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ADULT ATTACHMENT STYLE AND INTER-PARENTAL DISCREPANCY ON PEDIATRIC BEHAVIOR ASSESSMENT SCALES

by

Laura Beliech Harris, B.S., S.S.P.

A Dissertation Presented in Partial Fulfillment Of the Requirements for the Degree Doctor of Philosophy

COLLEGE OF EDUCATION LOUISIANA TECH UNIVERSITY

February 2017

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entitled

ADULT ATTACHMENT STYLE AND INTER-PARENTAL DISCREPANCY ON PEDIATRIC BEHAVIOR ASSESSMENT SCALES

accepted in partial fulfillment requirements for be of the the Degree of Doctor of Philosophy

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ABSTRACT

The process of diagnosing pediatric psychopathology is an important and sometimes complex endeavor. Diagnoses are useful for facilitating communication among providers, setting therapy goals, and intervention selection. However, beyond their utility, diagnoses potentially can influence client-therapist rapport, therapeutic alliance, and therapy outcomes in a negative manner, as well as leading to stigma and discrimination against the client (child). Best practice for pediatric psychological evaluations includes obtaining data regarding the child's behavior in multiple settings and from multiple respondents. This is most often accomplished through administration of standardized objective pediatric behavior assessment instruments. However, collecting data from multiple respondents in this manner frequently leads to inter-rater discrepancy, which if not interpreted properly may lead to misdiagnosis or the failure to select the best therapeutic approach (e.g., family systems therapy versus individual therapy). Childspecific, parent-specific, and family-specific variables have been studied to determine their contribution to inter-parental discrepancy on child behavior assessment scales. However, research findings are inconsistent, leaving researchers to continue questioning the underlying factors involved in inter-parental discrepancy on child behavior assessment scales. While studies also have considered parent variables, such as anxiety and depression, that may influence parent perceptions and contribute to a more pessimistic world view, to date adult attachment style has not been investigated as a

possible underlying factor contributing to inter-parental discrepancy. Data in the current body of literature clearly make the connection between adult attachment style and individual perceptions of interpersonal interactions and attachment related events. Specifically, individuals with anxious attachment styles tend to hold a more pessimistic world view, while secure individuals tend to be more optimistic in general. Avoidant individuals tend to recall less information related to emotional and attachment related events; therefore minimizing reports of certain details.

This study examined the differences in scores on the CBCL/6-18 Internalizing and Externalizing behavior scales among cohabitating parent dyads who have different attachment styles (e.g., secure/anxious, secure/avoidant, anxious/avoidant) versus parent dyads with the same attachment styles (e.g., secure/secure, anxious/anxious, avoidant/avoidant). Participants of this study included cohabitating parents seeking psychological evaluation for a child ages 6-16, sampled from participating psychology clinics in the Northern Louisiana region. Participants were asked to complete a survey packet that included demographic questions, measures of adult attachment style, and the CBCL/6-18 rating scale for their child. Differences among groups were analyzed using independent samples t-tests. Preliminary analysis was conducted to assess distribution of attachment styles within the sample and socio-demographic correlates of attachment style in each parent.

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TABLE OF CONTENTS

ABSTRACTiii
LIST OF TABLES
ACKNOWLEDGMENTS ix
CHAPTER ONE INTRODUCTION1
Discrepancy Factors
Attachment5
Justification7
LITERATURE REVIEW
Diagnosis
Behavior Assessment Measures11
Clinical Interviews11
Objective Behavior Checklist Scales
Inter-Rater Discrepancy18
Child Variables Affecting Inter-Rater Discrepancy19
Parent Variables Affecting Inter-Rater Discrepancy
Family Variables Affecting Inter-Rater Discrepancy
Attribution Bias Context Model
Attachment Theory
History of Attachment Theory
Adult Attachment Theory
Working Model of Attachment
Secure Base Scripts

Attachment Influences on Perceptions	40
Adult Styles and Parental Caregiving	41
Distribution of Adult Attachment Styles	43
THE PRESENT STUDY	47
Hypothesis 1	48
Hypothesis 2	49
CHAPTER TWO METHODS	50
Participants	50
Measures	51
Demographics	51
Child Behavior Checklist for Ages 6-18	52
Revised Adult Attachment Scale – Close Relationships Version	53
Procedure	54
CHAPTER THREE RESULTS	56
Preliminary Analysis	56
Preliminary Exploratory Analysis	56
Descriptive Statistics for Adult Attachment Style Measures	57
Descriptive Statistics for Internalizing and Externalizing Behavior Scores	58
Demographic Differences in Study Variables	58
Data Analysis	61
Hypothesis 1	61
Hypothesis 2	62
CHAPTER FOUR DISCUSSION	64
General Overview of Results	64
Demographic Variables	65
Adult Attachment Style and Inter-parental Discrepancy on Behavior Scores	67
Practical Implications	67

•

Limitations	Conceptual Implications	.70
Implications for Future Research 72 APPENDIX A HUMAN USE COMMITTEE APPROVAL 75 APPENDIX B DEMOGRAPHIC SURVEY 77 APPENDIX C REVISED ADULT ATTACHMENT SURVEY 79 APPENDIX D CHILD BEHAVIOR CHECKLIST 6–18 81 REFERENCES 84	Limitations	.71
APPENDIX A HUMAN USE COMMITTEE APPROVAL	Implications for Future Research	.72
APPENDIX B DEMOGRAPHIC SURVEY	APPENDIX A HUMAN USE COMMITTEE APPROVAL	.75
APPENDIX C REVISED ADULT ATTACHMENT SURVEY	APPENDIX B DEMOGRAPHIC SURVEY	.77
APPENDIX D CHILD BEHAVIOR CHECKLIST 6–18	APPENDIX C REVISED ADULT ATTACHMENT SURVEY	.79
REFERENCES	APPENDIX D CHILD BEHAVIOR CHECKLIST 6–18	.81
	REFERENCES	.84

•

LIST OF TABLES

Table 1 Summary of Internalizing and Externalizing Behavior Composite and Discrepancy Scores	.58
Table 2 Summary of Internalizing and Externalizing Behavior Discrepancy Scores byChild Demographic Variable	60
Table 3 Participant Internalizing Discrepancy Scores	.62
Table 4 Participant Externalizing Discrepancy Scores	.63

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ix

CHAPTER ONE

INTRODUCTION

Diagnosis of pediatric psychopathology is an historically complex task that requires the collection of data from multiple sources. Ideally, in order to obtain a detailed picture of a child's functioning and behavior in multiple settings and from multiple perspectives, data should be gathered via self-report ratings, parent or caregiver ratings, collateral respondent reports (e.g., teachers, daycare workers), and formal observations of the child by the evaluating clinician (Achenbach, McConaughy, & Howell, 1987). Accuracy in diagnosis is essential for a number of reasons. Communication among providers, treatment selection, and interventions are all influenced by diagnosis (Kendell & Jablensky, 2003). Inaccurate diagnosis can be detrimental in many ways, including unnecessary stigma and discrimination based on psychiatric labels and possible negative impact on future career options (Coverdale, Nairn, & Claasen, 2002; Kessler, Chiu, Demler, Merikangas, & Walters, 2005). Client-therapist rapport and therapy outcomes are impacted by specific information provided by informants, as well as the resultant diagnosis (Yeh & Weisz, 2001).

Inter-rater discrepancy is common when obtaining pediatric behavioral ratings from multiple respondents; even among cohabitating parents (Achenbach et al., 1987; Duhig, Renk, Epstein, & Phares, 2000; Langberg et al., 2010). Disagreement among raters can serve to complicate diagnosis if not interpreted properly, possibly leading to

misdiagnosis (Langberg et al., 2010). There are various ways in which inter-parental discrepancy can be handled, ranging from treating it as rater error or arbitrarily utilizing data from only one informant, to combining data, potentially leading to different diagnostic impressions (Gingerich, Regehr, & Eva, 2011; Kraemer et al., 2003; Offord et al., 1996). Another means of handling discrepancy among respondents has been for clinicians to confront the respondents regarding their discrepant ratings (Nguyen et al., 1994). However, this may have the potential to convey the message to respondents that it is more important to give responses that are concordant with other raters, rather than accurate observations as each rater uniquely experiences them (Angold et al., 1987). Further, parents' perceptions of child behavior can be influenced and even distorted by parent psychopathology, such as depression or anxiety (Chi & Hinshaw, 2002; Richters, 1992; van der Oord, Prins, Oosterlaan, & Emmelkamp, 2006), situational factors, such as parenting stress (van der Oord et al., 2006; Youngstrom, Loeber, & Stouthamer-Loeber, 2000), and adult attachment style (Hughes & Gullone, 2010; Pesonen, Raikkonen, Strandberg, Keltikangas-Jarvinen, & Jarvenpaa, 2004). Thus, when significant interparental discrepancy on pediatric behavior assessment scales exists, clinicians should give consideration to factors that may have contributed to discrepancies before a diagnosis is rendered. Assessment of parents' typical patterns of perception (e.g., negative, positive) would be useful when interpreting inter-parental discrepancy. and symptoms identified by parent respondents (World Health Organization [WHO], 2013). Yeh and Weisz (2001) found that when discrepancy among raters is not addressed effectively, it can interfere with a participant's ability to work cooperatively on therapy

treatment goals. Due to these facts, as well as the potential for misdiagnosis based on parent variables that may be unrelated to the client (child), it is essential to further elucidate underlying factors involved in inter-parental discrepancy on pediatric behavior assessment scales.

Factors that influence parents' unique perceptions of children's behavior (e.g., psychopathology, depression, anxiety, parenting stress) have been investigated to evaluate the extent to which they affect inter-parental discrepancy on pediatric behavior assessment scales (Chi & Hinshaw, 2002; Richters, 1992; van der Oord et al., 2006). While much has been published on the topic of adult attachment style and its effects on individuals' general perceptions of self, the world, and interpersonal relationships (Baldwin, Fehr, Keedian, Seidel, & Thompson, 1993; Collins & Read, 1994; Hesse, 1999; Hughes & Gullone, 2010; Main, Kaplan, & Cassidy, 1985; Mikulincer & Shaver, 2007; Mikulincer, Shaver, Sapir-Lavid, & Avihou-Kanza, 2009; Pascuzzo, Cyr & Moss, 2013; Pesonen et al., 2004; van der Oord et al.; Waters & Waters, 2006; Youngstrom et al., 2000), an extensive literature review of parent variables that affect inter-parental discrepancy on pediatric behavior assessment scales failed to yield results for adult attachment style as a factor.

