

# Associations of Parent-Adolescent Discrepancies in Family Cohesion and Conflict with Adolescent Impairment

Yingcheng Xu<sup>1</sup> · Rhonda C. Boyd<sup>2</sup> · Laura Butler<sup>3</sup> · Tyler M. Moore<sup>1</sup> · Tami D. Benton<sup>2</sup>

Published online: 17 June 2017  
© Springer Science+Business Media, LLC 2017

**Abstract** Family cohesion and family conflict are important protective and risk factors respectively in the development of child psychopathology. Our study examines parent-adolescent discrepancy of the family environment constructs, family cohesion and family conflict, and their associations with adolescent impairment. The sample consists of 141 parent-adolescent dyads evaluated at an outpatient behavioral health clinic. The mean adolescent age is 14.8 (range 11–18) while the mean parent age is 48.9 (range 32–67). Findings show that adolescents report significantly less family cohesion but do not differ significantly in reports of family conflict. Greater family cohesion is associated with less adolescent impairment by multiple reporters. Nonetheless, greater family conflict is associated with more adolescent impairment by the same reporter. The results show that both adolescent and parent reports of family cohesion and conflict are important to consider when integrating information gathered in a clinical assessment.

**Keywords** Family environment · Reporter discrepancy · Family cohesion · Family conflict · Impairment

## Introduction

Research shows that family factors play a major role in developmental psychopathology (Block et al. 1986; Fincham and Osborne 1993; Emery et al. 1982). In particular, the literature identifies several family factors to be protective or risk factors for psychopathology. A recent review of resilience in youth notes several protective family factors, including family structure, intimate-partner relationships, family cohesion, positive parent-child relationship, stimulating environments, social support, and an adequate and consistent income (Zolkoski and Bullock 2012). Other family protective factors include secure attachments, family routines, extended family support, and transmission of cultural values (Masten and Monn 2015). On the other hand, extensive research exists on family risk factors of child psychopathology. For example, a review of family risk factors for youth depression identifies lack of parental availability and warmth, marital conflict, and parental stress and psychopathology (Sander and McCarty 2005). Another review delineates several family risk factors for youth suicidal behavior, including history of abuse and poor family communication (Wagner 1997). Thus, there are numerous family factors, such as family environment, linked to the child functioning.

Family environment is an important variable in examining a family's role in the development of psychopathology. Two variables that are a part of family environment include family cohesion and conflict. Family cohesion is "the ability of the family to work together, communicate, and problem solve" (Cuffe et al. 2005). In a longitudinal epidemiological study of adolescents, findings show an association between low family cohesion, higher levels of depression symptoms, and having an affective disorder diagnosis (Cuffe et al. 2005; McKeown et al. 1997).

---

✉ Rhonda C. Boyd  
rboyd@mail.med.upenn.edu

<sup>1</sup> Perelman School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania, USA  
<sup>2</sup> The Children's Hospital of Philadelphia & Perelman School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania, USA  
<sup>3</sup> The Children's Hospital of Philadelphia, Philadelphia, Pennsylvania, USA

Additionally, studies in clinical samples of youth demonstrate that low family cohesion and depression symptoms and disorders are linked (Cumsille and Epstein 1994; Ogburn et al. 2010). In another study, findings reveal associations between maternal report of high family cohesion and fewer internalizing and attention symptoms as reported by both mothers and teachers of children 6- to 11-years old (Lucia and Breslau 2006). In a large study of adolescent females and their parents, results show associations between both parent and adolescent reports of family and depression symptoms but not anxiety symptoms. Findings also show associations between changes in adolescent report and greater self-worth and less eating disorder symptoms, suggesting that adolescent report of family cohesion is more important to later psychological functioning than parent report (White et al. 2014). Overall, family cohesion and behavioral health symptoms in youth are linked.

On the other hand, family conflict covers the spectrum of all kinds of conflicts between the family members in the youth's household, including marital conflict, parent-child conflict, and sibling conflict. Negative outcomes of increased family conflict include youth behavior problems, such as aggressiveness and depression (Stocker and Youngblade 1999). Similarly, Loon et al. (2014) find in a cross-sectional study that family conflict is associated with both externalizing and internalizing behaviors in adolescents. Another study shows an association between family conflict and increased disruptive behaviors in young boys with continuing disruptive behavior problems through adolescence (Loukas et al. 2003). A recent meta-analysis indicates that conflict in sibling relationships is also associated with increased internalizing and externalizing symptoms (Buist et al. 2013). Thus, considerable research documents the associations of the family environment, and in particular, family conflict and cohesion, with youth psychopathology.

There has been increasing research on reporter discrepancies in family constructs, as well as on utilizing novel theoretical and analytical methods (De Los Reyes and Ohannessian 2016). Family functioning is one area in the larger research focusing on informant discrepancies in developmental psychopathology in which discrepancies have been studied in youth behavior, psychological symptoms, risk factors, and protective factors (Achenbach 2006; De Los Reyes 2013). Clinicians and researchers commonly use multiple informants (i.e., parents, children, observers, clinicians, teachers, peers) to gather information about youth and families. In both research and clinical practice, no single gold standard exists for how to utilize informants to gather information about a youth (Kraemer et al. 2003). In fact, current research and general consensus support the use of multiple informants in gathering information from

multiple perspectives in order to acquire a fuller picture and a more valid assessment of youth functioning (Kraemer et al. 2003; Piacentini et al. 1992). This multiple-informant approach consistently obtains discrepant information; in fact, research shows that only low to moderate levels of concordance are present (De Los Reyes and Kazdin 2005). A recent meta-analysis of 341 studies on informant discrepancies in child and adolescent mental health shows an overall cross-informant correlation of 0.28 (De Los Reyes et al. 2015). There is no consensus on what these discrepancies mean or how to interpret them (De Los Reyes 2011; De Los Reyes and Kazdin 2005; De Los Reyes and Ohannessian 2016; Laird and Weems 2011). Nonetheless, we can extrapolate from the work of Kraemer et al. (2003), which produced a conceptualization of informant discrepancy for youth functioning to be utilized for family functioning. For example, discrepancy can represent separate and combined influences of a family's actual characteristics. It can also be representative of the contexts (e.g., home, outside of the home) in which the family is observed or the perspectives of the different family members.

