce a single difference score for each APQ domain, which would each be evaluated individually as an outcome with attachment as the independent variable.

To directly test the incremental value of this LPA approach compared to a difference score approach, we conducted post-hoc analyses in which we calculated two difference scores for each participant on each APQ subscale: absolute difference scores (the absolute value of the difference between parent and adolescent scores) and directional difference scores (the parent score minus the adolescent score), replicating the method used by Ehrlich et al. (2011, 2014). Bivariate correlations between difference scores and the four dimensional scales of the CAI were tested, demonstrating that directional difference scores in involvement, positive parenting, monitoring, and low corporal punishment were significantly related to maternal preoccupation (greater preoccupation was associated with

greater discrepancy, with mothers having the more positive accounts). Directional differences in positive parenting and involvement were both significantly related to maternal idealizing and dismissal, but in opposite directions: greater levels of dismissal were related to greater discrepancy between mother-adolescent, with mothers having the more positive account, and greater levels of idealizing were related to greater discrepancies with the adolescents having the more positive account. Finally, directional discrepancies in involvement were negatively related to overall attachment coherence such that greater discrepancy in which the mother rated her involvement more positively was associated with lower attachment security. Strength of correlations were small,  $r = 0.11–0.17$ . There were no significant correlations for absolute difference scores. Group comparisons on difference scores based on attachment classification revealed only that preoccupied youth and their mothers had significantly greater differences from each other for corporal punishment relative to secure youth and their mothers. No other categorical analyses were significant.

In summary, post-hoc results using difference scores did not necessarily conflict with LPA results; rather, each provided complementary data. Using difference scores results in testing associations separately for each APQ parenting behavior scale, whereas LPA takes into account the pattern of scores, including both the degree of discrepancy and the level of both parent- and adolescent-report across the five domains of parenting. Difference score results provided additional information suggesting that discrepancies in involvement and positive parenting are particularly related to maternal dismissal whereas greater discrepancies across all parenting domains except consistent discipline are related to greater maternal preoccupation. In addition, these results suggest discrepancies in maternal involvement are particularly related to lower attachment security when measured dimensionally. However, considering that only one significant result was found for categorical analyses using the difference score approach, even at the bivariate level, it seems likely that the LPA had more power than the difference score method. Thus, beyond contributing to the conceptual research question (i.e., the association between discrepancies and attachment), this paper is also poised to contribute to the methodological question in the field regarding quantitative approaches to understanding interrater reporting discrepancies.

### Theoretical Implications

To place current findings within the context of attachment theory, it is useful to consider how different attachment organizations may influence children’s perceptions of their parents’ behavior. Given that attachment representations are thought to form early in life and act as a lens through which youth interpret future interactions with attachment figures



(Main 1996), it is likely that adolescents in this sample have longstanding attachment representations to their mothers that continue to serve as a “filter” for processing their mothers’ behavior toward them. Specifically, research has shown that adolescents with insecure attachment representations are more likely to have negatively biased perceptions about others (e.g., rejection expectancy, negative attributions, negative expectations) compared to more positively biased perceptions in securely attached adolescents (Dykas and Cassidy 2011). In addition, research has shown that adolescents with preoccupied (anxious/ambivalent) attachment may be angry, fearful, or overwhelmed with regard to their caregivers and may be overly focused on experiences with the parent or perceived rejection or hostility from the parent (Main 1996; Shmueli-Goetz et al. 2011). Adolescents with dismissing (avoidant) attachment, on the other hand, may perceive/report negative experiences but act as if this had no emotional effect on them, or in the case of idealizing, may report positive experiences that are unsubstantiated as a defensive strategy (Main 1996). Securely attached youth are likely to describe both good and bad experiences with more objectivity while also showing a valuing of the relationship and a need for support from the caregiver (Main 1996).

It is also the case that experiences of parenting contribute to children’s attachment representations with their parent. Specifically, negative experiences with parents are thought to lead to insecure attachment representations over time (Ainsworth et al. 1978). Experiences may be iterative in nature, such that over time, a child may require less and less of a specific parenting behavior in order for it to have the same effect. Therefore, we may see a magnifying effect in which negative parenting behaviors lead to insecure attachment representations, which contributes to negative perceptual bias and more negative reports of parenting by children. Although few studies have explicitly explored the extent to which members of dyads reciprocally adjust their behavior in response to one another over time, the results of one study of substance-abusing mothers and their toddlers found that mothers with greater levels of disengagement had children who showed decreasing levels of engagement over a 5 month period (Rasmussen et al. 2016), such that the children became harder and harder to reach over time. In this way, parent-youth dyads become entrapped in their attachment patterns, reifying one another’s expectations of the other, over time each requiring less and less from the other to confirm the expectations of the internal working model (Bowlby 1973).

