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# Examining Mother and Father (Dis)agreement of Youth Mental Health Among Ethnically Diverse Families

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**EXAMINING MOTHER AND FATHER (DIS)AGREEMENT OF YOUTH MENTAL  
HEALTH AMONG ETHNICALLY DIVERSE FAMILIES**

by

Areti Vassilopoulos, M.S.

A Dissertation Presented to the College of Psychology  
of Nova Southeastern University  
in Partial Fulfillment of the Requirements  
for the Degree of Doctor of Philosophy

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## DISSERTATION APPROVAL SHEET

This dissertation was submitted by Areti Vassilopoulos under the direction of the Chairperson of the dissertation committed listed below. It was submitted to the College of Psychology and approved in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Clinical Psychology at Nova Southeastern University.

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## Table of Contents

LIST OF TABLES .....	iv
LIST OF FIGURES .....	v
ABSTRACT .....	1
CHAPTER I: STATEMENT OF THE PROBLEM .....	3
CHAPTER II: REVIEW OF THE LITERATURE	
Externalizing Behavior Problems .....	6
Multi-Informant Approach .....	7
Sources of Informant Discrepancies .....	9
Child Characteristics .....	9
Parent Characteristics .....	10
Parent Depression .....	11
Parenting Stress .....	14
Family Characteristics .....	15
Socioeconomic Status .....	15
Ethnicity .....	16
Conclusions .....	21
Goals of this Study .....	22
CHAPTER III: METHOD	
Participants .....	24
Measures .....	24
Procedure .....	27
Data Analyses .....	27

CHAPTER IV: RESULTS

Exploration of Study Variables by Ethnicity ..... 30

Exploration of Characteristics of Difference Scores by Ethnicity ..... 34

Predicting Difference Score from Primary Study Variables ..... 37

CHAPTER V: DISCUSSION..... 42

REFERENCES ..... 53

## **List of Tables**

Table 1: Study Variables by Ethnicity: Categorical Predictors .....	30
Table 2: Study Variables by Ethnicity: Categorical Predictors .....	31
Table 3: Study Variables by Ethnicity: Dependent Variables .....	31
Table 4: Interpretive Guidelines for Analyses .....	35
Table 5: Comparison of Ratings Between Mothers and Fathers: Hispanics .....	35
Table 6: Comparison of Ratings Between Mothers and Fathers: European-Americans	36
Table 7: Comparison of Ratings Between Mothers and Fathers: African Americans...	37
Table 8: Results of Regression Analyses: Conners 3-P Defiance/Aggression .....	39
Table 9: Results of Regression Analyses: Conners 3-P Learning Problems .....	40
Table 10: Results of Regression Analyses: Conners 3-P Hyperactivity/Impulsivity ....	41
Table 11: Results of Regression Analyses: Conners 3-P Inattention .....	42

## List of Figures

Figure 1: Regression Model.....	38
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## **ABSTRACT**

Many children and adolescents in the United States experience externalizing behavior problems identified as attention-deficit/hyperactivity disorder, oppositional defiant disorder, and conduct disorder. These behavior problems cause disruptions in the youth's socioemotional functioning and academic success. The assignment of a diagnosis from the DSM-5 is often the first step in treatment planning, because many clinics and third-party payers require a diagnosis for authorization of treatment payment. However, research has repeatedly revealed that informants differ in the information they provide regarding youth mental health. While studies have separately examined the association of youth characteristics, parent characteristics, and family characteristics and informant agreement, there is a dearth of research examining the association between these variables in mother-father agreement of ethnically diverse youth. The current study addresses this gap in a sample of 88 mother-father dyads in a clinic sample of youth evaluated for the presence of externalizing behavior problems. Pearson correlations and paired *t*-tests were run to examine associations and discrepancies, respectively, between mother and father reports of youth inattention, hyperactivity/impulsivity, defiance/aggression, and learning problems. Regression analyses were run to examine the impact of child age, gender, symptom severity, ethnicity, family income, and parent mental health (i.e., depressive symptoms, parenting stress) on mother-father reporting discrepancies. Overall associations between mother and father reports of youth behavior



problems were positively correlated, and moderate to large in magnitude. Mother's depression scores, mother and father parenting stress scores, and child's symptom severity were significant predictors in some regression analyses. Child age, child ethnicity, father's depression scores, and family income were not significant predictors in the regression analyses. Results of this research contribute to the small literature base of discrepancies in parent reports in ethnically diverse youth. It further expands upon the minimal research regarding paternal caregivers. Further, it highlights the need for mental health screening of youth's parents during child psychological assessment to identify situations in which both parent reports may be necessary for appropriate assessment of youth mental health.

## CHAPTER I

### Statement of the Problem

Children and adolescents with externalizing behavioral difficulties often experience academic underachievement, as well as frequent conflicts with parents, teachers, supervisors, peers, and romantic partners. These externalizing difficulties are often ultimately categorized as attention-deficit/hyperactivity disorder (ADHD), oppositional defiant disorder (ODD), and conduct disorder (CD) according to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5; American Psychiatric Association, 2013). The aforementioned diagnoses are associated with similar poor outcomes in various domains throughout youth and adulthood. Children and adolescents with these behavioral problems are at increased risk for several problems in adjustment as adults, including antisocial behavior, impulse-control problems, substance abuse, elevated interpersonal conflict, higher probability of unemployment, anxiety, and depression (Kim-Cohen et al. 2003; Nock, Hwang, Sampson, & Kessler, 2007; Rowe, Costello, Angold, Copeland, & Maughan., 2010). Fortunately, several effective, evidence-based treatment options are available for children and adolescents experiencing these behavioral difficulties, including behavioral parent training, school-based interventions, and pharmacotherapy (Evans, Owens, & Bunford, 2014). Successful implementation of these treatments requires the correct identification of youth behavioral difficulties, highlighting the importance of accurate screening.

The assignment of a diagnosis from the DSM-5 is often the first step in treatment planning, because many clinics and third-party payers require a diagnosis for authorization of treatment payment. Further, school interventions in the form of Individualized Education Plans (IEP) and 504-Plan Accommodations require the conferral of diagnoses to determine eligibility. Diagnoses

can also aid clinicians and physicians in treatment planning, as many psychosocial and pharmacological interventions have been designed for and tested with particular diagnostic groups.

Research has repeatedly revealed that informants (e.g., mothers, fathers, youth, teachers) differ in the information they provide regarding youth symptomatology (Achenbach, McConaughy, & Howell, 1987; De Los Reyes et al., 2015; Duhig, Renk, Epstein, & Phares, 2000). Reliance on different informants ultimately results in different children identified as meeting criteria (Youngstrom, Findling, & Calabrese, 2003). It appears that informants from the same setting (e.g., mothers and fathers) rate children more similarly than do informants from different settings (e.g., mothers and teachers; Achenbach et al., 1987). Although parent responses and appraisals of their children's behaviors are similar, with agreement for externalizing and internalizing difficulties in the moderate range, they are far from congruent (De Los Reyes et al., 2015). As such, some research has examined situations in which parents are more likely to vary in their reports of youth behavior problems. Studies to date have considered diagnoses, youth age, sociodemographic status, and informant mental health as potential contributors to informant discrepancies of youth problem behaviors. However, there has been little research on inter-parental agreement and even less has examined individuals from ethnically diverse backgrounds.

Research examining the effect of various youth, informant, and familial characteristics on informant discrepancies would provide insight in situations where mother and father reports should not be viewed as interchangeable, and when extra efforts should be made to obtain reports from the other parent. Further, with the constantly growing ethnic diversification of United States, a better understanding of parent reporting styles of ethnic minorities is necessary to provide appropriate assessment and subsequent treatment to those children and families. The current study

examined the impact of family- and child-level factors on mother-father agreement of youth's externalizing behaviors in a sample of clinically-referred children.

## CHAPTER II

### Review of the Literature

Many children and adolescents in the United States exhibit externalizing behavior problems such as patterns of hyperactivity, impulsivity, defiance, aggression, and peer relational difficulties. According to population surveys conducted by the Centers for Disease Control and Prevention, approximately 11% of children four to seventeen years of age (6.4 million) have ever been diagnosed with attention-deficit/hyperactivity disorder (ADHD), per parent report from 2011 and 2012 (Visser et al., 2014). Prevalence rates for other disruptive behavior disorders such as oppositional defiant disorder (ODD) and conduct disorder (CD) range from 1% to 11% and 2% to 10%, respectively (Canino et al., 2010; Costello et al., 2005). The behavior and conduct problems associated with these diagnoses result in a disruption in the youth's socioemotional functioning and academic and vocational success. Youth with externalizing behavior difficulties experience frequent conflicts with parents, teachers, and peers. Such problems often result in significant impairment in the individual's emotional, social, academic, and occupational adjustment (American Psychiatric Association, 2013). Youth with ADHD often experience co-occurring specific learning disorders. Additionally, youth with ADHD, ODD, and CD are at a higher risk for anxiety disorders and major depressive disorder (Kessler et al., 2006; Rowe et al., 2010; Willcutt et al., 2010). As these difficulties persist into adulthood, individuals are more likely to also develop antisocial behavior, impulse-control problems, substance abuse, as well as experience unemployment (Kim-Cohen et al. 2003; Nock et al., 2007; Rowe, et al., 2010). Fortunately, effective, evidence-based psychological, psychosocial, and pharmacological interventions for these disruptive behavior disorders exist. This stresses the importance of correct assessment and identification of youth behavioral difficulties.

Correct identification of youth behavior problems and DSM-5 diagnosis assignment is often the first step in treatment planning and is crucial for several reasons. For instance, diagnoses aid clinicians in treatment planning, as many psychosocial and pharmacological interventions have been designed for and tested with particular diagnostic groups. Further, many treatment recommendations for disruptive behavior disorders such as ADHD, ODD, and CD include school-based accommodations due to the disruption in the academic setting and often co-occurring learning disorders (DuPaul & Stoner, 1994; Evans, Owens, & Bunford, 2014). School-based interventions in the form of Individualized Education Plans (IEP) and 504-Plan Accommodations require the conferral of diagnoses to determine eligibility. Additionally, several third-party payers require a diagnosis for authorization of treatment payment. Therefore, for youth and their families to obtain appropriate and effective services, appropriate diagnosis assignment is essential.