Research on reporter discrepancy has focused on characterizing the discrepancies in family factors. For example, De Los Reyes et al. (2010) examine mother-child discrepancies of parental monitoring over a 2-year period finding consistent differences over time and across domains such as child disclosure, parental knowledge, and parent solicitation. Additionally, the discrepancy between child and parent reports of parental monitoring has a greater predictive validity to child delinquent behavior in comparison to individual separate reports lending support for examining discrepancies within family functioning. In a study of African American mother-adolescent female dyads, mothers rate less parent-adolescent conflict than the adolescents (Gonzales et al. 1996). In a recent Special Issue in the *Journal of Youth and Adolescence* (see De Los Reyes and Ohannessian 2016), studies in China, the Netherlands, and the United States show that adolescents rate their family functioning more negatively than their mothers do (Leung et al. 2016; Nelemans et al. 2016; Ohannessian et al. 2016). For example, the Ohannessian et al. study reveals that adolescents report less open communication and more communication problems than their mothers; however, both report similar levels of family satisfaction. On the other hand, a recent latent profile analysis of mother-adolescent dyads among family constructs demonstrates that the most common profile for positive parent-adolescent interactions is no disagreement, although discrepant profiles are identified (Rote and Smetana 2016). Additionally, in a clinical sample of adolescents with mood symptoms, informant discrepancies are not associated with family functioning measures (De Los Reyes et al. 2011). In sum, adolescent and parent discrepancies have been demonstrated in family

functioning constructs; however, they do not occur in all domains.

In addition to examining the degree of discrepancy, research examines the association of the reporter discrepancies with youth functioning. For example, Spilt et al. (2015) show that when adolescents report more mother-adolescent warmth than their mothers do, this discrepancy is associated with less concurrent adolescent depressive symptoms. In another study of sixth and seventh graders, results demonstrate that youth report lower levels of family cohesion and family functioning than their parents do and that there is an association between greater parent-child discrepancies and lower self-worth (Ohannessian et al. 2000). A large study of fifth graders and their parents shows that children reporting a more negative view of parenting than their parents also report higher levels of internalizing symptoms a year later. However, externalizing behaviors do not demonstrate this same association (Guion et al. 2009). Additionally, a recent study shows that discrepant adolescent and mother perceptions of family routines and chaos, in which the adolescents view the family more negatively, are associated with increased adolescent perceived stress (Human et al. 2016). These findings indicate that reporter discrepancies in family functioning can potentially impact youth functioning. On the other hand, discrepancy among adolescents and parents may not be the only important focus when examining family functioning. De Los Reyes and Ohannessian's (2016) framework states that when parents and youth converge on report of protective family factors, this agreement is linked with low youth maladjustment; however, when they converge on family risk factors, this convergence is linked with more youth maladjustment. For example, Nelemans et al. (2016) find that the congruence of low negative relationship interactions between adolescents and mothers is associated with the lowest number of depressive symptoms, in comparison to the congruence of high levels of negative interactions, which is associated with the greatest number of depression symptoms. Thus when investigating adolescent and parent reports of family domains, both discrepancy and convergence should be considered.

The current investigation examines parent-adolescent discrepancy on the family environment constructs, family cohesion and family conflict, as well as their associations with adolescent impairment. The current study adds to the literature by further exploring family environment discrepancies between parent and youth in a clinically referred sample and including both family and clinician ratings of impairment. Clinician ratings are of relevance to this study as in clinical settings, clinicians gather information about the family environment, as well as adolescent behavior, from both adolescents and parents in order to inform diagnostic formulations and treatment recommendations.

The study investigates three objectives: (1) whether discrepancies exist between parent and adolescent reports of family cohesion and conflict, (2) whether parent and adolescent reports of family cohesion and conflict are associated with adolescent impairment (across different reporters), and (3) whether parent reports of family cohesion and conflict moderate the association between adolescent reports of family cohesion and conflict on adolescent impairment. We hypothesize that there will be significant discrepancies between parent and adolescent child reports of family cohesion and conflict. We expect that reports of family conflict will be associated with increased adolescent impairment; however, family cohesion will be associated with less impairment. Finally, we hypothesize that parent report of family cohesion and conflict will moderate the impact of adolescent reports of family cohesion and conflict on adolescent impairment.

## Method

### Participants

The sample included 141 parent-adolescent dyads. The adolescents ranged in age from 11 to 18 years with a mean age of 14.8 ( $SD = 1.90$ ) years. They were mostly females (62.4%;  $n = 88$ ). Based on parent report, more than half of the adolescents were White (55.3%;  $n = 78$ ), 15.6% ( $n = 22$ ) were African American, 15.6% were multi-racial/ethnic, 4.3% ( $n = 6$ ) were Latino, 3.5% ( $n = 5$ ) were Asian, and 5.7% ( $n = 8$ ) did not answer. The majority of the adolescents also had a mood disorder diagnosis (76.6%;  $n = 108$ ).

Parent ages ranged from 32 to 67 years with a mean of 48.9 years ( $SD = 6.44$ ). They were mostly mothers (88.7%;  $n = 125$ ), with the rest comprised of fathers (11.3%;  $n = 16$ ).

### Procedures

This investigation utilized data from an existing registry of patients evaluated at a mood disorders clinic in a hospital-based behavioral health outpatient clinic in a large metropolitan area. The current evaluation includes clinical assessments conducted from July 2013 to November 2016. An intake coordinator screened all patients for depression symptoms and scheduled those indicating depression symptoms for an initial evaluation with a psychiatrist or psychologist. For the clinical evaluation, we gathered a semi-structured clinical interview, clinician-report assessments, parent and adolescent report behavioral rating scales (via RedCap and paper copies), laboratory assessments, and physical exam. The hospital's Internal Review Board

approved the data registry with a waiver of consent for the use of de-identified clinical data for the registry.