Previous research, together with current results, suggests that a) adolescents with preoccupied attachment in our sample may have internalized particularly negative perceptions of their caregivers’ behavior across domains, especially for affectively-laden parent behaviors such as involvement, positive parenting, and corporal punishment, b) adolescents with dismissing attachment appear to perceive (and report)

negative parental behaviors, but may not have the same emotional response to this relative to preoccupied adolescents, c) adolescents who have dismissing attachment representations, but with a tendency to idealize, appear to report positively and more often “agree” with their mothers’ report of parenting behaviors, even though this positive report may be unsubstantiated if assessed further, and d) youth with secure attachment tend to have either low or moderate divergence with their mothers, reflective of their ability to report on both the positive and negative aspects of the relationship, and in cases where they do report more negative parenting (i.e., Profile 1 adolescents), it is on the non-emotional aspects of parenting such as consistent discipline and monitoring.

Results may also have implications for attachment theory. First, findings illustrate which *levels* of both mother- and adolescent-reported involvement, positive parenting, monitoring, consistent discipline, and corporal punishment were most strongly associated with secure (Profiles 1 and 3), insecure-preoccupied (Profile 2), and insecure-dismissing attachment (Profile 2). This adds further evidence, specific to adolescents with psychiatric disorders and their mothers, to the body of research linking attachment to parenting behaviors in childhood and adolescence (see Koehn and Kerns 2018, for a review). Further, these results suggest that when studying the associations between attachment and caregiving behavior, attachment classifications may relate differently to parenting behaviors depending on the informant. Therefore, the informant of the parenting behavior should be taken into account, and behavioral assessment of parenting behavior should be used whenever possible when studying attachment and caregiving behaviors. This may also explain why there have been some inconsistent findings in the literature examining child attachment and caregiving behavior in middle childhood and adolescence (Koehn and Kerns 2018). Finally, results illustrate the *degree of discrepancy* between mothers and adolescents that is associated with each attachment classification and therefore adds additional information that is not captured when either parent- or child-reported parenting behavior alone is tested in association with attachment. That is, it is not just the parenting behavior (regardless of informant) that is associated with attachment, but also the degree that the parent and child are “in sync” regarding their perceptions of the parents’ behavior toward the child; if there is a large discrepancy in what they perceive, the dyad may need to negotiate these differing perceptions in order to understand why they perceive the behavior differently and repair this discrepancy.

There are also important implications for research on informant discrepancies. Results suggest that reports of parenting are influenced by individuals’ internal working models of attachment. This is no surprise given that attachment has been linked to social information processing (Dykas and Cassidy 2011). Given this, when modeling informant discrepancies between parents and children in reports of their own behavior

or the behavior of close others, it is important to consider attachment and how that may be influencing informants' perceptions and reporting. In addition, De Los Reyes and Ohannessian's (2016) review of discrepancies in reports of family functioning suggested that when parents and youth converge in reporting relatively high levels of factors that are protective against psychopathology (such as parental knowledge and acceptance), this convergence tends to predict lower youth maladjustment. The present results slightly deviated from these patterns. The least divergent group in our results seemed to "agree" on more favorable reports of mothers' parenting; however, adolescents in this group were more likely to be higher in idealizing. Therefore, mother-adolescent "agreement" on more favorable reports of parenting may not always be reflective of secure attachment, which is typically associated with lower maladjustment. It is possible that our results differ from converging and diverging operations as outlined by De Los Reyes and Ohannessian (2016) due to the clinical nature of our sample; the majority of research focused on parent-youth discrepancy in perceptions of parenting has been conducted among community or mixed samples rather than adolescents with psychiatric disorders (Korelitz and Garber 2016).