### ***Multi-Informant Approach***

The most prevalent strategy for assessing youth mental health and related variations in behaviors based on settings and situations is the multi-informant assessment approach (Kraemer et al., 2003). This approach involves obtaining reports from informants who share close relationships with the child or adolescent about whom they are providing reports, or at minimum, spend a significant amount of time observing his or her behavior (Achenbach, 2006). For youth, these informants often include one or both parents, teacher, and the youth themselves (Hunsley & Mash, 2007). In clinical practice as well as research settings, gathering reports from multiple informants generates considerable information about patients' behavioral concerns. However, when compared, the individual reports often yield different conclusions (i.e., informant discrepancies; Achenbach, 2006; De Los Reyes et al., 2015). In other words, reporters may disagree on whether a behavior or emotional problem is present or its severity. Informant

discrepancies occur across measurement methods (De Los Reyes & Kazdin, 2005) and areas of clinical practice (e.g., Achenbach et al., 1987; Clancy, McGrath, & Oddson, 2005; De Los Reyes & Prinstein, 2004), suggesting the phenomenon is of general concern to researchers interested in studying youth's behaviors, as well as clinicians interested in identifying and treating these youth. Of note, most research examining informant agreement has been conducted using majority European-American families (e.g., Achenbach et al., 1987; Duhig et al., 2000) and mothers (e.g., Chi & Hinshaw, 2002; Jensen & Weisz, 2002; Klein et al., 2010; Treutler & Epkins, 2003) as the "parent" informant.

Multi-informant research to date has focused largely on comparing reports between parents and teachers. This is due to the diagnostic criteria for ADHD, which requires that symptoms be present in two or more settings (American Psychological Association, 2013). Such studies suggest low-to-moderate rates of agreement between parents and teachers for externalizing and internalizing behavior problems (Firmin et al., 2005; Narad et al., 2015; van der Oord, Prins, Oosterlaan and Emmelkamp, 2006; Willard et al., 2006). Some studies have also examined agreement between parents (majority mothers) and clinicians and have highlighted that symptom severity and impairment consistently predicted greater rates of agreement (Klein et al., 2010). The few studies that have evaluated mother-father agreement have revealed greater congruency than parent-teacher and clinician-parent reports. Specifically, parents' responses yield moderate agreement for both externalizing ( $r = .58$ ) and internalizing ( $r = .48$ ) difficulties (De Los Reyes et al., 2015). Although parent responses and appraisals of their children's behaviors may be similar, they are far from interchangeable. To clarify contributing factors to inconsistencies in reports, some research has examined youth, parent, and family characteristics. Specifically, studies have

considered youth diagnoses, youth age, parent mental health, socioeconomic status, and ethnicity as potential contributors to informant discrepancies of youth problem behaviors.

### ***Informant Discrepancies: Child Characteristics***

#### ***Child age***

Researchers have evaluated the association between youth age and mother-father agreement of youth mental health. Younger children are more constrained in the situations in which they exhibit behavior and are more often supervised by their parents. As such, it is expected that parents agree more for behavior problems in younger children than older adolescents. Indeed, the first comprehensive, cross-informant meta-analysis including 119 studies conducted by Achenbach and colleagues (1987) supported this notion. When comparing younger children (ages 6 to 11) and adolescents (ages 12 to 19), their analyses revealed higher mother-father agreement for the younger age group ( $r = .51$ ) than the older ( $r = .41$ ). However, a subsequent meta-analysis of 60 studies evaluating mother-father correspondence of youth mental health yielded contradictory results. Duhig and colleagues (2000) found greater mother-father agreement among reports of parents for adolescents ( $r = .63$ ) than for children in early ( $r = .47$ ) and middle ( $r = .55$ ) childhood; this was true for both internalizing and externalizing behavior problems. Notably, the two meta-analyses examined the association of age and parental agreement differently. Achenbach and colleagues (1987) divided the age groups utilizing a median split, separating into two age groups (i.e., 6 to 11 years, 12 to 19 years), while Duhig and colleagues (2000) divided children into three age groups (i.e., 3 to 5 years old, 6 to 12 years old, 13 to 19 years old). Thus, inconsistent findings in studies examining the relation between child age and parent reporting discrepancies may be due to the inconsistent method across investigations.

#### ***Child gender***



A handful of studies have considered whether the rate of multi-informant agreement is impacted by the youth's gender. That is, do informants agree more or less for boys or girls regarding various diagnoses or problems? This may reflect differences in informants' expectancies for the degree of problem behaviors that they consider "normal" given their child's gender. That is, parents may rate the same degree of externalizing symptomatology among boys as less problematic than among girls, and vice versa for the relationship between gender and internalizing symptomatology due to societal norms. The current literature base does not include research regarding the relationship between child gender and mother-father agreement of externalizing behavior problems. A single, Australian study has examined the impact of gender on mother-father reporting discrepancies of their adolescents' internalizing symptoms (Hughes & Gullone, 2010). Hughes and Gullone (2010) found that mothers' depressive and stress symptoms accounted for 7% of the variance in parents' reports of sons' internalizing symptomatology (i.e., higher depression and stress symptoms yielded greater mother-father discrepancies). In addition, fathers' anxiety and stress symptoms explained additional variance (5%) in parent reports of daughters' internalizing symptoms. Notably, Hughes and Gullone (2010) did not assess the sole impact of gender on mother-father agreement and findings may not generalize to families from a different country or ethnic background. Further, the study did not evaluate mother-father agreement on youth externalizing behavior problems. Nevertheless, it suggests that fathers' and mothers' mental health may impact parent agreement in different, and potentially opposite, ways.

### ***Informant Discrepancies: Parent Characteristics***

Expanding on the influence of child characteristics on mother-father reporting discrepancies of youth mental health, the influence of parent characteristics on parent reports have been examined in the literature. Some studies have considered the effect of parent mental health

on informant discrepancies, typically between parents and other informants (e.g., teachers, child). Parental mental health may influence reporting due to the symptoms of each mental disorder or stressor (e.g., sleep disturbance, fatigue, feeling overwhelmed), or in how these symptoms influence parents' view of their children's behaviors (e.g., cognitive distortions, deliberate noncompliance vs. inattention). Researchers have examined the association between parental mental health (i.e., depression, parenting stress) on parent reports of youth mental health. If parent mental health influences parent reports of youth behavior difficulties, evaluating parental mental health when assessing youth socioemotional functioning may be necessary to find "red flags" for when additional assessment is needed or when greater efforts should be made to obtain reports from the other parent.

### *Depression*

Depression as described in the DSM-5 (American Psychological Association, 2013) involves sleep disturbances (i.e., hypersomnia, insomnia), fatigue or loss of energy, and the inability to think or concentrate. These symptoms make parenting more difficult, as they influence the way in which parents care for and attend to their children. That is, caregiver-child interactions might be different due to the caregiver's depressed mood, causing behavior problems that might not have existed otherwise (Richters, 1992). Depression may also influence or negatively "distort" the way one views the world (i.e., cognitive distortions). Cognitive distortions are described as exaggerated or irrational, negative thought patterns that perpetuate the effects of psychopathological states, such as depression. Common cognitive biases include catastrophizing (i.e., taking an event of concern and exaggerating it out of proportion to the point of negative emotional impact; if their child is sad once, they may be depressed and it will be difficult to ever help them feel better), overgeneralization (i.e., establishing a broad rule based on few limited

occurrences; a child fails to comply with one command and the parent believes this mean he is noncompliant), and labeling (i.e., attaching a label to someone after a negative experience; identifying a child as having ADHD-C because they were not sitting still one instance), to name a few. The association between informants' mental health status and informant discrepancies of youth's mental health has been examined in the literature. Generally, the conceptual rational work is grounded in the depression-distortion hypothesis, which posits that when an informant experiences low mood, he or she is more likely to attend to, encode, and thus rate the child's behavior with greater negative descriptors, relative to neutral or positive descriptors (Richters, 1992; Youngstrom, Izard, & Ackerman, 1999).

A fundamental concern with research on the depression-distortion hypothesis is that empirical evidence is often inconsistent. Many studies have tested the depression-distortion hypothesis, with primarily European-American samples, and some studies have found that informants experiencing depressive symptoms provide reports that indicate greater levels of youth mental health concerns relative to reports obtained from other informants (De Los Reyes & Kazdin, 2005). However, a number of studies have failed to find such support (e.g., Conrad & Hammen, 1989; De Los Reyes, Goodman, Kliever, & Reid-Quiñones, 2010; De Los Reyes et al., 2011a; Hawley & Weisz, 2003; Weissman et al., 1987). Importantly, most of these studies were conducted solely or mostly with mother informants. A single study has evaluated the relationship between parental mental health and their reports of youth symptom presence while including both mothers and fathers. Hughes and Gullone (2010) found that mothers reporting higher levels of depressive symptoms reported higher levels of internalizing symptoms in their sons than did fathers. Fathers' depressive symptoms were not significantly related to parent reporting of son or daughter symptomatology.

Some studies have used experimental designs and constrained other possible confounding factors (e.g., context of observations) to further examine the depression-distortion hypothesis. Jouriles and Thompson (1993) experimentally provoked negative mood states in parents before they viewed a previously recorded task involving a “clean-up” activity with their child. They had both parents and independent observers rate the child’s behavior during the task. Parents and independent observers rated children’s behavior similarly, suggesting that a negative mood state does not skew parents’ perceptions. However, subsequent researchers found conflicting results through their experimental study with mothers with depressive symptoms. Youngstrom, Izard, and Ackerman (1999) examined the relation between mothers’ depressive mood symptoms and their reports of children’s behavior during the completion of a frustration task. Reports from mothers and independent observers of children completing a frustration task were compared. Mothers’ with elevated depressive symptoms rated their child’s behavior as worse when compared to independent observers, suggesting that depression does indeed negatively skew mothers’ perspectives.

Overall, research evaluating informant discrepancies of youth symptoms with clinical, community, and experimental designs yield inconsistent support for the depression-distortion hypothesis. This may suggest that depression and mood symptoms may not entirely account for the presence of informant discrepancies. For instance, parental stress levels may influence the rating of youth externalizing behavior problems over and above depression. Indeed, in a study conducted in the Netherlands, van der Oord and colleagues (2006) found that parenting stress, and not depressed mood, was significantly associated with low agreement between parents (86.2% mothers) and teachers regarding youth inattentive, hyperactive/impulsive, and oppositional behavior. To provide clarification, some studies have further evaluated the impact of stress on informant discrepancies.

### *Parenting stress*

The notion of stress can include several kinds of stress, including general life stress, psychosocial adversity through negative life events, or parenting stress (Webster-Stratton, 1990). Some authors have studied general life stress or psychosocial adversity in families of children with externalizing behavior difficulties, and have reported inconsistent results (e.g., Biederman et al., 1995; Murphy & Barkely, 1996; Hughes & Gullone, 2010). Most research with children with externalizing difficulties and stress levels of parents has evaluated parenting stress, using almost exclusively the Parenting Stress Index (Abidin, 2012; e.g., Anastopoulos, Guevremont, Shelton, & DuPaul, 1992; Breen & Barkley, 1988; Pisterman et al., 1992; Wells et al., 2000). Parenting stress has been defined as a specific type of stress perceived from the demands of being a parent (Abidin, 2012), involving a set of processes that result in aversive psychological and physiological reactions, because of potentially unsuccessful attempts to adapt to the demands of parenthood (Samiei et al., 2015). Parenting stress is multidimensional, including parents' subjective emotional experiences, thoughts and expectations for parenting, as well as perceived lack of control and self-doubt.

