

Children's and Parents' Perceptions of Parenting: Correlates, Predictors, and
Moderators

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CHAPTER 1

INTRODUCTION

Depression is associated with impairments in parenting. Specifically, parents who are depressed often exhibit less warmth and more hostility towards their children compared to non-depressed parents (Lovejoy, Graczyk, O'Hare, & Neuman, 2000). These parenting behaviors are associated with negative developmental outcomes for children. Studies have found that lower levels of parental warmth and higher levels of psychological control are concurrently and prospectively related to elevations in children's depressive symptoms (e.g., Bayer, Sanson, & Hemphill, 2006; Chen, Liu, & Li, 2000; Garber, Robinson, & Valentiner, 1997). Thus, parenting is an important target for interventions aimed at reducing the intergenerational transmission of depression. The present study addressed several important issues regarding the assessment of parenting practices.

Parenting typically is measured with questionnaires completed by children or parents or by trained observers who rate the behaviors of parents while they interact with their children. Questionnaires are the more common method of assessing parenting because they require significantly less time and resources than observational coding. A critical concern regarding self-report measures of parenting is the low concordance between parent and child informants. When parents and children complete parallel versions of parenting measures, their mean scores are usually significantly different and the correlations between the two informants are typically small to

moderate. This is true across a range of both positive and negative parenting constructs (e.g., Gaylord, Kitzmann, & Coleman, 2003; Tein, Roosa, & Michaels, 1994).

Incongruence between Children's and Parents' Reports of Parenting

Historically, incongruence between parents' and children's reports of parenting have been viewed as a methodological nuisance (e.g., Jessop, 1981; Turk & Bell, 1972). Such pervasive parent-child incongruence, however, is not merely measurement error. Rather than doubting the veracity of one or both reporters, such differences highlight the "multiple subjective realities that exist in family relationships" (Conway, 2011; p. 41). Incongruence underscores the need to assess both viewpoints in order to best examine the relation of parental behavior to other important variables, such as children's psychosocial functioning.

More recent perspectives indicate that parent-child discrepancies are meaningful, internally consistent, and stable over time (Andres De Los Reyes, 2011). For example, incongruent perceptions may be due to parents and children having different definitions of or sensitivity to certain parental behaviors (Tein et al., 1994). Discrepancies between informants also may reflect problems in the relationship such as conflict, absence of insight, or communication deficits (Guion, Mrug, & Windle, 2009).

One particularly compelling reason for clinicians and researchers to pay attention to differences between parents' and children's perceptions of parenting is that discrepancies have been found to be associated with negative child outcomes, including higher levels of internalizing and externalizing symptoms (A. De Los Reyes, Goodman, Kliewer, & Reid-Quinones, 2008; Gaylord et al., 2003; Guion et al., 2009). In some cases, however, divergent parent-child perceptions may reflect an adolescent's healthy

increase in autonomy and separation from the family unit (Carlson, Cooper, & Spradling, 1991; Ohannessian, 2000). Nevertheless, whatever incongruence signifies, parents' behaviors are less likely to have the intended effect on their children when the parent and child perceive them differently (Tein et al., 1994).

Incongruence between parents and children is not a “monolithic characteristic” of all parent-child relationships. Rather, the degree and meaning of perceptual differences vary as a function of characteristics of the dyad and of the particular construct being assessed (Collins, 1991). That is, each of the various interpretations of what parent-child incongruence represents may be correct in certain situations. Thus, it is important not only to acknowledge the presence of such incongruence, but also to explore the reasons for it, what it signifies, and how best to deal with it when encountered in research or clinical practice (De Los Reyes, 2013).

How is Congruence Measured?

Most often, researchers have operationalized “agreement” or “correspondence” as the Pearson correlation between parent- and child-reports, and “discrepancy” as the mean difference between these reports. Pearson correlations describe the degree to which parents' and children's ratings covary (i.e., occupy the same rank order in their respective groups), whereas mean differences describe the degree to which parents' and children's ratings are equal (Achenbach, 2011; Feinberg, Howe, Reiss, & Hetherington, 2000). Thus, parents' and children's scores can be correlated at $r = 1.0$ even if the parents' scores have a significantly higher mean than children's scores (or vice versa) as long as they covary in a perfectly linear manner. Furthermore, two samples with different mean differences can have the same Pearson correlation and

two samples with different Pearson correlations can have the same mean difference (Feinberg et al., 2000).

One advantage of using the Pearson correlation as an index of parent-child congruence is that “the process of z scoring [inherent in calculating the Pearson correlation] allows one to ignore variance that may accrue from absolute threshold differences between sets of raters” (Richters, 1992; p. 493). Whereas correlations do not describe the level of similarities *within* families, they represent similarity *across* families. For example, a sample that is characterized by a parent-child correlation of 0.2 likely would include some dyads that exhibited high agreement and others with low agreement (Bogenschneider & Pallock, 2008). A major disadvantage, however, is that Pearson correlations do not give any information about directional patterns in reporting differences (i.e., did parents or children report higher levels of a given behavior?).

Discrepancy scores, which are calculated on the basis of mean differences, have the advantage of providing information about the direction of the differences. In the extant literature on parent-child differences in reports about parenting and family functioning constructs, discrepancy scores have been calculated in several ways: *raw directional* (e.g., Juang, Syed, & Takagi, 2007; Ohannessian, Lerner, Lerner, & von Eye, 1995; Paikoff, Carlton-Ford, & Brooks-Gunn, 1993; Reidler & Swenson, 2012; Shek, 1998, 1999), *standardized directional* (e.g., Borelli, Luthar, & Suchman, 2010; De Los Reyes, Goodman, Kliewer, & Reid-Quinones, 2008, 2010; Fung & Lau, 2010; Guion et al., 2009; Leung & Shek, 2013), *raw absolute* (e.g., Carlson et al., 1991; Gaylord, Kitzmann, & Coleman, 2003; McCauley Ohannessian, 2000; Michaels, Messe, &

Stollak, 1983; Pelton & Forehand, 2001), and *standardized absolute* (e.g., Feinberg et al., 2000).

To calculate a raw directional difference score, one simply subtracts the parent's score from the child's score or vice versa. The resulting score indicates who reported a higher level of that behavior compared to the other. For example, if a parent's score is subtracted from a child's score, a negative difference score indicates that the parent's rating was higher than the child's. Raw *absolute* difference scores are calculated in the same way except the sign is dropped so there is no longer an indication of whose report is higher. Standardized directional and standardized absolute difference scores are calculated in similar ways, except the scores are standardized (i.e., converted to z scores) before the subtraction step. Standardized difference scores have the advantage of placing the parents' and children's scores on the same metric (i.e. the z-distribution). In a direct comparison of raw and standardized difference scores, De Los Reyes and Kazdin (2004) found that only standardized difference scores correlated equally with both informants' ratings, and they related to child and family characteristics more consistently. Consequently, they recommended using standardized difference scores to quantify discrepancy.

Other approaches that have been used less often are intraclass correlations (e.g., Bogenschneider & Pallock, 2008), standardized residuals (e.g., Chi & Hinshaw, 2002; De Los Reyes & Kazdin, 2004), and interaction terms (e.g., Bell et al., 2001; De Los Reyes, Salas, Menzer, & Daruwala, 2013; Holmbeck & O'Donnell, 1991; Miller & Drotar, 2003). The various ways of calculating informant congruency are not interchangeable. In fact, in a direct comparison of several approaches (directional

difference, standardized directional difference, standardized residuals) using the same set of data, De Los Reyes and Kazdin (2004) showed that the relation of reporting discrepancies to child and family variables were quite different depending on the method used.

The majority of studies that have investigated the relation between congruence of parents' and children's perceptions of parenting behaviors and other variables (e.g., parent or child characteristics, child psychopathology) have used difference scores as the independent variable in a regression equation. Difference scores are useful for describing the degree of inter-reporter discrepancy, although several problems with using difference scores as predictors in regression models have been noted (Laird & De Los Reyes, 2013; Laird & Weems, 2011). First, models that use parent-child difference scores as a predictor are mathematically equivalent to models that use both parents' and children's scores as separate predictors. Thus, in articles that have concluded that discrepancies are related to some other factor, an equally likely interpretation is that one informant's report is more predictive of that factor than the other informant's report (Laird & Weems, 2011). Additionally, if one expands the regression equation of a difference score being used to predict an outcome (see below), it becomes clear that this model is testing the hypothesis that children's reports will positively predict the outcome and parents' reports will negatively predict the outcome, which typically is not the question of interest (Laird & De Los Reyes, 2013).

$$\text{Original equation: } Y = b_0 + \mathbf{b_1(C-P)} + e$$

$$\text{Expanded equation: } Y = b_0 + \mathbf{b_1(C)} - \mathbf{b_2(P)} + e$$

where C = Child report, P=Parent report

Edwards (1994) demonstrated that these problematic constraints also extend to regressions that use absolute or squared difference scores. As a solution to these problems, Laird and Weems (2011) recommended using polynomial regression (see below) to answer questions about which variables are predicted by parent-child discrepancies. Polynomial regressions use the interaction terms to directly test “whether high (or low) scores from one informant are more or less strongly associated with the outcome when scores from the other informant are also high (or low)” (Laird & De Los Reyes, 2013, p. 4). With this approach, one can use post-hoc testing (e.g., simple slopes, response surface plotting) to simultaneously assess multiple reporting patterns that were previously assessed with various forms of difference scores. It is important that the squared terms be included in the model, because otherwise it would be possible that the interaction between parents’ and children’s report reflected the quadratic effect of either the parent’s or child’s reports. When quadratic terms are not significant, they are removed from the model (Laird & De Los Reyes, 2013).

Polynomial regression with informant discrepancy as the independent variable:

$$Y = b_0 + b_1C + b_2P + b_3C^2 + b_4CP + b_5P^2 + e$$

where Y= Outcome variable, C = Child report, P=Parent report

In addition to using polynomial regression in this way (i.e., treating “discrepancy” as an independent variable), Laird and LaFleur (2014) demonstrated how polynomial regression can be used to treat “discrepancy” as a dependent variable. To do this, the child’s report is treated as the outcome variable and is regressed onto the parent’s report, the parent’s report squared, a potential moderator variable, the moderator variable squared, and the interaction between parents’ report and the moderator

variable. In this way, it is possible to test whether the strength of the relation between the parents' and children's reports differs as a function of the moderator of interest. A significant interaction term indicates that the moderator variable is associated with the degree of discrepancy between parents' and children's reports.

Polynomial regression with informant discrepancy as the dependent variable:

$$C = b_0 + b_1P + b_2X + b_3P^2 + b_4PX + b_5X^2 + e$$

C= Child report, P=Parent report, X=Moderator

To date, few published studies have used polynomial regression to explore factors associated with parent-child congruence in reports about parenting. Notable exceptions include studies by Laird and LaFleur (2014), Fleming and colleagues' (2015), and Ohanessian and De Los Reyes (2014), which investigated factors associated with parent-child discrepancy in reports of parental monitoring behavior, family management, and family satisfaction and communication, respectively.

Factors Associated with Parent-Child Congruence in Perceptions of Parenting

Implicit in the notion that incongruence in reports of parenting is meaningful is the assumption that the degree to which parents' and children's reports differ varies systematically as a function of informant characteristics. We next highlight findings regarding factors associated with degree of agreement and discrepancy, with the caveat that some of the studies of discrepancies relied on difference scores, which are problematic for reasons explicated in the previous section.

Agreement

The most thorough investigation of factors associated with parent-child agreement (i.e., correlation) about parenting behaviors was conducted by Tein et al.

(1994) in a sample of 134 students in grades 4, 5, and 6. Children, along with their mothers and fathers, completed the following scales of the Children's Report of Parental Behavior Inventory (Schaefer, 1965): parental acceptance, rejection, inconsistent discipline, firm control, and hostile control. Tein and colleagues found a complex pattern of relations between parents' sex and level of parent-child agreement. Although there were no significant differences between level of mother-child and father-child agreement for any of the five parenting constructs overall, when the data were split by levels of certain moderator variables (older vs. younger child, high vs. low child depressive symptoms, more vs. less parent education), sex differences in level of agreement about inconsistent discipline, rejection, and firm control emerged. Other factors, including children's age, number of children in the home, child conduct problems, child depressive symptoms, parental alcoholism, and number of risk factors present, also were related to level of parent-child agreement, but the pattern of associated factors differed for each parenting construct and dyad type (mother-child vs. father-child).

Bogenschneider and Pallock (2008) assessed the similarity of parent-child reports about parent responsiveness using intraclass correlations. They found that mother-child similarity was greater for dyads that had higher maternal education as compared to lower maternal education and for intact as compared to non-intact families. None of the demographic factors assessed were related to father-child similarity in reports of father responsiveness.

Discrepancies

When discrepancies between parents' and children's reports about parenting have been found, they have tended to be in the direction of children reporting less

favorably about their parents' behaviors than their parents reported about themselves. This has been found across a range of parenting constructs and is thought to reflect parents' tendency to give socially desirable responses (e.g., Bögels & Van Melick, 2004; Fung & Lau, 2010). Some studies have found that the amount of parent-child discrepancy about parenting varies by the type of parenting construct being assessed; specifically, there is greater congruence for more directly observable, concrete behaviors as compared to less observable, abstract constructs (Taber, 2010). For example, using the Cornell Parent Behavior Inventory (Devereux, Bronfenbrenner, & Rodgers, 1969), Gaylord and colleagues (2003) found no significant difference between parents' and children's reports about the more observable constructs of covert control and punitive discipline, whereas parents reported significantly higher levels of a more subjective construct – support. This is consistent with meta-analyses that have found that agreement was significantly higher for ratings of more easily observable, externalizing problems as compared to internalizing problems for both parent-child (Achenbach et al., 1987; De Los Reyes et al., 2015) and mother-father dyads (Duhig, Renk, Epstein, & Phares, 2000).

Informant Characteristics. Demographic factors found to be related to the magnitude of parent-child discrepancy include children's sex, age, and race, parents' sex and marital status, and family SES. For example, mother-son reports of autonomy-promoting behaviors were more discrepant than mother-daughter reports (Sher-Censor et al., 2011), and older as compared to younger children had smaller discrepancies from their parents on a range of parenting variables (e.g., Lanz et al., 2001). Absolute

discrepancies in reports of harsh discipline have been shown to be greater for African American as compared to White parent-child dyads (Guion, Mrug, & Windle, 2009).

Parents' sex has been found to have a complex pattern of relations to parent-child congruence that varies by sex of the child and parenting construct (e.g., Carlson et al., 1991). Absolute discrepancies in reports of relationship quality have been greater for parent-child dyads from divorced as compared to non-divorced families (Pelton & Forehand, 2001). Finally, past studies have found greater absolute discrepancies in parent-child perceptions about parenting and family variables for low SES as compared to middle or high SES families (e.g., Pelton et al., 2001). Of note, however, whereas some studies have found associations between a given informant characteristic and the extent of parent-child discrepancy, other studies have not found such patterns. Thus, it is difficult to draw definitive conclusions about which factors are truly associated with informant discrepancies, because of the wide range of parenting constructs assessed and the types of discrepancy scores used.

Children's Psychosocial Functioning. Parent-child reporting discrepancies have been positively associated with both internalizing (e.g., De Los Reyes et al., 2008; Gaylord et al., 2003) and externalizing symptoms in children (e.g., Borelli, Luthar, & Suchman, 2010; De Los Reyes et al., 2010). Moreover, some studies have reported a curvilinear relation between parent-child discrepancies and child adjustment such that both a lack of discrepancy and too much discrepancy were related to greater child problems (Feinberg et al., 2000). Most investigations have only examined the cross-sectional association between discrepancy and child adjustment, although some studies have found a prospective relation also (e.g., De Los Reyes et al., 2010; Guion et al.,

2009; Pelton & Forehand, 2001). Finally, moderators of the link between discrepant perceptions of parenting and children's psychopathology include parents' sex (e.g., Gaylord et al., 2003; McCauley Ohannessian, 2000), children's sex (e.g., Carlson et al., 1991; Feinberg et al., 2000), and the parenting construct studied (e.g., Gaylord et al., 2003). Thus, considerable evidence exists of a relation between parent-child discrepancy about parenting behaviors and children's adjustment, although the direction of this relation often is unclear.