## Measures

### *The family environment scale (FES)—cohesion and conflict subscales*

FES measures social and environmental characteristics of the family (Moos and Moos 2009). The two subscales, the Cohesion and Conflict subscales, are used in this study. Each subscale consists of nine items. The Cohesion subscale assesses the “extent to which family members are concerned and committed to the family and degree to which family members are helpful and supportive of each other” (Loomis et al. 1997). On the other hand, the Conflict subscale assesses the “extent to which the open expression of anger and aggression and generally conflictual interactions are characteristic of the family” (Loomis et al. 1997). Responses to the items on the subscales include True/False. The final raw score for each subscale ranges from 0 to 9. Total raw scores are converted to standard scores. The FES demonstrates adequate reliability and validity in multiple populations (Moos and Moos 2009; Sanford et al. 1999). For this investigation, all parent-adolescent dyads completed the two subscales. For adolescents, the mean Cohesion subscale score was 5.77 (SD = 2.63) and the mean Conflict subscale score was 3.53 (SD = 2.34). The internal consistencies were 0.80 for the Cohesion subscale and 0.75 for Conflict subscale for the adolescents. For parents, the mean Cohesion subscale score was 6.87 (SD = 2.10) and the mean Conflict subscale score was 3.21 (SD = 2.12). The internal consistencies were 0.74 for the Cohesion subscale and 0.70 for Conflict subscale for the parents.

### *The columbia impairment scale (CIS)*

The Columbia Impairment Scale is a 13-item, global impairment scale. It has separate parent report and youth report versions. The CIS has a 5-point Likert scale with total scores ranging from 0 to 52. Sample questions include: “In general, how much of a problem do/does you/your child have with...1) getting in trouble...6) having fun...8) feeling nervous or afraid...11) getting involved in activities like sports or hobbies?” High scores represent greater impairment. The CIS has strong psychometric properties (Bird 1999; Bird et al. 1993). For adolescents, the mean impairment score was 17.14 (SD = 8.70), while for parents it was 21.82 (SD = 8.88). The internal consistencies were 0.78 for adolescents and 0.77 for parents.

### *Global assessment of functioning (GAF)*

GAF (Diagnostic and statistical manual of mental disorders 4th ed., text rev. (DSM-IV-TR), American Psychiatric Association 2000), a clinician rating, assesses a patient’s social, occupational, and psychological functioning. Scores are on a 0 to 100 scale with 10-point ranges that specify varying levels of global functioning. Clinicians use this scale in their clinical assessment of all adolescents involved in this investigation. Lower GAF scores indicate greater impairment. For data analyses, scores ending in “5” are used when a range is provided for the GAF; for example, if the GAF notes a range of 61–70 in the medical record for a patient, then a score of 65 is put in the data registry. GAF scores were multiplied by  $-1$  so that higher scores mean greater impairment, consistent with the CIS. The average GAF score was  $-53.62$  (SD = 7.65).

Demographics questionnaire includes parents’ and adolescents’ ages, gender, and race/ethnicity.

## Data Analyses

We first obtained descriptive statistics for all variables, which were also examined for non-normality. Substantial negative skew was detected for both adolescent and parent ratings of family cohesion, so we transformed these variables by squaring them to better approximate normality. The transformations improved the skew, and the transformed variables were therefore used for all comparisons and relational analyses (correlations and regressions). We conducted paired t-tests for FES Cohesion and Conflict subscales and CIS impairment. As recommended by Laird and De Los Reyes (2013), we utilized polynomial regression analyses to examine objectives 2 and 3. We standardized all variables and then created squared terms for the standardized independent variables (family cohesion, family conflict). Finally, we conducted two sets (i.e., family cohesion, family conflict) of polynomial regression analyses with each independent variable (i.e., adolescent self-report of impairment, parent report of adolescent impairment, and clinician rating of adolescent impairment) separately. For example, for family cohesion, the following variables were entered: adolescent report, parent report, adolescent report squared, parent report squared, and interaction between adolescent and parent reports. We used SPSS Statistics Version 22 for all analyses.

## Results

Table 1 presents means, standard deviations, and Pearson correlations of study variables. Adolescent report of cohesion was negatively correlated with adolescent report of

**Table 1** Correlations, means, and standard deviations of study variables

Measure	1	2	3	4	5	6	7
1. Cohesion (adolescent)	–						
2. Conflict (adolescent)	–0.70**	–					
3. Impairment (adolescent)	–0.59**	0.57**	–				
4. Cohesion (parent)	0.33**	–0.34**	–0.16	–			
5. Conflict (parent)	–0.26**	0.54**	0.16	–0.47**	–		
6. Impairment (parent)	–0.25**	0.27**	0.27**	–0.33**	0.41**	–	
7. Impairment (clinician)	–0.16	0.19*	0.36**	–0.22**	0.08	0.38**	–
Mean	5.77	3.53	17.14	6.87	3.21	21.82	–53.62
SD	2.63	2.34	8.70	2.10	2.12	8.88	7.65

Notes: Parent cohesion and adolescent cohesion variables were transformed (squared) due to significant negative skew; transformation successfully reduced skew for regression analyses; Clinician impairment scores were multiplied by  $-1$  to be consistent with adolescent and parent impairment scores

\* $p < 0.05$ ; \*\* $p < 0.01$

conflict ( $r = -.70$ ,  $p < .01$ ) and with adolescent report of impairment ( $r = -.59$ ,  $p < .01$ ). Adolescent report of cohesion was positively correlated with parent report of cohesion ( $r = .33$ ,  $p < .01$ ) but negatively correlated with parent reports of conflict ( $r = -.26$ ,  $p < .01$ ) and impairment ( $r = -.25$ ,  $p < .01$ ). Adolescent report of conflict was positively correlated with adolescent report of impairment ( $r = .57$ ,  $p < .01$ ), with parent reports of conflict ( $r = .54$ ,  $p < .01$ ) and impairment ( $r = .27$ ,  $p < .01$ ), and with clinician report of impairment ( $r = .19$ ,  $p < .05$ ). Parent report of cohesion was negatively associated with parent reports of conflict ( $r = -.47$ ,  $p < .01$ ) and impairment ( $r = -.33$ ,  $p < .01$ ) and clinician report of impairment ( $r = -.22$ ,  $p < .01$ ). Parent report of conflict was positively correlated with parent report of impairment ( $r = .41$ ,  $p < .01$ ). Clinician report of impairment was positively correlated with adolescent report of impairment ( $r = .36$ ,  $p < .01$ ) and parent report of impairment ( $r = .38$ ,  $p < .01$ ).