The relationship between parenting stress and ratings of child externalizing disorders has been examined to some extent, but its understanding is limited. Some researchers have suggested that child externalizing behavior problems result in parenting stress (e.g., Fischer, 1990; Mash & Johnston, 1990). Researchers have found that parenting stress can be reduced without necessarily requiring improvements in child behavior (Pisterman et al., 1992), suggesting that parenting stress may be present for reasons beyond the presence of child behavior problems. Indeed, Wells and colleagues (2000) failed to find significant differences in parenting stress among intervention groups (i.e., medication only, behavior parent training, combined medication and behavior parent

training), although the combined treatment condition showed greater improvements in child externalizing behavior problems (i.e., ADHD). Overall, research suggests a bidirectional association between youth externalizing behavior problems and parenting stress (Johnston & Mash, 2001).

One study examined the association between parenting stress and parent reports of youth mental health. Langberg and colleagues (2010) found that, overall, when mothers and fathers were both experiencing low levels of parenting stress, mothers rated their children higher on externalizing behavior problem domains than fathers. However, when both mothers and fathers were experiencing moderate levels of stress, they evidenced greater agreement in their responses. Finally, when fathers and mothers were both experiencing high levels of stress, fathers rated their child's behavior difficulties as more severe than their mothers (Langberg et al., 2010). These results suggest differential discrepancies over the range of parenting stress for mothers and fathers.

### ***Informant Discrepancies: Family Characteristics***

#### ***Socioeconomic status***

Parental behaviors and relationship may differ not only by youth and parental characteristics, but by socioeconomic status (SES; Mosley & Thomson, 1995). For that reason, the potential associations among SES, ethnicity and reporter discrepancies has been evaluated by several studies. A meta-analysis of inter-parental (i.e., mother-father) agreement found lower levels of agreement between mothers and fathers for families of lower socioeconomic status (SES;  $r = .30$ ) when compared to their middle SES counterparts ( $r = .63$ ; Duhig et al., 2000). This may be a consequence of the lack of time available for parents to spend and observe their children when they are of lower SES, potentially working longer hours to sustain their family. Some studies since then examining a variety of informant pairs (parent-child, parent-teacher) failed to find a relation

between SES and informant discrepancies (Chi & Hinshaw, 2002; Jensen & Weisz, 2002; Treutler & Epkins, 2003). However, the SES for families in those studies was restricted, with most participants of lower SES, potentially contributing to the null findings. Further, a majority of the research was conducted with European-American families, limiting generalizability to other cultures and ethnicities. The association or interaction between SES and ethnicity may further elucidate interrater agreement of youth psychopathology.

### ***Ethnicity***

According to the DSM-5, differences in prevalence rates across regions for youth externalizing behavior difficulties (e.g., ADHD, ODD, CD) may be attributable to different diagnostic practices (Polanczyk, de Lima, Horta, Biederman, & Rohde, 2007), as well as to cultural variation in attitudes toward or interpretations of children's behaviors (American Psychiatric Association, 2013). Clinical identification rates for ADHD in the United States for African American and Latino populations tend to be lower than for European-American populations (Froehlich et al. 2007; Kessler et al. 2006; Miller, Nigg, & Miller. 2009). Informant symptom ratings may be influenced by the cultural group of the child and the informant (Mann et al. 1992; Miller et al., 2009), suggesting that culturally appropriate practices are relevant in assessing and understanding externalizing behavior difficulties in youth.

The ecological context in which families live and parents' cultural background shape the family socialization processes (Garcia Coll et al., 1996; Harrison, Wilson, Pine, Chan, & Buriel, 1990). Minority families of various ethnicities in the United States face similar ecological challenges (e.g., poverty, segregation, racism) and may respond to these challenges by developing adaptive strategies with implications for socialization goals and developmental outcomes (Garcia Coll et al., 1996; Harrison et al., 1990). The influence of ethnicity on parents' reports of youth

mental health may be the function of (1) the expectations placed on youth by their parents, and (2) the potentially different roles mothers and fathers play in child-rearing.

*Hispanic/Latino youth expectations.* “Latino” is a broad term used to describe a diverse group of people from several different countries of origin. Research has been conducted with various groups within the Latino community (e.g., Puerto Ricans, Mexicans, Cubans), and often reveals similar cultural concepts regarding child rearing and parenting roles. Specifically, the themes of “respeto” (i.e., proper demeanor) and “familismo” (i.e., family-oriented) are apparent across the Latino culture regardless of country of origin. “Respeto” refers to knowing the level of courtesy and decorum required in given situations and includes honesty, respectfulness, obedience, and responsibility in youth (Harwood et al., 1995). Further, “familismo” posits that Latinos are relatively more family oriented than European-Americans (Vega, 1990). Consistent with these themes, research has revealed that, compared to European-American families, Latino parents exert higher degrees of direct control over their adolescents’ (i.e., ages 12 to 18) behavior, regarding activities within and outside of the family context (Bulcroft, Carmody, & Bulcroft, 1996).

The association between these family views on parents’ expectations for youth is variable at first glance. For instance, Cardona, Nicholson, and Fox (2000) failed to find differences in expectations in child competencies (e.g., my child should... “be able to follow three-part directions, be old enough to take a bath without being watched, understand taking turns during games, my child should be quiet when I’m talking to another adult”) between Hispanic and European American mothers. Notably, this study combined expectations for compliance and manners, with behaviors often dependent on development. When these two are examined separately in a subsequent study, differences in expectations between Latino and European-American parents are revealed. Specifically, Schulze and colleagues (2001) found that, compared



to European-American mothers, middle-SES Puerto Rican mothers placed more emphasis on instrumental independence (i.e., the ability to perform tasks without an adult's help), and less emphasis on aspects of autonomy related to self-esteem. Similarly, Azmitia, Cooper, Garcia, and Dunbar (1996) examined lower-SES European-American and Mexican American families and found that Latino parents had higher expectations for self-reliance regarding the completion of household chores and everyday tasks. However, other studies evaluating middle- and lower-SES Puerto Rican mothers' expectations regarding the attainment of developmental milestones have found that Puerto Rican mothers expect their infants to achieve specific social and self-care milestones (e.g., self-feeding, self-dressing) at a later age when compared to European-American mothers (Pachter and Dworkin, 1997; Schulze et al., 2001). Similarly, Savage and Gauvain (1998) examined low-income Mexican American and European-American parents of school-age children and found that Latino parents reported older ages than European American parents for when their children were or would be able to participate in specific decisions regarding after-school activities and personal care. Overall, these findings suggest a greater emphasis among Latino families on interdependence, both in terms of expectations that the child contribute more to the household at an earlier age but assert his or her own agency at a later age.

***Hispanic/Latino parental expectations.*** In Latino cultures, the male gender role has often been characterized by the “machismo” concept, wherein men avoid work labeled feminine, such as childrearing or housecleaning; emphasize respect and honor; and having absolute authority within the family (Andrade, 1992; DeYoung and Zigler, 1994; Gutmann, 1994; Ingoldsby, 1991; Zaitchik and Mosher, 1993). When directly examining the role of fathers in childrearing among Latino families, researchers have found little support for these stereotypic views of Latino masculinity. Specifically, Caldera, Fitzpatrick, and Wampler (2002) found that Mexican-

American fathers in their study had an egalitarian view of parenting, expressing a desire for both parents to be involved and provide input in caring for their children. Research also suggests that Latino fathers spend a similar amount of time with their children when compared to European American Fathers. Specifically, Roopnarine and Ahmeduzzaman (1993) found that Puerto Rican fathers and European American fathers estimated spending a similar proportion of time as primary caregivers for their children (i.e., 37% and 33%, respectively). Suggesting, perhaps, that parenting roles between Latino and European American ethnic groups are quite similar in nature.

*African American youth expectations.* Minimal research has been conducted regarding similar familial childrearing practices and themes. The current literature base suggests that, similar to Latino families, African American families place high value on respecting, obeying, and learning from elders and parents (Smetana & Gaines, 1999; Willis, 1992). Further, in a study with African American adolescent girls and their mothers, mothers reported expectations for their daughters' autonomy while concurrently expecting closeness, loyalty, and attachment to their parents and community (Cauce et al., 2002). Similar to the Latino culture, interdependence is an underlying theme, with self-efficacy and contribution to family needs is promoted, while independence from family is discouraged.

*African American parental expectations.* Further in line with the Latino culture, a salient African American tradition is that childrearing is a communal task to be shared with all members of the family and community (Franklin & Boyd-Franklin, 1985; Garcia-Coll, Meyer & Brillon, 1995; McAdoo, 1978). Research further indicates that African American fathers tend to share the "provider role" (i.e., economic sustainability) with their spouse (McAdoo, 1986, 1988a). In addition, African American fathers have reported sharing major childrearing decisions and responsibilities with their spouse (Mack, 1978; McAdoo, 1993), suggesting parenting roles within

African American families may be similar to those of other ethnic groups. Notably, research in this area is minimal, with the majority of studies examining African American parenting in the context of single-parent households.

***Informant discrepancies: Ethnicity***

The role of ethnicity on multi-informant agreement of youth symptomatology has been considered in some studies, but research in this area is sorely lacking. In ethnic minority families, youth tended to report more externalizing and internalizing problems than did their parents (Lau et al., 2004). This may be a function of ethnic differences in parental monitoring or ethnic differences in familiarity with Western conceptions of child mental health. European-American parents may have more exposure to education about psychopathology and may thus be more vigilant of behavior problems than ethnic minority parents (Li, Su, Townes, & Varney, 1989). It is also possible that ethnic minority parents shouldering the burdens of migration or discrimination may be less sensitive to their children's distress and thus less apt to notice symptoms (Cauce et al., 2002). Further, some religious and ethnic groups (e.g., Christianity, African Americans) promote religious conceptualization of mental health and family cohesion (Nicolas, DeSilva, Grey, & Gonzalez-Eastep, 2006; Ryan, Hawkins, Parker, & Hawkins, 2004).

Most research to date regarding mother-father agreement of youth mental health involves all or majority European-Americans, making it difficult to discern ethnic influences on informants' reporting in a sample with underrepresented minorities. In terms of the association of ethnicity and mother-father agreement of child symptomatology, a meta-analysis conducted by Duhig and colleagues (2000) failed to reveal a significant difference in average effect sizes among three different categories of ethnicities: European-American, "diverse ethnicity," and Jewish for internalizing and externalizing disorders. These findings may not generalize to other ethnicities,

as it does not include many prominent ethnic minorities found in the United States (e.g., Hispanic/Latino, African American, Caribbean, Asian).