Parental Psychopathology. Few studies have examined the relation between parental psychopathology and parent-child discrepancies about parenting. In a study of discrepancies measured by standardized residual scores, Chi and Hinshaw (2002) found that mothers with elevated depressive symptoms perceived their parenting style to be more negative compared to their children's reports. Using standardized difference scores, De Los Reyes et al. (2008) found that greater levels of maternal depressive symptoms were associated with greater parent-child discrepancy in reports of parents' monitoring-related behavior. These findings were interpreted as support for the depression-distortion hypothesis, which suggests that depression leads to negatively-biased perceptions (Richters, 1992).

Thus, studies have included a wide range of parenting constructs and have used various ways of measuring discrepancy. The majority of published studies of parent-child discrepancies about parenting have used difference scores as predictors or outcomes in regression analyses to investigate factors associated with the degree of discrepancy. In recent years, Laird and colleagues (Laird & De Los Reyes, 2013; Laird & Weems, 2011) have described several serious statistical issues that arise when using

difference scores in regression models, which may result in invalid results. Laird and Weems recommended using polynomial regression instead to answer questions about which variables are associated with parent-child discrepancies, and they warned that findings based on difference scores should be interpreted with caution.

Relation of Children's and Parents' Reports to Observers' Ratings of Parenting

An important issue regarding the discrepancy between parents' and children's perceptions of parenting is how each informant's perception relates to independent observers' ratings of parenting behaviors. Of course, observational ratings should not be viewed necessarily as the "gold-standard" or as a more "accurate" measure of parenting compared to parents' or children's reports. In addition to the great deal of time and resources they require, observational measures have other drawbacks including questions about their ecological validity and low likelihood of certain behaviors even occurring during the observation period (e.g., harsh physical discipline; Gardner, 2000; Morsbach & Prinz, 2006). Nevertheless, advantages of observer ratings include their being coded according to researcher-defined constructs, and being subject to less rater bias (Gardner, 2000). Thus, observer ratings are a worthwhile criterion variable to compare to parents' and children's reports.

Generally, the association between child- and observer-ratings of parenting has been found to be greater than the association between parent- and observer-ratings, across a range of constructs including positive parenting, negative parenting, warmth, control, and hostility (Gonzales, Cauce, & Mason, 1996; Scott, Briskman, & Dadds, 2011; Sessa, Steinberg, & Morris, 2001); this pattern has been found in samples ranging in age from preschoolers (Sessa et al., 2001) through adolescents (Gonzales et

al., 1996). Scott and colleagues (2011) noted that when observed parenting was regressed on parent- and child-reports of positive and negative parenting, child- but not parent-reports accounted for unique variance. Gonzales and colleagues (1996) showed that adolescents' ratings of parenting converged more with observers' ratings than did the composite score of parent-child reports. Nevertheless, typically even children's reports do not converge with observer ratings at a level much greater than $r = 0.30$, suggesting that "a good deal of unique information may be provided by both sources" (Gardner, 2000, p. 188).

Factors Associated with the Extent of Congruence between Observers and Children or Parents

Parent and colleagues (2014) examined children's and parents' depressive symptoms as potential moderators of the relation between parent- or child-ratings of parenting on the Alabama Parenting Questionnaire and observer ratings of "positive" and "negative" parenting. They found that level of informants' depressive symptoms moderated the relation between their reports of parenting and observer ratings for both children and parents. Examination of the interactions revealed opposite patterns for the parents and children; parents' reports of negative parenting were more similar to observer ratings when parents had higher levels of depressive symptoms, whereas children's reports of negative parenting were more similar to observer ratings when children had lower levels of depressive symptoms. These findings are consistent with both the "depression-distortion" (Richters, 1992) and "depressive realism" (Alloy & Abramson, 1979) hypotheses, respectively. Depressive symptoms did not moderate the relation between parents' or children's ratings of positive parenting and observers'

ratings, however. Thus, overall, examining the relation of parents' and children's reports of parenting behaviors to observers' ratings of parenting behaviors may provide important information about the validity of each informant.

Current Study Aims and Hypotheses

The present study aimed to examine how children's and parents' reports of parenting are related to each other and to other variables (i.e., subsequent child adjustment, observer ratings of parenting). The following aims were addressed:

Aim 1. Congruence between Children's and Parents' Reports of Parenting and Moderators of Congruence

First, we examined the extent of congruence between children's and parents' perceptions of parenting (measured by Pearson correlations and paired *t*-tests comparing mean child- and parent-reports) as reported on the Acceptance and Psychological Control scales of the Children's Report of Parental Behavior Inventory (CRPBI; Schaefer, 1965), the most widely used questionnaire measure of parenting (Taber, 2010). Based on meta-analytic findings of parent-child agreement on the CRPBI (Korelitz & Garber, 2016), we hypothesized that there would be a significant small-to-medium correlation between parent- and child-reports for both parental Acceptance and Psychological Control. In line with the findings of that meta-analysis, we hypothesized that there would be no difference in the magnitude of the parent-child correlations for parental Acceptance versus Psychological Control.

As previously noted, some studies have found greater congruence between parents' and children's reports when the constructs being assessed were more

observable. Within the CRPBI domains of Acceptance and Psychological Control, however, items reflect both observable and non-observable behaviors. For example, two items contained on the CRPBI *Acceptance* subscale are: “Believes in showing her love for me” (not directly observable) and “Smiles at me very often” (directly observable). Therefore, we did not hypothesize any difference between congruence of parent-child reports on the basis of the observability of the two constructs.

For mean differences, as past studies have found (e.g., Bögels & Van Melick, 2004; Bogenschneider & Pallock, 2008; Lanz et al., 2001), we hypothesized that children would report less favorably than did their parents; that is, children would rate parents as exhibiting significantly less Acceptance and more Psychological Control than parents would rate themselves.

We also explored factors associated with the degree of parent-child congruence (i.e., moderators of the relation between parent and child reports) in two ways: by comparing Pearson correlations between subgroups and through the use of polynomial regression analyses. Potential moderators included children’s age, sex, race, and depressive symptoms, and parents’ sex, marital status, years of education, depressive symptoms, and depression diagnosis.

To our knowledge, only one study (Tein et al., 1994) had previously directly compared parent-child correlations for ratings of parenting between various subgroups of a given sample. Thus, this question was largely exploratory. Based on Tein and colleagues’ findings, we hypothesized that there would be greater agreement about psychological control for dyads that included older children as compared to younger children.

On the basis of findings from studies that have conducted regression analyses with difference scores or standardized residuals (e.g., Chi & Hinshaw, 2002b; Guion et al., 2009; Pelton & Forehand, 2001; Pelton et al., 2001; Shek, 1999), we hypothesized that polynomial regression analyses would show that older children, White (non-Hispanic) race, female sex, married parents, lower depressive symptoms in parents and children, higher parental education, and no parental history of a depressive diagnosis would be associated with greater congruence in perceptions of parenting between children and their parents. We extended these past findings by using the statistical approach recommended by Laird and De Los Reyes (2013), polynomial regression.

Table 1. Potential moderator variables

Variable Name	Variable Description
<i>Children's Characteristics</i>	
Age	Age in years
Sex	Male or Female
Race	White, non-Hispanic or All other races
Depressive Symptoms	Total score on CDI
<i>Parents' Characteristics</i>	
Sex	Male or Female
Marital Status	Married or Not
Depression Status	Depressed = Current DSM-IV diagnosis of MDD and HRSD \geq 14 Not depressed = No history of mood disorders
Depressive Symptoms	Total score on BDI
Educational Attainment	Years of education (e.g., 14 = 2 years of college)

Aim 2. Prospective Relation between Parent-Child Congruence in Reports of Parenting and Children's Depressive Symptoms

Second, we investigated the relation between parent-child discrepancy regarding parenting and changes in children's depressive symptoms over the ten-month study period. Several previous studies had found a prospective relation between parent-child discrepancy and children's adjustment such that greater incongruence between

children's and parents' views of the parent-child relationship were associated with lower life satisfaction, self-esteem, and higher levels of externalizing symptoms, hopelessness, and general psychiatric morbidity. (e.g., Pelton & Forehand, 2001; Pelton et al., 2001; Shek, 1998). We aimed to extend these findings by investigating the relation of parent-child discrepancies regarding Acceptance and Psychological Control, in particular, to depressive symptoms, using polynomial regression rather than entering a difference score as a predictor in the regression model. Based on findings from past studies, we hypothesized that there would be a positive association between the extent of discrepancy and increases in children's depressive symptoms.

Aim 3. Relations between Children's and Parents' Perceptions and Observers' Ratings of Parenting and Potential Moderators of These Relations

The third aim was to examine how children's and parents' reports of Acceptance and Psychological Control related to ratings of similar constructs made by independent, "objective" observers during a parent-child interaction task. We examined the Pearson correlations between the reports on the CRPBI and observer ratings. Based on existing literature, we hypothesized that children's reports of parenting would be more highly correlated than parents' reports with observers' ratings of positive and negative parenting constructs (Gonzales et al., 1996; Scott et al., 2011; Sessa et al., 2001).

We also examined factors associated with the extent to which children's or parents' reports predicted observers' ratings (i.e., moderators of the relation between CRPBI ratings and observer ratings). We aimed to replicate Parent and colleagues' (2014) findings that children's depressive symptoms moderated the relation between children's reports and observers' ratings, and parents' depressive symptoms moderated

the relation between parents' reports and observers' ratings. We also explored other potential moderators including children's age, sex, and race, and parents' sex, marital status, depression status, and level of education.

CHAPTER 2

METHOD

Participants

Participants were 226 dyads of one parent and one child per family. The “Depressed Parent” group consisted of 129 families in which a parent was receiving treatment for a current Major Depressive Disorder (MDD) as defined in the Diagnostic and Statistical Manual of Mental Disorders–Fourth Edition (DSM–IV; American Psychiatric Association, 1994), and scored 14 or higher on the Hamilton Rating Scale for Depression (HRSD; Hamilton, 1967). Exclusion criteria were a lifetime diagnosis in parents of any psychotic or paranoid disorder, organic brain syndrome, intellectual disability, or bipolar I or II, or a current or primary diagnosis of substance abuse or dependence, obsessive-compulsive disorder, eating disorder, or unwillingness to participate in treatment for depression.

The comparison (“Non-depressed Parent”) group included 97 families with parents who were lifetime free of mood disorders, psychotic disorders, organic brain syndromes, or personality disorders, and during the child’s life were free of adjustment disorders, anxiety disorders, substance abuse/dependence, psychotherapy longer than eight sessions, and psychotropic medication use.

Child participants were between 7 and 17 years old ($M = 12.39$, $SD = 2.31$). Only one child per family was included. In families with multiple children, the child closest to age 12 was invited to participate.

Child exclusion criteria were an intellectual/developmental disability or a chronic

medical condition that would have interfered with their ability to participate. Children lived with the target parent at least half the time. For non-depressed families, the enrolled child was selected to be similar in age, sex, and race to a child in the “depressed parent” group. The overall child sample was 54.6% female, 69.6% Caucasian, 21.6% African American, 1% Asian, and 6.9% multiracial. Children in the two groups did not differ significantly in children’s age, sex, ethnicity/race, or parents’ age or sex (see Table 2).

Procedure

Depressed parents were recruited from psychiatric clinics when they first presented for treatment. These parents received standard, evidence-based treatments including medication and/or cognitive behavioral therapy from experienced psychiatrists, psychologists, social workers, or psychiatric nurses. Recruitment of comparison families involved advertisements, coordination with local schools, health maintenance organizations, and community agencies. These parents were initially screened over the phone and, if eligible, were scheduled for an in-person evaluation to further assess eligibility criteria.

Assessments of children in the “Depressed Parent” group were conducted by different evaluators than those treating and assessing the parents. Children’s evaluations at the beginning of the parents’ treatment and at 10 months post intake were used in the current study. Children in the “Non-depressed Parent” group were assessed within 2 weeks after the parent’s evaluation (baseline) and then followed for the same interval (i.e., 10 months post baseline) as the high-risk group. Aims 1 and 3 were addressed using cross-sectional data from the assessment at baseline (Time 1).

For questions regarding predicting change in children's depressive symptoms, we used data from baseline (Time 1) and the 10-month follow-up (Time 2).

Measures

Demographic Characteristics

Parents answered questions about their child's age, sex, and race, as well as their own sex, marital status, and years of education. Parents' years of education was used as a proxy for SES. Level of education is a common indicator of SES in health research, and has numerous strengths including being easy to measure, excluding few members of the population, and being predictive of better jobs, housing, neighborhoods, working conditions, and incomes (Shavers, 2007).

Parents' Psychopathology

The Structured Clinical Interview for DSM–IV Axis I Disorders (SCID-I; First, Spitzer, Gibbon, & Williams, 1997) was used to evaluate psychopathology in parents. A randomly selected subset of taped interviews was used to assess interrater reliability, yielding kappa coefficients $\geq .80$.

Hamilton Rating Scale for Depression (HRSD; Hamilton, 1967) is an interview-based measure of the severity of depression. The 17-item version used here yields scores ranging from 0 to 52; higher scores indicate greater severity. The HRSD has high interrater reliability (i.e., $\geq .84$). Intraclass correlation in this study was .96.

Beck Depression Inventory, Second Edition (BDI–II; Beck, Steer, Ball, & Ranieri, 1996) is a 21-item self-report measure rated on a scale ranging from 0 (absence of symptoms) to 3 (most severe level of the symptom). Total scores can range from 0 to

63; higher scores indicate more depression. Coefficient alpha in this sample was .97 at baseline.

Children's Depressive Symptoms

The Children's Depression Inventory (CDI; Kovacs, 1992) is a 27-item self-report measure of children's symptoms of depression rated on a 3-point scale. Total scores can range from 0 to 54, with higher scores indicating more depression. Coefficient alpha for the CDI in this sample was $\geq .84$ across time points

Children's and Parents' Perceptions of Parenting

The Children's Report of Parent Behavior Inventory (CRPBI; Schaefer, 1965; see Appendix) contains 24 items yielding three factors: Acceptance, Psychological Control, and Monitoring. The CRPBI was used to evaluate children's and parents perceptions of the parent's parenting behaviors. The Acceptance and Psychological Control factors were the focus of the current study because they have been found to be associated with depression in children (e.g., Bayer et al., 2006; Chen et al., 2000; Garber et al., 1997).

Acceptance measures parents' emotional connectedness, warmth, and the extent to which parents express care and affection to their child. The Acceptance dimension includes items such as "Tells me how much she loves me" and "Gives me a lot of care and attention." *Psychological Control* measures the extent to which parents control their child through indirect, intrusive psychological methods such as inducing guilt, instilling anxiety, and withdrawing love. The Psychological Control dimension includes items such as "Is always telling me how I should behave" and "Feels hurt when I don't follow his/her advice." Parents reported on their own parenting behavior using a

parallel version of the CRPBI. Respondents indicated the extent of similarity between the item and the parent's behavior, using a 3-point scale (0 = like, 1 = somewhat like, 2 = not like). Higher scores indicated more of the particular parenting behaviors. In the current sample, internal consistency for reports of Acceptance for parents and children was $\alpha = .87$ and $.88$, respectively. For parents' and children's reports of Psychological Control, internal consistency was $\alpha = .74$ and $.76$, respectively.