We conducted paired t-tests to examine differences between parent and adolescent report measures. Adolescents reported significantly less family cohesion than their parents ( $t = -4.61$ ,  $p < .01$ ). However, adolescents and parents reported similar levels of conflict ( $t = 1.73$ ,  $p > .05$ ). Adolescents reported less impairment than their parents ( $t = -5.25$ ,  $p < .01$ ).

We conducted polynomial regression analyses for parent and adolescent reports of family cohesion and conflict and their association with adolescent impairment (adolescent report, parent report, and clinician rating) and moderating effects. Table 2 shows analyses for family cohesion in which greater adolescent report of cohesion was significantly associated with lesser adolescent report of impairment ( $B = -.60$ ,  $p < .01$ ). Parent report of family cohesion was significant associated with both parent report ( $B = -.33$ ,  $p < .01$ ) and clinician rating ( $B = -.21$ ,  $p < .05$ ) of adolescent impairment such that greater family cohesion

was associated with less impairment. The interaction term was not significant.

Table 3 displays the family conflict polynomial regressions. Findings showed that adolescent report of family conflict was positively associated with adolescent report of impairment ( $B = .71$ ,  $p < .01$ ); however, parent report of family conflict was negatively associated with adolescent impairment ( $B = -.23$ ,  $p = .01$ ). We found that parent report of family conflict was positively associated with parent report of adolescent impairment ( $B = .41$ ,  $p < .01$ ). The interaction term was not significant.

## Discussion

Research has shown parent-adolescent discrepancies in reports of family factors (De Los Reyes et al. 2010; Gonzales et al. 1996; Ohannessian et al. 2000). Our study demonstrates that adolescents report less family cohesion than their parents; however, adolescents and parents are similar in reports of family conflict. The family cohesion findings are consistent with other studies demonstrating that adolescents report lower levels of family cohesion than their parents (Kirwil 1993; Ohannessian et al. 2000; Stuart and Jose 2012). Additionally, in a recent meta-analysis of the correspondence between child and parent perceptions of parenting behaviors, children report lower parental acceptance than both mothers and fathers in both clinical and non-clinical samples (Korelitz and Garber 2016). On the other hand, research does not consistently find discrepancies between adolescent and parent reports, as with our family conflict result. For example, Jensen and Dost-Gözkán (2015) find that there is no significant difference between levels of family conflict reported by adolescents and parents of both Asian Indian and Salvadoran families. Stuart and

**Table 2** Polynomial regressions of family cohesion on adolescent impairment

Variables	Impairment (adolescent)			Impairment (parent)			Impairment (clinician)		
	B	SE	p	B	SE	p	B	SE	p
Cohesion (adolescent)	-0.60	0.07	0.00	-0.16	0.09	0.06	-0.09	0.09	0.33
Cohesion (parent)	0.06	0.08	0.50	-0.33	0.09	0.00	-0.21	0.10	0.04
Cohesion (adolescent) <sup>2</sup>	0.11	0.09	0.26	0.04	0.11	0.71	-0.01	0.11	0.96
Cohesion (parent) <sup>2</sup>	-0.03	0.07	0.63	0.01	0.08	0.95	0.05	0.09	0.56
Cohesion (adolescent × parent interaction)	0.07	0.07	0.34	-0.17	0.09	0.06	-0.12	0.09	0.20
Model R	0.61			0.39			0.27		
Model R <sup>2</sup>	0.36			0.16			0.07		

*Note:* Parent cohesion and adolescent cohesion variables were transformed (squared) due to significant negative skew; transformation successfully reduced skew for regression analyses; Clinician impairment scores were multiplied by -1 to be consistent with adolescent and parent impairment scores

**Table 3** Polynomial regression of family conflict on adolescent impairment

Variables	Impairment (adolescent)			Impairment (parent)			Impairment (clinician)		
	B	SE	p	B	SE	p	B	SE	p
Conflict (adolescent)	0.71	0.08	0.00	0.07	0.10	0.47	0.20	0.10	0.05
Conflict (parent)	-0.23	0.09	0.01	0.41	0.10	0.00	-0.00	0.10	0.99
Conflict (adolescent) <sup>2</sup>	-1.67	0.10	0.11	0.08	0.12	0.51	0.04	0.13	0.76
Conflict (parent) <sup>2</sup>	-0.05	0.07	0.49	-0.09	0.08	0.24	-0.03	0.08	0.71
Conflict (adolescent × parent Interaction)	0.15	0.11	0.17	-0.03	0.13	0.85	-0.07	0.14	0.61
Model R	0.61			0.43			0.21		
Model R <sup>2</sup>	0.37			0.18			0.04		

*Note:* Clinician impairment scores were multiplied by -1 to be consistent with adolescent and parent impairment scores

Jose (2012) also find no significant different in levels of family conflict reported by adolescents and parents.