Per the latest U.S. Census in 2014, the non-Hispanic “White” population is the majority group, accounting for more than a 50 percent share of the nation’s total population. However, by 2044, the share of this group is projected to be at 44 percent. Ethnic groups of “two or more races,” Hispanic, Pacific Islander, “Black,” Asian, American Indian and Alaskan native origin will experience marked increases (Colby & Ortman, 2014). As such, the field of psychology would benefit from focusing research efforts to inform best practice in working with these rapidly growing and understudied subsets of the general population.

### *Conclusions*

Parent reports of youth mental health are important, as they are often considered and heavily weighted in psychosocial assessment and diagnostic assignment. Most often, “parent report” refers to maternal reports of youth behavior problems, both in the research as well as clinical practice (De Los Reyes et al., 2015; Duhig, et al., 2000). Although some research to date has revealed moderate levels of agreement between mothers’ and fathers’ reports of youth internalizing and externalizing behavior difficulties, it appears the two are far from congruent (Achenbach et al., 1987; De Los Reyes et al., 2015; Duhig, et al., 2000). Further, some research to date has revealed situations and characteristics that influence mothers’ and fathers’ reports of their child’s mental health (e.g., Achenbach et al., 1987; Duhig et al., 2000; Grills & Ollendick, 2003; Hughes & Gullone, 2010; Langberg et al., 2010). A better understanding of situations in which parent reports deviate from each other will help identify situations in which greater effort should be made to obtain reports from both parents, despite the additional time-intensive and costly measures.

Notably, to date, research has examined and identified youth age, parental depression, parenting stress and socioeconomic status and contributors to multi-informant disagreement of youth mental health. Few studies have specifically examined these characteristics in the context of mother-father reports. Several researchers (e.g., Duhig, Renk, Epstein, & Phares, 2000; Moreno, Silverman, Saavedra, Phares, 2008) have discussed how lack of father involvement in psychological research studies is a problem given that fathers, like mothers, play a critical role in their child's development and in the development and maintenance of child internalizing and externalizing behavior problems (e.g., Connell & Goodman, 2002).

The lack of father involvement in psychological research has resulted in an incomplete picture of the familial context involved in child and adolescent psychopathology, especially in the assessment of youths' internalizing and externalizing behavior problems. Further, multi-informant research has been primarily conducted with European-American families limiting its generalizability to the ethnically diverse populations in the United States. Given the ever-growing population of ethnic minorities (e.g., Hispanics, African Americans), which often accounts for the majority population of a given region or city, the lack of research in this area is concerning. For instance, in Miami, Florida, Hispanics account for 67.4% of the city's population, with "Blacks" (e.g., African American, Haitian American, etc.) accounting for 19.8% and European-Americans accounting for 11.3% (U.S. Census Bureau, 2016). As such, the field of psychology would benefit from focusing research efforts to inform best practice in working with these rapidly growing and understudied subsets of the general population.

### *Goals and Hypotheses of this Study*

The primary goal of the current study was to examine the associations between family-level, child-level, and parent-level factors and mother-father disagreement of youth externalizing behavior problems. Research to date is inconclusive regarding the impact of child gender (i.e., boys and girls), parent depressive symptoms (Beck Depression Inventory [BDI-II]; Beck, Steer, & Brown, 1996), and ethnic backgrounds (i.e., European-American, Hispanic, African American). The impact of these variables on parent discrepancy will be evaluated, but specific a priori hypotheses will not be considered.

For other predictors (e.g., child age), the following a priori hypotheses will be tested. Parent disagreement, as measured by difference scores on four of the Conners 3-P subscales (i.e., inattention, hyperactivity/impulsivity, learning problems, defiance/aggression) will be:

- (a) predicted by child age, such that older children will have higher rates of parent disagreement
- (b) predicted by parenting stress (Parenting Stress Index [PSI-4-SF] Total Stress Scale; Abidin, 2012), such that greater levels of stress will predict greater levels of parent disagreement
- (c) predicted by symptom severity, such that youth with lower levels of symptom severity will have higher rates of parent disagreement
- (d) predicted by family income, such that families with lower income will have higher rates of parent disagreement

## CHAPTER III

### Method

#### *Participants*

Mothers and fathers included in the current study sought services from a university-based clinic in south Florida for a psychoeducational evaluation to clarify their child's diagnostic status and consider a diagnosis of ADHD. The data utilized were from an archival database created at the university-based clinic. All of the data collected were de-identified prior to being entered into the database. Selection criteria were as follows: (1) measures completed by both mother and father, and (2) child between the ages of 6 and 18. The restricted age range was imposed based on the age range for the Conners 3<sup>rd</sup> Edition, Parent Version (Conners 3-P). Only those cases that met the inclusion criteria were chosen from the database for use in the present study. The final sample included 88 parent dyads of 70% boys and 30% girls, from ethnically diverse backgrounds (e.g., 44% Hispanic/Latino, 38% European-American, 17% African American) between the ages of 6 and 16 ( $M = 10.12$ ,  $SD = 2.47$ ).

#### *Measures*

At their initial clinic visit, mothers and fathers were asked to provide demographic information, as well as complete the Conners 3-P, the Parenting Stress Index, 4<sup>th</sup> Edition Short Form (PSI-SF-4), and the Beck Depression Inventory, 2<sup>nd</sup> Edition (BDI-II). Studies on use and interpretation of multiple informants' reports recommend measures completed by multiple informants hold item content constant in an effort to rule out methodological differences among reports when drawing inferences about incremental validity (De Los Reyes et al., 2013).

### ***Demographic information***

The sociodemographic characteristics of the participants includes child age, child gender, ethnicity, and family income. This information was collected during the initial telephone contact with parents as well as at the first clinic visit. Given the nature of the income screening to determine fee-for-service on a sliding scale in the clinic, income was categorized in 8 brackets in the archival dataset (i.e., \$0 to \$10,000; \$10,001 to \$20,000; \$20,001 to \$30,000; \$30,001 to \$40,000; \$40,001 to \$50,000; \$50,001 to \$60,000; \$60,001 to \$70,000; Over \$70,000). Demographic characteristics were used as descriptive data, as well as predictors in the regression analyses. Further, ethnicity was used to divide the sample into three groups (i.e., Hispanic, European-American, African American) across some analyses.

### ***Conners Third Edition, Parent Version (Conners 3-P)***

Mothers' and fathers' ratings of their child's behavior problems were assessed using the Conners 3<sup>rd</sup> Edition, Parent Version (Conners 3-P; Conners, 2008). The Conners 3-P consists of 110 questions and is a narrow-band, multi-informant measure for attention-deficit/hyperactivity disorder (ADHD) and related symptoms and common comorbid disorders (e.g., oppositional defiant disorder, conduct disorder). The Conners 3-P has a direct link to the diagnostic criteria presented in the DSM-5 and yields multidimensional index scores. For the present study, scores on the Inattention (e.g., "Has trouble staying focused on one thing at a time;" 10 items), Hyperactivity/Impulsivity (e.g., "Blurts out the first thing that comes to mind;" 14 items), Learning Problems (e.g., "Reads slowly and with a lot of effort;" 9 items), and Defiance/Aggression (e.g., "Actively refuses to do what adults tell him/her to do;" 14 items) scales were used. Raw scores were converted to *T*-scores ( $M = 50$ ,  $SD = 10$ ). The use of *T*-scores allows for the description of informant agreement and discrepancies in reported levels of youth externalizing symptoms relative



to population norms on a metric frequently used in clinical and research practice (Hughes & Gullone, 2010). Normative data for the Conners 3-P show test-retest reliability coefficients range from .70 to .98 for two- to four-week administrations. Although item-level information was unavailable for the current study, normative data suggest acceptable internal consistency reliabilities for subscales ranging from .77 to .98 (Conners, 2008).

***Parenting Stress Index, Fourth Edition Short Form (PSI-4-SF)***

Mothers' and fathers' symptoms of parenting-related stress were assessed using a Parenting Stress Index, 4<sup>th</sup> Edition Short Form (PSI-4-SF; Abidin, 2012). The PSI-4-SF is a 36-item self-report questionnaire of parenting-related stress. Response options range from 1 (strongly agree) to 5 (strongly disagree). The 36 items comprise three domains: Parental Distress (e.g., "I feel trapped by my responsibilities as a parent"), Parent-Child Dysfunctional Interaction (e.g., "My child rarely does things for me that make me feel good"), and Difficult Child (e.g., "My child seems to cry and fuss more than most children"), which combine to form a Total Stress scale. Elevations on the PSI-4-SF subscales above the 85<sup>th</sup> percentile (i.e., score of 88 or above) are considered clinically significant. Item-level information was unavailable for the current study. The normative data include mothers (n = 534) and fathers (n = 522). The PSI-4-SF has acceptable test-retest reliability (range = .68 - .85) and internal reliability (range = .80 - .87; Abidin, 2012).

***Beck Depression Inventory, Second Edition (BDI-II)***

Parents' symptoms of depression were evaluated using the Beck Depression Inventory, 2<sup>nd</sup> Edition (BDI-II). The BDI-II (Beck et al., 1996) is a 21-item self-report scale that taps symptoms of depression, including affective, cognitive, behavioral, somatic, and motivational components. Items are rated on a 4-point Likert-type scale (e.g., 0 = "I do not feel sad", 1 = "I feel sad much of the time," 2 = "I am sad all of the time," 3 = "I am so sad or unhappy that can't stand it") and are

endorsed if present within the past two weeks, including the day that the measure was completed. The following scores can be used to indicate a general level of depression: 0 to 13 (*No or Minimal Depression*), 14 to 19 (*Mild Depression*), 20 to 28 (*Moderate Depression*), and 29 to 60 (*Severe Depression*). Item-level information was unavailable for the current study. The BDI-II has excellent internal consistency ( $\alpha = .82$ ), test-retest reliability ( $r = .92$ ), and convergent validity with the Geriatric Depression Scale ( $r = .78$ ; Beck et al., 1996).

### ***Procedure***

The data utilized in the present study are from an archival database created at the university-based clinic. All the data were de-identified prior to being entered into the database. Consequently, the present study was exempted from further review by the university's institutional review board.

### ***Statistical Analyses***

All analyses were performed using IBM SPSS Version 24.0 (IBM Corp., 2016). To describe the sample, descriptive analyses for demographic information were conducted. In the first set of exploratory analyses, associations between primary study variables and family ethnicity (i.e., Hispanic, European-American, African American) were examined. Chi-square tests were used for categorical variables (i.e., child gender, income, symptom severity), and one-way ANOVAs were used for continuous variables and measures (i.e., age, mother PSI, father PSI, mother BDI-II, father BDI-II).