Observations of Parenting

The Conflict-Resolution Task involved a 10-min videotaped interaction, during which the parent and child discussed and worked to resolve some issue that both had indicated was a problem between them. Trained raters coded the target parents' behavior using the Iowa Family Interaction Rating Scales (IFIRS; Melby & Conger, 2001). The IFIRS is a global coding system that considers frequency and intensity of behavior, as well as the contextual and affective nature of the behavior. The scales measure characteristics of the individual and the dyadic interaction. Each scale is assigned a score ranging from 1 (not at all characteristic of the target) to 9 (mainly characteristic of the target). The validity of the IFIRS system has been established in several studies (Alderfer et al., 2008; Melby & Conger, 2001). All interactions were double-coded by two independent observers. Coders established consensus on any discrepant codes – those rated two or more points apart on the 9-point scales.

Because a primary aim of this study was to determine the criterion validity of children's and parents' reports of parenting, the IFIRS scales that most closely aligned with the CRPBI dimensions were included in the analyses. Observed *Acceptance* consisted of an average of the IFIRS' subscales for Positive Mood (appears content,

optimistic, or demonstrates positive behavior toward self and others), Listener Responsiveness (degree to which the parent attends to, shows interest in, acknowledges, and validates what the child says), and Communication (the extent to which the parent conveys in a neutral or positive manner his or her needs and wants, rules and regulations, as well as clearly expresses information and ideas that may be useful to others).

Observed *Psychological Control* was an average of Hostility (angry, critical, disapproving, and/or rejecting behavior toward the child), Angry Coercion (attempts to control or change the behavior or opinions of the child or attempts in a hostile manner to get the child to do what the parent wants), and Lecture/Moralize (degree to which the parent presents information in a didactic, superior-wisdom manner that may be preachy, intrusive, pushy, and/or moralizing).

Data Analytic Plan

Parallel analyses were conducted for Acceptance and Psychological Control. In the following data analytical plan, we use the term “parenting” to refer to the two different constructs that were analyzed separately.

Aim 1. Congruence between Children’s and Parents’ Reports of Parenting and Moderators of Congruence

Bivariate correlations were calculated to determine the degree of agreement between parent- and child-reports of parenting for the overall sample. Paired samples *t*-tests were conducted to examine mean differences between parents’ and children’s reports of the parenting variables.

To examine the potential moderators of the correlation between parent- and child-reports of parenting, we created dichotomous categories for the potential moderators and compared the parent-child correlation coefficient (r) for each subgroup using Fisher's r -to- z transformation procedure. In the absence of empirical or theoretical reasons to dichotomize continuous variables at a particular cut-off value, continuous variables were divided by applying a median split. Potential moderators included children's age (older versus younger), sex, race (White, non-Hispanic versus all other races), and depressive symptoms (higher versus lower), and parents' sex, marital status (married versus not married), depressive symptoms (higher versus lower), depression status (current diagnosis of MDE versus no diagnosis), and years of education (higher versus lower).

To examine factors that potentially moderated the degree of discrepancy between parent- and child-reports of parenting, polynomial regression was used. The same moderator variables described in Table 1 were examined as predictors of discrepancies in the polynomial regression analyses. The polynomial regression analyses (see Equation 1 below) regressed child-reported parenting (CRP) on the following predictors: parent-reported parenting (PRP), a moderator variable, the interaction term (parent-reported parenting * moderator), parent-reported parenting squared, and the moderator squared. Additionally, we entered all variables that were significantly correlated with the dependent variable (i.e., child-reported parenting) into the model as covariates. All predictor variables were mean-centered as recommended by Edwards (1994).

$$(1) \text{ CRP} = b_0 + b_1\text{PRP} + b_2\text{Moderator} + b_3\text{PRP}^2 + b_4(\text{PRP}*\text{Moderator}) + b_5\text{Moderator}^2 + e$$

Following guidelines from Edwards (1994) and Laird & De Los Reyes (2013),

when the quadratic terms did not significantly improve the fit of the model, they were removed. When quadratic terms were significant, four higher order terms – interaction between parent-report of parenting times moderator squared, parent-report of parenting squared times moderator, parent-report of parenting cubed, and moderator cubed – were tested to examine whether they significantly improved model fit. If they did not, they were not included in the model. Significant interaction terms were interpreted by plotting predicted values and calculating simple slopes at high and low levels of the moderator (i.e., 1 SD above/below the mean; Cohen & Cohen, 1983). Lines were plotted for all values of the x-axis variable that were observed in this sample.

Aim 2. Prospective Relation between Parent-Child Congruence in Reports of Parenting and Children’s Depressive Symptoms

Polynomial regressions were conducted to examine whether discrepancies between the children’s and parents’ perceptions of parenting, above and beyond the absolute level, predicted children’s depressive symptoms at Time 2, controlling for Time 1 symptoms (see Equation 2 below). Symptoms at Time 2 (10 months after baseline) were regressed on the following predictors: Time 1 (baseline) symptoms, child-reported parenting, parent-reported parenting, the interaction term (child-reported parenting*parent-reported parenting), child-reported parenting squared, and parent-reported parenting squared. Non-significant higher order terms were dropped from the models and significant interactions were plotted according to the procedures described above.

$$(2) \text{ Time 2 symptoms} = b_0 + b_1 \text{Time 1 symptoms} + b_2 \text{CRP} + b_3 \text{PRP} + b_4 (\text{CRP} * \text{PRP}) \\ + b_5 \text{CRP}^2 + b_6 \text{PRP}^2 + e$$

Aim 3. Relations between Children's and Parents' Perceptions and Observers' Ratings and Potential Moderators of These Relations

Bivariate correlations between child-reported parenting, parent-reported parenting, and observer ratings of parenting were calculated. The strength of the correlation between children's or parents' ratings and observer ratings of parenting were compared using Fisher's *r*-to-*z* transformation procedure. Bivariate correlations between potential moderators and observers' ratings of parenting also were examined.

To investigate factors that predicted how similar children's or parents' ratings were to observer ratings, we conducted regression analyses in which the observer ratings were regressed on either parent or child ratings, a potential moderator variable, and the interaction of the parent or child ratings and the potential moderator variable (see Equations 3 and 4 below). Significant interactions were probed and plotted according to the procedures described above.

$$(3) \text{ Observer rating of parenting} = b_0 + b_1\text{CRP} + b_2\text{Potential Moderator} + b_3(\text{CRP} * \text{Potential Moderator}) + e$$

$$(4) \text{ Observer rating of parenting} = b_0 + b_1\text{PRP} + b_2\text{Potential Moderator} + b_3(\text{PRP} * \text{Potential Moderator}) + e$$

CHAPTER 3

RESULTS

Descriptive Analyses

Characteristics of the sample by parental depression status are presented in Table 2. Results of t-tests for continuous variables and chi-square tests for categorical variables revealed no significant differences between the non-depressed and depressed groups for children's age, sex, race, ethnicity, or parents' sex. The depressed group had a significantly lower proportion of married parents, higher mean Child Depression Inventory scores, higher mean Beck Depression Inventory scores for parents, and fewer mean years of parental education.

Table 2. Sample characteristics

	Overall (<i>n</i> = 226)	Non-depressed Parent Group (<i>n</i> = 97)	Depressed Parent Group (<i>n</i> = 129)	t or Chi-square comparing groups
Children's Age	7-17 years old; <i>M</i> = 12.39 (<i>SD</i> = 2.31)	7-17 years old; <i>M</i> = 12.73 (<i>SD</i> = 2.22)	7-17 years old; <i>M</i> = 12.38 (<i>SD</i> = 2.40)	<i>t</i> = 1.11 (<i>p</i> = .27)
Children's Sex	53.3% female	54.1% female	52.7% female	$\chi^2 = .04$ (<i>p</i> = .84)
Children's Race	69.6% Caucasian, 21.6% African American, 1% Asian, 6.9% multiracial	71.4% Caucasian, 22.4% African American, 6.1% multiracial	69.8% Caucasian, 20.9% African American, .8% Asian, 7.8% multiracial	$\chi^2 = .01$ (<i>p</i> = .92)
Children's Ethnicity (Hispanic/Latino)	3.1% Hispanic/Latino	4.1% Hispanic/Latino	2.3% Hispanic/Latino	$\chi^2 = 1.32$ (<i>p</i> = .52)
Parents' Sex	75.8% female	79.6% female	72.9% female	$\chi^2 = 1.37$ (<i>p</i> = .24)
Parents' Marital Status	61.7% married	77.6% married	49.6% married	$\chi^2 = 18.39$ (<i>p</i> < .001)
Depressive Symptoms (Children)	0-37; <i>M</i> = 6.56 (<i>SD</i> = 6.03)	0-18; <i>M</i> = 4.52 (<i>SD</i> = 4.32)	0-37; <i>M</i> = 8.10 (<i>SD</i> = 6.66)	<i>t</i> = -4.59 (<i>p</i> < .001)
Depressive Symptoms (Parents)	0-52; <i>M</i> = 14.97 (<i>SD</i> = 14.90)	0-15; <i>M</i> = 1.76 (<i>SD</i> = 2.61)	0-52; <i>M</i> = 25.40 (<i>SD</i> = 12.03)	<i>t</i> = -21.18 (<i>p</i> < .001)
Years of Parent Education	7-22; <i>M</i> = 15.00 (<i>SD</i> = 2.59)	7-22; <i>M</i> = 15.43 (<i>SD</i> = 2.61)	10-22; <i>M</i> = 14.66 (<i>SD</i> = 2.53)	<i>t</i> = 2.23 (<i>p</i> = .03)

M = Mean; *SD* = Standard Deviation

Factors Associated with Parenting

Bivariate correlations among the potential moderator variables and between moderator variables and the parent- and child-reported parenting variables are shown in Table 3. Higher parent- and child-ratings of parental Acceptance were significantly associated with younger child age, lower child depressive symptoms, and the parent being non-depressed. Higher child-reported parental Acceptance also was significantly associated with the parent being married.

Higher child ratings of Psychological Control were significantly associated with non-White race, higher levels of depressive symptoms in children and in parents, the parent being unmarried, and fewer years of parental education. Higher parent ratings of Psychological Control were significantly associated with higher levels of depressive symptoms in children and parents.

Table 3. Bivariate Pearson correlations among moderators and parenting variables

	1	2	3	4	5	6	7	8	9	10
1. Child Age	1									
2. Child Sex (0=girl, 1=boy)	.04	1								
3. Child Race (0=White, 1=Non-White)	-.10	-.16*	1							
4. T1 CDI	.10	-.04	.08	1						
5. T2 CDI	.10	-.06	.18**	.68**	1					
6. Parent Sex (0=mother, 1=father)	.21**	.13	-.11	-.03	-.06	1				
7. Parent Marital (0=not married, 1=married)	.05	.21**	-.34**	-.21**	-.25**	.15*	1			
8. Parent Depression (0=Not dep, 1=Dep)	-.07	.01	.01	.30**	.20**	.08	-.29**	1		
9. Parent BDI	-.01	.01	-.09	.22**	.09	.04	-.20**	.79**	1	
10. Parent Education (years)	.04	.20**	-.35**	-.17*	-.23**	.20*	.22**	-.15*	-.10	1
Acceptance (Child)	-.31**	-.04	-.001	-.47**	-.43**	-.13	.14*	-.16*	-.09	.07
Psych Control (Child)	.09	-.05	.15*	.52**	.55**	.02	-.21**	.21**	.21**	-.16*
Acceptance (Parent)	-.14*	.01	.10	-.23**	-.25**	-.02	.03	-.28**	-.24**	.04
Psych Control (Parent)	-.002	.05	.05	.23**	.22**	.01	-.09	.35**	.27**	-.06
Acceptance (Observer)	-.05	.09	-.36**	-.25**	-.29**	.00	.33**	-.24**	-.19*	.38**
Psych Control (Observer)	-.01	-.17*	.38*	.20**	.29**	-.07	-.21**	.09	.06	-.37**

Psych = Psychological; CDI = Children's Depression Inventory; BDI = Beck Depression Inventory; Dep = depressed; White cells contain correlations among moderators; Grey shaded cells contain correlations between T1 parenting variables and moderator variables; *p<.05; **p<.01

Aim 1. Congruence between Children’s and Parents’ Reports of Parenting Extent of Parent-Child Congruence

Correlations

Bivariate Pearson correlations among parenting variables are presented in Table 4. The correlation between children’s and parents’ reports of Acceptance and Psychological Control were significant. Further, higher levels of Acceptance were associated with significantly lower levels of Psychological Control for both child-report and parent-report.

Table 4. Correlations among children’s and parents’ reports of parental Acceptance and Psychological Control

	Acc (C)	Acc (P)	PC (C)	PC (P)
1. Acceptance (C)	1			
2. Acceptance (P)	.37**	1		
3. Psychological Control (C)	-.49**	-.23**	1	
4. Psychological Control (P)	-.21**	-.34**	.35**	1

C = child-report; P = parent-report; ACC = Acceptance; PC = Psychological Control

**Correlation is significant at the 0.01 level (2-tailed); *ns* range from 199 to 223

Means

Table 5 presents the means for children’s and parents’ reports of Acceptance and Psychological Control for the overall sample. Children reported significantly lower parental Acceptance than their parents reported ($t(216) = -2.02, p = .04$). There was no statistically significant difference between levels of Psychological Control reported by children versus parents.

Table 5. Children’s and parents’ means for reports of Acceptance and Psychological Control

	Acceptance		Psychological Control	
	Mean (SD)	<i>t</i> (<i>p</i>)	Mean (SD)	<i>t</i> (<i>p</i>)
Child-report	25.50 (4.44)	-2.02 (.04)	12.46 (3.24)	1.55 (.12)
Parent-report	26.17 (3.72)		12.07 2.66)	

Factors Associated with Degree of Parent-Child Congruence

Correlations

With Fisher’s *r*-to-*z* transformation, we used 2-tailed tests to compare the parent-child agreement (Pearson *r*) across subgroups of children by age, sex, race, and depressive symptoms, and parents’ sex, marital status, depressive symptoms, depression status, and years of education (see Table 6).

With regard to parent-child agreement about Acceptance, White children agreed more with their parents than did non-White children; children above the median on depressive symptoms agreed more with their parents than did children below the median; and children of parents with higher levels of education agreed more with their parents than did children of parents with lower levels of education.

With regard to parent-child agreement about Psychological Control, children who were above the median on depressive symptoms agreed more with their parents than did children who were below the median; further, regardless of children’s level of depressive symptoms, there was a nonsignificant trend (*p* = .051) for female children to agree more with their parents as compared to male children.

Table 6. Pearson correlations for moderators and results of Fisher's *r*-to-*z* tests

	<i>n</i>	Acceptance		Psychological Control	
		<i>r</i>	Fisher's <i>z</i>	<i>r</i>	Fisher's <i>z</i>
Children's age					
Younger (≤ 12.75 years)	110	.30**	-1.00	.31**	-.84
Older (> 12.75 years)	107	.42**		.41**	
Children's sex					
Male	99	.35**	-.34	.23**	-1.90~
Female	118	.39**		.46**	
Child Race					
White, non-Hispanic	150	.47**	2.45**	.38**	.45
Other races	66	.14		.32**	
Children's Depressive Symptoms (CDI)					
Low (CDI ≤ 5)	114	.16	-1.99*	.11	-2.45*
High (CDI > 5)	103	.41**		.42**	
Parents' Sex					
Male	54	.30*	-.71	.20	-1.45
Female	163	.40**		.41**	
Parents' Marital Status					
Married	133	.43**	1.06	.32**	-.57
Not Married	84	.30**		.39**	
Parents' Depressive Symptoms (BDI)					
Low (BDI ≤ 11.33)	105	.35**	-.17	.24	-.96
High (BDI > 11.33)	112	.37**		.36**	
Parents' Depression Status					
Low Risk (never depressed)	94	.36**	.08	.31**	.00
High Risk (currently depressed)	123	.35**		.31**	
Parents' Years of Parent Education					
Lower Education (≤ 15 years)	105	.20*	-2.82**	.44**	1.42
Higher Education (> 15 years)	113	.53**		.27**	

~ $p < .06$; ** $p < .01$

Polynomial Regression

Polynomial regression models were used to evaluate the hypothesis that parents' reports of parenting were differentially related to children's reports of parenting as a function of the potential moderator variables. Results are presented in Table 7. The quadratic terms did not significantly improve model fit for any of the Acceptance models and therefore are not reported. Quadratic terms significantly improved model fit for the Psychological Control model that included children's CDI scores as a moderator. Following guidelines from Edwards (1994) and Laird and De Los Reyes (2013), four

higher order terms – interaction between parent-report of PC by CDI squared, parent-report of PC squared by CDI, parent-report of PC cubed, and CDI cubed – were tested to examine whether they significantly improved model fit. Results indicated that these terms did not improve model fit, and therefore, they were dropped from the model.