We utilized polynomial regression analyses with tests of moderation as recommended by Laird and De Los Reyes (2013) to examine parent-adolescent discrepancies in family cohesion and conflict. However, we did not find any moderation effects with these family factors. Nonetheless, our study demonstrates the benefits of family cohesion on adolescent functioning across multiple reporters, which is consistent with the research literature (Lucia and Breslau 2006; White et al. 2014). Greater family cohesion is associated with less adolescent impairment by the same reporter (i.e., adolescent, parent respectively). When the reporter views family cohesion favorably, then he/she also describes the adolescent as functioning better. There was one across reporter finding in which parent report of greater family cohesion was associated with less clinician rated impairment. It is not clear why parent report and not adolescent report is associated with clinician rating of impairment. It is possible that parents' report of family cohesion weigh more heavily than the adolescents' report when the clinician is evaluating impairment. A research study of clinically

referred youth shows that clinicians tend to agree more with parents on child problems than with the child except for life stress/family problems (Hawley and Weisz 2003).

Similar to family cohesion, main effects were found with family conflict and adolescent impairment. There was an association between adolescents' report of greater family conflict and their report of increased impairment. This is consistent with the research literature that family conflict has negative effects. For example, a recent study shows that adolescents in high conflict families have higher depression symptoms and engage in more risky behaviors than adolescents in low conflict families (Skinner and McHale 2016). There were no associations between parent or adolescent reports of family conflict and clinician ratings. A surprising finding is the association between parent report of family conflict and less adolescent report of impairment. An explanation is that some of the parents may be exhibiting more psychological distress and, thus, view the family environment more negatively but not accurately reflecting the adolescents' functioning. This is supported by research showing that parental psychological distress negatively bias their views of their children behaviors (Briggs-Gowan et al.

1996; Najman et al. 2000). This association needs to be explored further in future research.

Our study included a large percentage of adolescent participants who have a mood disorder diagnosis (76.6%). Therefore, we need to interpret the findings in the context of the characteristics of the clinical population. Adolescents with significant mood symptoms may view their families more negatively and this would explain the lower report of family cohesion that was found. On the other hand, family conflict did not differ by reporters, and adolescents viewed their functioning more positively than their parents did. Within the literature, mixed results exist about whether adolescent depression may affect reporter discrepancies of family environment. A recent study finds that adolescent depression is not associated with mother-adolescent discrepancies of various family variables (parents' right to know, maternal knowledge, and positive maternal-adolescent interactions) (Rote and Smetana 2016). However, another study shows that the children's depressive symptoms are associated with discrepancies of family constructs (child disclosure, parental knowledge, and parental solicitation) (De Los Reyes et al. 2008). Thus, there does not yet appear to be a consensus on whether adolescent mood symptoms impact discrepancies between adolescents and parents. The field will benefit from more research in this area to clarify this issue.

Our clinical sample included adolescents between the ages of 11–18 which can be viewed as a large age range. Younger and older adolescents address different developmental tasks, especially as it relates to family relationships. Overall, autonomy is a major developmental task as adolescents differentiate from parents and develop their own identity and independence (Butner et al. 2009; Christie and Viner 2005). Several research studies have shown that parent-adolescent discrepancy is less in younger adolescents than with older adolescents (Handwerk et al. 1999; Lewis et al. 2012; Wang et al. 2014). In a study of adolescents (ages 10–15 years) in New Zealand, findings show that younger adolescents and their parents rate positive family factors higher than older adolescents and their parents. However, older adolescents rate family conflict higher than both younger adolescents and their parents but parents of older adolescents rate family conflict the lowest among all groups (Stuart and Jose 2012). Furthermore, a large study of adolescents 12–18 did not find an association between parent-adolescent discrepancies and internalizing and externalizing symptoms (Carlston and Ogles 2009). Nonetheless, informant discrepancy is complex and appears to vary depending on reporters, their characteristics and constructs being assessed (Achenbach 2006). Although our study's age range expands 8 years, it includes older adolescents which is a group that has not been frequently studied in discrepancy research (De Los Reyes et al. 2015).

A strength of the current investigation is that it includes a clinician rating of adolescent impairment and does not rely solely on parent and adolescent reports. Correlations demonstrate that clinician ratings of child impairment are moderately correlated with adolescent and parent reports of impairment. The clinical assessment also produces discrepant information. De Los Reyes and Kazdin (2005) propose that informants' perspectives in a clinical assessment may diverge in regards to causes of youth's behavior, to whether the youth's behavior warrants treatment, and to memories accessed to complete the assessment. They also posit that discrepancies between youth and their parents are expected in this clinical context. In clinical settings and clinical research, there needs to be an integration of all clinical information and reconciliation of any discrepancies in order to make diagnoses, offer recommendations, and interpret research findings.

There are a few limitations of the current study. First, this was a cross-sectional study. As with all cross-sectional studies, our study captures only one snapshot in time of the participants. Hence, our study cannot assess any temporal relationships that may have an effect on the associations that were found. Future studies can examine parent-child discrepancies of family environment and their effect on reports of child impairment as a child progresses through treatment. Second, the use of GAF for adolescent impairment has some weaknesses, although previously widely used. There are questions regarding this scale's reliability and validity, especially in the clinical setting (Aas 2010, 2011), and whether it succeeds in its task to assess overall functioning (Bacon et al. 2002). A third limitation of our investigation is that it utilized a specific clinical sample. All the participants initiated treatment with concerns about mood; thus, our findings may not be generalizable to a general population of treatment-seeking families. Additionally, our study population was largely comprised of adolescents, which may limit the generalizability to younger children. Our sample was also largely White females with their mothers, which again limits the generalizability of the findings. Future studies should examine the association between parent-youth report of family environment and association with impairment with a more diverse clinical population. Finally, our sample was small and thus increases our chance of incurring Type I error.