Next, Pearson correlations were used to assess parental agreement between mothers and fathers for the Conners-3 Inattention, Hyperactivity/Impulsivity, Learning Problems, and Defiance/Aggression scales. Discrepancies in mother and father ratings on each of the Conners 3-P scales (i.e., Inattention, Hyperactivity/Impulsivity, Learning Problems, Defiance/Aggression)

were assessed using paired sample *t*-tests. These two sets of analyses were conducted because they provide different insights into level of inter-parental agreement. Specifically, correlations assessed the associations between reporters (i.e., mothers and fathers) and paired sample *t*-tests assessed for mean differences between reporters (and associations and mean differences are not necessarily related to one another).

In the final set of analyses, four hierarchical linear regression models (Kleinbaum, Kupper, Nizam, & Rosenberg, 2013) were run to examine possible predictors of observed discrepancies in mother-father ratings. The difference between mother and father *T*-scores on each scale was used as the dependent variable (De Los Reyes & Kazdin, 2004). A positive mother-father discrepancy score indicated that mothers reported higher levels of symptoms than fathers; a negative mother-father discrepancy score indicated that mothers reported lower levels of symptoms than fathers. Two dummy codes were computed for ethnicity, with European-Americans as the reference group (i.e., European-American vs. Hispanic, European-American vs. African American). Ten predictor variables were entered simultaneously into the regression: two dummy codes representing ethnicity (as described above), family income, youth age, youth gender, symptom severity (i.e., score of  $\geq 70$  from mother or father), maternal parenting stress (PSI-4-SF Total Score), paternal parenting stress (PSI-4-SF Total Score), maternal depression (BDI-II total score), and paternal depression (BDI-II total score). One hierarchical linear regression model was run for the difference scores of four dependent variables: Conners 3-P Inattention, Conners 3-P Hyperactivity/Impulsivity, Conners 3-P Learning Problems, and Conners 3-P Defiance/Aggression (Figure 1).

Hierarchical linear regression models were run since some of the variables were grouping variables (e.g., ethnicity) with multiple associated codes. Analyzing the variables through a

hierarchical linear regression allowed for the test to assess each variable independently as opposed to testing the grouping variable itself. Further, this form of regression allowed for meaningful output in the form of effect size estimates. Lastly, interactions were run between ethnicity and all predictor variables (e.g., child age, child gender, family income, symptom severity, mother's PSI-4-SF, father's PSI-4-SF, mother's BDI-II, father's BDI-II) and any nonsignificant findings were dropped from the model.

## CHAPTER IV

### Results

#### *Exploration of Study Variables by Ethnicity*

In the first set of analyses, associations between primary study variables (e.g., child gender, income, symptom severity, age, mother and father PSI-4-SF, mother and father BDI-II) and family ethnicity were examined. Chi-square tests were used for categorical variables (e.g., child gender, income; Table 1) and one-way ANOVAs were used for continuous measures (e.g., PSI-4-SF, BDI-II; Table 2). Descriptive statistics for dependent variables (i.e., Conners 3-P Scales) are presented in Table 3.

Table 1  
*Study Variables by Ethnicity: Categorical Predictors*

	Hispanic ( <i>n</i> =39)		European-American ( <i>n</i> =34)		African American ( <i>n</i> =15)	
	<i>n</i>	Percent	<i>n</i>	Percent	<i>n</i>	Percent
Child gender						
Males	32	82.1%	20	58.8%	10	66.6%
Females	7	17.9%	14	41.2%	5	33.3%
Family income						
0-10,000	0	0%	1	2.90%	0	0%
10,001-20,000	3	7.70%	0	0%	1	6.70%
20,001-30,000	7	17.95%	5	14.70%	1	6.70%
30,001-40,000	5	12.80%	5	14.70%	3	20.00%
40,001-50,000	3	7.70%	0	0%	0	0%
50,001-60,000	3	7.70%	2	5.90%	1	6.70%
60,001-70,000	5	12.82%	5	14.71%	2	13.30%
Over 70,000	13	33.30%	16	47.10%	7	46.70%

Table 2  
*Study Variables by Ethnicity: Continuous Predictors*

	ANOVA Statistics			Hispanic ( <i>n</i> =39)		European-American ( <i>n</i> =34)		African American ( <i>n</i> =15)	
	<i>F</i>	<i>p</i>	<i>R</i> <sup>2</sup>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Child age	$F(2, 85) = .435$	.649	.0102	10.53	4.06	10.35	3.74	9.59	2.58
Mother PSI	$F(2, 79) = .320$	.727	.0081	79.43	20.17	81.56	26.84	75.62	17.80
Father PSI	$F(2, 79) = .503$	.606	.0127	77.87	21.70	76.16	22.08	71.00	17.84
Mother BDI	$F(2, 82) = .880$	.419	.0215	7.68	8.03	9.33	8.51	6.13	7.08
Father BDI	$F(2, 80) = .086$	.917	.0022	5.86	6.75	5.42	4.76	5.20	4.90

*Note.* PSI=Parenting Stress Index, 4<sup>th</sup> edition Short Form; BDI= Beck Depression Inventory 2<sup>nd</sup> Edition.

Table 3  
*Study Variables by Ethnicity: Dependent Variables*

	Hispanic ( <i>n</i> =39)				European-American ( <i>n</i> =34)				African American ( <i>n</i> =15)			
	Mother		Father		Mother		Father		Mother		Father	
Conners Scales*	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Inattention	76.10	13.83	70.10	15.41	74.47	16.03	74.47	16.03	73.80	14.63	70.87	15.80
Hyperactivity/Impulsivity	73.64	16.67	67.82	14.45	73.62	17.64	72.09	18.15	59.67	12.27	55.00	19.02
Learning Problems	65.08	13.97	61.82	13.41	67.59	15.53	64.26	13.86	63.27	17.32	59.47	13.73
Defiance/Aggression	60.64	16.94	61.21	14.97	70.50	23.57	68.97	23.88	54.73	12.37	52.53	10.76

*Note.* \**T*-scores.

The association between family ethnicity and child gender was nonsignificant,  $\chi^2(2) = 4.833, p = .089$ , although girls were under-represented in the Hispanic group (17.9%) in relation to the European-American (41.2%) and African-American (33.3%) groups. The association between family ethnicity and family income was also nonsignificant,  $\chi^2(14) = 13.289, p = .504$ , although the Hispanic group was under-represented in the two highest income classes (46.1%) in relation to European-Americans (61.8%) and African-Americans (60%). The association between family ethnicity and symptom severity was nonsignificant for Inattention,  $\chi^2(2) = 1.178, p = .555$ , Hyperactivity/Impulsivity,  $\chi^2(2) = .713, p = .700$ , Learning Problems,  $\chi^2(2) = .708, p = .717$ , and Defiance/Aggression,  $\chi^2(2) = .452, p = .798$ . In general, family ethnicity was not associated with child gender, family income, or mother/father report of child symptom severity.

One-way ANOVA models were also nonsignificant and effects were small in magnitude, with  $R^2$  values ranging from .002 to .022. Child age ranged from 6.33 to 16.75, with quartiles at 8.2 (25<sup>th</sup> percentile), 9.9 (50<sup>th</sup> percentile) and 12.0 (75<sup>th</sup> percentile). Average child age was between 9 and 10 across the ethnic groups. Mother and father parenting stress means were below the clinically significant cut-off (i.e., score of 88) across ethnic groups. Parents' mean stress scores appear most similar between the Hispanic and European-American parents. Parents' depression scores were also similar, with means below the *Minimal Depression* range for all three groups as outlined in the BDI-II manual (i.e., scores of 0 to 13). Overall, child age, parent stress, and parent depression did not vary by ethnic group in the present sample.

### ***Exploration of Characteristics of Difference Scores by Ethnicity***

In the second set of analyses, correlations between parent reports of the outcomes, as well as mean differences between parent reports of the outcomes were examined separately for the three ethnicity groups. For correlations, the following interpretive guidelines were used to qualify

strength of association: .10 = small, .30 = moderate, .50 = large (Table 4). For level (i.e., mean) differences, quantified by Cohen’s *ds*, the following interpretational guidelines were used to describe the magnitude of effect: .20 = small, .50 = moderate and .80 = large (see Cohen, 1988; Table 4).

Table 4  
*Interpretive Guidelines for Analyses*

	Correlation ( <i>r</i> )	Cohen’s <i>d</i>
Small	.01	.20
Moderate	.30	.50
Large	.50	.80

***Hispanics***

Pearson correlations between mothers and fathers for the Conners 3-P Inattention, Hyperactivity/Impulsivity, Learning Problems, and Defiance/Aggressions were large (*rs* ranged from .56 – .74) and statistically significant (*ps* < .001; Table 5). This indicates proportion of shared variance between parent reports ranged from 31% to 55%. Results from the paired *t*-tests on each of the Conners 3-P scales revealed that mothers rated their children significantly higher (more severe) than fathers did on the Conners 3-P Inattention (*d* = .41) and Hyperactivity/Impulsivity (*d* = .38) scales. Parent discrepancy was nonsignificant for Learning Problems (*d* = .24) and Defiance/Aggression scale (*d* = -.04). Significant discrepancies in mother and father ratings were small-to-moderate for Inattention and Hyperactivity/Impulsivity scales.

Table 5  
*Comparison of Ratings Between Mothers and Fathers: Hispanics (n=39)*

<i>Conners Scales</i>	Correlation		Paired <i>t</i> -Test	
	<i>r</i>	<i>t</i>	<i>p</i>	<i>d</i>
Inattention	.68*	3.16	.003	.41
Hyperactivity/Impulsivity	.56*	2.49	.018	.38
Learning Problems	.62*	1.86	.072	.24
Defiance/Aggression	.74*	-.51	.616	-.04

Note. \* *p* < .001.



### ***European-Americans***

Pearson correlations between mothers and fathers for the Conners 3-P Inattention, Hyperactivity/Impulsivity, Learning Problems, and Defiance/Aggressions were large ( $r$ s ranged from .68 – .77) and statistically significant ( $ps < .001$ ; Table 6). This indicates proportion of shared variance between parent reports ranged from 46% to 59%. Results from the paired  $t$ -tests on each of the Conners 3-P scales revealed that, although mothers rated their children higher (more severe) than fathers did on all Conners 3-P scales these differences were not statistically significant and were generally small in magnitude: Inattention ( $d = .18$ ), Hyperactivity/Impulsivity ( $d = .09$ ), Learning Problems ( $d = .23$ ), Defiance/Aggression ( $d = .06$ ).