Discrepancy Factors

Current literature includes a large body of research on factors that influence interparental discrepancy on pediatric behavior assessment scales. Child-specific variables have been considered, such as the age and ethnicity of the child, type of behavior, symptom severity, and social role expectations based on the gender of the child (Duhig et al., 2000; Harvey, Fischer, Weieneth, Hurwitz, & Sayer, 2013; Konold, Walthall, & Pianta, 2004; Schroeder, Hood, & Hughes, 2010). Parent-specific variables, such as gender, parent ethnicity, marital status, employment, education, alcohol use, anxiety, and parent depression have been investigated (Bartels, Boomsma, Hudziak, van Beijsterveld, & van den Oord, 2007; Chi & Hinshaw, 2002; Dave', Nazareth, Senior, & Sherr, 2008; Harvey et al., 2013; Hughes & Gullone, 2010; Langberg et al., 2010; Richters, 1992; van der Oord et al., 2006; van der Toorn et al., 2010). Other studies have focused on parent-child interactions as variables that influence unique parent perspectives (Bartels et al., 2007). Further, from a more interactive perspective, some researchers have found that stress predicts discrepancies in inter-parental ratings; specifically, as distress or role stress increased, inter-rater discrepancy increased (Christensen, Margolin, & Sullaway, 1992; Dave' et al, 2008; Langberg et al., 2010; van der Oord et al., 2006). Family variables also have been considered, including socio-economic status and family distress (Christensen et al., 1992; Dave' et al., 2008).

The wide range of prevalence rates for pediatric psychopathology is a compelling reason to analyze inter-rater discrepancy. In community samples, Offord and colleagues (1996) reported prevalence rates for conduct disorder (CD) and oppositional defiant disorder (ODD) ranging from 1.6% to 10.2%. In clinical samples, depending on whether respondents were parents or teachers, prevalence rates for conduct disorders ranged from 9.7% to 23% and internalizing disorders (e.g. anxiety, depression) ranged from 10.3% to 36.2% (MacLeod, McNamee, Boyle, Offord, & Friedrich, 1999). When various combinations of respondents were used (e.g. parent-child-teacher, parent-teacher, mother-father) comorbidity rates ranged from 5.4% to 74.1% (Youngstrom, Findling, &

Calabrese, 2003). Such large variation in prevalence rates may lead one to question the underlying reason for the drastic differences.

Attachment

Over 45 years ago, attachment systems research originated with Bowlby's (1969) concepts of individual mental representations regarding the availability of attachment figures during times of need. Bowlby termed this system of mental representations "working models" (as cited in Mikulincer & Shaver, 2007, p. 15), recognizing its broad reaching influence on behaviors, thoughts, beliefs, emotions, and memory processes. The working model of attachment reflects the manner in which we organize perceptions of self and of others in our daily lives (Main et al., 1985). Ainsworth (1967) first described the phenomena of attachment style when researching infant reactions to separation from caregivers in the Strange Situation assessment procedure. Ultimately, researchers identified three possible categories of attachment style: secure, anxious, and avoidant (Ainsworth, Blehar, Waters, & Wall, 1978).

By the 1980s, research on attachment models extended into adolescent and adult applications (George, Kaplan, & Main, 1985; Hazan & Shaver, 1987; Main & Goldwyn, 1988). In a seminal study, Hazan and Shaver (1987) developed three narrative descriptions to categorize participants with an attachment style of secure, anxious, or avoidant. Further research built upon Hazan and Shaver's method led to increasing support for a two-dimensional concept of attachment, based on attachment avoidance and attachment-related anxiety (Brennan, Clark, & Shaver, 1998; Fraley & Waller, 1998; Simpson, Rholes, & Phillips, 1996). The two dimensions that emerged were (a) avoidance, which is exemplified by an individual's level of comfort versus discomfort with intimacy and depending upon others and (b) anxiety, based on a person's desire for closeness and fear of rejection (Mikulincer & Shaver, 2007).

Since the inception of research on adult attachment styles, multiple measures of assessment have been developed attempting to accurately define the underlying factors and facets related to attachment (Ravitz, Maunder, Hunter, Sthankiya, & Lancee, 2010). Since Ainsworth and colleagues' (1978) introduction of the first instrument for measuring attachment, at least 29 different attachment scales have been developed (Ravitz et al., 2010). The methodologies of data collection vary, including (a) self-report questionnaires, such as the Adult Attachment Styles (AAS; Hazan & Shaver, 1987), Adult Attachment Questionnaire (AAQ; Simpson, 1990), and the Revised Adult Attachment Scale (RAAS; Collins, 1996), (b) interviewer-assessed instruments like the Adult Attachment Inventory (AAI; Fonagy, Target, Steele & Steele, 1998) and Adult Attachment Interview as a Questionnaire (AAIQ; Crandell, Fitzgerald, & Whipple, 1997), and (c) projective instruments, such as the Adult Attachment Projective (AAP; George & West, 2001).

With advancement in the area of attachment, some researchers have moved beyond the concept of working models of attachment to a mental model of secure base scripts (Mikulincer et al., 2009; Waters & Waters, 2006). Working models of attachment describe an individual's mental representations of attachment figures and subsequent perceptions of social interactions (Collins & Read, 1994; Mikulincer et al., 2009; Waters & Waters, 2006). The concept of secure base scripts further explains how an individual's history of attachment experiences ultimately influences interpersonal interactions (Mikulincer et al., 2009; Waters & Waters, 2006). Repeated experiences with attachment figures during childhood lead to the development of internalized scripted knowledge of procedures for managing distress (Waters, Rodrigues, & Ridgeway, 1998; Waters & Waters, 2006). Mikulincer and colleagues (2009) asserted that secure base scripts influence an individual's social perceptions and interpersonal interactions based upon the attachment figure's level of consistency in responding to distress and subsequent distress relief. Over time, individuals come to expect the same level of support and distress relief received early in life. These expectations color an individual's self and world-view (Mikulincer et al., 2009).

Justification

Accurate diagnosis and correct usage of symptom data derived from client selfreport, parent ratings, and other collateral raters are important for many reasons, including the facilitation of understanding between providers based upon common nosology, detrimental effects of labels, treatment planning, intervention selection, impact on rapport between client and therapist, and overall therapy outcomes (Coverdale et al., 2002; Kendell & Jablensky, 2003; Kessler et al., 1994, WHO, 2013; Yeh & Weisz, 2001). Because is it known that inter-parental discrepancy occurs frequently on pediatric behavior assessment scales and reciprocal interactions exist among individual parent factors, parent perceptions, child behavior, and parent-child relationships (Achenbach et al., 1987; Chi & Hinshaw, 2002; Duhig, et al., 2000; Langberg et al., 2010; Patterson, 1995; Pelton, Steele, Chance & Forehand, 2001), it would be beneficial to investigate other variables that may influence adult perspectives. Adult attachment style is believed to globally influence the manner in which adults experience life and relationships (Collins & Read, 1994). As such, the tendency to perceive events from an optimistic or pessimistic perspective based upon early life experience has been attributed to adult attachment style (Baldwin et al., 1993). Ravitz and colleagues (2010) suggested assessment of attachment style can be beneficial in a clinical setting as interventions can be tailored specifically based on the understanding of how a client perceives social and attachment-related events. Investigating the effects of adult attachment style on interparental discrepancy on pediatric behavior assessment scales may prove helpful for clarification of divergent descriptions presented by cohabitating parents. This information could result in improved accuracy of pediatric psychological diagnosis. Additionally, understanding the variables that lead parents to perceive pediatric behaviors from unique and discrepant perspectives may result in therapists incorporating this information to more effectively inform their approach to therapy, goal setting, and selection of interventions. Understanding the reasons for which parents rate their child's behavior discrepantly may lead to the clinical decision to treat the entire family system rather than merely focusing on the identified "problem" child. The purpose of this study was to evaluate the extent to which adult attachment style differences influence inter-parental discrepancy on pediatric behavior assessment scales.

LITERATURE REVIEW

Diagnosis

In the United States, the two predominant systems for diagnosing psychiatric disorders are the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association, 2013) and chapter five of the International Classification of Diseases (ICD-9-CM; Buck, 2011). Diagnostic systems such as these provide a nosology that allows for medical and mental health practitioners

to employ operationally defined diagnostic labels that are universally understood to represent a cluster of symptoms and behaviors with an implied minimum threshold for frequency, duration, and intensity (Farmer, 1997). Diagnostic labels serve as organizational tools that are advantageous for a number of reasons. Increased research in psychology has been facilitated by the standardization of diagnostic criteria, which allows for reliable comparisons of data across time (Clark, Watson, & Reynolds, 1995). Diagnostic labels ensure a shared common language in order to improve the ease of communication and understanding among providers, regardless of treatment setting or geographic region (Clark et al. 1995; Farmer, 1997). Finally, diagnostic labels drive empirically-based treatment decisions (WHO, 2013).

Kendell and Jablensky (2003) argued that psychiatric diagnostic categories give treatment providers useful information related to etiology, demographic descriptions, prognosis, and factors that are commonly associated with poor treatment outcomes and relapse. These categories are invaluable to treatment decision-making and intervention planning. However, Kendell and Jablensky (2003) cautioned providers to be mindful of the distinction between the validity of a psychiatric diagnosis and the actual utility of a diagnosis.