In conclusion, this investigation adds to the growing literature on parent-youth discrepancy in family functioning. There is no clear consensus on how parent-youth discrepancy should be interpreted. As mentioned, De Los Reyes and Ohannessian (2016) provide a framework for examining such discrepancies, taking into account both disagreement and convergence. Parent-youth discrepancies can represent normal family adaptive processes, especially as adolescents are becoming more autonomous and

negotiating developmental demands. However, the discrepancy itself can be a risk factor for youth maladjustment, as there is a dysfunctional aspect of the family interactions. Finally, discrepancies may be the result of measurement error. Considering this framework in examining our findings, family cohesion is generally associated with less child impairment. Additionally, convergence of family cohesion may be a protective factor. The risk factor of family conflict is associated with the reporters' assessment of child impairment, and this finding may be consistent with expectations that some family conflict may be a normative process in adolescent development. Thus, it is important for clinicians and researchers to consider adolescent development and presentation of symptoms by reporters when integrating information gathered in a clinical assessment, which appears consistent with our findings.

**Funding** The Speizle Mood Disorder Research Fund funded this study.

**Author Contributions** Y.X.: collaborated with the design of the study, assisted with data analyses, and wrote portions of the manuscript. R.C.B.: collaborated with the design of the study, analyzed data, and wrote portions of the manuscript. L.B.: assisted with data analyses, in writing Methods and editing the manuscript. T.M.M.: collaborated with data analyses, writing of the Methods and Results and editing the manuscript. T.D.B.: collaborated with the design of the larger registry where data were derived and provided feedback on writing and editing of manuscript.

### Compliance with Ethical Standards

**Conflict of Interest** The authors declare that they have no competing interests.

**Ethical Approval** All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

**Informed Consent** The hospital's Internal Review Board approved a waiver of consent for the use of de-identified clinical data from the data registry that was used in this investigation.

### References

- Achenbach, T. M. (2006). As others see us clinical and research implications of cross-informant correlations for psychopathology. *Current Directions in Psychological Science*, *15*, 94–98.
- Aas, I. H. M. (2010). Global assessment of functioning (GAF): Properties and frontier of current knowledge. *Annals of General Psychiatry*, *9*. doi:10.1186/1744-859X-9-20
- Aas, I. M. (2011). Guidelines for rating global assessment of functioning (GAF). *Annals of General Psychiatry*, *10*. doi: 10.1186/1744-859X-10-2
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders*. (4th ed.). Washington, DC: Author.

- Bacon, S. F., Collins, M. J., & Plake, E. V. (2002). Does the global assessment of functioning assess functioning? *Journal of Mental Health Counseling*, *24*, 202–212. <http://search.proquest.com/docview/619945093?accountid=14707>.
- Bird, H. R. (1999). The assessment of functional impairment. *Diagnostic assessment in child and adolescent psychopathology*. (pp. 209–229). New York, NY: Guilford.
- Bird, H. R., Shaffer, D., Fisher, P., & Gould, M. S. (1993). The columbia impairment scale (CIS): pilot findings on a measure of global impairment for children and adolescents. *International Journal of Methods in Psychiatric Research*, *3*, 167–176. <http://search.proquest.com/docview/618423501?accountid=14707>.
- Block, J. H., Block, J., & Gjerde, P. F. (1986). The personality of children prior to divorce: a prospective study. *Child Development*, *57*, 827–840. doi:10.2307/1130360.
- Briggs-Gowan, M., Carter, A. S., & Schwab-Stone, M. (1996). Discrepancies among mother, child, and teacher reports: Examining the contributions of maternal depression and anxiety. *Journal of Abnormal Child Psychology*, *24*, 749–765. doi:10.1007/BF01664738.
- Buist, K. L., Deković, M., & Prinzie, P. (2013). Sibling relationship quality and psychopathology of children and adolescents: A meta-analysis. *Clinical Psychology Review*, *33*(1), 97–106. doi:10.1016/j.cpr.2012.10.007.
- Butner, J., Berg, C. A., Osborn, P., Butler, J. M., Godri, C., & Fortenberry, K. T., et al. (2009). Parent–adolescent discrepancies in adolescents' competence and the balance of adolescent autonomy and adolescent and parent well-being in the context of type 1 diabetes. *Developmental Psychology*, *45*, 835–849. doi:10.1037/a0015363.
- Carlston, D. L., & Ogles, B. M. (2009). Age, gender, and ethnicity effects on parent–child discrepancy using identical item measures. *Journal of Child and Family Studies*, *18*, 125–135. doi:10.1007/s10826-008-9213-2.
- Christie, D., & Viner, R. (2005). Adolescent development. *British Medical Journal*, *330*, 301–304. doi:10.1136/bmj.330.7486.301.
- Cuffe, S. P., McKeown, R. E., Addy, C. L., & Garrison, C. Z. (2005). Family and psychosocial risk factors in a longitudinal epidemiological study of adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*, *44*, 121–129. doi:10.1097/00004583-200502000-00004.
- Cumsille, P. E., & Epstein, N. (1994). Family cohesion, family adaptability, social support, and adolescent depressive symptoms in outpatient clinic families. *Journal of Family Psychology*, *8*, 202–214. doi:10.1037/0893-3200.8.2.202.
- De Los Reyes, A. (2011). Introduction to the special section: More than measurement error: discovering meaning behind informant discrepancies in clinical assessments of children and adolescents. *Journal of Clinical Child and Adolescent Psychology*, *40*, 1–9. doi:10.1080/15374416.2011.533405.
- De Los Reyes, A. (2013). Strategic objectives for improving understanding of informant discrepancies in developmental psychopathology research. *Development and Psychopathology*, *25*, 669–682. doi:10.1017/S0954579413000096.
- De Los Reyes, A., Augenstein, T. M., Wang, M., Thomas, S. A., Drabick, D. A., Burgers, D. E., & Rabinowitz, J. (2015). The validity of the multi-informant approach to assessing child and adolescent mental health. *Psychological Bulletin*, *141*, 858–900. doi:10.1037/a0038498.
- De Los Reyes, A., Goodman, K. L., Kliewer, W., & Reid-Quinones, K. (2008). Whose depression relates to discrepancies? Testing relations between informant characteristics and informant discrepancies from both informants' perspectives. *Psychological Assessment*, *20*, 139–149. doi:10.1037/1040-3590.20.2.139.
- De Los Reyes, A., Goodman, K. L., Kliewer, W., & Reid-Quinones, K. (2010). The longitudinal consistency of mother-child reporting