Table 6  
*Comparison of Ratings Between Mothers and Fathers: European-Americans (n=34)*

<i>Conners Scales</i>	Correlation		Paired $t$ -Tests		
	$r$	$t$	$p$	$d$	
Inattention	.74*	1.40	.172	.18	
Hyperactivity/Impulsivity	.79*	.81	.423	.09	
Learning Problems	.68*	1.78	.085	.23	
Defiance/Aggression	.77*	.46	.649	.06	

Note. \*  $p < .001$ .

### ***African Americans***

Pearson correlations between mothers and fathers for the Conners 3-P Inattention ( $r = .82$ ) and Learning Problems scales ( $r = .92$ ) were statistically significant ( $ps < .001$ ; Table 7). This indicates proportion of shared variance between parent reports ranged from 67% to 84%. Although moderate in size, responses were not significantly correlated for the Hyperactivity/Impulsivity ( $r = .29$ ) and Defiance/Aggression scales ( $r = .37$ ), however. Results from the paired  $t$ -tests on each of the Conners 3-P scales revealed that mothers rated their children higher (more severe) than fathers did on all Conners 3-P scales, although the discrepancies were nonsignificant. Discrepancies in mother and father ratings reflected small-to-moderate effect sizes dependent on

the content Conners 3-P scale scales: Inattention ( $d = .19$ ), Hyperactivity/Impulsivity ( $d = .30$ ), Learning Problems ( $d = .24$ ), Defiance/Aggression ( $d = .19$ ).

Table 7

*Comparison of Ratings Between Mothers and Fathers: African Americans (n=15)*

<i>Conners Scales</i>	Correlation	Paired <i>t</i> -Tests		
	<i>r</i>	<i>t</i>	<i>p</i>	<i>d</i>
Inattention	.82*	1.40	.188	.19
Hyperactivity/Impulsivity	.29	1.01	.330	.30
Learning Problems	.93*	1.57	.140	.24
Defiance/Aggression	.37	.75	.468	.19

*Note.* \*  $p < .001$ .

### ***Overall Comparison within Ethnicity***

Across most of the content scales and ethnic groups, mothers' and fathers' reports on the Conners 3-P content scales were significantly correlated. Of note, parent reports on the Hyperactivity/Impulsivity and Defiance/Aggression Conners 3-P for the African American sample were not significantly correlated. When evaluating mean discrepancies through paired *t*-tests, mothers generally rated their children's difficulties as more severe across ethnicities and content scales. Effect sizes across sets ranged from  $-.04$  to  $.41$ , with the majority being small in magnitude ( $M = .21$ ,  $SD = .13$ ).

### ***Predicting Difference Score from Primary Study Variables***

In the final set of analyses, four hierarchical linear regression models were examined; with one for each of the primary outcome difference scores (Figure 1). The square of the semi-partial correlation was used as the effect size estimate ( $sr^2$ ).

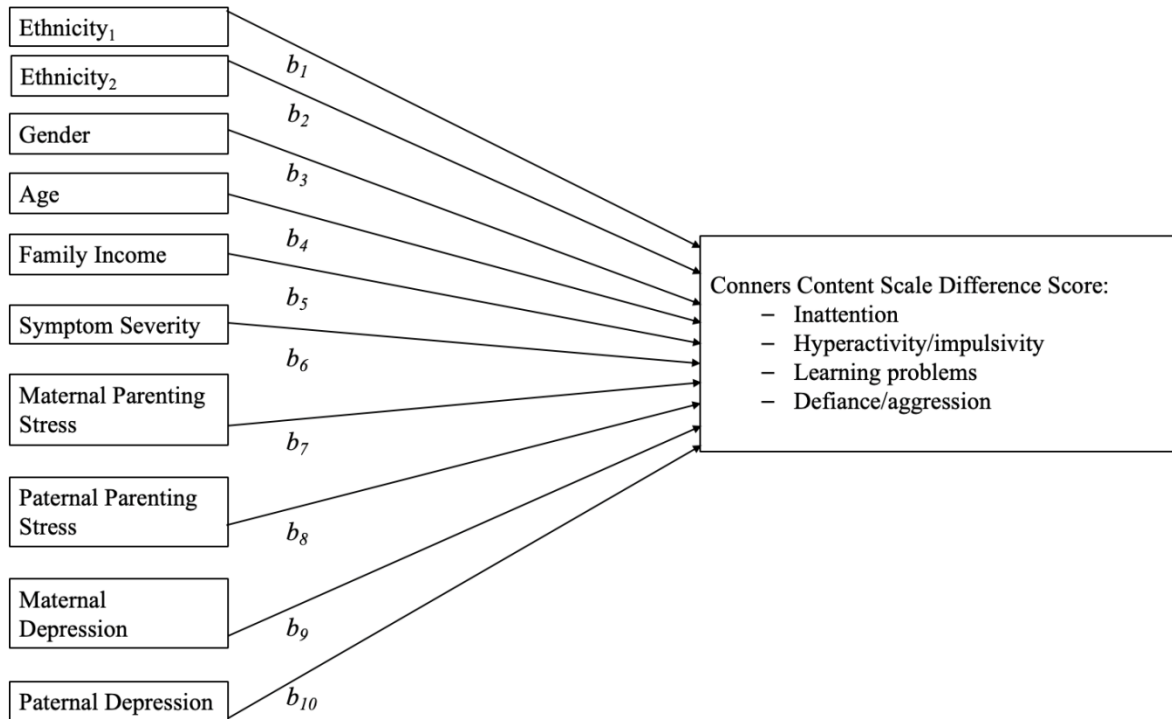


Figure 1. Regression Model.

Note. Ethnicity<sub>1</sub> represents European-American vs. Hispanic; Ethnicity<sub>2</sub> represents European American vs. African American; Child gender was coded with girls=0, boys=1.

The same ten predictors (i.e., two ethnicity dummy codes, age, gender, family income, symptom severity, mother’s PSI-4-SF total score, father’s PSI-4-SF total score, mother’s BDI-II score, and father’s BDI-II score) were included in all analyses. Results of the hierarchical linear regression analyses are detailed below and illustrated in Tables 8 through 11.

### ***Defiance/Aggression Model***

The overall model predicting the Defiance/Aggression difference score was statistically significant,  $F(2, 65) = 2.287, p = .02, R^2 = .279$  (see Table 8). Two individual predictors were significant in the full model. Gender was significantly associated with the Defiance/Aggression difference score in that boys’ parents reported higher levels of discrepancies ( $s^2 = .072$ ). Symptom severity was a significant negative predictor in that higher levels of child symptoms were

associated with lower levels of parent discrepancy ( $sr^2 = .068$ ). For the remaining nonsignificant predictors, squared semi-partial correlations ranged from 0 to .027 ( $M = .007$ ,  $SD = .009$ )

Table 8  
*Results of Regression Analyses: Conners 3-P Defiance/Aggression*

<i>Predictors</i>	<i>zero-order</i>	<i>b</i>	<i>se</i>	<i>p</i>	<i>sr<sup>2</sup></i>
Ethnicity <sub>1</sub>	-	-1.11	3.08	.22	.002
Ethnicity <sub>2</sub>	-	-.15	3.99	.58	<.001
Age	-.226*	-.42	.66	.90	.005
Gender	.249*	7.79	3.08	.01	.072
Family Income	-.143	-.94	.61	.06	.027
Symptom Severity	-.363*	-8.56	3.49	.01	.068
Mother PSI-4-SF	.104	.09	.09	.22	.011
Father PSI-4-SF	-.099	-.08	.09	.33	.009
Mother BDI-II	.143	-.07	.20	.71	<.001
Father BDI-II	-.069	.03	.28	.99	.001

*Note.* Conners 3-Parent scale scores are difference scores (father's *T*-score subtracted from mother's *T*-score). BDI-II = Beck Depression Inventory 2<sup>nd</sup> Edition; PSI-4-SF = Parenting Stress Index 4<sup>th</sup> Edition Short Form; *b* = unstandardized beta;  $sr^2$  = square of semi-partial effect size estimate; <sub>1</sub> European-American vs. Hispanic; <sub>2</sub> European-American vs. African American.  $F(2, 65) = 2.287$ ,  $p = .02$ ,  $R^2 = .279$ ; \*  $p < .05$ .

### ***Learning Problems Model***

The overall model predicting the Learning Problems difference score was statistically significant,  $F(2, 65) = 3.975$ ,  $p < .001$ ,  $R^2 = .402$  (see Table 9). Four individual predictors were significant in the full model. Fathers' parenting stress was significantly negatively associated with the Learning Problems difference score in that higher levels of fathers' parenting stress were associated with lower discrepancies ( $sr^2 = .070$ ). Mothers' self-reported depression ratings were also significantly negatively associated with the Learning Problems difference score, such that higher levels of mothers' depression ratings were associated with lower levels of discrepancies ( $sr^2 = .048$ ).

Symptom severity was significantly associated with the Learning Problems difference score in that greater symptom severity was associated with higher levels of discrepancies in parent

ratings ( $sr^2 = .236$ ). Mothers reported parenting stress was also significantly associated with the Learning Problems difference score, with greater maternal parenting stress associated with higher levels of parent rating discrepancies ( $sr^2 = .039$ ). For the remaining nonsignificant predictors, squared semi-partial correlations ranged from .002 to .023 ( $M = .007$ ,  $SD = .008$ ).

Table 9  
*Results of Regression Analyses: Conners 3-P Learning Problems*

Predictors	zero-order	<i>b</i>	<i>se</i>	<i>p</i>	$sr^2$
Ethnicity <sub>1</sub>	-	1.24	2.42	.47	.003
Ethnicity <sub>2</sub>	-	1.75	3.11	.49	.003
Age	.117	.41	.47	.50	.008
Gender	-.099	-1.91	2.63	.47	.005
Family Income	-.043	-.20	.49	.77	.002
Symptom Severity	.443*	14.34	2.83	<.001	.236
Mother PSI-4-SF	-.132	.14	.07	.04	.039
Father PSI-4-SF	-.285*	-.18	.07	.01	.070
Mother BDI-II	-.198*	-.36	.16	.04	.048
Father BDI-II	-.197	-.35	.22	.11	.023

*Note.* Conners 3-Parent scale scores are difference scores (father's T-score subtracted from mother's T -score). BDI-II = Beck Depression Inventory 2<sup>nd</sup> Edition; PSI-4-SF = Parenting Stress Index 4<sup>th</sup> Edition Short Form; *b* = unstandardized beta;  $sr^2$  = square of semi-partial effect size estimate; <sub>1</sub> European-American vs. Hispanic; <sub>2</sub> European-American vs. African American.  $F(2, 65) = 3.975$ ,  $p < .001$ ,  $R^2 = .402$ ; \*  $p < .05$ .