While the American Psychological Association (APA) has published guidelines for the evaluation of children in a few specific areas, such as custody cases (APA, 2010), forensic cases (APA, 2013), and assessment of individuals with disabilities (APA, 2012), there are no such guidelines for general pediatric psychological evaluation. Instead, practitioners must rely heavily on diagnostic criteria set forth in the DSM-5 or ICD-9-CM (American Psychiatric Association, 2013; Buck, 2011). Criteria for the manifestation of symptoms, such as frequency, intensity, duration, age of onset, and settings in which symptoms are exhibited, vary depending upon the disorder (American Psychiatric Association). For example, in order to diagnose a person with Attention Deficit Hyperactivity Disorder (ADHD), inattentive and/or hyperactive/impulsive symptoms must have been present before the age of 12. Further, impairment from these symptoms must be present in at least two settings, such as school and home (American Psychiatric Association). In contrast, in order to make a diagnosis of Autism Spectrum Disorder (ASD), social communication and interaction deficits must be present across multiple contexts, with symptoms present during early developmental periods of childhood (American Psychiatric Association). Examples of early developmental periods that are implicated in ASD include (a) communication milestones between the ages of 1 and 3 years old (e.g., language acquisition, using words to get needs met) and (b) social skills development from 3-5 years old, such as turn-taking, pretend play, and development of theory of mind (American Academy of Pediatrics, 2009). Considering the necessary diagnostic criteria in these examples, requiring that a client must exhibit symptoms in multiple settings and by a certain age, parent reports are often needed to gather certain data related to onset of symptoms and developmental history.

Due to the above stated considerations, children's limited ability to serve as accurate informants regarding their own symptoms, best practice for evaluation dictates incorporating a means of collecting data in multiple settings and from multiple raters (Achenbach et al., 1987; Elliot & Busse, 1993; Verhulst & Van der Ende, 2002). Verhulst and Van der Ende (2002) suggested obtaining information from multiple respondents, such as both parents, or a parent and a grandparent, as well as collateral ratings from a teacher or others who have had opportunities to observe the child's behavior. Although multiple respondents would seemingly add a measure of reliability for problem behaviors endorsed, it is well-known that informants frequently disagree in their ratings of pediatric behavior (Achenbach et al., 1987; Christensen et al., 1992; Dave' et al., 2008; De Los Reyes & Kazdin, 2004, 2005; Duhig et al., 2000; Hughes & Gullone, 2010; Kraemer et al., 2003; Langberg et al., 2010; Sims & Lonigan, 2012; Yeh & Weisz, 2001; Youngstrom et al., 2000). Inter-rater disagreement may serve to confuse the process of diagnosis or lead to an incorrect diagnosis if the discrepancy is not interpreted correctly or applied meaningfully.

Behavior Assessment Measures

There are multiple methods of obtaining informant data for pediatric psychological evaluations, some with advantages and disadvantages. Beyond the standard intake interview and observations of the child, clinicians have the option of using clinical interviews with varying degrees of structure (Anastopoulos & Shelton, 2002). Another option for gathering informant data is administration of an objective behavior assessment scale (Elliot & Busse, 1993). Broadband objective behavior assessment scales have increased in popularity and usage as the result of the standardization, convenience, and efficiency they provide (Elliot & Busse, 1993; Watson, 2005). The options of assessments appear only to be limited by the symptoms or behaviors a clinician wishes to assess (Carlson, Geisinger, & Jonson, 2014).

Clinical Interviews

First, the clinical interview, utilizing varying degrees of structure, can be conducted as a method of gathering information to assist with diagnosis. Clinical

interviews vary in their level of structure and as such can be structured, semi-structured, or unstructured (Jones, 2010). Unstructured interviews involve unstandardized questions posed by the evaluator (Summerfeldt & Antony, 2002). The absence of strict constraints on the questions in an unstructured interview allows for more freedom and potentially can result in a more detailed diagnostic picture (Anastopoulos & Shelton, 2002). Another advantage of the unstructured interview is that it allows the interviewer to observe the respondent's language skills, thought processes, and nonverbal cues that might otherwise be missed using an objective rating measure (Anastopoulos & Shelton, 2002). Conversely, the disadvantage of using an unstructured interview format is that a clinician's lack of experience or knowledge could result in failure to obtain pertinent information (Jones, 2010).

Some clinicians prefer a more structured alternative. The semi-structured interview imposes some degree of uniformity while allowing for follow up questions and probing at the discretion of the interviewer (Anastopoulos & Shelton, 2002; Craig, 2003). The most standardized of the clinical interviews is the structured interview (Jones, 2010). In the structured clinical interview, question content and sequence, as well as response ratings, are standardized (Bagby, Wild, & Turner, 2003). An example of a structured clinical interview is the Diagnostic Interview Schedule for Children (DISC-IV; Shaffer, Fisher, Lucas, Dulcan, & Schwab-Stone, 2000), a comprehensive diagnostic measure designed to assess symptoms related to 34 different pediatric psychiatric diagnoses. Anastopoulos and Shelton (2002) cited several potential advantages of using a structured interview. Standardization can increase the assurance of satisfactory test reliability and validity. Another advantage of some structured interviews is the option for computerbased administration. Computer software can simplify administration and scoring. However, Anastopoulos and Shelton (2002) cautioned that these advantages must be weighed against the disadvantages, including lengthy administration time for longer comprehensive tests like the DISC-IV, increased costs of computer-based instruments, and reduced flexibility in the interview process.

Objective Behavior Checklist Scales

Possibly among the most widely used, efficient, and cost effective methods of data collection are the broadband rating scales, designed to be completed by respondents who are familiar with the child (Achenbach,1991b; Achenbach, 2014; Achenbach et al.,1987; Anastopoulos & Shelton, 2002; Elliot & Busse, 1993). Two commonly used child behavior rating instruments are the Behavior Assessment System for Children 2nd Edition (BASC-2; Reynolds & Kamphaus, 2004) and the Achenbach Child Behavior Checklist (CBCL/6-18; Achenbach & Rescorla, 2001). Both instruments measure a wide range of behaviors, including internalizing and externalizing behaviors, as well as adaptive functioning (Rescorla, 2009).

The Achenbach System for Empirically Based Assessment (ASEBA; Achenbach & Rescorla, 2001) is a set of pediatric behavior checklists that includes the Child Behavior Checklist ages 1 1/2 to 5 (CBCL/1 ½ - 5), the Child Behavior Checklist ages 6 to 18 (CBCL/6-18), the Caregiver-Teacher Report Form (C-TRF), the Teacher Rating Form ages 6 to 18 (TRF/6-18), and the Youth Self Report ages 11 to 18 (YSR/11-18; Achenbach, 2014). One of the most researched and referenced collections of pediatric behavior assessment instruments, multiple versions and editions of the ASEBA have been cited in over 800 journals and books, and in more than 8,000 publications since 1966

(Achenbach, 1966, 1991a, 1991b, 2014; Achenbach, Dumenci, & Rescorla, 2003; Achenbach & Edelbrock, 1983, 1986, 1987; Achenbach & Rescorla, 2001). One of the oldest broadband pediatric behavior checklists, the development of the CBCL/4-18 dates back to research that began in the 1960s in order to further the classification of pediatric psychopathology (Achenbach, 1966). The CBCL/4-18 measures behavioral, emotional, and adaptive functioning, social problems, and competencies (Watson, 2005). Continued research and revisions yielded a system of standardized pediatric assessment scales for ages 4-18 years old and the publication of the first CBCL/4-18 detailed manual (Achenbach & Edelbrock, 1983), followed by a teacher rating form (TRF; Achenbach & Edelbrock, 1986) and the youth self-report form for ages 11 to 18 years old (YSR; Achenbach & Edelbrock, 1987).

The most recent revision, the Child Behavior Checklist for Ages 6-18 (CBCL/6-18; Achenbach & Rescorla, 2001), is comprised of 113 items that yield eight empiricallybased syndrome scales (Anxious/Depressed, Withdrawn/Depressed, Somatic Complaints, Social Problems, Thought Problems, Attention Problems, Rule-Breaking Behavior, Aggressive Behavior) and six DSM-oriented scales (Affective Problems, Anxiety Problems, Somatic Problems, Attention Deficit/Hyperactivity Problems, Oppositional Defiant Problems, Conduct Problems), along with broadband externalizing, internalizing, and total problem scales (Achenbach & Rescorla, 2001). Test items such as "cries a lot," "fears going to school," "feels worthless," and "gets in many fights," are rated on a 3point Likert scale, using 0 (not true), 1 (somewhat or sometimes true), or 2 (very true or often true). Raw scores are converted to standardized t-scores with a mean of 50 and standard deviation of 10 (Achenbach, 1991b).

The CBCL/6-18 has strong internal consistency reliability, with coefficient alpha ranges from .55 to .90 for Competence and Adaptive scales, .71 to .97 on the empiricallybased Syndrome scales, and .67 to .94 on DSM-oriented subscales (Flanagan, 2005). Coefficient alphas of .91, .92, and .94 were reported for broadband Internalizing, Externalizing, and Total Problems respectively (Achenbach & Rescorla, 2001). Mean test-retest reliability ranged from .88 to.90 (Internalizing), .79 to .88 (Externalizing), and .85 to .90 (Total Problems), for 8 and 16-day time intervals (Flanagan, 2005). Achenbach, Dumenci, and Rescorla (2003) reported a mean test-retest reliability of .85 and a mean Cronbachs' alpha of .82 for the DSM-oriented scales. Achenbach and Rescorla reported high concurrent validity between the CBCL/6-18 and other behavior assessment instruments, such as the DSM-IV Checklist (Hudziak, 1998), the Conners' Rating Scales (CRS; Conners, 1997), and the Behavior Assessment System for Children (BASC; Reynolds & Kamphaus, 1992).

The CBCL/6-18 offers several useful features. Extensive research supports its empirical validity and reliability (Achenbach, 2014; Achenbach et al., 2003; Achenbach & Rescorla, 2001; Rescorla, 2009; Flanagan, 2005). The CBCL/6-18 allows for assessment of a broad range of behaviors in a variety of settings (Flanagan; Watson, 2005). The language on the CBCL/6-18 protocols is on a 5th grade reading level (Flanagan, 2005). Scoring can be done by hand or with computer software; however, a significant disadvantage compared to other checklist assessments (e.g., BASC-2, CRS) is that hand scoring is a laborious process with high potential for error by the scorer (Flanagan, 2005). Overall, Flanagan (2005) suggested the CBCL/6-18 is an empirically sound instrument, useful for assessment of behaviors and symptoms of school age children in multiple settings that yields data applicable to medical, mental health, and forensic settings.