In these models, we also controlled for variables that were significantly associated with the dependent variable, child-reported parenting. For the Acceptance models, we controlled for children's age, children's depressive symptoms, parents' marital status, and parents' depression status. For the Psychological Control models, we controlled for children's race, children's depressive symptoms, parents' marital status, parents' depression status, and parental education.

Table 7. Polynomial regression analyses predicting children’s reports of parenting from parents’ reports of parenting and moderator variables at baseline

		Child Age	Child Sex	Child Race	Child CDI	Parent Sex	Parent Marital	Parent BDI	Parent Dep	Parent Educ
	Predictor	<i>B (SE)/ β</i>	<i>B (SE)/ β</i>	<i>B (SE)/ B</i>	<i>B (SE)/ B</i>	<i>B (SE)/ B</i>	<i>B (SE)/ β</i>	<i>B (SE)/ β</i>	<i>B (SE)/ B</i>	<i>B (SE)/ β</i>
Child-Reported Acceptance	Child age	N/A	-.47(.11)/ -.25**	-.45(.11)/ -.24**	-.48(.11)/ -.25**	-.43(.11)/ -.23**	-.47(.11)/ -.25**	-.47(.11)/ -.24**	-.48(.11)/ -.25**	-.46(.11)/ -.24**
	Child dep symptoms	-.26(.04)/ -.35**	-.28(.04)/ -.38**	-.29(.04)/ -.39**	N/A	-.29(.04)/ -.38**	-.28(.04)/ -.38**	.30(.04)/ -.40**	-.28(.04)/ -.37**	-.29(.05)/ -.38**
	Marital Status	.79(.53)/ .09	.90(.55)/ .10	.84(.56)/ .09	-.77(.53)/ .08	.93(.54)/ .10	N/A	.63(.53)/ .07	.76(.53)/ .08	.68(.56)/ .07
	Parent Depression	.38(.55)/ .04	.53(.56)/ .06	.63(.56)/ .07	.472(.56)/ .05	.64(.56)/ .07	.51(.55)/ .06	-.32(.85)/ -.04	N/A	.66(.56)/ .07
	Parent-reported Acceptance (PRA)	.30(.07)/ .26**	.28(.09)/ .24**	.45(.08)/ .38**	.32(.07)/ .27**	.31(.08)/ .26**	.21(.10)/ .18*	.33(.07)/ .27**	.35(.14)/ .30**	-.56(.42)/ -.46
	Moderator	-.50(.11)/ -.26**	-.62(.51)/ -.07	.28(.57)/ .03	-.28(.04)/ -.38**	-1.18(.59)/ -.12*	.77(.53)/ .09	.03(.03)/ .11	.49(.57)/ .05(.60)/ -.03	-1.62(.74)/ -.95*
	PRA x Moderator	.07(.03)/ .13*	.10(.13)/ .05	-.42(.14)/ -.20**	-.004(.01)/ -.02	.05(.15)/ .02	.21(.13)/ .13	.01(.01)/ .08	-.05(.16)/ -.03	.06(.03)/ 1.23*
	Model R ²	.36*	.36**	.38**	.34**	.37**	.37**	.39**	.36**	.39**
Child-Reported Psychological Control	Child race	.41(.44)/ .06	.37(.44)/ .06	N/A	.52(.44)/ .08	.53(.46)/ .08	.53(.46)/ .08	.43(.45)/ .06	.38(.44)/ .06	.31(.44)/ .05
	Child dep symptoms	.23(.03)/ .44**	.24(.03)/ .45**	.23(.03)/ .45**	N/A	.24(.03)/ .46**	.24(.03)/ .46**	.24(.03)/ .45**	.23(.03)/ .45**	.23(.03)/ .44**
	Marital status	-.44(.42)/ -.07	-.43(.43)/ -.07	-.43(.42)/ -.07	-.43(.42)/ -.07	-.51(.44)/ -.08	N/A	-.42(.43)/ -.07	-.42(.42)/ -.07	-.39(.42)/ -.06
	Parent depression	-.27(.42)/ -.04	-.33(.42)/ -.05	-.24(.41)/ -.04	-.25(.41)/ -.04	-.14(.43)/ -.02	-.08(.42)/ -.01	-.73(.66)/ -.12	N/A	-.24(.41)/ -.04
	Parental education	-.04(.08)/ .04	-.04(.08)/ -.03	-.05(.08)/ -.04	-.03(.07)/ -.03	-.05(.08)/ -.04	-.04(.08)/ -.03	-.03(.08)/ -.02	-.04(.08)/ -.03	N/A
	Parent-reported Psychological Control (PRPC)	.30(.08)/ .25**	.39(.11)/ .32**	.35(.09)/ .28**	.30(.09)/ .25**	-.14(.06)/ -.16*	-.15(.08)/ -.17	.31(.08)/ .25**	.35(.14)/ .29*	.29(.08)/ .24**
	Moderator	.09(.08)/ .07	2.17(1.74)/ .35*	.36(.44)/ .05	.30(.04)/ .57**	.34(.45)/ .05	-.46(.43)/ -.07	.02(.02)/ .08	-.32(.42)/ -.05	-.06(.08)/ -.05
	PRPC x Moderator	-.02(.03)/ -.04	-.17(.14)/ -.35	-.18(.16)/ -.08	.03(.01)/ .13*	.02(.12)/ .01	.04(.10)/ .03	.00(.01)/ -.04	-.08(.17)/ -.05	-.04(.03)/ -.07
	PRPC squared				-.02(.02)/ -.09					
	Moderator Squared				-.01(.00)/ -.21**					
	Model R ²	.34**	.34**	.34**	.36**	.30**	.30**	.32**	.33**	.34**

Significant interaction terms are bolded

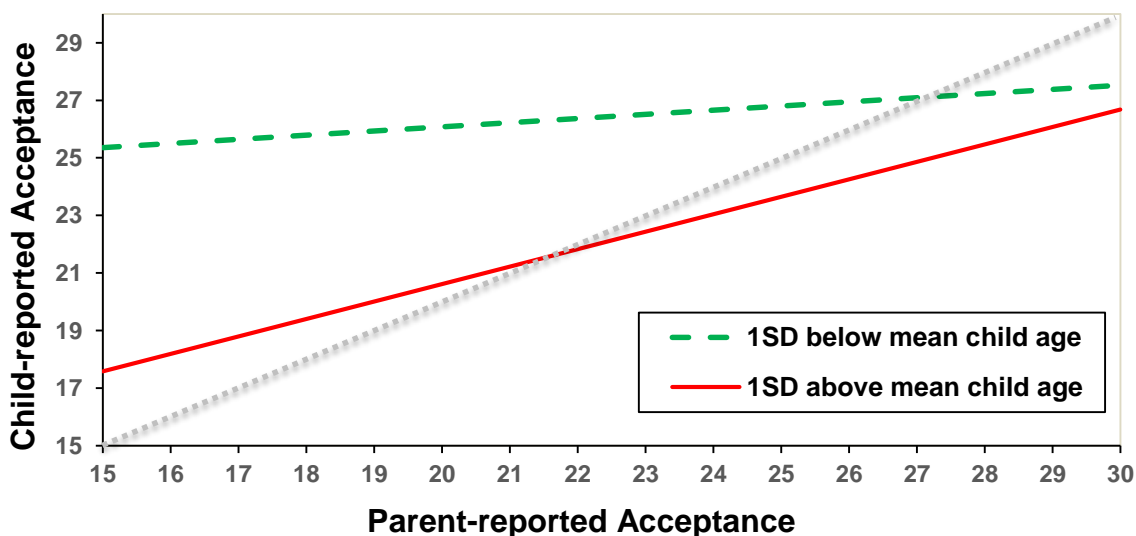
Note: Cells in the “PRPC squared” and “Moderator squared” rows of the Psychological Control portion of the table were left blank when those terms were not included in the final models

**p<.01, *p<.05

Across Acceptance models, three interaction terms were significant, indicating that the relation between children's and parents' reports of Acceptance were moderated by: children's age ($b = .07$, $SE = .03$, $p = .02$) and race ($b = -.42$, $SE = .14$, $p = .003$), and parents' years of education ($b = .06$, $SE = .03$, $p = .03$).

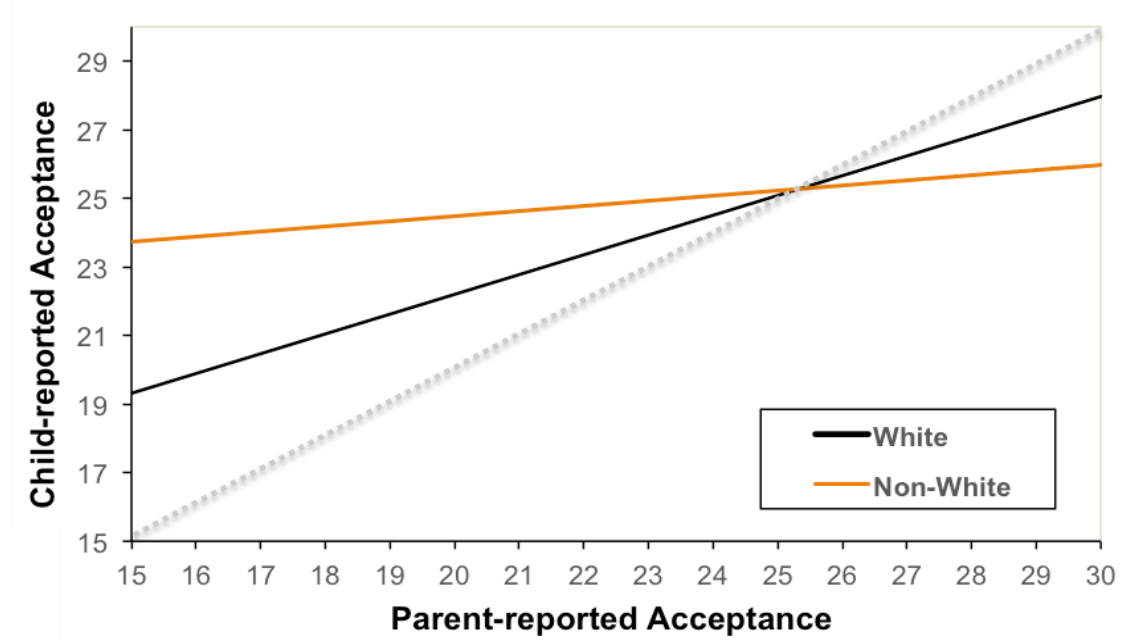
As shown in Figure 1, the linear effect of parent-reported Acceptance was stronger for older children ($b = .61$, $SE = .10$, $p < .001$) than younger children ($b = .14$, $SE = .10$, $p = .16$). The gray line in Figure 1 illustrates perfect agreement between parent and child reports; the area of the plot above this line represents children reporting higher scores than parents and the area below the line represents parents reporting higher scores than children. The plotted predicted values show that overall there was greater congruence in children's and parents' reports of parental Acceptance for dyads that included older children as compared to dyads that included younger children (i.e., the red line is closest to the gray perfect agreement line).

Figure 1. Parent-reported Acceptance by child age predicting child-reported Acceptance



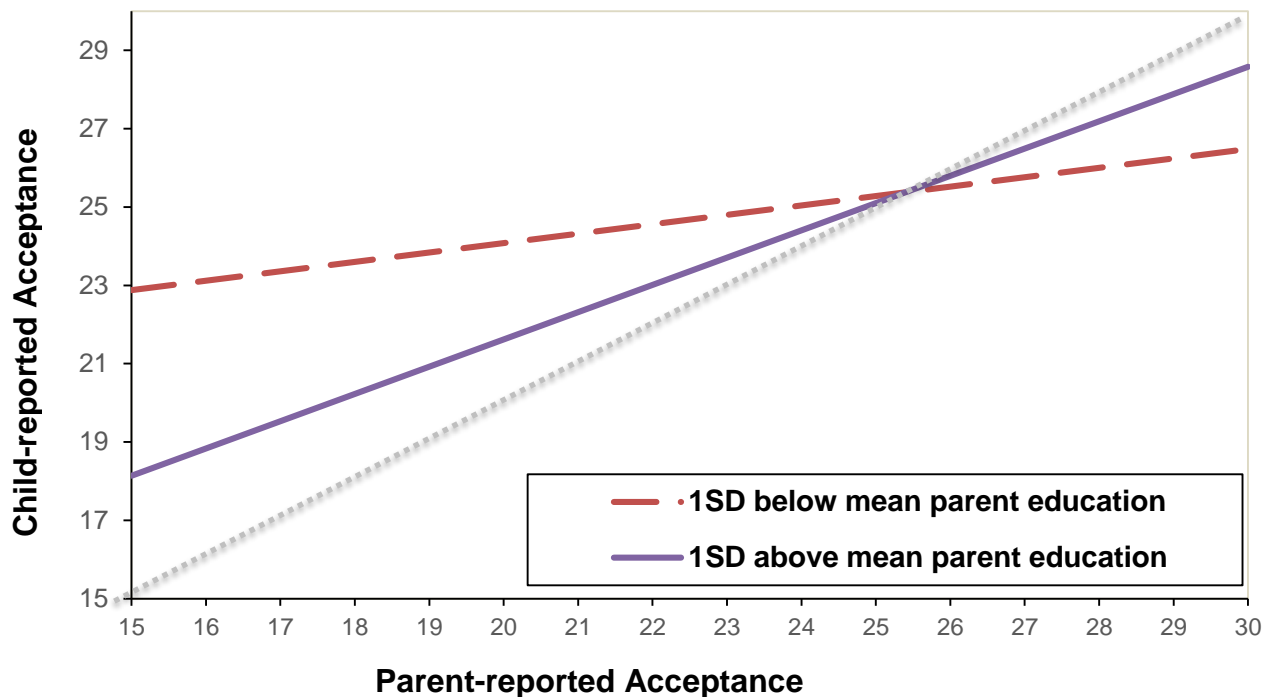
The linear effect of parent-reported Acceptance was stronger for White children ($b = .58$, $SE = .09$, $p < .001$) than children of other races ($b = .15$, $SE = .13$, $p = .26$). The plotted predicted values show greater congruence in children's and parents' reports of parental Acceptance for dyads of White children as compared to dyads of children of other races (see Figure 2).