### ***Hyperactivity/Impulsivity Model***

The overall model predicting the Hyperactivity/Impulsivity difference score did not reach significance,  $F(2, 65) = .738$ ,  $p = .70$ ,  $R^2 = .111$  (see Table 10). Further, no individual predictors were statistically significant and semi-partial correlations ranged from 0 to .045 ( $M = .019$ ,  $SD = .014$ ).

Table 10

*Results of Regression Analyses: Conners 3-P Hyperactivity/Impulsivity*

Predictors	zero-order	<i>b</i>	<i>se</i>	<i>p</i>	<i>sr</i> <sup>2</sup>
Ethnicity <sub>1</sub>	-	4.42	5.26	.32	.019
Ethnicity <sub>2</sub>	-	4.86	3.93	.40	.012
Age	.010	.42	.76	.52	.045
Gender	.103	1.57	4.13	.71	.002
Family Income	.002	-.05	.83	.93	<.001
Symptom Severity	-.019	-.49	4.82	.84	<.001
Mother PSI-4-SF	.011	.07	.11	.51	.005
Father PSI-4-SF	-.174	-.15	.11	.17	.025
Mother BDI-II	.108	.29	.25	.28	.018
Father BDI-II	-.176	-.48	.35	.19	.027

*Note.* Conners 3-Parent scale scores are difference scores (father's T-score subtracted from mother's T-score). BDI-II = Beck Depression Inventory 2<sup>nd</sup> Edition; PSI-4-SF = Parenting Stress Index 4<sup>th</sup> Edition Short Form; *b* = unstandardized beta; *sr*<sup>2</sup> = square of semi-partial effect size estimate; <sub>1</sub> European-American vs. Hispanic; <sub>2</sub> European-American vs. African American.  $F(2, 65) = .738, p = .70, R^2 = .111; * p < .05.$

***Inattention Model***

The overall model predicting the Inattention difference score was not statistically significant,  $F(2, 65) = 1.688, p = .096, R^2 = .222$  (see Table 11). Two individual predictors were significant in the full model. Fathers' parenting stress score was significantly negatively associated with the Inattention difference score, in that higher levels of fathers' parenting stress were associated with lower levels of discrepancies ( $sr^2 = .059$ ). Symptom severity was a positive and significant predictor in the Inattention model, in that greater symptom severity was associated with higher levels of discrepancies in parent ratings ( $sr^2 = .115$ ). For the remaining nonsignificant predictors, squared semi-partial correlations ranged from 0 to .018 ( $M = .007, SD = .007$ ).

Table 11

*Results of Regression Analyses: Conners 3-P Inattention*

Predictors	zero-order	<i>b</i>	<i>se</i>	<i>p</i>	<i>sr</i> <sup>2</sup>
Ethnicity <sub>1</sub>	-	2.92	2.64	.26	.016
Ethnicity <sub>2</sub>	-	-1.89	3.37	.59	.004
Age	-.032	.33	.51	.55	.005
Gender	-.004	-.29	2.53	.83	<.001
Family Income	-.029	-.49	.54	.38	.010
Symptom Severity	.160	8.50	2.75	.00	.115
Mother PSI-4-SF	-.003	.05	.08	.51	.005
Father PSI-4-SF	-.153	-.16	.72	.03	.059
Mother BDI-II	.003	.03	.17	.88	<.001
Father BDI-II	-.115	-.29	.24	.22	.018

*Note.* Conners 3-Parent scale scores are difference scores (father's *T*-score subtracted from mother's *T*-score). BDI-II = Beck Depression Inventory 2<sup>nd</sup> Edition; PSI-4-SF = Parenting Stress Index 4<sup>th</sup> Edition Short Form; *b* = unstandardized beta; *sr*<sup>2</sup> = square of semi-partial effect size estimate; <sub>1</sub> European-American vs. Hispanic; <sub>2</sub> European-American vs. African American.  $F(2, 65) = 1.688, p = .096, R^2 = .222; * p < .05.$

***Overall: Predictors of Discrepancies***

Overall, there were few consistencies among predictors across scales. Father's parenting stress was significantly negatively related in the Learning Problems and Inattention models, such that greater reports of father's parenting stress were associated with lower levels of parent discrepancies. Youth's symptom severity was significantly positively related in the Inattention and Learning Problems models, indicating that greater symptom severity is associated with higher levels of parent discrepancies in those models. Notably, symptom severity was a significant negative predictor in the Defiance/Aggression model, such that greater symptom severity was associated with lower levels of discrepancies.

With regards to single-model predictors, gender was a significant predictor in the Defiance/Aggression model, such that boys' parents had higher rates of disagreement. Mother's parenting stress was significant within the Learning Problems model, such that greater rates of mother's stress was associated with higher rates of parent discrepancies. Mother's depression was

negatively related in the Learning problems scale, such that higher rates of maternal depression were associated with lower rates of discrepancies.

Child age, child ethnicity, family income, and father's depression were not significantly related to of mother-father discrepancies in the regression analyses ( $sr^2 = .000$  to  $.045$ ).



## CHAPTER V

### Discussion

The present study sought to contribute to the sorely lacking literature base of discrepancies in parent reports in ethnically diverse youth, the minimal research regarding paternal caregivers, as well as the potential need for mental health screening of youth's parents during child psychological assessment. These considerations help to identify situations in which both parent reports may be necessary for appropriate assessment of youth mental health to facilitate accurate diagnostic assignment, resource access, and treatment modality. The current study evaluated the associations between family, child, and parent characteristics on mother-father disagreement of youth externalizing behavior problems in a clinic sample of youth.

The present findings indicate that fathers generally agree with mothers on Conners 3-P subscales (i.e., attention problems, hyperactivity/impulsivity, learning problems, and defiance/aggression). This is evidenced in the significant mother-father associations for almost all subscales, and mostly small effect sizes and mean differences. Such findings contribute valuable information to the existing literature on mother-father agreement by examining maternal and paternal ratings of child behavior problems in a clinic sample using different methods of analyses (e.g., correlations, paired *t*-tests, regressions). Findings are consistent with past research (Achenbach et al., 1987; Duhig et al., 2000, Moreno et al., 2008) in that interparental agreement is relatively high for ratings of youth externalizing behavior problems. As previous researchers have suggested, this may be a consequence of the easily observable nature of externalizing problems. This may also be related to the level of impairment and distress that may accompany behavior difficulties. Specifically, youth referred for ADHD testing often have associated school-based and home-based concerns related to academic underachievement, noncompliance, and social

difficulties (American Psychiatric Association, 2013). These findings are further important as they contribute to the understanding of mother-father agreement in ethnically diverse samples.

### *Ethnicity*

This study found that, for externalizing symptoms (i.e., attention problems, hyperactivity/impulsivity, learning problems, defiance/aggression), mother's and father's ratings of youth were significantly associated within European-American and Hispanic families. Within the African American group, mothers' and fathers' ratings were significantly associated for inattention and learning problems scales, but not for hyperactivity/impulsivity or defiance/aggression scales. These findings did not appear confounded by family income, as the association between family ethnicity and family income was nonsignificant. As such, the findings suggest the potential generalizability of interparental agreement to ethnically diverse samples (Jackson, 2005; Moreno et al., 2008). Simultaneously, findings suggest the need for additional research within African American families, as there is no previous research on this sample regarding mother-father agreement, and it was the most generally different with regards to parent reports. Further, the African American sample was the smallest, which may have contributed to the lack of consistent agreement across the behavioral rating subscales. It should be highlighted that these conclusions may not be appropriately generalized to the broader ethnically diverse population, but instead to just clinically referred children within these groups.

It is possible that parents of diverse backgrounds are already in agreement regarding the presence of behavior problems prior to pursuing psychological services. That is, given the ongoing cultural stigma of seeking psychological services, Hispanic/Latino and African American families may be generally less likely to seek services. When services are sought out, it may be because parents are already in agreement that additional resources or treatments are warranted, thus

contributing to such a high agreement (Cauce et al., 2002; Vega, 1990). Another possibility may be that the high agreement is due to both parents having the same heritage. That is, if they are both viewing their child's behavior through the similar lens with comparable expectations and thresholds, they may continue to agree at similar rates as other ethnic groups. These possible explanations should be examined in future research, and perhaps with parents of different ethnic origins (e.g., European-American mother and Hispanic father, African American mother and Hispanic father, etc.).

### *Parent Factors*

The present study also highlighted the impact of parent factors on mother-father agreement. Inconsistent with the a priori hypothesis, when significant, mothers' and fathers' reports of parenting stress were inversely related to mother-father agreement. Specifically, higher paternal parenting stress was related to greater rates of mother-father agreement in two of the models (i.e., learning problems, inattention). However, higher rates of maternal parenting stress were related to lower rates of mother-father agreement in one of the models (i.e., learning problems). This was because greater levels of parenting stress in either caregiver yielded higher reporting of symptoms. Since mothers' reports were generally greater, increasing those further resulted in lower reporter agreement. However, fathers' greater reports of youth symptoms closed the gap between reporters, resulting in higher reporter agreement. With regards to depression, fathers' BDI-II scores were not significant in any of the models, and mothers' BDI-II was inversely related to parent agreement in one model (i.e., greater maternal depression was associated with lower disagreement in the Learning Problems scale).

This contributes important information about the role of parental psychopathology on parents' ratings of youth behavior difficulties. Previous studies have considered the impact of

parental general psychopathology, parents' depression and general stress on parent-child, parent-teacher, and mother-father agreement (Chi & Hinshaw, 2002; De Los Reyes et al., 2008; Hughes et al., 2008; Langberg et al. 2010; van der Oord et al., 2006; Youngstrom et al., 1999). Prior findings have been mixed, with some studies suggesting that high levels of parental depression may in fact bias parent ratings, such that high levels of depression are associated with overly negative reports of behavior (Chi & Hinshaw, 2002). However, other studies have suggested that stress and not depression predict discrepancy between parents and teachers (van der Oord et al., 2006) and mothers and fathers (Langberg et al., 2010).

The present findings are in support of the latter studies, where stress, and more specifically parenting stress, was generally more impactful than parental depression. It is important to note that Beck Depression Inventory 2<sup>nd</sup> edition (BDI-II) categorizes scores as follows: 0 to 13 (no-to-minimal depression), 14 to 19 (mild depression), 20 to 28 (moderate depression), and 29 to 63 (severe depression). In the current study, parents' BDI-II scores were typically low, with most parents' reporting no-to-minimal symptoms of depression in both the mother and father groups. Future studies should incorporate parents whose responses on depression scales are more broadly distributed. Nevertheless, similar to previous research, the findings suggest that parenting stress is potentially more significant a predictor than parental depression. This study extends those findings in an ethnically diverse sample. It particularly highlights the differing impact of parenting stress on fathers when compared to mothers. Although mothers generally rated their youth as exhibiting more behavior difficulties than fathers, when fathers' parenting stress was elevated, they reported more comparable symptoms scores. It is possible that fathers who reported higher rates of stress were also more involved in child-rearing and were therefore more likely to see and report child

difficulties. Further, being increasingly involved may have resulted in fathers experiencing greater rates of parenting stress due to child behavioral difficulties.