The Behavior Assessment System for Children (BASC; Reynold & Kamphaus, 1992) was developed to provide a dimensional approach to pediatric behavior assessment (Kratochwill, Sheridan, Carlson, & Lasecki, 1999). As the cognitive behavioral approach to assessment and therapy gained popularity in the 1980s, demand increased for assessments based not only upon observable behaviors, but on thoughts and feelings as well. The BASC blended more traditional behavior models of assessing observable behaviors with cognitive behavior approaches to include covert cognitions and emotions (Kratochwill et al., 1999).

In 2004, the second edition of the Behavior Assessment System for Children was published (BASC-2; Reynolds & Kamphaus, 2004). Reynolds and Kamphaus (2004) designed the BASC-2 to assess multiple constructs of behavior and emotion in children and adolescents ages 2 to 21 years old. It is comprised of up to 160 items, depending on the type of form (e.g., parent, teacher, self) and yields five composite scores (Behavioral Symptoms Index, Externalizing Problems, Internalizing Problems, Adaptive Skills, School Problems). Three types of rating forms are available including (a) the Parent Rating Form (PRF), which can be completed by parents, caregivers, or other collateral reporters who know the child, (b) the Teacher Rating Form (TRF), and (c) the self-report form (SRF), to be completed by the child no younger than 8 years old. Items such as "Cannot wait to take turn," "Is unable to slow down," and "Has a short attention span," are rated on a 4-point Likert scale ranging from "never" to "almost always" (Reynolds & Kamphaus, 2004). All three rating scales include measures to safeguard against potential threats to validity, such as response bias, careless responding, and inconsistent reporting (Watson & Wickstrom, 2007). Like the CBCL/6-18, the BASC-2 yields standardized norm-referenced t-scores with a mean score of 50 and a standard deviation of 10 (Achenbach & Rescorla, 2001; Reynolds & Kamphaus, 2004).

Reynolds and Kamphaus (2004) reported high mean internal consistency coefficients for all three rating scales, ranging from .80s and .90s for composite scales. Specifically, teacher and parent rating scales had alpha coefficients in the low to mid .90s. Clinical norms reliability alpha coefficients were equally high, with coefficients above .90 for adaptive skills and behavioral symptoms. Test-retest reliabilities for the PRF and TRF ranged from .81 on Internalizing Problems Index to .93 for Behavior Symptoms Index. Concurrent validity was strong for the BASC-2 scales; the TRF correlated highly with the ASEBA, with correlations for Externalizing Problems ranging from .75 to .85. Correlations between TRF and ASEBA internalizing were lower, ranging from .64 to .80. Similarly, high correlations were reported between externalizing behaviors on the BASC-2 parent ratings and the ASEBA, ranging from .73 to .84. Correlations between PRS and ASEBA internalizing problems were lower, ranging from .65 to .75 (Watson & Wickstrom, 2007).

Like the CBCL/6-18, the BASC-2 has both advantages and disadvantages. Scoring can be done conveniently by hand or with computer-based software. Either scoring method is relatively simple and fast (Watson & Wickstrom, 2007). Watson and Wickstrom (2007) conceded that the manual is extensive in its coverage of data, case examples, and interpretation assistance, yet they criticized the cumbersome nature of the manual and asserted that it is not user friendly. However, despite the complexity of the BASC-2 manual, Watson and Wickstrom (2007) described the rating forms as straightforward and rather simple for respondents to complete. A major benefit of the BASC-2 is its ability to assist with classification of emotional and behavior disorders according to educational standards, as well as to facilitate treatment planning and intervention selection (Watson & Wickstrom, 2007). However, while the BASC-2 is used for many other purposes, including clinical diagnosis based on the DSM (American Psychiatric Association, 2013), forensic evaluation, research, and Individual Education Program (IEP) planning, Watson and Wickstrom (2007) cautioned that the instrument was not designed or validated for all of these purposes. Given the current lack of validity information available on the BASC-2 for research purposes, the CBCL/6-18 may be the better choice when conducting a study for purposes other than validating the BASC-2 scales.

Inter-Rater Discrepancy

A large body of research exists documenting common discrepancies among mothers' and fathers' ratings of child problem behaviors (Achenbach et al., 1987; Bartels et al., 2007; Chi & Hinshaw, 2002; Dave' et al., 2008; Duhig et al., 2000; Harvey et al., 2013; Hughes & Gullone, 2010; Konold et al., 2004; Langberg et al., 2010; Loeber, Green, Lahey, & Stouthamer-Loeber, 1989; Schroeder et al., 2010; van der Oord et al., 2006; van der Toorn et al., 2010). Considering that parents are generally the chief sources from whom clinicians gather information regarding child behavior (Hewitt, Silberg, Neale, Eaves, & Erickson, 1992), the lack of inter-parental agreement could pose potential problems with interpretation of assessments and accurate diagnosis (Langberg et al., 2010). Complications in intervention selection may arise if discrepancies cannot be

usefully interpreted and utilized. Researchers have investigated a multitude of variables that significantly moderate or predict inter-rater discrepancy between mothers and fathers. Possible factors that have been investigated are parent and child demographic variables, such as age, gender, ethnicity, and socioeconomic status, along with the type of behaviors or severity of symptoms that are being rated (Bartels et al., 2007; Duhig et al., 2000; Harvey et al., 2013; Konold et al., 2004; Langberg et al., 2010). Parent-specific variables, including marital status, employment, education, alcohol use, and depression (Chi & Hinshaw, 2002; Dave' et al., 2008; Richters, 1992; van der Oord et al., 2006) have been investigated. Other variables specific to parent-child interactions, such as family and parent distress and role stress have been researched as well (Bartels et al.; Christensen et al., 1992; Dave' et al., 2008; Langberg et al., 2010, van der Oord et al., 2006).

Child Variables Affecting Inter-Rating Discrepancy

In a meta-analysis, which reviewed 60 studies, Duhig and colleagues (2000) investigated inter-parental discrepancy on ratings of child behavior problems as moderated by child age. The authors reviewed 166 studies published between 1990 and 1997. Of the 166 studies, 60 met inclusion criteria of containing a measure of child behavior/emotional functioning completed by both the mother and the father and reported sufficient data to allow for the calculation of effect size. The authors did not specify whether non-biological parents were included or excluded. Studies with findings that failed to reach statistical significance were excluded from the meta-analysis. While the statistical design of the study necessitated this exclusion, it is possible that results may be skewed because studies with significant discrepancies may have been more likely to report detailed analysis results. There was greater inter-parental discrepancy for internalizing behaviors such as withdrawal, depressed mood, and anxiety, as compared to externalizing behavior items such as hyperactivity, aggression, and oppositional behavior. There were significant differences between mothers' and fathers' ratings of both internalizing and externalizing behaviors according to the age of the child and socioeconomic status; parental discrepancy was higher for younger children than for adolescents. Likewise, there was more discrepancy between mothers' and fathers' ratings among lower socioeconomic groups.

Due to ongoing concerns regarding the validity and reliability of scores on pediatric measures of behavior when discrepancy exists among multiple respondents (e.g., mother and father), Konold and colleagues (2004) conducted a study to examine a number of variables suspected of predicting inter-rater discrepancy. A sample of 589 parent dyads participated in a longitudinal study designed to evaluate three variables of interest, (a) age of the child, (b) gender of the child, and (c) interaction of parent-child gender. Of particular interest to the authors was whether parent ratings and amount of discrepancy in a dyad would remain stable over a 4-5 year time span. Researchers collected demographic information on respondent ethnicity, socioeconomic status, child and respondent gender, and child age at data collection 'time 1' and 'time 2.' Data were obtained regarding internalizing behaviors (e.g., Withdrawn, Anxious/Depressed, Somatic) and externalizing behaviors (e.g., Delinquent Behavior, Aggressive Behavior) via administration of the CBCL/4-18 at age 4 ¹/₂ years and again when the child reached first grade. No differences based on child gender were detected between mother/father dyad ratings at either 'time 1' or 'time 2.' Likewise, individual parent ratings remained

consistent over time for both internalizing and externalizing behaviors at age 4 1/2 and again in 1st grade. In summary, the study found neither gender nor age of the child to be predictive of parent discrepancy on pediatric behavior ratings.

Schroeder and colleagues (2010) investigated inter-parent discrepancy on child behavior assessment scales using the CBCL/4-18. The authors evaluated the age and gender of the target child as moderating variables of inter-parent discrepancy. Archival data from completed psychological evaluations was obtained from a pediatric outpatient psychology clinic from a 5-year time period. The sample consisted of records for 174 children ages 5 to 18 years old, for which a CBCL/4-18 had been completed by both parents. Informants included biological and step-parents. Parent correspondence and discrepancy were analyzed using Pearson correlations to compare CBCL/4-18 index and syndrome scale t-scores of mothers and fathers. Results from this analysis suggested that parent agreement varies according to the type of behavior being rated; specifically, parental ratings were more discrepant regarding internalizing behaviors than externalizing behaviors. Gender was a moderator only for the CBCL/4-18 Anxious/Depressed scale. Parental discrepancy on the Anxious/Depressed scale was larger for male children than for female children. Mothers rated the level of symptom severity as higher than fathers on six out of eight syndrome scales. Age of the child was a moderating variable for discrepancy on the Attention scale only. Inter-parental discrepancies on the Attention scale were larger for older children. Further, when analyzed by diagnostic group, mothers reported more problematic behaviors than fathers when discrepancies occurred.

There continues to be a lack of researcher agreement related to which childrelated variables influence discrepant inter-parental ratings of pediatric behavior (Harvey et al., 2013). Many studies have found no inter-rater discrepancy based on child gender (Achenbach et al., 1987; Crane, Mincic, & Winsler, 2011; Duhig et al., 2000; Hughes & Gullone, 2010; Kolko & Kazdin, 1993; Langberg et al., 2010). Other researchers reported inter-parental discrepancy was moderated by child gender to a greater extent in young children (Campbell, 1993; Dave' et al., 2008; Gagnon, Vitaro, & Tremblay, 1992). However, Harvey and colleagues (2013) stressed that the findings of these studies have failed to present a clear pattern and results have been inconsistent between studies.