Figure 2. Parent-reported Acceptance by race predicting child-reported Acceptance



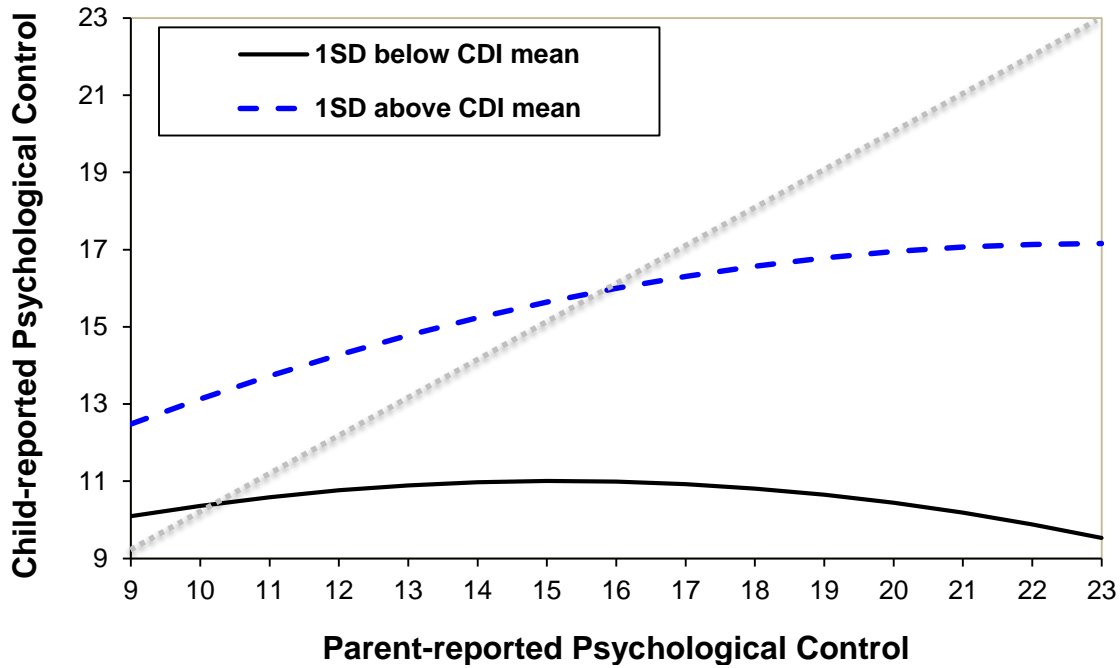
Although they were both significantly different from zero, the linear effect of parent-reported Acceptance was stronger for parents with higher education ($b = .70$, $SE = .11$, $p < .001$) than parents with lower education ($b = .24$, $SE = .11$, $p = .03$). As presented in Figure 3, the plotted predicted values show more congruence in children's and parents' reports of parental Acceptance for dyads of parents with higher education as compared to dyads of parents with lower education.

Figure 3. Parent-reported Acceptance by parent education predicting child-reported Acceptance



Across Psychological Control models, children’s depressive symptoms significantly moderated the relation between children’s and parents’ reports of Psychological Control ($b = .03$, $SE = .01$, $p = .05$), such that the linear effect of parent-reported Psychological Control was stronger for children with higher depressive symptoms ($b = .41$, $SE = .07$, $p < .001$) than children with lower depressive symptoms ($b = .12$, $SE = .07$, $p = .09$). As shown in Figure 4, the plotted predicted values show that overall there was more congruence in children’s and parents’ reports of parental Psychological Control for dyads of children with higher depressive symptoms as compared to dyads of children with lower depressive symptoms. At the lower end of the range of parent-reported Psychological Control, however, the reports of children with fewer depressive symptoms were more congruent with parents’ reports (i.e. the black line is closer to the gray perfect agreement line).

Figure 4. Parent-reported Psychological Control by child depressive symptoms predicting child-reported Psychological Control



Note: Although the significant interaction was between linear variables, the inclusion of quadratic main effects in the model produced curved lines when the predicted values were plotted.

Aim 2. Relation between Parent-Child Congruence in Reports of Parenting and Children’s Future Depressive Symptoms

Polynomial regression models were used to evaluate the hypothesis that the interaction of parent- and child-reports of parenting would predict children’s depressive symptoms ten months later (T2), controlling for children’s depressive symptoms at baseline (T1). In these models, we entered all variables that were significantly associated with T2 CDI scores as covariates, which were children’s race, parents’ marital status, depression status, and years of education (see Table 8).

Table 8. Polynomial regression analyses predicting children's Time 2 CDI scores

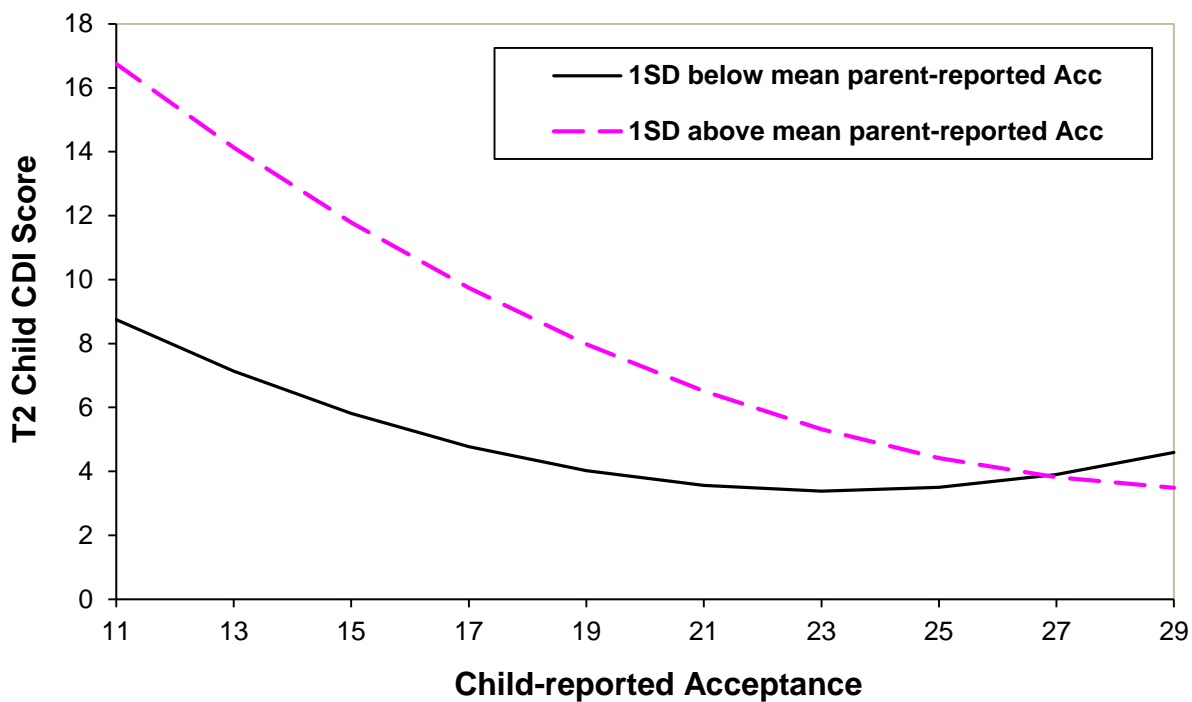
	Predictor	B (SE)	β	<i>p</i>
Acceptance	T1 Children's Depression Inventory	.47 (.05)	.58	<.001
	Race	-.02 (.58)	-.002	.97
	Marital Status	-.75 (.55)	-.08	.18
	Parent depression status	-.37 (.52)	-.04	.48
	Parent education	-.15 (.10)	-.09	.11
	Child-report of Acceptance (CRA)	-.10 (.08)	-.09	.24
	Parent-report of Acceptance (PRA)	.12 (.10)	.09	.24
	CRA squared	.04 (.01)	.25	.001
	PRA squared	.06 (.02)	.30	<.001
	CRA x PRA	-.07 (.02)	-.31	<.001
	Model R ² (p value)	.56 (<.001)		
Psychological Control	T1 Children's Depression Inventory	.42 (.05)	.52	<.001
	Race	.23 (.59)	.02	.70
	Marital Status	-.91 (.56)	-.09	.11
	Parent depression status	-.31 (.55)	-.03	.58
	Parent education	-.13 (.10)	-.07	.21
	Child-report of Psych Control (CRPC)	.38 (.09)	.25	<.001
	Parent-report of Psych Control (PRPC)	-.001 (.11)	-.001	.99
	CRPC x PRPC	.03 (.03)	.05	.38
	Model R ² (p value)	.52 (<.001)		

Significant terms are bolded; T1 = Time 1; Psych = Psychological

Child-reported Acceptance interacted with parent-reported Acceptance to predict children's depressive symptoms at T2, controlling for T1 depressive symptoms ($b = -.07$, $SE = .02$, $p < .001$). Quadratic terms significantly improved model fit and therefore were included in the model. Higher order terms (quadratic interaction terms and cubic terms) did not improve model fit and were not included in the final model. For Psychological Control, the interaction between child-reported and parent-reported Psychological Control was not associated significantly with children's depressive symptoms at T2. Quadratic terms did not significantly improve model fit and therefore were not in the final Psychological Control model.

The significant interaction in the Acceptance model was plotted and interpreted with parent-reported Acceptance serving as the moderator of the relation between child-reported Acceptance and T2 child depressive symptoms. As shown in Figure 5, the congruence of high child-reported Acceptance and high-parent reported Acceptance was associated with the lowest levels of children’s depressive symptoms at T2. The discrepancy of low child-reported Acceptance and high parent-reported Acceptance was associated with the highest levels of children’s depressive symptoms at T2.

Figure 5. Child-reported Acceptance by parent-reported Acceptance predicting children’s depressive symptoms



Note: Although the significant interaction was between linear variables, the inclusion of quadratic main effects in the model produced curved lines when the predicted values were plotted.

Aim 3. Relations between Children's and Parents' Perceptions and Observers' Ratings of Parenting and Moderators of These Relations

Children's and parents' ratings of Acceptance both correlated significantly in the positive direction with Observed Acceptance ($r = .29, .25$, respectively). No significant difference was found between the magnitude of the child-observer and parent-observer correlations (Fisher's $z = .40, p = .69$). Similarly, children's and parents' ratings of Psychological Control both correlated significantly in the positive direction with Observed Psychological Control ($r = .33, .26$, respectively). There was no significant difference between the magnitude of the child-observer and parent-observer correlations (Fisher's $z = .72, p = .47$).

The magnitude of parent-observer and child-observer correlations did not significantly differ from parent-child correlations for Acceptance or Psychological Control (see Table 9). Additionally, within dyad type (i.e., parent-child, child-observer, and parent-observer), there were no significant differences in levels of agreement between Acceptance and Psychological Control.

Higher observer ratings of parental Acceptance were significantly associated with the child being White and having lower depressive symptoms, and the parent being married, having no diagnosis of depression, a lower BDI score, and more years of education. No significant associations were found between observers' ratings of Acceptance and children's age or sex, or parents' sex. Higher observer ratings of parental Psychological Control were significantly associated with the child being non-White and having higher depressive symptoms, and the parent being unmarried and having fewer years of education. There was no significant association between observer

ratings of Psychological Control and children’s age, or parents’ sex, depression status, or BDI score.

Table 9. Bivariate correlations among parents’, children’s, and observers’ ratings of parenting

	Parent-Child r (n)	Child-Observer r (n)	Parent-Observer r (n)	Fisher’s Z Parent-Child vs. Obs-Child	Fisher’s Z Parent-Child vs. Obs-Parent	Fisher’s Z Obs-Child vs. Obs-Parent
Acceptance	.37** (217)	.29** (176)	.25** (178)	.88	1.31	.40
Psychological Control	.35** (218)	.33* (175)	.26** (178)	.22	.98	.72

**p<.01, *p<.05

Factors Associated with Degree of Congruence between Children’s and Observers’ Ratings of Parenting

Regression models were used to evaluate the hypothesis that the interaction of parent- or child-reports of parenting would interact with potential moderator variables to predict observers’ ratings of parenting. We ran separate models for each potential moderator (see Table 10; Acceptance in top half and Psychological Control in bottom half). We included variables that were significantly associated with the dependent variables as covariates in the models when they were not already included as the moderator of interest for that analysis.

Children’s depressive symptoms ($b = -.01$, $SE = .004$, $p = .034$) and parents’ marital status ($b = .09$, $SE = .04$, $p = .04$) emerged as significant moderators of the relation between child-reported Acceptance and Observed Acceptance. Children’s age was a significant moderator of the relation between child-reported Psychological Control and Observed Psychological Control ($b = -.03$, $SE = .01$, $p = .04$).

Table 10. Regression analyses predicting observers' ratings of parenting from children's reports of parenting and moderator variables at baseline

		Child Age	Child Sex	Child Race	Child CDI	Parent Sex	Parent Marital	Parent BDI	Risk	Parent Education
Outcome	Predictor	B (SE)/ β	B (SE)/ β	B (SE)/ β	B (SE)/ β	B (SE)/ B	B (SE)/ B	B (SE)/ β	B (SE)/ β	B (SE)/ β
Observed Acceptance	Child Race	-.79(.23)/ -.25**	-.77(.22)/ -.25**	N/A	-.74(.22)/ -.24**	-.77(.23)/ -.24**	-.72(.22)/ -.23**	-.79(.23)/ -.25**	-.78*.23)/ -.25**	-.78(.23)/ -.25**
	Marital Status	.47(.21)/ .16*	.44(.21)/ .15*	.47(.21)/ .16*	.51(.21)/ .17*	.49(.21)/ .16*	N/A	.45(.21)/ .15*	.40(.21)/ .13	.47(.21)/.16 *
	Parent Education	.14(.04)/ .25**	.14(.04)/ .24**	.14(.04)/.2 5**	.14(.04)/ .25**	.15(.04)/ .26**	.14(.04)/ .25**	.15(.04)/ .26**	.14(.04)/ .24**	N/A
	Child CDI	-.01(.02)/ -.03	-.01(.02)/ -.05	-.01(.02)/ -.03	N/A	-.01(.02)/ -.03	-.01(.02)/ -.04	-.01(.02)/ -.03	-.002(.02)/ -.01	-.01(.02)/ -.03
	Parent BDI	-.01(.01)/ -.14*	-.01(.01)/ -.15*	-.01(.01)/ -.13	-.01(.01)/ -.13	-.01(.01)/ -.13	-.02(.01)/ -.15*	N/A	N/A	-.01(.01)/ -.15*
	CR Acceptance	.06 (.03)/ .18*	.02(.03)/ .5	.05(.03)/ .17*	.06(.02)/ .18*	.05(.03)/ .14	-.003(.03)/ -.01	.05(.02)/ .15*	.04(.04)/ .12*	.05(.02)/ .16*
	Moderator	-.01(.04)/ -.02	.24(.19)/ .08	-.76(.23)/ -.24**	-.02(.02)/ -.08	-.19(.22)/ -.06	.49(.21)/ .16*	-.01(.01)/ -.14*	-.44(.20)/ -.15*	.15(.04)/ .26**
	CR Acc * Moderator	-.01(.01)/ -.07	.06(.04)/ .14	-.02(.05)/ -.02	-.01(.00)/ -.15*	.00(.04)/ .01	.09(.04)/ .21*	.001(.001)/ .04	.02(.04)/ .04	-.01(.01)/ -.06
	Model R ²	.30**	.31**	.29**	.31**	.30**	.31**	.29**	.29**	.30**
Observed Psychological Control	Child Sex	-.11(.18)/ -.04	N/A	-.07(.18)/ -.03	-.12(.18)/ -.05	-.07(.18)/ -.03	-.06(.18)/ -.03	-.14(.19)/ -.05	-.12(.18)/ -.05	-.05(.18)/ -.02
	Child Race	.33(.21)/ .12	.31(.21)/ .11	N/A	.31(.21)/ .11	.31(.21)/ .11	.34(.21)/ .12	.29(.22)/ .10	.28(.22)/ .10	.27(.21)/ .10
	Marital Status	.03(.20)/ .01	-.02(.20)/ -.01	-.02(.20)/ -.01	-.05(.20)/ -.02	-.01(.20)/ -.01	N/A	-.01(.20)/ -.004	-.03(.20)/ -.01	-.04(.20)/ -.02
	Parent Education	-.11(.04)/ -.22**	-.12(.04)/ -.24**	-.12(.04)/ -.24**	-.12(.04)/ -.24**	-.12(.04)/ -.24**	-.12(.04)/ -.25**	-.11(.04)/ -.23**	-.12(.04)/ -.23**	N/A
	Child CDI	.01(.03)/ .22**	.004(.02)/ .02	.01(.02)/ .02	N/A	.004(.02)/ .02	.001(.02)/ .01	-.01(.02)/ -.02	.01(.02)/ .02	.001(.02)/ .004
	CR PC	.09(.03)/ .22**	.10(.04)/ .23*	.09(.04)/ .22*	.10(.03)/ .23**	.10(.04)/ .23*	.12(.05)/ .30*	.09(.03)/ .22**	.13(.05)/ .31**	.09(.03)/ .21**
	Moderator	-.05(.04)/ -.10	-.08(.18)/ -.03	.31(.21)/ .11	.02(.02)/ .07	-.03(.21)/ -.01	-.004(.20)/ -.001	.01(.01)/ .07	.04(.19)/ .02	-.13(.04)/ -.26**
	CR PC * Moderator	-.03(.01)/ -.14*	-.02(.06)/ -.03	-.01(.06)/ -.01	-.01(.01)/ -.13	-.02(.06)/ -.03	-.06(.06)/ -.11	-.004(.002)/ -.13	-.08(.06)/ -.13	-.01(.01)/ -.09
	Model R ²	.20**	.17**	.17**	.18**	.17**	.17**	.18**	.17**	.17**

N/A = Not applicable to this model because that variable is already included in model as the potential moderator variable of interest; CDI = Children's Depression Inventory; BDI = Beck Depression Inventory; PR=Parent-reported

**p<.01, *p<.05

As shown in Figure 6, the linear effect of child-reported Acceptance was stronger for children with lower depressive symptoms ($b = .10$, $SE = .03$, $p = .001$) as compared to children with higher depressive symptoms ($b = .01$, $SE = .03$, $p = .81$). The plotted predicted values show more congruence in children's and observer's reports of parental Acceptance for dyads that include children with lower as compared to higher levels of depressive symptoms.