- discrepancies of parental monitoring and their ability to predict child delinquent behaviors two years later. *Journal of Youth and Adolescence*, 39, 1417–1430. doi:10.1007/s10964-009-9496-7.
- De Los Reyes, A., & Kazdin, A. E. (2005). Informant discrepancies in the assessment of childhood psychopathology: A critical review, theoretical framework, and recommendations for further study. *Psychological Bulletin*, 131, 483–509. doi:10.1037/0033-2909.131.4.483.
- De Los Reyes, A., & Ohannessian, C. M. (2016). Introduction to the special issue: Discrepancies in adolescent–parent perceptions of the family and adolescent adjustment. *Journal of Youth and Adolescence*, 45, 1957–1972. doi:10.1007/s10964-016-0533-z.
- De Los Reyes, A., Youngstrom, E. A., Pabón, S. C., Youngstrom, J. K., Feeny, N. C., & Findling, R. L. (2011). Internal consistency and associated characteristics of informant discrepancies in clinic referred youths age 11 to 17 years. *Journal of Clinical Child and Adolescent Psychology*, 40, 36–53.
- Emery, R. E., Weintraub, S., & Neale, J. M. (1982). Effects of marital discord on the school behavior of children with schizophrenic, affectively disordered, and normal parents. *Journal of Abnormal Child Psychology*, 10, 215–228. doi:10.1007/BF00915942.
- Fincham, F. D., & Osborne, L. N. (1993). Marital conflict and children: Retrospect and prospect. *Clinical Psychology Review*, 13 (1), 75–88. doi:10.1016/0272-7358(93)90009-B.
- Gonzales, N. A., Cauce, A. M., & Mason, C. A. (1996). Interobserver agreement in the assessment of parental behavior and parent–adolescent conflict: African American mothers, daughters, and independent observers. *Child Development*, 67, 1483–1498. doi:10.2307/1131713.
- Guion, K., Mrug, S., & Windle, M. (2009). Predictive value of informant discrepancies in reports of parenting: Relations to early adolescents' adjustment. *Journal of Abnormal Child Psychology*, 37, 17–30. doi:10.1007/s10802-008-9253-5.
- Handwerk, M. L., Larzelere, R. E., Soper, S. H., & Friman, P. C. (1999). Parent and child discrepancies in reporting severity of problem behaviors in three out-of-home settings. *Psychological Assessment*, 11, 14–33.
- Hawley, K. M., & Weisz, J. R. (2003). Child, parent and therapist (dis) agreement on target problems in outpatient therapy: The therapist's dilemma and its implications. *Journal of Consulting and Clinical Psychology*, 71, 62–70. doi:10.1037/0022-006X.71.1.62.
- Human, L. J., Dirks, M. A., Delongis, A., & Chen, E. (2016). Congruence and incongruence in adolescents' and parents' perceptions of the family: Using response surface analysis to examine links with adolescents' psychological adjustment. *Journal of Youth and Adolescence*, 45, 2022–2035. doi:10.1007/s10964-016-0517-z.
- Jensen, L. A., & Dost-Gozkan, A. (2015). Adolescent-parent relations in asian indian and salvadoran immigrant families: A cultural-developmental analysis of autonomy, authority, conflict, and cohesion. *Journal of Research on Adolescence*, 25, 340–351. doi:10.1111/jora.12116.
- Kirwil, L. (1993). Child and parent perceptions of family climate in early and mid-adolescence. *Polish Psychological Bulletin*, 24, 219–230.
- Korelitz, K. E., & Garber, J. (2016). Congruence of parents' and children's perceptions of parenting: A meta-analysis. *Journal of Youth and Adolescence*, 45, 1973–1995. doi:10.1007/s10964-016-0524-0.
- Kraemer, H. C., Measelle, J. R., Ablow, J. C., Essex, M. J., Boyce, W. T., & Kupfer, D. J. (2003). A new approach to integrating data from multiple informants in psychiatric assessment and research: Mixing and matching contexts and perspectives. *The American Journal of Psychiatry*, 160, 1566–1577. doi:10.1176/appi.ajp.160.9.1566.
- Laird, R. D., & De Los Reyes, A. (2013). Testing informant discrepancies as predictors of early adolescent psychopathology: Why difference scores cannot tell you what you want to know and how polynomial regression may. *Journal of Abnormal Child Psychology*, 41, 1–14. doi:10.1007/s10802-012-9659-y
- Laird, R. D., & Weems, C. F. (2011). The equivalence of regression models using difference scores and models using separate scores for each informant: implications for the study of informant discrepancies. *Psychological Assessment*, 23, 388–397. doi:10.1037/a0021926.
- Leung, J. T. Y., Shek, D. T., & Li, L. (2016). Mother-child discrepancy in perceived family functioning and adolescent developmental outcomes in families experiencing economic disadvantage in Hong Kong. *Journal of Youth and Adolescence*, 45, 2036–2048. doi:10.1007/s10964-016-0469-3.
- Lewis, K. J., Mars, B., Lewis, G., Rice, F., Sellers, R., Thapar, A. K., et al. (2012). Do parents know best? Parent-reported vs. child-reported depression symptoms as predictors of future child mood disorder in a high-risk sample. *Journal of Affective Disorders*, 141, 233–236. doi:10.1016/j.jad.2012.03.008.
- Loomis, J. W., Javornisky, J. G., Monahan, J. J., Burke, G., & Lindsay, A. (1997). Relations between family environment and adjustment outcomes in young adults with spina bifida. *Developmental Medicine and Child Neurology*, 39, 620–627. doi:10.1111/j.1469-8749.1997.tb07498.x.
- Loon, L. M. A., Ven, M. O. M., Doesum, K. T. M., Witteman, C. L. M., & Hosman, C. M. H. (2014). The relation between parental mental illness and adolescent mental health: The role of family factors. *Journal of Child and Family Studies*, 23, 1201–1214. doi:10.1007/s10826-013-9781-7.
- Loukas, A., Zucker, R. A., Fitzgerald, H. E., & Krull, J. L. (2003). Developmental trajectories of disruptive behavior problems among sons of alcoholics: Effects of parent psychopathology, family conflict, and child undercontrol. *Journal of Abnormal Psychology*, 112, 119–131. doi:10.1037/0021-843X.112.1.119.
- Lucia, V. C., & Breslau, N. (2006). Family cohesion and children's behavior problems: A longitudinal investigation. *Psychiatry Research*, 141(2), 141–149. doi:10.1016/j.psychres.2005.06.009.
- Masten, A. S., & Monn, A. R. (2015). Child and family resilience: A call for integrated science, practice, and professional training. *Family Relations*, 64, 5–21. doi:10.1111/fare.12103.
- McKeown, R. E., Garrison, C. Z., Jackson, K. L., Cuffe, S. P., Addy, C. L., & Waller, J. L. (1997). Family structure and cohesion, and depressive symptoms in adolescents. *Journal of Research on Adolescence*, 7, 267–281. doi:10.1207/s15327795jra0703\_2.
- Moos, R.H., & Moos, B.S. (2009). *Family environment scale manual*. (4th ed.). Palo Alto, CA: Mind Garden, Incorporated.
- Najman, J. M., Williams, G. M., Nikles, J., Spence, S., Bor, W., O'Callaghan, M., et al. (2000). Mothers' mental illness and child behavior problems: Cause-effect association or observation bias? *Journal of the American Academy of Child and Adolescent Psychiatry*, 39, 592–602. doi:10.1097/00004583-200005000-00013.
- Nelemans, S. A., Branje, S. J. T., Hale, W. W., Goossens, L., Koot, H. M., Oldehinkel, A. J., & Meeus, W. H. J. (2016). Discrepancies between perceptions of the parent-adolescent relationship and early adolescent depressive symptoms: An illustration of polynomial regression analysis. *Journal of Youth and Adolescence*, 45, 2049–2063. doi:10.1007/s10964-016-0503-5.
- Ohannessian, C. M., Laird, R., & De Los Reyes, A. (2016). Discrepancies in adolescents' and mothers' perceptions of the family and mothers' psychological symptomatology. *Journal of Youth and Adolescence*, 45, 2011–2021. doi:10.1007/s10964-016-0477-3.
- Ohannessian, C. M., Lerner, R. M., Lerner, J. V., & von Eye, A. (2000). Adolescent-parent discrepancies in perceptions of family functioning and early adolescent self-competence. *International*