Inconsistencies in the research impelled Harvey and colleagues (2013) to further research child-related variables to clarify which of these may accurately predict interparent discrepancy on pediatric behavior assessment scales. Authors focused on three child variables including (a) child gender, (b) child mental health status, and (c) preacademic skills of the child. Participants were recruited from a larger longitudinal study. Parent dyads were comprised of 162 pairs of biological mothers and fathers who had a 3year old child. Parent dyads were not limited to cohabitating parents, which could be considered a limitation in this study due to observations being made in differing home environments. Respondents completed the parent version of the BASC as part of an initial screening. Children were 3-years old at the initial screening. A follow-up home visit was conducted when children were 37-50 months of age. Demographics were collected at the home visit, including ethnicity, education level, income, marital status, and number of children in the home. At this time, children were administered the Kaufman Survey of Early Academic and Language Skills (KSEALS; Kaufman & Kaufman, 1993) in order to assess pre-academic and communication skills. When the children reached age six, another home visit was conducted and children who met criteria were diagnosed with ADHD or ODD based on all data collected. Compared to mothers, African American fathers rated their child with less attention problems than Caucasian fathers. ADHD and ODD diagnoses served as predictors of significant inter-parent discrepancy on hyperactivity ratings. Specifically, for children diagnosed with ADHD or ODD later in the study, mothers had given higher ratings on hyperactivity during the prescreening assessments.

Parent Variables Affecting Inter-Rating Discrepancy

Variables that are unique to parents have been investigated in an effort to better understand factors that contribute to inter-parental discrepancy on pediatric behavior assessment scales. Specifically, researchers analyzed demographic variables, such as parent gender and ethnicity, education level, employment status, socioeconomic status, home ownership, and car ownership (Dave' et al., 2008; Youngstrom et al., 2000). Psychological states and psychopathology of parents has been evaluated as well, including general distress, depression, parenting stress, substance abuse, anxiety, and self-reported marital stress (Chi & Hinshaw, 2002; Dave' et al., 2008; Langberg et al., 2010; Youngstrom et al., 2000).

Youngstrom and colleagues (2000) conducted a study of the patterns and correlates of inter-rater agreement regarding externalizing and internalizing behavior problems in adolescent males. The sample was comprised of 394 triads of adolescent males, caregivers, and teachers who participated in Loeber, Farrington, Stouthamer-Loeber, and Van Kammen's Pittsburgh Youth Study (as cited in Youngstrom et al., 2000). Each respondent completed Achenbach checklists (Achenbach, 1991a). Caregiver was defined as biologic, step- or adoptive mother or father, or grandmother, with a small number of "other" relatives or foster parents serving in the role of caregiver. Demographic information was collected from caregivers including education level, employment, and socioeconomic status. Data regarding the presence of recent depressive symptoms, perceived parental stress, maternal substance use, and paternal antisocial behavior were collected via structured interviews. Interestingly, caregiver characteristics of depression and stress correlated with discrepancies in the perceived intensity of problem behavior. Caregiver depression was a significant predictor of disagreement among raters. Caregiver stress was also important, although this variable did not reach statistical significance.

Chi and Hinshaw (2002) investigated depression-related distortions as an underlying factor for discordant respondent ratings. Researchers sought to evaluate the veracity of the Depression-Distortion hypothesis as an explanation for inter-rater discrepancy on child behavior assessment scales. The Depression-Distortion hypothesis (Richters, 1992) proposed that depressed mothers exaggerate children's behavior ratings. Chi and Hinshaw (2002) suggested that initial negative maternal biases resulting from depressed mood would result in a reciprocal interaction between mother and child. Specifically, negatively distorted perceptions contributed to the depressed mother's response to the child's behavior, which subsequently led to a cycle of self-fulfilling prophecy, whereby the child reacted with an exaggerated or aggressive response. The potentially resultant increase in maternal-child conflict can lead to coercive discipline and increasingly negative interactions between mother and child (Patterson, 1995). Chi and
Hinshaw (2002) recruited a sample of 96 participants from both clinical and community sources. Only children between ages 6-10 with a diagnosis of ADHD Combined type and a minimum IQ of 80 were included. Confounding child variables such as age, gender, and verbal IQ were controlled. Mothers completed self-report ratings on the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), as well as the revised Conners Parent Rating Scales (CPRS-R; Conners, Sitarenios, Parker, & Epstein, 1998a) and CBCL for child behavior ratings. Revised Conners Teacher Rating Scales (CTRS-R; Conners, Sitarenios, Parker, & Epstein, 1998b) and CBCL-TRF rating forms were also completed by the child's teacher. In order to evaluate negative maternal biases regarding parenting/discipline strategies, mothers completed the Parent-Child Relationship Questionnaire (PCRQ; Furman & Giberson, 1995) and the Alabama Parenting Questionnaire (APQ; Shelton, Frick, & Wootton, 1996). BDI scores predicted discrepancies between mothers and teachers for ADHD symptoms, as well as general behavior problems. Further, higher reports of child externalizing problems as rated by teachers were correlated with higher levels of depressed mood in mothers. Discrepancies between mother and child ratings of discipline strategies yielded additional data supporting the authors' hypothesis of depression-related distortions. Specifically, maternal self-report of depressed mood was associated with the mother reporting use of more negative discipline strategies than were endorsed by her child. This suggested a strong correlation between maternal depression and negative maternal perceptions of both self and child behavior.

Van der Oord and colleagues (2006) investigated the association of informant discrepancy on child behavior assessment scales with parenting stress and depression.

Parent, teacher, and child ratings were obtained for a total of 65 children ages 8-12. All participants were recruited via psychiatric outpatient clinics and inclusion criteria required a diagnosis of ADHD based on the parent DISC-IV, IQ of 75 or greater, and a mastery of the Dutch language. All respondents completed the appropriate version of the Disruptive Behavior Disorder Rating Scale (DBDRS, as cited in van der Oord et al., 2006). Additionally, parents completed the short form of the Parenting Stress Index (PSI; Abidin, 1983) and the Center for Epidemiologic Studies – Depression rating (CES-D; as cited in van der Oord et al., 2006). Stimulant use by the target child was controlled for in the analysis. Parenting stress was positively correlated with higher scores on the DBDRS inattention, hyperactivity/impulsivity, ODD behavior scales compared to teacher ratings. Informant agreement/discrepancy was independent of stimulant treatment. While van der Oord and colleagues found increased parenting stress was associated with comparatively higher ratings of problem behavior, their results differed from Chi and Hinshaw (2002) finding that parental depression was not significant. Van der Oord and colleagues (2006) discussed that perceived parent stress may operate to create a negative bias when parents rate children's behavior. Van der Oord and colleagues (2006) also suggested an alternative explanation for discrepancy among parent and teacher respondents could be that the target child behaves differently in different settings, thereby leading to discord among raters.

A longitudinal study of inter-parental discrepancy on internalizing child behavior ratings was conducted with twins from Dutch birth cohorts from 1986-1993, analyzing the stability of maternal versus paternal ratings over time (Bartels et al., 2007). Participants were recruited through the Netherlands Twin Registry. The CBCL/4-18 was completed by mothers and fathers of each twin sets. Ratings were obtained from parents of twins born between 1986 and 1993. Longitudinal parent ratings for 3,207 twin sets at age three, 3,859 twin sets at age seven, 2,196 twin sets at age ten, and 1,105 twin sets at age 12. The authors did not specify whether all parents were biological parents. A variance-covariance matrix was used to investigate three components for effects on interparental discrepancy: common additive factors, shared environmental influences, and non-shared environmental influences. Shared environmental influences were not clearly defined in the introduction or discussion by the authors; however, variables that were measured that were specific to parents included smoking, alcohol use, socioeconomic status, religion, and family leisure time. Bartels and colleagues (2007) reported 19% of the covariance between parent raters could be accounted for by mother-specific, shared environmental influences. These results suggested that rater-bias may account for the stability of behavior ratings across the years. Authors opined that parents may perceive their children's behavior from unique perspectives. Further, a child potentially may behave in a different manner specifically according to the parent with which he or she interacts and according to the unique situation in which the child is observed. Along these lines, results supported the authors' argument of differing perceptions, and they suggested that fathers seemed to have different perceptions of various facets of the child's behavior depending upon the age of the child; whereas mothers gave more consistent ratings over the years.

Dave' and colleagues (2008) investigated the role of parent stress, marital satisfaction, and alcohol abuse as moderators of parental discrepancy on child behavior using the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997). Families

were recruited from 13 general practice settings as part of a larger study on parental depression and child development. The study included 248 dyads of biological mothers and fathers, with a target child age range of 4 to 6 years old. The SDQ was chosen over the CBCL because of its high specificity, its ability to discriminate between psychiatric and non-psychiatric disorders, and its superiority for detecting hyperactivity. In addition to the SDQ, parents completed the Patient Health Questionnaire (PHQ; Widiger & Sankis, 2000) as a measure of parent depression; the Dyadic Adjustment Scale (DAS; Spanier, 1976), which assesses for marital satisfaction, consensus, affection, and cohesion; and the Alcohol Use Disorders Identification Test (AUDIT; WHO, 2010) in order to determine problematic alcohol use within the previous year. Demographic information was obtained for both parents including age, employment, marital status, education, ethnicity, housing tenure, and car ownership. The study specified that information on fathers was collected regarding father-child engagement, quantity and quality of time fathers spent with children, and parenting stress; however, authors failed to report whether similar information was collected from mothers. While it may have been assumed that mothers typically take on a larger portion of child-rearing duties, this excluded cases where fathers may share equal responsibility or engage in a larger share of parenting responsibilities than the mother. Paternal factors such as the father's perceived dyadic consensus, paternal employment, and number of hours a father spends with the child moderated discrepancies in ratings. Specifically, a father who perceived dyadic consensus as high, or who was employed, was less likely to rate a child with higher levels of hyperactivity than the mother. However, the more time a father spent with the child being rated, the higher he was likely to rate levels of hyperactivity compared to the

mother's ratings. Additionally, fathers who reported increased paternal role stress were more likely to rate conduct problems as more severe than mothers. Finally, in cases where mothers reported higher levels of dyadic satisfaction compared to the father, or when the mother reported alcohol misuse by the father, fathers rated total behavior difficulties as more severe than mothers. Authors failed to report similar findings for mothers who misused alcohol. Interestingly, maternal ratings did not differ significantly according to whether or not the mother worked outside the home.