Figure 6. Child-reported Acceptance by children's depressive symptoms predicting Observed Acceptance

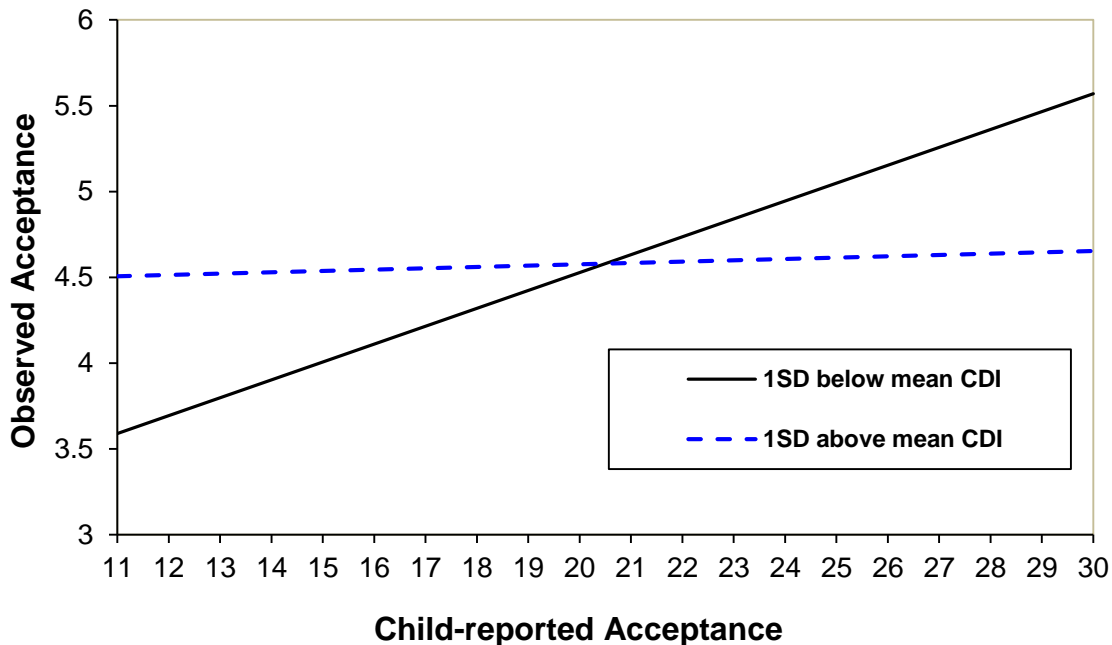
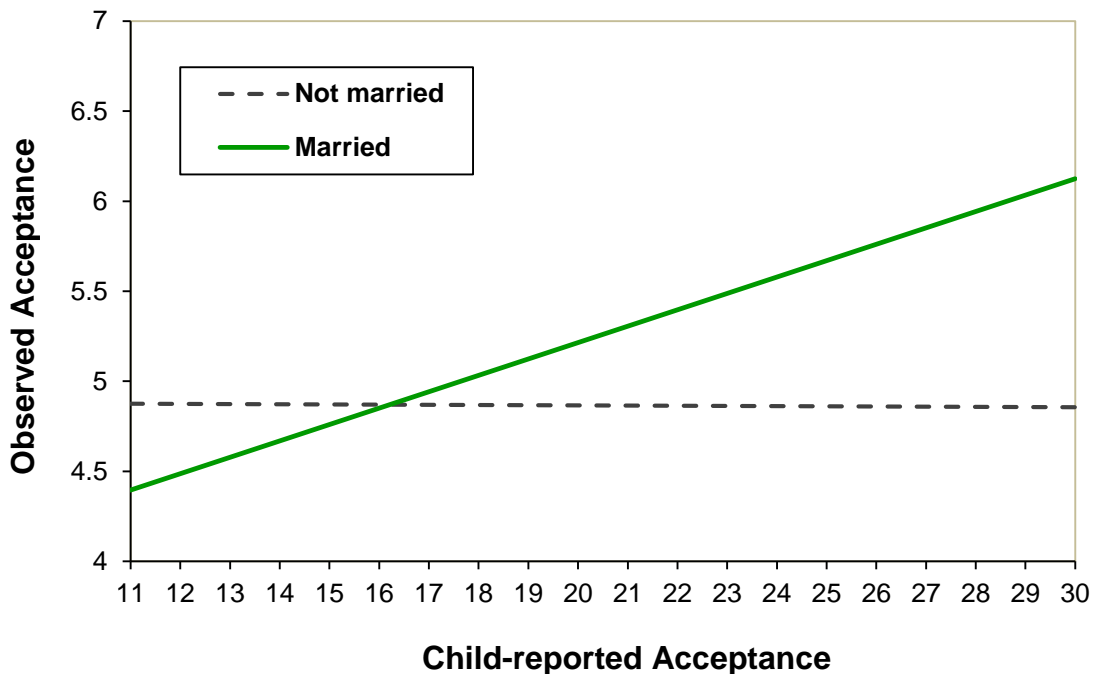


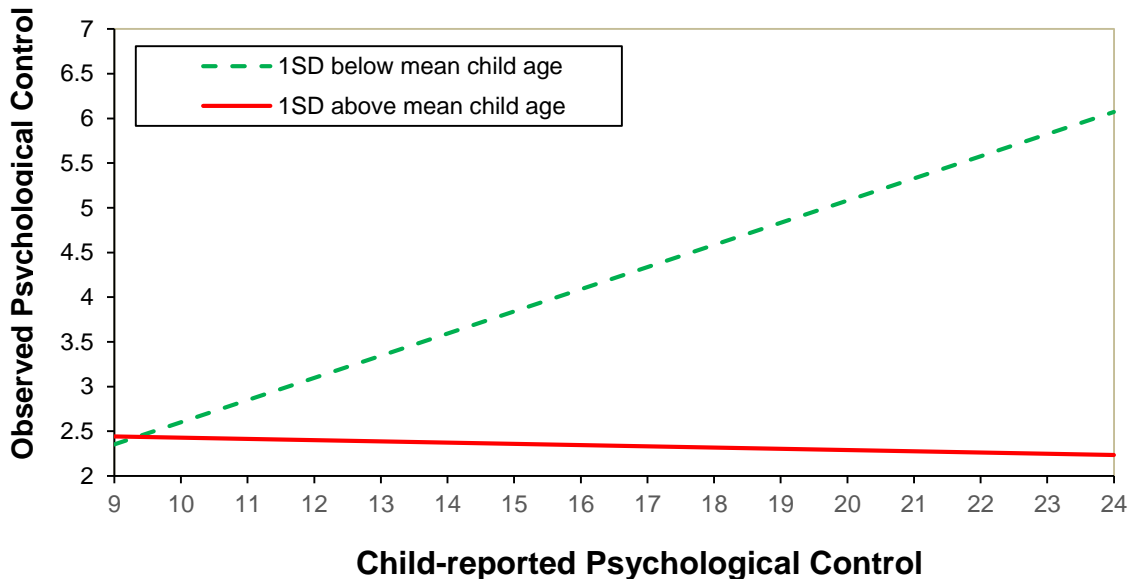
Figure 7 shows that the linear effect of child-reported Acceptance was stronger for children with married parents ($b = .10$, $SE = .03$, $p = .01$) as compared to children with unmarried parents ($b = -.001$, $SE = .03$, $p = .97$). The plotted predicted values show more congruence in children's and observer's reports of parental Acceptance for dyads with parents who were married as compared to parents who were not married.

Figure 7. Child-reported Acceptance by parental marital status predicting Observed Acceptance



The linear effect of child-reported Psychological Control on Observed Psychological Control was stronger for younger children ($b = .25$, $SE = .03$, $p < .001$) than for older children ($b = -.01$, $SE = .03$, $p = .66$). The plotted predicted values show more congruence in children's and observer's reports of parental Psychological Control for dyads that included younger as compared to older children (see Figure 8).

Figure 8. Child-reported Psychological Control by child age predicting Observed Psychological Control



Factors Associated with Degree of Congruence between Parents' and Observers' Ratings of Parenting

Results are presented in Table 10 (Acceptance in the top half and Psychological Control in the bottom half). The models were set up in the same way as the previous set except parent-reported parenting replaced child-reported parenting. No significant interactions were found between parent-reported Acceptance or Psychological Control and any of the potential moderators in predicting Observed Acceptance or Observed Psychological Control.

Table 11. Regression analyses predicting observers' ratings of parenting from parents' reports of parenting and moderator variables at baseline

		Child Age	Child Sex	Child Race	Child CDI	Parent Sex	Parent Marital	Parent BDI	Risk	Parent Education	
Outcome	Predictor	B (SE)/ β	B (SE)/ β	B (SE)/ β	B (SE)/ β	B (SE)/ B	B (SE)/ B	B (SE)/ B	B (SE)/ β	B (SE)/ β	
Observed Acceptance (Acc)	Child Race	-.80(.22)/ -.26***	-.77(.22)/ -.25**	N/A	-.77(.22)/ -.25**	-.77(.22)/ -.25**	-.79(.22)/ -.25**	-.78(.22)/ -.25**	-.79(.22)/ -.25**	-.79(.22)/ -.25**	
	Marital Status	.58(.20)/ .19**	.53(.20)/ .18**	.57(.20)/ .19**	.57(.20)/ .19**	.58(.20)/ .19**	N/A	.56(.20)/ .18**	.48(.21)/ .16*	.57(.20)/ .19**	
	Parent Education	.16(.04)/ .27**	.14(.04)/ .25**	.15(.04)/ .27**	.15(.04)/ .26**	.17(.04)/ .29**	.15(.04)/ .26**	.15(.04)/ .27**	.15(.04)/ -.26**	N/A	
	Child CDI	-.02(.02)/ -.07	-.02(.02)/ -.07	-.02(.02)/ -.08	N/A	-.02(.02)/ -.07	-.02(.02)/ -.07	-.02(.02)/ -.07	-.02(.02)/ -.07	-.01(.02)/ -.06	-.02(.02)/ -.07
	Parent BDI	-.01(.01)/ -.08	-.01(.01)/ -.08	-.01(.01)/ -.08	-.01(.01)/ -.08	-.01(.01)/ -.07	-.01(.01)/ -.08	-.01(.01)/ -.08	N/A	N/A	-.01(.01)/ -.08
	PRP Acceptance	.08(.03)/ .21**	.08(.03)/ .20*	.07(.03)/ .18*	.08(.03)/ .22**	.08(.03)/ .19*	.06(.04)/ .15	.08(.03)/ .21**	.05(.05)/ .13	.08(.03)/ .21**	
	Moderator	-.04(.04)/ -.07	.24(.19)/ .08	-.80(.22)/ -.26**	-.02(.02)/ -.06	-.31(.21)/ -.09	.57(.20)/ .19	-.01(.01)/ -.08	-.30(.20)/ -.10	.15(.04)/ .27**	
	PRP Acc x Moderator	-.003(.01)/ -.02	.01(.05)/ .02	.04(.06)/ .06	-.003(.01)/ -.04	.03(.06)/ .04	.04(.05)/ .08	.001(.002)/ .02	.03(.06)/ .06	-.003(.01)/ -.02	
	Model R ²	.33**	.33**	.32**	.32**	.33**	.33**	.32**	.31**	.32**	
Observed Psychological Control (PC)	Child Sex	-.10(.18)/ -.04	N/A	-.14(.18)/ -.06	-.14(.18)/ -.06	-.15(.18)/ -.06	-.16(.18)/ -.06	-.11(.18)/ -.05	-.16(.18)/ -.06	-.14(.18)/ -.05	
	Child Race	.37(.21)/ .13	.39(.21)/ .14	N/A	.39(.21)/ .14	.40(.21)/ .14	.39(.21)/ .14	.34(.21)/ .12	.40(.21)/ .14	.39(.21)/ .14	
	Marital Status	.02(.19)/ .01	.01(.19)/ .002	.01(.19)/ .01	.01(.19)/ .01	.01(.20)/ .004	N/A	-.03(.20)/ -.01	-.02(.20)/ -.01	.01(.19)/ .01	
	Parent Education	-.13(.04)/ -.25**	-.13(.04)/ -.25**	-.13(.04)/ -.25**	-.13(.04)/ -.25**	-.13(.04)/ -.25**	-.13(.04)/ -.25**	-.13(.04)/ -.26**	-.13(.04)/ -.25**	N/A	
	Child CDI	.02(.02)/ .09	.02(.02)/ .07	.02(.02)/ .07	N/A	.02(.02)/ .06	.02(.02)/ .06	.01(.02)/ .05	.02(.02)/ .07	.02(.02)/ .06	
	PRP PC	.12(.03)/ .25**	.17(.05)/ .34**	.13(.04)/ .26**	.13(.04)/ .25**	.13(.04)/ .26**	.21(.06)/ .42**	.15(.04)/ .29**	.21(.07)/ .41**	.13(.03)/ .25**	
	Moderator	-.05(.04)/ -.10	-.15(.18)/ -.06	.39(.21)/ .14	.02(.02)/ .06	.03(.21)/ .01	.01(.19)/ .004	.000(.01)/ .01	-.12(.20)/ -.04	-.13(.04)/ -.26**	
	PRP PC x Moderator	-.02(.01)/ -.08	-.09(.07)/ -.13	-.01(.08)/ -.01	.001(.01)/ .01	-.01(.09)/ -.01	-.12(.07)/ -.20	-.003(.002)/ -.09	-.11(.08)/ -.17	-.003(.02)/ -.01	
	Model R ²	.21**	.21**	.20**	.20**	.20**	.21**	.20**	.21**	.20**	

N/A = Not applicable to this model because that variable is already included in model as the potential moderator variable of interest; CDI = Children's Depression Inventory; BDI = Beck Depression Inventory; PR=Parent-reported

**p<.01, *p<.05

CHAPTER 4

DISCUSSION

Children's and parents' views of parenting and family functioning are often quite different from each other (Ohannessian, Laird, & De Los Reyes, 2016). This phenomenon has been documented across a range of constructs and cultures (e.g., (Leung, Shek, & Li, 2016; Nelemans et al., 2016), and poses a considerable methodological issue for developmental psychopathology researchers. A widely acknowledged practice is to conduct multi-informant assessments whenever possible. A continuing problem, however, is what to do when informants do not agree. Conclusions often are quite different depending on whose perspective is used (De Los Reyes, 2013). Therefore, recently researchers have called for more investigations of "the origins and implications of informant discrepancies" (p.13, Laird & De Los Reyes, 2013).