### Clinical Implications

Findings have several implications for clinical practice. First, results may point to the relational adaptiveness of low and moderate divergence between mother and adolescent reports of parenting. Second, findings support Korelitz and Garber's (2016) suggestion that clinicians assess the degree of discrepancy between parent and child perceptions of the family in clinical settings, as it allows for an understanding of differing perceptions that may go beyond a focus on parenting behaviors alone. Understanding the degree of discrepancy can provide additional information about the parent-child attachment relationship, as our results suggest, or may at the very least provide an opportunity for a discussion of discrepant parent-child perceptions and offer an opportunity for members to attempt to resolve them together, an intervention first suggested by Pelton and Forehand (2000). Third, when parents and teens do demonstrate large discrepancies between their reports of the family, our results suggest that these discrepancies may be a factor of an insecure attachment relationship, and suggest that these dyads may benefit from treatments addressing the attachment relationship. In our sample, the size of the standardized mean difference (Cohen's *d*) between mother-adolescent reports in the Strong Divergence group ranged from 1.06–2.52, and averaged 1.97 across domains of parenting practices (except consistent discipline, on which mothers and teens did not differ). Therefore, in clinical settings, dyads who show a similar degree of difference in their reports of parenting may benefit from evidence-based

treatments for youth that target the attachment relationship, such as Attachment Based Family Therapy (ABFT; Diamond et al. 2016) or Mentalization Based Therapy for Adolescents (MBT-A; Rossouw and Fonagy 2012).

### Limitations

These results should be considered in light of the study's limitations. First, we used a cross-sectional design and thus temporal conclusions cannot be drawn. However, attachment as rated by the CAI has shown good stability over three-month and one-year periods (Shmueli-Goetz et al. 2008), is thought to form early in life, and may thus reasonably be thought to precede perceptions of parenting during adolescence. Another limitation is the inclusion of only female caregivers. We made this decision due to the small size of the sample with paternal reports of parenting practices. It is possible that the present results would not hold for father-adolescent perceptions of parenting, which have been shown to sometimes differ in direction and magnitude from mother-adolescent reporting discrepancies (Korelitz and Garber 2016). The majority of previous studies on discrepancies have relied on maternal informants (e.g. Barker et al. 2007; Berger et al. 2005); therefore, more work examining discrepancies with fathers is needed. The study was also limited in its use of a primarily Caucasian sample. There is evidence that mother-adolescent divergence in perceptions of parenting is higher among samples that have greater proportions of African American and Hispanic participants (Korelitz and Garber 2016); thus, a more diverse sample may evidence different patterns of discrepancy than current results. A fourth limitation is the lack of measurement of parental psychopathology; given that psychopathology influences individuals' reports of their own behavior (Richters 1992), and that youth with psychopathology often have parents with a history of psychopathology, it is also likely that parent symptoms may have also influenced their reporting of their parenting behavior. A final limitation is that the APQ does not include a harsh parenting scale. Previous studies have used the APQ corporal punishment scale as an index of harsh parenting (e.g. Cowan et al. 2019). Still, without a more comprehensive measurement of harsh parenting in this study, discrepancy profiles do not take into account how parents and adolescents differ in their reports of harsh parenting. Future research should examine this research question using other parenting measures to capture the full range of parent behavior that is relevant for a sample of youth with psychiatric diagnoses, including, for example, harsh parenting and parent emotion socialization behaviors.

### Conclusion

The current study extended previous research by using LPA to identify patterns of discrepancy in mother-adolescent reports

of parenting practices in a large sample of youth with psychiatric diagnoses. Overall, results differed from previous research mainly conducted with community adolescent samples in that youth appeared more negative in their perceptions than mothers, youth did not become more convergent on average as they got older, and youth externalizing, but not internalizing, was associated with only moderate divergence, but not the highest level of divergence. The highest level of divergence in reports was most strongly associated with insecure-preoccupied attachment and, less strongly, with insecure-dismissing attachment. Secure attachment was associated with low and moderate levels of divergence. Disorganized attachment was not associated with any particular discrepancy pattern. Findings highlight the clinical utility of assessing discrepancy between parent-child reports of the family, and suggest that dyads with high levels of divergence may benefit from treatments addressing the attachment relationship.

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## Compliance with Ethical Standards

**Conflict of Interest** The authors declare that they have no conflict of interest.

**Ethical Approval** All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional research committees (University of Houston, Protocol Number 14238-02; Baylor College of Medicine, Protocol Number H-23579) and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

**Informed Consent** Informed consent was obtained from all individual participants included in the study.

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