Langberg and colleagues (2010) conducted a study of parent stress and distress as predictors of inter-parental discrepancy on child behavior ratings with 324 children between 7 and 9 years of age, who had an existing diagnosis of ADHD. The respondent sample was comprised of married couples only, including biological parents and stepparents. The study used two measures of child behavior; the fourth edition of the Swanson, Nolan, and Pelham Questionnaire (SNAP-IV; Swanson, 1992), which measured inattention, hyperactivity, and impulsivity, and the Externalizing Problems subscale of the CBCL/4-18 (Achenbach, 1991a), which measured delinquent and aggressive behaviors. The Parenting Stress Index (PSI; Abidin, 1983) was used to measure dysfunctional interaction between parents and children, as well as parental distress. Parents also completed the BDI. Significant results were found in several areas. When comparing mothers and fathers, mothers rated their children's behavior as more severe in all areas, including inattention, hyperactivity, impulsivity, delinquency, and aggression. Parental stress was found to be a moderating variable for inter-parental discrepancy. There were significant negative correlations for mothers between PSI scores and ODD symptoms, and significant positive correlations between PSI scores and the

CBCL/4-18 Externalizing Score. An interesting pattern was found when mothers' and fathers' behavior ratings were plotted as a function of parental stress. For fathers with lower parental stress, behavior ratings were generally lower than those of the mother. However, as parental stress increased, fathers' behavior ratings became more severe than mothers'.

Family Variables Affecting Inter-Rating Discrepancy

In a study of 137 families, Christensen and colleagues (1992) assessed for interparental discrepancy based on family distress. The sample was comprised of cohabitating parents of children ages 3 to 13, regardless of whether parents were biologically related to the target child. Participants were recruited via public service announcements. advertisements, and clinic referrals. The DAS and the Areas of Change Ouestionnaire (ACQ; Weiss & Birchler, 1975) were used to categorize couples with or without marital distress. The Becker Bipolar Adjective Checklist (BBACL; Becker, 1960) and the CBCL/4-18 were used to determine the presence of conduct problems in a child. The final sample included (a) a group 50 families who met the criteria for marital discord and child conduct problems, (b) a nondistressed group of 46 families without child conduct problems, (c) a group of 30 families with marital distress but no child conduct problems, and (d) a group of 11 families with no marital distress but with a child with conduct problems. Results indicated that cohabitating parents disagreed two times more often than they agreed about child behavior ratings. Mothers provided significantly more negative ratings than fathers. Family factors affected disagreement as well; as family distress increased, inter-parental discrepancy increased. As the severity of the problem behavior increased, discrepancy increased. The authors suggested that these findings are important

because disagreement about the actual problem behavior may lead to disagreement about child rearing practices. For example, parents who cannot agree about what problem behaviors exist may not be likely to agree on how to handle the child; this has the potential to create controversy between the parents, resulting in higher levels of family distress.

Attribution Bias Context Model

The phenomenon of inter-rater discrepancy has been well-studied with respect to the basic variables involved in divergent responses among co-parent dyads (Duhig et al., 2000). However, until 2005, research explaining why these variables affected discrepancy was largely absent (De Los Reyes & Kazdin, 2005). De Los Reyes and Kazdin (2005) proposed the Attribution Bias Context (ABC) Model, a theoretical framework for understanding informant discrepancies. The ABC Model is based on three premises, (a) actor-observer phenomenon, (b) influence of perspective-taking on memory recall, and (c) source monitoring framework attribution for acquiring memories. The actor-observer phenomenon suggests individuals tend to attribute causes of their own behaviors to external factors, such as environment, and minimize the influence of their own disposition (Jones & Nisbett, 1972). Conversely, when observing another person's behavior, observers often engage in fundamental attribution error, attributing the cause of the behavior to the observed person's dispositional qualities and minimizing, or disregarding, context or environmental influences on the behavior (Moran, Jolly, & Mitchell, 2013). When applied to the problem of discord among raters, the actor-observer phenomenon may help explain discrepancies between child self-report and parent or teacher responses regarding problem behavior. The ABC Model posits that memory

recall is influenced by the perspectives people take. Specifically, the perspective of the individual (e.g., positive or negative) when attempting to remember events governing memory recall (Tversky & Marsh, 2000). This may be especially pertinent to pediatric psychological evaluations in circumstances in which a child is referred by a parent due to behavior concerns. In such a case, the parent, or parents, may be placed in a negative perspective while answering behavior scale items that assess maladaptive or problematic behavior. Finally, the ABC Model posits that people use heuristics when retrieving memories (Johnson, Hashtroudi, & Lindsay, 1993). When attempting to answer behavior rating items, a parent is likely to employ schematic representations of the child's typical behavior to assist in memory retrieval (De Los Reyes & Kazdin, 2005). Relying on schematic representations may result in exaggerated ratings if the parent fails to remember times when the child has acted in a manner different than that schema.

Attachment Theory

History of attachment theory. Attachment theory, as originally proposed and researched by Bowlby (1969), argued that there is an innate drive within human infants to develop secure emotional bonds with caregivers. This evolutionarily adaptive drive initiates an attachment-behavioral system in which infants seek safety, protection, and responsiveness from their caregiver, while concurrently monitoring said caregivers for availability and ability to fulfill the role as the attachment figure. Ainsworth and colleagues (1978) theorized that the emotional bonds formed between caregiver and child resulted in one of three attachment styles – secure, anxious, or avoidant. In order for a secure attachment to form, the caregiver must respond to an infant's needs in a prompt, consistent, and appropriate manner. This provides the child with a secure base from

32

which to safely explore the environment. According to this theory, a securely attached toddler becomes upset when the caregiver leaves, but is easily comforted upon the return of the caregiver. An overly protective caregiver who impedes the natural progression of their child toward increasing independence may influence the development of an anxious attachment style. Characteristics that are typical of a child with an anxious attachment style include hypervigilance, overdependence upon the caregiver, and a need for constant reassurance. Such a toddler becomes exceedingly distressed when the caregiver leaves and is difficult to soothe upon their return. The third attachment style, avoidant, is believed to be the result of an under-responsive caregiver who fails to exhibit common nurturing behaviors. The caregiver in this situation may fail to respond to an infant in distress, or conversely, encourage too much independence too soon. The resulting behavior in an avoidant toddler might include rebellion, lack of affective expression in play, and minimal or absent levels of distress related to the proximity of the caregiver. Furthermore, Main, Goldwyn, and Hesse (2003) suggested that a parent's pattern of attachment style is typically adopted by the child; thus the cycle begins again, with the child mirroring the attachment style of the parent.

Adult attachment theory. Adult attachment theory had its beginnings with research on the effects of separation and loss on adults (Marris, 1982; Weiss, 1982), along with Kahn and Antonucci's (1980) adult attachment research, and Hazan and Shaver's (1987) research and development of a self-report scale to assess adult romantic relationships. Hazan and Shaver (1987) extended Bowlby's (1969) attachment theory with their proposed theory of adult attachment. Hazan and Shaver's adult attachment theory assumed that adults operated from working models of attachment that are believed to guide their social interactions. Researchers have found common self-perceptions related to close or romantic relationships that appear to cluster together based upon selfreported adult attachment style (Carnelley, Pietromonaco, & Jaffe, 1994). For example, individuals who demonstrated secure attachment styles reported higher levels of satisfaction in intimate relationships (Carnelley et al., 1994). Further, Bartholomew and Horowitz (1991) found that in general, securely attached individuals not only reported a higher level of comfort with both autonomy and intimacy, but also appeared to seek a balanced state between the two. Among adults who evidenced anxious attachment styles, an intense need for intimacy was endorsed (Hazan & Shaver, 1987), with less overall satisfaction in their romantic relationships (Carnelley et al., 1994). Additionally, individuals with anxious attachment styles experienced emotions more intensely, showed more emotional lability, were less likely to believe in the inherent goodness of people's intentions (Hazan & Shaver, 1987), and reported higher levels of anxiety and impulsivity (Shaver & Brennan, 1992). The anxiously attached individual appeared to have a more negative opinion of human nature in general (Collins & Read, 1990). Individuals with avoidant attachment styles tended to be more independent and were less likely to seek out intimate relationships (Bartholomew & Horowitz, 1991). These adults appeared to employ defense strategies with the intention of suppressing emotional reactions (Mikulincer & Orbach, 1995) and, as seen with anxious attachment, avoidant adults tended to have a more negative view of others overall (Bartholomew & Horowitz, 1991).

Working model of attachment. First conceptualized by Bowlby (as cited in Mikulincer & Shaver, 2007), the working model of attachment described an internal system of mental representations of the self, the world, and others that develop during childhood. The term "working" is appropriate because these internal representations develop over time, such that schemas are formed based on the interactive cycle of a child seeking out support and nurturance from a significant caregiver, the subsequent availability of that caregiver, and the final result of either perceived support and relief of distress, or lack of support (Collins & Allard, 2001). Further, Collins and Read (1994) proposed that working models of attachment function in a reciprocal manner. These working models are heavily influenced by people's relationship experiences throughout life, beginning in childhood; while simultaneously serving to guide how an individual experiences intimate relationships. Accordingly, working models of attachment served to shape and predict an individual's cognitive, affective, behavioral and interpersonal responses as mediated by the individual's memories, beliefs/expectations, and problem-solving strategies (Collins & Read, 1994).

Attachment working models are believed to influence aspects of the environmental stimuli to which an individual attends, in part due to the individual's memories and learned expectations (Baldwin et al., 1993). Further, memory storage is directly related to attention. Thus, one could argue that attachment style ultimately influences the manner in which an individual reports past events because these reports will be affected by memory encoding and biases in the way memories are retrieved. For example, secure adults are more likely to be optimistically-oriented, tending to pay more attention to positive aspects of day-to-day life; while avoidant adults interpret events from a pessimistic perspective (Baldwin et al., 1993). Individual perspective, as influenced by attachment style, guides what a person attends to, thereby influencing storage of memories and later memory recall. Proponents of this theory believe affective reactions are mediated by an individual's working model of attachment; whereby, a person's interpretation of events affects both immediate emotional response and secondary maintenance, intensification, or weakening of the affective response (Collins & Read, 1994). Finally, an individual's behavior is affected by the working model of attachment through the process of activating previously stored plans, as well as constructing new strategies. The influence of the working model on behavioral responses can be seen in an individual's solution strategies, manifested in a repeating pattern of conflict approach.