The present study aimed to further our understanding of discrepancies between children's and parents' perceptions of two important parenting constructs (Acceptance and Psychological Control) by using data analytic methods recommended for modeling the relation between several parent and child characteristics and informant congruence (i.e., polynomial regression; Laird & LaFleur, 2014). We also used polynomial regression analyses to examine whether informant discrepancies predicted unique variance in future child depressive symptoms (controlling for baseline symptoms), above and beyond the contributions of the main effects of the individual informants' reports. Finally, we examined observed parenting as a criterion variable for children's and parents' reports of parenting to determine the relative "accuracy" of their reports,

and investigated factors that potentially predicted congruence between informants and observers.

Congruence between Children's and Parents' Reports of Parenting and Moderators of Congruence

The first aim of this study was to examine the extent of parent-child agreement (i.e., correlation) and discrepancy (i.e., mean differences) and to determine which of the hypothesized variables were significantly associated with congruence. This was one of the first studies to use the polynomial regression approach of Laird and LaFleur (2014) to treat informant discrepancies as the outcome variable rather than the predictor. This allowed us to examine whether a range of demographic and psychosocial characteristics were associated with differences between children's and parents' perceptions of parental Acceptance and Psychological Control. We identified several moderators of the relation between children's and parents' reports, thus indicating that the discrepancies were not simply due to random error. One important implication of this finding is that aggregating children's and parents' reports may not be appropriate because it could obscure meaningful differences between each of their perspectives.

Correlations

As hypothesized, we found a low, but statistically significant, level of parent-child agreement for each of the two parenting constructs – Acceptance and Psychological Control – indicating that, for the most part, parents and children perceived parents' behaviors differently. Moreover, they were no more likely to agree about positive (Acceptance) than negative (Psychological Control) parenting behaviors. The present

finding of a low-to-moderate level of parent-child agreement is consistent both with the effect sizes reported in meta-analyses of parent-child agreement about *parental Acceptance or Psychological Control* (Korelitz & Garber, 2016) and regarding *children's mental health symptoms* (Achenbach et al., 1987; De Los Reyes et al., 2015). Individual studies also have found low-to-moderate correlations between children's and parents' reports on other parenting constructs such as communication, responsiveness, and negative relationship quality (Bogenschneider & Pallock, 2008; Gaylord et al., 2003; Ohannessian et al., 2016).

Some previous studies have shown that level of parent-child agreement differed as a function of how observable were the behaviors being rated (Taber, 2010). The lack of difference in levels of parent-child agreement across the two CRPBI parenting dimensions in this study is consistent with findings from the meta-analysis of parent-child agreement on the same CRPBI dimensions (Korelitz & Garber, 2016) and may have been due, in part, to the lack of differences in the level of observability of the particular parenting behaviors that characterized each construct.

Means

When children's and parents' means were compared, results varied by parenting construct. Consistent with our hypothesis, parents reported higher mean levels of Acceptance as compared to their children's reports about parental Acceptance. That is, parents saw themselves as showing more warmth and acceptance than their children perceived of their parents. This finding is consistent with past studies showing that parents tend to report more favorably than their children about parenting, parent-child relationships, and family functioning (e.g., Ohannessian, 2000; Ross, Marrinan,

Schattner, & Gullone, 1999; Sher-Censor et al., 2011). One possible explanation for why parents report more favorably is the “developmental stake” hypothesis (Bengston & Kuypers, 1971), which suggests that whereas adolescents have a developmental “stake” in achieving autonomy and minimizing emotional closeness with their parents (Bogenschneider & Pallock, 2008), parents are more invested in maintaining a bond and closeness with their children. As a result, parents and children each have a stake in appearing more or less, respectively, committed to their relationship with the other (Bengston & Kuypers, 1971).

Social desirability also may play a role in parents rating their behavior more favorably than their children (Giarrusso, Du, & Bengston, 2004; Morsbach & Prinz, 2006). Tein and colleagues (1994), however, argued against social desirability as an explanation for this pattern of reporting because they found that parents were willing to report openly about other sensitive topics (e.g., domestic abuse). Nevertheless, it is possible that parents may be willing to share some difficult aspects of their lives, while still wanting to be considered to be a “good” parent.

Regarding parental Psychological Control, contrary to our hypothesis there was no significant difference between the mean level of children’s and parents’ reports. This lack of significant mean difference should not necessarily be taken as evidence of congruence at the dyad level, however; rather, it only indicates that there was not a systematic tendency for one member of the dyad to report higher levels of parental Psychological Control relative to the other.

The absence of a significant difference between children’s and parents’ mean reports of Psychological Control is in contrast to some findings in the literature. A meta-

analysis of parent-child discrepancies on the CRPBI showed that, on average, mothers reported lower levels of Psychological Control than did their children (Korelitz & Garber, 2016). That same meta-analysis, however, did not find a significant difference between fathers and their children. Thus, the inclusion of fathers in the current sample may partially explain the difference between the current results and those of the meta-analysis with regard to parent-child discrepancy about Psychological Control.

It is important to note that correlations and means measure different characteristics of a sample. As a result, the tests that compared them (z-tests after performing Fisher's *r*-to-*z* transformation, *t*-tests) often yield different findings. For instance, there were very similar parent-child correlations for both Acceptance and Psychological Control, yet there was a significant difference in parent-child means for Acceptance but not for Psychological Control. We would not necessarily expect the findings from these different analyses to converge because correlations measure the extent to which scores in two groups covary in a linear fashion, whereas means are an indicator of the magnitude of the scores. High correlations can be seen in samples where the two groups have either identical means or highly discrepant means.

Factors Associated with Congruence in Parent-Child Reports of Parenting

We examined several potential moderators of congruence of parent-child ratings. Exploring moderators allowed us to identify characteristics that may put families at risk for perceptual incongruence. Identifying factors that are related to agreement/discrepancy may indicate that inter-reporter differences characteristics are substantively meaningful and vary in systematic ways.

Children's Age

Polynomial regression analyses revealed a stronger association between children's and parents' ratings of Acceptance for dyads that included older children as compared to younger children. Though not statistically significant, a similar pattern was seen for comparisons of parent-child *correlations* between older child and younger child dyads for both Acceptance and Psychological Control. This is consistent with our hypotheses, which were based on evidence of a positive association between child age and parent-child agreement about Acceptance and Psychological Control (Korelitz & Garber, 2016). This result also is consistent with findings from studies of other parenting constructs (e.g., Parental Involvement), which have reported higher agreement among parent-adolescent dyads compared to parent-child dyads (Russell, Graham, Neill, & Weems, 2016).

Interestingly, a meta-analysis of parent-child agreement about *child behavior problems* revealed the opposite developmental trend (i.e., a negative relation between mean age and parent-child correspondence; Achenbach et al., 1987). The difference between these two findings suggests that the positive relation between age and correspondence in ratings of parenting does not merely reflect a general developmental trend toward greater similarity between parents' and children's ratings across all types of constructs. Instead, as children mature and develop greater cognitive abilities, their views about parenting behaviors may become more similar to those of their parents, or they may become better able to take their parent's perspective, which may facilitate their growing more closely aligned in their perceptions of their parents' behaviors.

Children's Sex

No significant association was found between children's sex and parent-child congruence in ratings of Acceptance or Psychological Control for either correlational or regression analyses. We had hypothesized that girls would exhibit greater correspondence with their parents' ratings than boys based on limited past findings. Specifically, Shek (1999) had shown greater discrepancies in both mother-son and father-son dyads compared to mother-daughter and father-daughter dyads. The discrepancies in that study, however, were for reports about general family functioning rather than specific parenting behaviors as in our study. Also, Shek's study was conducted with Chinese families; socialization processes likely are different for Chinese as compared to American children, and girls show less conflict in relationships with authority figures than boys, which may partially explain why girls' and parents' perceptions were more congruent in the samples of Chinese participants (Wu et al., 2015; Yu, Volling, & Niu, 2015).

Children's Race

As hypothesized, polynomial regression and correlational analyses showed that parent-child dyads exhibited greater congruence regarding parental Acceptance in "White" as compared to "Non-White" samples. Of note, the association between race and parent-child congruence remained even when years of parental education (a proxy for SES) was included as a covariate. Parent education and race were significantly, negatively correlated ($r = -.35$).

It is possible that lower parent-child agreement in the "Non-White" (predominantly African American) sample may be related to subcultural differences in parenting. Some studies have found African American parents to be stricter and less warm than their

European American counterparts (Julian, McKenry, & McKelvey, 1994; Richman & Mandara, 2013). Parents from different cultural backgrounds may vary in their socialization goals and cultural beliefs about child obedience and respect for elders (Richman & Mandara, 2013), in part due to the long history of prejudice and discrimination African Americans have endured. For example, African American parents may try to raise their children to behave and cope in ways that facilitate their survival in the often hostile and racist environment that they may regularly encounter (Julian et al., 1994). The complex social context in which these parents' behaviors are shaped may contribute to their perceiving their actions differently from their children, who may be less aware of the societal pressures they are likely to face.

Children's Depressive Symptoms

We found that children's reported depressive symptoms were significantly associated with the magnitude of correlation between children's and parents' reports of both Acceptance and Psychological Control such that the correlation for the "higher child depressive symptoms" group was significantly greater than for the "lower" depressive symptoms group. Of note, it is possible that the greater parent-child correlation in the dyads with children above the median level of depressive symptoms could have been due to that group exhibiting greater variability in both parent- and child-report of parental Acceptance and Psychological Control.

Polynomial regression analyses also showed that children with higher depression scores exhibited greater congruence with parents in their reports of parental Psychological Control. That is, there was greater parent-child congruence for dyads that included children who rated themselves as having more depressive symptoms. This

contrasts with past studies that have found that greater parent-child discrepancies are concurrently associated with more internalizing symptoms (e.g., De Los Reyes et al., 2008; Gaylord et al., 2003). Importantly, in the present study, we used a median split to create “higher” and “lower” child depressive symptom groups. Examination of the median for our sample (five out of a possible 54 points) indicates that despite more than half of the children being offspring of depressed parents (i.e., high risk), most of the children had low levels of depressive symptoms. Therefore, even the “higher child depressive symptom” group was not in the clinical range.

Why might higher depressive symptoms be associated with greater parent-child congruence about Acceptance and Psychological Control? Perhaps children who are somewhat higher on depressive symptoms (although below the clinical range) also may be higher in anxiety or certain personality traits such as neuroticism. This might translate into greater vigilance, sensitivity, and attention to parents’ behaviors that results in higher levels of parent-child congruence. Future empirical study of the relation between personality traits and parent-child perceptual congruence is warranted.

Parents’ Marital Status

Marital status was not related to degree of congruence between children’s and parents’ ratings of either Acceptance or Psychological Control in either the correlational or polynomial regression analyses. Some previous studies have reported a significant relation between family intactness and parent-child congruence in reports of parent-child relationship quality and children’s internalizing and externalizing symptoms (De Los Reyes & Kazdin, 2005; Pelton & Forehand, 2001). Other studies that have used the CRPBI in particular, however, have not found an association between congruence

about parental Acceptance and parents' marital status (see meta-analysis by Korelitz & Garber, 2016). A significant relation between parent-child congruence about Psychological Control and parents' marital status has been found in father-child dyads (Korelitz & Garber, 2016). In the current study, we were not able to examine the relation between marital status and father-child congruence about Psychological Control due to the relatively small number of father-child dyads in the "unmarried" category ($n = 14$; 6% of the sample).

Parental Depression

Parental depression (measured as either a categorical DSM-IV diagnosis or continuously on the BDI) was not related to degree of parent-child congruence on either parental Acceptance or Psychological Control in the correlational or polynomial regression analyses. Previous studies have shown that maternal depressive symptoms were positively associated with more negatively biased reports (i.e., more discrepant from children's reports) of negative parenting style (Chi & Hinshaw, 2002). Although Chi and Hinshaw argued that their findings were consistent with the "depression-distortion hypothesis," evidence in support of this hypothesis has been mixed (Richters, 1992). Our findings also do not indicate that parents' depression had any bearing on the "realism" (i.e., similarity to children's reports) of their ratings of parenting.

Parents' Education

Correlational and regression analyses showed a positive association between years of education and degree of parent-child congruence for Acceptance, but not for Psychological Control. If we consider parents' education to be a rough proxy for SES, then this is consistent with past studies that have found greater discrepancies in parent-

child perceptions about parenting and the family in low SES as compared to middle or high SES families (e.g., Pelton et al., 2001). One possible explanation for lower parent-child congruence in lower SES families is that they are more likely to face stressors that disrupt the parents' and/or children's focus on parenting, thereby making it more difficult to perceive it similarly (Pelton et al., 2001).

Prospective Relations between Parent-Child Discrepancies about Parenting and Children's Depressive Symptoms

The second aim of the present study was to examine whether the interaction of children's and parents' reports of parenting predicted variance in children's future depressive symptoms beyond the main effects of children's and parents' reports, using the polynomial regression approach recommended by Laird & Weems (2011). The results were consistent with our hypothesis that the extent of congruence between children's and parents' reports of parental Acceptance at baseline would be related to children's reported depressive symptoms 10 months later, controlling for children's baseline depressive symptoms. Specifically, we found that children's depression levels were the lowest when children and parents agreed that the parent exhibited high Acceptance. Interestingly, children's depression levels were the highest when children reported low levels of Acceptance but parents reported high levels of Acceptance.

The finding that the best child outcomes occurred when children and parents had similarly positive views of their parent's behavior is consistent with recent prospective studies that also have used polynomial regression models. The most positive outcomes (e.g., low depressive symptoms, low substance abuse, low perceived stress) have been found when children and parents agree on high levels of positive constructs or low

levels of negative constructs (e.g., positive family management, family chaos, routines, negative interaction; Fleming et al., 2015; Human, Dirks, DeLongis, & Chen, 2016; Nelemans et al., 2016).

Particularly noteworthy is our finding that the highest level of depressive symptoms occurred when the child reported a low level of parental Acceptance but the parent reported a high level of Acceptance. Nelemans and colleagues (2016) similarly showed that the highest levels of adolescent depressive symptoms occurred when youth reported a high degree of negative interactions and fathers reported low levels of negative interactions. Human et al. (2016) also found that incongruence defined by more negativity in adolescents' versus parents' perceptions about family chaos and routines was associated with more depressive symptoms and higher perceived stress. Human and colleagues (2016) suggested that this pattern of incongruence in which children hold more negative views than their parents may reflect a lack of awareness or insight by the parent, which then might result in the child not getting support to deal with the perceived or actual negativity in their relationship.

Our results also indicate that discrepant parent-child views are not always problematic. When parents reported low levels of Acceptance, it was "protective" for children to have discrepant views (i.e., to report high levels of Acceptance). In fact, when children reported higher parental Acceptance than their parents reported, their level of depressive symptoms was quite similar to those children whose parents agreed with them about high parental Acceptance. Thus, children's views about their relationship with their parent may be even more important for their adjustment than the parents' perceptions of this relationship.