- Journal of Behavioral Development*, 24, 362–372. doi:10.1080/01650250050118358.
- Ogburn, K. M., Sanches, M., Williamson, D. E., Caetano, S. C., Olvera, R. L., & Pliszka, S., et al. (2010). Family environment and pediatric major depressive disorder. *Psychopathology*, 43, 312–318. doi:10.1159/000319400.
- Piacentini, J. C., Cohen, P., & Cohen, J. (1992). Combining discrepant diagnostic information from multiple sources: Are complex algorithms better than simple ones? *Journal of Abnormal Child Psychology*, 20, 51–63. doi:10.1007/BF00927116.
- Rote, W. M., & Smetana, J. G. (2016). Patterns and predictors of mother-adolescent discrepancies across family constructs. *Journal of Youth and Adolescence*, 45, 2064–2079. doi:10.1007/s10964-016-0515-1.
- Sander, J. B., & McCarty, C. A. (2005). Youth depression in the family context: Familial risk factors and models of treatment. *Clinical Child and Family Psychology Review*, 8, 203–219. doi:10.1007/s10567-005-6666-3.
- Sanford, K., Bingham, C. R., & Zucker, R. A. (1999). Validity issues with the family environment scale: Psychometric resolution and research application with alcoholic families. *Psychological Assessment*, 11, 315–325. doi:10.1037/1040-3590.11.3.315.
- Skinner, O. D., & McHale, S. M. (2016). Parent–adolescent conflict in african american families. *Journal of Youth and Adolescence*, 45, 2080–2093. doi:10.1007/s10964-016-0514-2.
- Spilt, J. L., Lier, P. A. C., Branje, S. J. T., Meeus, W., & Koot, H. M. (2015). Discrepancies in perceptions of close relationships of young adolescents: a risk for psychopathology? *Journal of Youth and Adolescence*, 44, 910–921. doi:10.1007/s10964-014-0234-4.
- Stocker, C. M., & Youngblade, L. (1999). Marital conflict and parental hostility: Links with children's sibling and peer relationships. *Journal of Family Psychology*, 13, 598–609. doi:10.1037/0893-3200.13.4.598.
- Stuart, J., & Jose, P. E. (2012). The influence of discrepancies between adolescent and parent ratings of family dynamics on the well-being of adolescents. *Journal of Family Psychology*, 26, 858–868. doi:10.1037/a0030056.
- Wagner, B. M. (1997). Family risk factors for child and adolescent suicidal behavior. *Psychological Bulletin*, 121, 246–298. doi:10.1037/0033-2909.121.2.246.
- Wang, J., Liu, L., Wu, H., Yang, X., Wang, Y., & Wang, L. (2014). Agreement between parents and adolescents on emotional and behavioral problems and its associated factors among Chinese school adolescents: A cross-sectional study. *BMC Psychiatry*, 14, 114. doi:10.1186/1471-244X-14-114.
- White, J., Shelton, K. H., & Elgar, F. J. (2014). Prospective associations between the family environment, family cohesion, and psychiatric symptoms among adolescent girls. *Child Psychiatry and Human Development*, 45, 544–554. doi:10.1007/s10578-013-0423-5.
- Zolkoski, S. M., & Bullock, L. M. (2012). Resilience in children and youth: A review. *Children and Youth Services Review*, 34, 2295–2303. doi:10.1016/j.childyouth.2012.08.009.