An ongoing consideration in the literature is the directionality of poor child behavior and parenting stress. The direction of a possible causal relationship between parental stress and child misbehavior cannot be inferred from these correlational results. It is indeed plausible that children with negative behavior cause more stress in their parents. However, it is equally plausible that parents with increased stress rate their children more negatively. Further, in considering system-wide contributors, it is similarly possible that a third variable, such as environmental hardship, is a driver of both parenting stress and child behavior problems. Given the purpose of the current study, it simply highlights the importance of considering parenting stress when evaluating a child's behavioral functioning. It also largely provides support for the benefits of obtaining reports from both parents, so as to not assign an incorrect diagnosis, or fail to assign a diagnosis that would help the child obtain necessary interventions and resources.

### ***Child Factors***

With regards to child factors, this study's results suggest that child gender is a significant predictor only when examining mother-father agreement within the context of child defiance and aggression. Specifically, parents disagreed at greater rates regarding boy's externalizing behavior problems, when compared to girls. This finding is indeed similar to previous research wherein mothers report greater levels of adolescent son's behavior problems than fathers (Langberg et al., 2010). It is possible that, compared to fathers, mothers perceive externalizing symptoms as occurring more frequently (e.g., rating a behavior as occurring *very often*, as opposed to *often* or *sometimes*) possibly because they spend more time with the child. Indeed, Puerto Rican and European American fathers have reported primary stewardship of their children approximately

30% of the times (i.e., 37% and 33%, respectively), with mothers being the primary caregiver for the remainder of the time (Roopnarine & Ahmeduzzaman, 1993). Spending the majority of the time as primary caregiver offers a larger sample of, potentially, child externalizing behavioral difficulties.

An alternative explanation is that fathers and mothers agree on the frequency of their son's defiant and aggressive behaviors, but that fathers view the behavior as being less problematic and impairing, in line with the "boys will be boys" hypothesis. Studies where mothers and fathers observe their child's behavior and then rate it may shed light on the relative accuracy of mother compared to father ratings. Interestingly, a series of studies utilizing child confederates enacting ADHD and ODD behaviors and interacting with both parents of youth with and without ADHD showed no differences between mothers' and fathers' perceptions of deviant child behavior on standardized measures (Lang, Pelham, Atkeson, & Murphy, 1999; Pelham et al., 1997, 1998). This suggests that the findings obtained in the current study may be unique to mothers' and fathers' perceptions of their own children's behavior problems, as opposed to reflecting differences between mother-father perceptions of externalizing behaviors in general. Indeed, some research suggests that fathers, when compared to mothers, may be more likely to consider externalizing behaviors as a natural aspect of childhood for boys, therefore a less problematic area (Singh, 2003).

In addition, some evidence suggests that children with ADHD tend to have more deviant interactions with their mothers than with their fathers (Tallmadge & Barkley, 1983). Thus, personal experience may underline the current observed difference in mother-father reports of son's defiant and aggressive behaviors. This may also be related to the division of parenting responsibilities. Research has examined the inequality in childrearing practices, revealing that mothers complete approximately twice as much childcare as fathers. Further, the discrepancies for

routine activities such as feeding, grooming, and homework are greater than those for interactive, leisurely and playful activities (Bianchi et al., 2012; Schieman et al., 2018). These differences in parenting responsibilities remain consistent despite parents' employment status (Maume, 2008). Until more research is available on factors contributing to these differences, it is difficult to draw broad conclusions regarding the relative importance and accuracy of multiple parent raters in the diagnostic process. It may be helpful for future research to consider additional qualitative or quantitative measures regarding the impact of the amount of time, childrearing responsibilities, and role of primary disciplinarian on mother-father reporting discrepancies. Further, given the discrepancy in division of parenting responsibilities, future research might consider including an overt measure of general parent agreement (i.e., how often do you and your son's father agree on parenting?) or marital satisfaction in evaluating mother-father discrepancies.

#### *Other examined contributors*

The impact of some family (e.g., income) and child (e.g., age, symptom severity) factors examined in the current study were different than hypothesized. Specifically, it was expected that family income would predict mother-father agreement, such that lower income would be associated with greater rates of disagreement. Inconsistent with an earlier meta-analysis (Duhig et al., 2000), this hypothesis was not supported in any of the models (i.e., Conners 3-P Defiance/Aggression, Learning Problems, Hyperactivity/Impulsivity, and Inattention). These differing results may be a consequence of a few factors. For one, family income is not evenly distributed in the present sample. Few families had income in the lower end of the spectrum (i.e., 6.6% of families had income of \$20,000 or less), while the majority group had an income over \$70,000 (i.e., 40.9% of sample). Another possibility is that the other factors simultaneously considered in the models accounted for the majority of variance. Further, overall, mother-father

discrepancy scores were minimal. Perhaps, if there were greater difference scores as were present in Duhig and colleagues (2000), it is possible that family income may have been an impactful contributor. The current findings should not be disregarded, however, as they are congruent with other studies examining correspondence between other informant pairs (parent-child, parent-teacher) which also failed to find a relation between socioeconomic status and informant discrepancies (Chi & Hinshaw, 2002; Jensen & Weisz, 2002; Treutler & Epkins, 2003).

Some child factors also yielded null (i.e., child age) or inconsistent (i.e., symptom severity) findings that were incongruent with the hypothesized results. Regarding child age, it was expected that parent responses would be more consistent for younger youth than older youth, consistent with the most-recent meta-analysis (Duhig et al., 2000). However, current results failed to suggest any impact of age on mother-father reports of youth externalizing problems across models. Possible reasons for this discrepancy include the analyses utilized. That is, the current study utilized age as a continuous variable, instead of a grouping variable with three (Duhig et al., 2000) or two levels (Achenbach et al., 1987). Further, as noted previously, mother-father discrepancy scores across scales were small, providing only a small amount of variance for which to predict.

In the current study, youth symptom severity was an inconsistently significant predictor, with greater severity associated with both lower rates of disagreement (i.e., Defiance/Aggression model) or higher rates of disagreement (i.e., Learning Problems and Inattention models) depending on the Conners 3-Parent scale. The current study might be the first study to consider symptom severity as a predictor of mother-father agreement of youth behavior difficulties. However, these findings are indeed inconsistent with findings from a previous study examining agreement between parents (majority mothers) and clinicians, wherein symptom severity and impairment consistently predicted greater rates of agreement (Klein et al., 2010). In Klein and colleague's (2010) study,



researchers had utilized an impairment scale (i.e., Columbia Impairment Scale-Parent/Guardian Version; Bird et al., 1993). Future research regarding mother-father agreement should utilize an impairment scale to provide a psychometrically sound predictor, to further consider if impairment is a consistent predictor, over and above mother- and father-reported symptom severity.

### ***Clinical and Research Implications***

Several research and clinical recommendations have been provided throughout, but additional directions are outlined below. The current study sought to fill gaps in the literature regarding fathers' reports, as well as parents' reports ethnically diverse households. As family structure and country demographics change, research regarding these groups is necessary to provide an evidence base for evaluations and interventions. In the current study, mother's and father's ratings are generally largely associated in the overall sample, but mean differences revealed that mother's estimates are often greater. Unless we assume that one parent's report is more accurate, collecting measures from a single caregiver may lead to an over- or under-estimate of behavior severity at the symptom level (i.e., mean level).

The current data suggest that, for the assessment of youth behavioral problems, it is important to also assess the emotional wellbeing of the maternal and paternal informant. This was a significant contributor to discrepancies in parents' ratings across some of the scales in the current study. This was particularly salient in the context of parenting stress, as both mothers' and fathers' parenting stress were significant contributors in a few models. It may be argued from the present results that parenting stress measures should be added to the standard diagnostic procedures for youth with externalizing behavioral problems. If the impact of parents' depression be expanded in future research with a wider range of depression scores, including a depression measure for parents may also be helpful. Should one parent report mental health concerns, it would be helpful for

clinicians to make strong efforts to obtain reports from another parent or primary caregiver to more accurately evaluate youth behavioral problems.

It should be noted that the overarching purpose of the assessment of youth externalizing behavioral problems goes well beyond diagnosis, to obtaining the information that will guide intervention development (Pelham et al., 2005). Therefore, despite differences in parents' reports that may be difficult to reconcile, a multi-informant assessment strategy may serve to inform the clinician about family dynamics, and contextual differences that will be influential in the intervention process. For example, parental perceptions of the child, disagreement between caregivers of presenting concerns, as well as parent mental health are clinically relevant considerations in potential interventions, such as behavioral parent training (Pelham & Fabiano, 2008).

With regards to research and treatment outcome studies where repeated measures are collected, it will be important that the same parent completes the ratings each time. Since, although parents in the current sample were in general agreement, mothers consistently rated the children higher across scales. Therefore, if a different parent completes ratings at different times without at least documenting this change, the treatment effects may be artificially inflated or nullified, depending on the order in which mother and father ratings are acquired (Langberg et al., 2010).

### ***Limitations and Future Directions***

The current study provides insight regarding contributors to mother-father disagreement in a clinic-referred sample of youth. This is helpful, given that clinicians are often in contact with families who seek evaluations or treatment services to address youth presenting problems. Given the clinical nature of the sample, however, results may not readily generalize to a community sample. That is, perhaps youth symptomatology in a clinical sample may be more overt, thus

leading to greater informant agreement. Future research should consider how these populations may differ qualitatively and quantitatively.

These findings suggest the generalizability of interparental agreement of youth externalizing behavior problems to ethnically diverse samples. Nevertheless, sample size restrictions limit the power to sufficiently address possible ethnic differences. In addition, the restriction of range of predictor variables (e.g., parenting stress, parents' depression) and outcome variables (i.e., discrepancy scores in regression model) may have reduced statistical power in the current analyses and increasing the probability of type II errors (i.e., failing to reject a false null). This is because statistical associations (e.g., correlations) are attenuated by reduced variability. Future research would benefit from incorporating a wider range of values across variables examined in the current study.

The current study also carries the limitations associated with archival data, in that this researcher could only examine the information available through the clinical data (Jones, 2010). Future research would benefit from including a measure of acculturation to explore the potential impact of differing levels of parents' acculturation status on agreement.

It is important to note that this is possibly the first study to examine mother-father agreement of youth externalizing problems in Hispanic/Latino populations. Further, it is the first study to examine any form of parent agreement within African American families. Thus, this study is viewed as exploratory to guide future hypothesis-driven research in large groups of ethnically diverse families.

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