Finally, one might speculate that the worst outcomes would be associated with parents and children agreeing that parenting is negative. Indeed, some empirical evidence from studies using polynomial regression analyses is consistent with this (e.g., Leung et al., 2016; Nelemans et al., 2016). Nevertheless, there are theoretical reasons why congruent perceptions about high levels of a negative characteristic would bode better for children's outcomes as compared to the parent perceiving their behavior more favorably. If parents are aware of a shortcoming (e.g., their difficulty showing warmth and acceptance), then they may be able to validate the child's perceptions, provide additional support, or take action to alter their behavior. The idea that congruently negative perceptions may enable positive changes is in line with research on romantic relationships that emphasizes the importance of negative relationship processes for long-term benefits. For example, McNulty and Russell (2010) found that when faced with severe problems, using negative verbal behaviors was associated with improvement in the problems and subsequent increases in the partners' relationship satisfaction.

With regard to Psychological Control, the association between the extent of congruence between children's and parents' reports and children's future depressive symptoms was not significant. The main predictor of changes in depressive symptoms over time was children's perceptions of parental Psychological Control such that higher reports of Psychological Control predicted increases in depressive symptoms.

Relations between Children's and Parents' Perceptions and Observers' Ratings of Parenting and Moderators of These Relations

The third aim of the study was to examine the relation of children's and parents' reports of parenting to observers' ratings, and to explore factors that might be associated with congruence between informants and observers. This was one of very few studies to directly compare the association between observers' ratings of parenting to reports of children versus parents. Results showed a significant but modest correlation between both children and observers and parents and observers for Acceptance and Psychological Control. There was no difference in the magnitude of the child-observer versus parent-observer correlations for either parenting construct. This is not consistent with findings from studies showing that preschoolers' reports of parental warmth and hostility and adolescents' ratings of positive parenting were more similar to observers' ratings than were parents' reports (Parent et al., 2014; Sessa et al., 2001).

Following the work of Parent and colleagues (2014), we examined whether children's or parents' depressive symptoms moderated the degree of similarity between children's or parents' reports of parenting and observers' ratings. Similar to the results of Parent and colleagues, we found that children's depressive symptoms moderated the relation between children's and observers' ratings of parenting. Like Parent et al., our results are consistent with the depression-distortion hypothesis, as higher levels of children's depressive symptoms were associated with lower congruence between children's and observers' ratings of parental Acceptance. In contrast to Parent and colleagues, however, we did not find that the relation between parents' and observers' ratings of Acceptance or Psychological Control was moderated by parental depression.

Of note, Parent et al. (2014) found that children's depressive symptoms moderated the relation between children's and observers' ratings of Negative Parenting, but not Positive Parenting, whereas we found that children's depressive symptoms to be a moderator for Acceptance but not Psychological Control. Differences in our findings as compared to those of Parent and colleagues' may be due to differences in the parenting measures used (CRPBI versus Alabama Parenting Questionnaire), the precise parenting constructs measured by these questionnaires, and differences between the samples. Whereas their sample included only parents with a history of depression during the child's lifetime, our sample included one group of parents who were currently depressed and a comparison group of parents who were free of psychiatric diagnoses during their lifetime.

We extended the work of Parent and colleagues by investigating a range of demographic variables as potential moderators of the similarity of parents' or children's reports to observers' ratings. We found that certain parent and child characteristics were associated with a higher degree of similarity to observer ratings. Specifically, children of married parents perceived parental Acceptance more similarly to an observer than did children of non-married parents; and younger children perceived parental Psychological Control more similarly to an observer than did older children. None of the variables examined were significant predictors of congruence between parents' and observers' ratings of either Acceptance or Psychological Control.

Implications for Research and Practice

Congruence between Children's and Parents' Reports of Parenting and Moderators of Congruence

Results of this study indicate that agreement between parents and children was relatively low and the level of parent-child congruence about parenting varied systematically by characteristics of the dyad. Thus, discordance between parents' and children's reports about parenting may be more than a methodological nuisance, and instead may represent meaningful information about the parent-child relationship.

The finding that parents consistently rated themselves as more accepting than their children rated them highlights the importance of considering ways to maximize the validity of ratings about parenting. In some cases, parents' reports may be affected by their desire to portray themselves in a favorable light. Therefore, methods that reduce such bias should be used, including enhanced item wording (i.e., items are preceded by supportive statements about behaviors that could be viewed as unfavorable), positive item phrasing, and reminding informants that another family member will be rating the same items (Morsbach & Prinz, 2006). It also may be helpful to replace vague quantifiers (e.g. somewhat, often) with more concrete response options, and to incorporate more in depth instructions and training about how to answer the questions (De Los Reyes, 2013).

How should researchers use parents' and children's ratings about parenting? Aggregating reports may obscure important information contributed by each respondent separately. Several alternatives are available for making use of both perspectives. For example, researchers can conduct analyses separately for each reporter and compare

the results of the two models. As Tein et al. (1994) explained, “replicating tests of theoretical relationships within a study and finding similar results across reporters would provide strong arguments for the theory being tested without possibly compromising measurement integrity” (p. 352). One disadvantage of this approach, however, is that it is harder to interpret the results when the reporters’ ratings relate differently to other variables in the model.

Another option is to include both the children’s and parents’ perspectives in the model simultaneously, which would allow one to determine which reporters’ views account for more of the variability in the outcome, or how much one informant’s ratings contribute above and beyond the other’s ratings. Third, if a researcher is only interested in one informant’s point of view, or if it is not feasible to collect data from both parties, then it may not be necessary to administer the measure to both parents and children. Rather, informants should be selected on the basis of the particular research question(s) being asked, while also acknowledging the potential limitations of having only one reporter’s perspective.

Prospective Relation between Parent-Child Congruence in Reports of Parenting and Children’s Depressive Symptoms

Our finding that incongruent perceptions of parental Acceptance prospectively predicted depressive symptoms has important implications for the prevention and treatment of child psychopathology. In particular, we found that children who rated their parents to be low in Acceptance while the parents’ rated themselves to be high in Acceptance reported the highest level of depressive symptoms 10 months later.

Addressing this particular pattern of incongruence may help to reduce the subsequent development of children's depressive symptoms.

Interestingly, and consistent with our findings, a study of children seeking outpatient therapy in a community mental health clinic found that that children were significantly more likely than their parents to identify family functioning as an issue in need of intervention (Hawley & Weisz, 2003). This incongruence about targets for treatment is problematic because children and parents who do not agree about treatment goals have been found to attend fewer therapy sessions and have a poorer response to treatment (Brookman-Frazer, Haine, Gabayan, & Garland, 2008; Yeh & Weisz, 2001).

As a routine component of care, clinicians may want to assess the degree of incongruence in a parent-child dyad. When substantial differences in their views about parenting and their relationship are present, reasons for these differences should be explored and resolved in treatment, with the goal of promoting understanding and cohesion in the family. Pelton and Forehand (2001) outlined such an intervention, which involves the parent and child first explaining their individual perspectives to each other, discussing the differences, and then problem solving to find ways to reduce the inconsistencies in their views. Explicitly addressing perceptual discrepancies in therapy may help parents and children gain insight into problems in their relationship and open lines of communication between them.

In terms of clinical interventions broadly, modest correspondence and significant discrepancies between children's and parents' perceptions of parenting indicate that interventions that focus on teaching parenting skills might also benefit from assessing

children's perceptions about their parents' behaviors. That is, it may be helpful to explicitly focus on how the child experiences and *perceives* the parent's behavior and work toward achieving congruent perceptions about it. This is especially important as there is evidence to suggest that children's perceptions of their parents' behavior may be more predictive of objective future outcomes (e.g., number of contacts with the police) than parents' perceptions of their own parenting (Barry, Frick, & Grafeman, 2008).

Relations between Children's and Parents' Perceptions and Observers' Ratings of Parenting and Moderators of These Relations

We found that certain parent and child characteristics were associated with a higher degree of similarity to observer ratings. Specifically, children of married parents rated parental Acceptance more similarly to an observer than did children of non-married parents. In addition, younger children rated parental Psychological Control more similarly to an observer than did older children. These findings are relevant to decisions about whether or not to devote the time and resources to obtaining and coding observations of parenting. For example, researchers studying samples of older adolescents might not need to obtain observations of Psychological Control, as it may not significantly increment the information beyond what the youth report on a questionnaire.

Limitations and Future Directions

Limitations of the study provide directions for future research. First, as we only tested two specific parenting constructs, Acceptance and Psychological Control, we

cannot generalize the findings from this study to other aspects of parenting. Second, our sample was comprised of parent-child dyads in which the parent was either currently depressed or never-depressed. We do not know if these results generalize to dyads with parents who have other forms of psychopathology. Future research should examine different parenting constructs and different types of samples.

Although the polynomial regression approach to analyzing parent-child concordance has numerous strengths (Laird & De Los Reyes, 2013; Laird & Weems, 2011), it has shortcomings as well. First, in the present study, the overall sample size ($n = 226$) was a strength, but the power to detect interaction effects was still relatively low. Second, it can be difficult to correctly interpret interaction effects for regressions in which the models include quadratic, and in some cases, even higher order terms.

Third, the polynomial regression approach does not allow for examination of characteristics that are associated with the particular profile of incongruence that we found to be linked with the highest level of future depressive symptoms (i.e., parents reporting high Acceptance while their children reported low Acceptance). Recently, other statistical approaches have been suggested to fill in some of the gaps left by the polynomial regression approach, including multi-trait-multimethod confirmatory factor analysis (e.g., Jager et al., 2016), latent congruence models (e.g., Ksinan & Vazsonyi, 2016), and Actor-Partner Interdependence Models (e.g., Milan, Wortel, Ramirez, & Oshin, 2016), which should be used in future studies of parent-child congruence.

Several other limitations are relevant to the specific aims of the study. With regard to the first aim, we only tested a limited number of variables in relation to parent-child congruence. Other potential moderators would be interesting to examine such as

attachment style and perspective taking, which have been identified as significant moderators of congruence in parent-child reports of other constructs (Milan et al., 2016; Vierhaus, Rueth, & Lohaus, 2016); such variables may be related to congruence in parent-child reports of Acceptance and Psychological Control as well.

For the second study aim, we found that parent-child discrepancy in perceptions of parental Acceptance predicted change in children's depressive symptoms over time. We did not investigate potential mediators of this relation, however. Thus, our results do not explain *why* discrepant views about parental Acceptance, particularly when parents report higher levels of Acceptance than their child, predicted higher levels of depressive symptoms in children. One possibility proposed by Pelton and Forehand (2001) to explain the association they found between discrepant views of relational conflict and children's future internalizing and externalizing symptoms is that the perceptual differences may lead to an "environment of misunderstanding and frustration...[which] may set in motion poor parenting by the mother and/or rebellion by an adolescent, both of which can lead to difficulties in adolescent adjustment" (p. 12).

Another possible mediator of the link between discrepant views of parenting and children's outcomes is suggested by a cross-sectional study by Juang and colleagues (2007) showing that level of family conflict partially accounted for the relation between parent-child discrepancies in perceptions of parental control and children's depressive symptoms. Other potential mediators of the relation between specific aspects of parenting and children's psychosocial outcomes that may warrant future investigation include family functioning, parent-child conflict, other parent-child relationship variables, and parental psychopathology.

Although the current study was prospective (i.e., two time points) and we controlled for adolescents' baseline depressive symptoms in our statistical models, we still cannot make directional or causal inferences about the relation between parent-child perceptual discrepancies and children's adjustment. We conceptualized discrepancy in reports of parenting as a predictor of children's future depressive symptoms, although it is equally plausible that children's depressive symptoms could predict future parent-child discrepancy. Children with various kinds of psychological symptoms have been found to have a negative bias in their social information processing (e.g., Quiggle, Garber, Panak, & Dodge, 1992). Such bias may lead to encoding and/or interpreting parents' behaviors differently than their parent as noted by the depression-distortion hypothesis (Richters, 1992). Future studies should investigate the possible bidirectional relation between discrepancies and adjustment using multiple assessments over time.

As we were primarily interested in children who were at risk due to having a parent with depression, we focused on depressive symptoms as the outcome. Future work should expand to investigate the full range of children's mental health symptoms. Additionally, this study did not include an "objective" measure of child symptoms or functioning and instead relied on the child's report on the CDI. Future studies should examine similar questions using outcomes reported by other informants (e.g., teachers) or objective measures (e.g., number of visits to mental health practitioners during the study period, number of days absent from school due to mental health-related issues) and compare findings to those obtained when using child-and parent-reported outcomes.

The third study aim examined the relation between parents' and children's report and observations of parents' actual behaviors. This observational data came from ratings of a relatively short (10 minute) period during which parents and children were instructed to discuss a contentious issue. Although this is a commonly used task that is suitable for this type of research because it is designed to pull for a range of parenting behaviors, it is possible that the parents' behaviors during this task were not representative of how they behave in a naturalistic setting. In addition, we used composite variables based on IFIRS ratings to compare to parents' and children's reports of parenting on the CRPBI, but the content captured by the composite IFIRS variables and the CRPBI questions do not match up perfectly. Thus, the correlations between the parents and children with observers' coded ratings may have been an underestimate of the true relations.

Conclusions

Lack of congruence between parents' and children's reports is a significant methodological and substantive concern that has long been observed in the developmental psychopathology literature (e.g., Achenbach et al., 1987; Yarrow, 1963). In recent years, researchers have called for more focused studies of informant agreement that lead to better understanding of the "origins and implications of informant discrepancies" (p. 13; Laird & De Los Reyes, 2013). The present study represents an important step toward that goal by using a methodologically rigorous statistical approach (i.e., polynomial regression) to provide insight about (1) factors associated with differences in the way children and parents view two aspects of parenting (i.e., Acceptance and Psychological Control), which have been shown to be compromised in

depressed parents (Lovejoy et al., 2000), and (2) the relation of these disagreements to children's future depressive symptoms. In addition, by including observed parenting, we were able to determine the extent to which children's and parents' reports were similarly aligned with trained "objective" observers.

Clearly, there is no perfect way to assess parenting. Nevertheless, findings of this study may be helpful to researchers as they make decisions about how to assess parenting for the particular questions they are asking. Furthermore, the results also shed light on an important target (i.e., perceptual discrepancy) for interventions that aim to improve the parent-child relationship, which is especially important for children who are "at risk" due to having a parent with depression. Important issues remain regarding the meaning of parent-child incongruence, its origins, contribution to the development of child psychopathology, and interventions for reducing it.

Appendix A

Children's Report of Parental Behavior Inventory

(Adapted from Schaefer, 1965)

Note: a parallel version with identical wording except for the pronouns was given to the parents. For children participating with a male parent, "Mother" was replaced by "Father"

Acceptance scale items: 1, 3, 6, 7, 9, 12, 13, 15, 17, 18

Psychological Control items: 2, 4, 5, 8, 10, 11, 14, 16, 19

My Mother is a person who...	Circle 1, 2, or 3		
	<u>Not Like Her</u>	<u>Somewhat Like Her</u>	<u>A Lot Like Her</u>
1. makes me feel better after talking over my worries with her	1	2	3
2. changes the subject whenever I have something to say	1	2	3
3. smiles at me very often	1	2	3
4. always tries to change how I feel or think about things	1	2	3
5. often interrupts me	1	2	3
6. is able to make me feel better when I am upset	1	2	3
7. enjoys doing things with me	1	2	3
8. blames me for other family member's problems	1	2	3
9. cheers me up when I am sad	1	2	3
10. brings up my past mistakes when she criticizes me	1	2	3
11. is less friendly with me if I do not see things her way	1	2	3
12. gives me a lot of care and attention	1	2	3
13. makes me feel like the most important person in her life	1	2	3
14. will avoid looking at me when I have disappointed her	1	2	3
15. believes in showing her love for me	1	2	3
16. if I have hurt her feelings, stops talking to me until I please her again	1	2	3
17. often praises me	1	2	3
18. is easy to talk to	1	2	3
19. would like to be able to <u>tell me what to do all the time</u>	1	2	3

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