Secure base scripts. Beyond the working model of attachment style, the secure base script mental model is proposed as an explanatory schema of attachment-related functioning (Mikulincer et al., 2009). Waters and Waters (2006) suggested that individuals possess memories of past experiences related to their attachment figures. The history and consistency of support received from those figures influences the establishment of a "secure base" and contributes to the crystallization of one's expectations about close relationships. In theory, individuals who perceived consistency and availability from early attachment figures subsequently develop positive "scripts." Consolidated secure base scripts result in generalized positive expectations about intimacy, as well as people's reliability and trustworthiness.

A number of studies have been conducted demonstrating the association of secure base scripts with social perceptions and interpersonal interactions (Mikulincer et al., 2009; Waters & Waters, 2006). Mikulincer and colleagues (2009) conducted a series of eight studies exploring the association between scripts and secure attachment. In the first study, participants' attachment style was assessed using the Experiences in Close

36

Relationships inventory (ECR; Brennan et al., 1998). After completing the ECR, the 57 undergraduate participants were asked to write stories describing a sequence of pictures that portrayed themes of distress, receiving support, and subsequent distress relief. These three themes are considered the predominant facets of secure base scripts. Trained judges scored the stories based on how well they coincided with the themes depicted and the depth of elaboration included. After controlling for participants' verbal ability and social desirability, researchers found that the narratives written by participants with higher attachment anxiety contained fewer references to secure base scripts and less attachmentrelevant descriptives compared to their more secure counterparts.

In a second study, 60 undergraduate participants were asked to view a picture depicting three scenes, (a) someone in a hospital bed in distress, (b) someone providing help, and (c) the person from the hospital bed feeling relieved and happy (Mikulincer et al., 2009). After viewing the picture, participants were asked to write a story about what was happening and what they believed would happen next. They were asked to consider the protagonist's thoughts, emotions, and actions, and finally to predict how this story would end. Judges rated stories based upon the extent that participants wrote about the distressed person actively seeking help, the availability and responsiveness of the helper, and the depth of discussion regarding the character's distress relief in the end. The following week, participants completed the ECR. Results supported the influence of secure base scripts, finding that more secure participants had more indicators of secure base scripts as compared to less secure participants. Less secure participants tended to minimize or leave out important parts of the secure base script. For example, anxious participants were more likely to include details about the distress of the character,

minimizing the ending of distress relief. Conversely, avoidant participants were more likely to focus on distress relief and leave out details about support availability. Six additional studies were conducted by Mikulincer and colleagues (2009) on attachment style and the core components of secure base scripts (e.g., active support seeking, availability of support, achieving distress relief). Overall, there were consistent associations between secure attachment and the ability to access and effectively utilize secure base scripts to guide cognitive processing of attachment-related events and interpersonal interactions.

Attachment influences on memory. Just as various influences on memory are aspects that should be considered when evaluating sources of inter-rater discrepancies (De Los Reyes & Kazdin, 2005), the function of memory as mediated by attachment style is an important component to consider (Fraley & Brumbaugh, 2007). Fraley and Brumbaugh (2007) conducted a two-part study to evaluate differences in memory functions related to individual adult attachment style. Their study was designed to measure encoding of information, as well as implicit and explicit memory for attachmentrelated events. The first study sample consisted of 145 undergraduate students. Each participant completed the Relationship Styles Questionnaire (RSQ; Griffin & Bartholomew, 1994). Following the administration of the RSQ, participants were told they would listen to a recorded clinical interview of a therapy client describing intimate details of family relationships. The recording contained attachment-related content such as intimacy, loss, and separation. After the recording, participants were given the task of adding letters to word fragment stems in order to make real words; followed by a cuedrecall test of the interview content. The cued-recall test was used to measure each

participant's explicit memory for attachment-related information. Implicit memory was measured by the number of word fragment stems that were completed using attachmentrelated themes from the recording. Researchers found that even after controlling for the number of words completed, people who scored high on attachment avoidance completed fragments using fewer interview-related words than the secure or anxious groups. Participants high on attachment anxiety selected interview-related words more often than avoidant counterparts to complete the fragments. These data demonstrate that when exposed to the same information as others, individuals with high attachment avoidance recall less attachment-related information. Further, the results from the implicit memory test revealed that highly avoidant people appeared to encode less attachment-related information than other individuals, suggesting that encoding, rather than recall, is implicated in response differences.

In a second study, Fraley and Brumbaugh (2007) attempted to determine whether motivation to recall information would impact recall ability. The second sample was comprised of 130 undergraduate students. Participants completed the RSQ and were presented with the same recording and word fragment completion test as the first sample. However, in the second study, after completing the word fragment task, half of the participants were offered a monetary incentive for answering cued recall questions correctly, while half were assigned to a non-incentive group. Individuals with high attachment avoidance recalled less information from the recording than less avoidant counterparts, regardless of incentive condition. The finding that even when motivated to remember, avoidant individuals' recall was poorer than less avoidant subjects, supports the authors' hypothesis that highly avoidant people encode less attachment-related information than others. Thus, "defensive encoding" rather than retrieval, appears to be implicated in the difficulty avoidant people have recalling and utilizing attachmentrelated information (Fraley & Brumbaugh, 2007).

Attachment influences on perceptions. Pietromonaco and Barrett (1997) investigated the manner in which working models of attachment affect people's perceptions, responses to daily social interactions, and attachment-related interactions. The study sample was composed of 104 undergraduate students. Participants completed Bartholomew and Horowitz's (1991) attachment prototype measure in order to determine romantic attachment style. Participants' global, retrospective perceptions of emotional reactions were assessed via administration of several questionnaires, including the Affect Intensity Measure (AIM; Larsen & Diener, 1987), the Emotionality subscale from the Emotionality-Activity-Sociability measure (EAS; Buss & Plomin, 1975), and the Weinberger Adjustment Inventory (WAI; Weinberger & Schwartz, 1990). Views of self were assessed via administration of the Rosenberg (1965) measure of self-esteem, the Campbell (1993) measure of self-concept confusion, and a measure of self-knowledge (Kato & Markus, 1993). Views of others were assessed using subscales (Kato & Markus, 1993) that evaluated an individual's view of others related self, as well as assessing the degree of self-other differentiation. Immediate perceptions of the participants' interactions were assessed over a 7-day period using the Rochester Interaction Record (RIR; Reis & Wheeler, 1991). Results indicated that each attachment group (secure, dismissing-avoidant, anxious) could be identified by distinct patterns of self-esteem, selfconcept confusion, self-knowledge, and differentiation between self and others. Specifically, individuals with higher attachment anxiety endorsed more negative and

uncertain views of themselves compared to others. They also had more difficulty differentiating between self and others, had higher levels of distress in general, and had lower defensiveness than other attachment style groups. Avoidant and secure participants had comparably high levels of self-esteem, lower distress, and higher defensiveness than the anxious attachment group. Compared to secure and anxious groups, avoidant individuals had considerably lower emotional intensity. Overall, data demonstrated that people's working models of attachment are correlated to both retrospective and immediate perceptions of daily social interactions. The authors suggested that these categorical differences in people's working models of attachment will be evident in differences in their perceptions and responses to daily social interactions.

It is important to -consider the reciprocal nature of parent-child interactions when evaluating parent perceptions of child behavior. In light of research evidence regarding the cycle of influence of parent factors on distortions in parental perceptions of child behavior, followed by the parent's responses to the perceived behavior, subsequent reactions of the child to parenting practices, and the chance of escalation in the child's problem behavior, which at times may be attributed to the reciprocal parent-child interactions (Chi & Hinshaw, 2002), it is reasonable to conclude that perception and reporting of problem behavior may be initially precipitated by the influences of the parent attachment style.

Attachment styles and parental caregiving. Researchers have extended the concept of adult attachment style to investigate its role as a moderator of parent perceptions and mental representations of their children (Mikulincer & Shaver, 2007). Based on the premise that attachment avoidant individuals often fail to initiate intimate

relationships and tend to suppress attachment-related emotions, Rholes, Simpson, Blakely, Lanigan, and Allen (1997) conducted a study to evaluate attitudes toward parenting and parent-child relationships as moderated by self-reported attachment styles in a sample of potential future parents. Almost 400 undergraduate students completed the Adult Attachment Questionnaire (AAQ; Simpson, 1990), the Desire to Become a Parent Scale (Rholes et al., 1997), the Ability to Relate to Children Questionnaire (Rholes et al., 1997), an adapted version of the Parental Attitudes Toward Child Rearing scale (PATCR; Goldberg & Easterbrooks, 1984), the Parental Satisfaction Scale (PSS; Pistrang, 1984), the Parent Acceptance-Rejection Questionnaire (PARQ; Rohner, Saavedra, & Granum, 1978), and three of the Big Five personality dimensions, Extraversion, Neuroticism, and Agreeableness (Goldberg, 1990). Not surprisingly, researchers found that individuals with higher attachment avoidance showed less desire to have children. Avoidant participants held more negative expectations and attitudes toward parenting. Compared to secure participants, avoidant individuals expected to experience more frustration and less overall satisfaction related to parenting, and had comparatively lower confidence in their potential parenting ability. Regarding specific parenting practices, avoidant participants expect to be stricter disciplinarians and to demonstrate relatively lower levels of warmth.

Rholes and colleagues (2006) evaluated attachment style as a predictor of parenting satisfaction and parenting stress in a study of 106 first-time parent dyads. At six weeks prior to delivery due date and again six months after delivery each participant independently completed the AAQ to assess individual attachment styles, the DAS to assess marital satisfaction, and the CES-D to assess for depression. Each participant's desire to become a parent was assessed at the first session only using the Desire to Become a Parent Scale. Six months after delivery, parents' satisfaction with parenting and level of subjective stress was assessed via administration of the PSS and the PSI. Overall, avoidant people had less desire to become parents. Attachment avoidance prior to delivery predicted higher subjective postnatal parenting stress, less satisfaction in parenting, and more postnatal depression. Attachment anxiety was associated with more depression, higher subjective postnatal parenting stress, and a lower degree of marital satisfaction.

Distribution of adult attachment styles. As the study of adult attachment style progressed and development of valid assessment measures began, a number of studies examined distribution of adult attachment styles (Alexander, 1993; Hazan & Shaver, 1987; Joyce et al., 1994; Mickelson, Kessler, & Shaver, 1997; Shaver et al., 1996; Shaver & Hazan, 1993; Stein et al., 2002). In an effort to explore romantic love conceptualized as a biosocial process of attachment, Hazan and Shaver (1987) conducted a landmark study, eliciting over 1,200 survey responses through a newspaper advertisement. In their initial analysis, 620 surveys were used to classify participants into one of three attachment categories (a) secure, (b) avoidant, or (c) anxious. Among the 620 participants, there were 415 women and 205 men. The age of participants ranged from 14 to 82 years, with a mean age of 36. The average household income was between \$20,000 and \$30,000, and the average level of education was at least some college. Questionnaires divided into three sections inquiring about individual's romantic experiences were posted in a 1985 issue of the Rocky Mountain News. The first part of the questionnaire was comprised of 56 statements adapted from other love questionnaires, such as "I love(d) so much that I often feel/felt jealous" and "I consider(d) one of my

best friends." Items were rated on a 4-point Likert scale, with responses ranging from "strongly disagree" to "strongly agree." The second part of the questionnaire inquired about specific details related to the participants' romantic history. Last, a portion of the questionnaire obtained information regarding childhood relationships between the participant and parents, as well as the relationship between the parents of the respondent. Hazan and Shaver (1987) obtained attachment style distributions of 56% secure, 25% avoidant, and 19% anxious. These frequencies were similar to a prior study of infantmother attachment styles that reported findings of 62% secure, 23% avoidant, and 15% anxious (as cited in Hazan & Shaver, 1987).

With the exception of Hazan and Shaver's (1987) newspaper sample, the majority of research on adult attachment styles prior to 1997 was conducted using college student samples or distressed samples (Alexander, 1993; Joyce et al., 1994; Mickelson et al., 1997). This lack of attention to the larger adult population left researchers to question the limitations of generalizing earlier results to the general adult population (Mickelson et al., 1997). The failure of researchers to attend to demographic variables that may be related to attachment style prompted Mickelson and colleagues (1997) to conduct a nationwide study of the distribution of adult attachment styles and demographic correlates. Data was obtained from the National Comorbidity Survey (NCS; Kessler et al., 1994). The sample included 8,098 respondents' ages 15 to 54 from172 counties in 34 states across the United States. Each participant completed Hazan and Shaver's measure of attachment style and a selected subset from the Parental Bonding Instrument (PBI; Parker, Tupling, & Brown, 1979). Trained interviewers administered a modified version of the Composite International Diagnostic Interview (CIDI; World Health Organization [WHO], 1990) to

each participant, collected information regarding adverse childhood experiences of the participant that occurred before age 16, and documented eight demographic variables, including age, gender, marital status, ethnicity, income, education level, geographic region, and urbanicity. Obtained distribution of adult attachment styles for the total sample were (a) 59% secure, (b) 25% avoidant, (c) 11% anxious, and (d) 5% unclassified. Seven variables were identified as the most strongly associated with secure attachment. Individuals classified with secure attachment styles were more often Caucasian females 45 year or older from the Midwest region of the United States, who were either married or cohabitating, had at least one year of college, and earned an annual income of \$20,000 or greater. Overall, individuals who were classified as avoidant were more likely to be males of African American or "other" ethnic background, between the ages of 25 and 44 years old, who were married or had been married. Participants classified as anxious were more often younger respondents who had previously been married, had comparatively less education than other participants, had lower incomes, and were of African American or Hispanic ethnic groups. Overall attachment style distribution results were very similar to those obtained by Hazan and Shaver (1987).

In a study of five instruments commonly used to assess adult attachment, Stein and colleagues (2002) examined distributions of adult attachment style categories derived using the Relationship Scales Questionnaire (RSQ; Griffin & Bartholomew, 1994), the Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991), and the Revised Adult Attachment Scale (RAAS; Collins & Read, 1990). The sample was comprised of 115 male and female participants who had been in a committed relationship for at least six months. Each participant completed three attachment measures (RSQ, RQ, and

RAAS) designed to yield categorical attachment style results, as well as the Adult Attachment Scale (AAS; Simpson, 1990) and Attachment Style Questionnaire (ASQ; Feeney, Noller, & Hanrahan, 1994), which assess attachment style using a dimensional approach. The average participant age was 23 years. While educational level varied, 53.9% of the sample had attended at least some college and 33% were college graduates. Females outnumbered males in the sample by a 3:1 ratio. Because gender was not equally represented and analysis of attachment style by gender failed to yield significant results, gender categories were collapsed into one variable for final analysis of attachment style distribution. For the purpose of obtaining consistent outcome categories across the three instruments, scoring methods were selected that would derive four attachment categories (secure, dismissing, preoccupied, fearful). Using the RSO, 48% of participants were classified as secure, compared to 51% on the RQ, and 63% on the RAAS. On the RSQ, 22% of participants were classified as dismissing, defined as individuals who do not value attachment and therefore avoid it. The RQ and RAAS categorized participants as dismissing at a rate of 13% and 11% respectively. Participants were categorized as preoccupied, characterized by low avoidance and high ambivalence, at a rate of 15% on the RSO, 8% on the RO, and 13% on the RAAS. Fearful individuals, who expressed a strong desire for intimacy but a tendency to avoid it due to fears of rejection, were identified at a rate of 15% by the RSQ, 28% by the RQ, and 13% by the RAAS.

While some variability in attachment style exists between genders, age groups, ethnic groups, and socio-economic status, research regarding overall distribution of attachment styles has found consistent percentages for secure, anxious, and avoidant styles among the United States population. On average, over half the national population

46

falls into the category of secure attachment style. Around 25% fall into the avoidant attachment style category, and 10-15% are classified as anxious attachment style (Hazan & Shaver, 1987; Mickelson et al., 1997; Stein et al., 2002).

THE PRESENT STUDY

Further elucidation of factors that influence inter-parental discrepancy on pediatric behavior assessment scales is needed, with particular focus on factors that may affect a parent's unique perspective when rating child behavior. A variety of factors and personal attributes may contribute to divergent perspectives among cohabitating parents. Research has demonstrated correlations between adult attachment styles and characteristics such as depression, impulsivity, pessimism, emotional lability, mistrust, and dependence versus independence; as well as effects of adult attachment style on close relationships. However, there is a lack of research on the adult attachment style as a predictor of inter-parental discrepancy of pediatric behavior ratings. Attachment style is a relatively stable behavioral system that continues across the lifetime (Cyr & Moss, 2013; Hesse, 1999; Pascuzzo et al., 2013). Collins and Read (1994) suggested that adult attachment style impacts how adults experience close relationships; coloring perceptions of life experiences. Additionally, Baldwin and colleagues (1993) suggested that adults tend to adopt optimistic or pessimistic viewpoints through which they filter interpersonal information based on adult attachment styles. As such, it is reasonable to hypothesize that adult attachment style might influence parental perceptions of child behavior, resulting in two cohabitating parents providing divergent accounts on behavior assessment scales. More specifically, it is possible that personality characteristics related to adult attachment

styles, such as optimistic versus pessimistic life-views, may contribute to discrepancies between two cohabitating parent raters.

The primary purpose of this study was to investigate the extent to which differences in adult attachment styles affect inter-parental discrepancy on pediatric behavior assessment scales. Specifically, parent respondent composite scores of child internalizing and externalizing behaviors on the CBCL/6-18 were analyzed and absolute difference scores were calculated by subtracting "parent A" score from "parent B" score in each parent dyad. Adult attachment styles of parent dyads were evaluated to determine whether there was significant inter-parental discrepancy on child behavior assessment scales among parent dyads with different attachment styles compared to parent dyads with the same attachment style.

Based on the work of Collins and Read (1990) and Collins (1996), a threedimensional model of adult attachment style was utilized to assess adult attachment, via respondents' subjective reports of comfort with closeness and intimacy, comfort with depending on others, and concern about being rejected. Using the Revised Adult Attachment Scale – Close Relationships Version (RAAS-CR; Collins), parent/caregiver attachment styles of secure, anxious, or avoidant was derived as originally defined by Ainsworth and colleagues (1978).

Hypothesis 1

It was hypothesized that parent dyads with different attachment styles (e.g., secure/anxious, secure/avoidant, anxious/avoidant; as measured by the RAAS-CR) would have higher mean dyad internalizing discrepancy scores (as measured by the CBCL/6-18 INT composite score for parent A subtracted from parent B in a dyad) than parent dyads

with the same attachment style combinations (secure/secure, anxious/anxious, avoidant/avoidant; as measured by the RAAS-CR).

Hypothesis 2

It was hypothesized that parent dyads with different attachment styles (e.g., secure/anxious, secure/avoidant, anxious/avoidant; as measured by the RAAS-CR) would have higher mean dyad externalizing discrepancy scores (as measured by the CBCL/6-18 EXT composite score for parent A subtracted from parent B in a dyad) than parent dyads with the same attachment style combinations (secure/secure, anxious/anxious, avoidant/avoidant; as measured by the RAAS-CR).

CHAPTER 2

METHODS

Participants

Cohabitating parent-dyads of children ages 6 through 16 years were recruited for this study. Parent dyads were grouped according their combinations of attachment styles. Specifically, parent dyads were labeled as having either the same attachment style (e.g., secure/secure, anxious/anxious, avoidant/avoidant) or different attachment style (e.g., secure/anxious, secure/avoidant, anxious/avoidant), requiring a minimum of 30 dyads in each group. For the purpose of this study, the researcher defined parent-figures as the primary caregivers living in the home with a child, who play an active role in the care and supervision of the child to be rated. Co-parents did not need to be married and could be comprised of biological parents, step-parent, foster parents, same-sex couples, or adoptive parents. If participants had more than one child in the desired age range, ratings for only one child were obtained. Relationship of parent-figures to the child were documented. In order to control for environmental differences as a confounding variable, parents residing in separate homes or children who reside in multiple residences (e.g., a case of parents with shared custody) were excluded from the study. A current pediatric psychiatric diagnosis was not used to exclude a child.

The majority of the final total sample of parent participants (N=160; 80 couples?) were Non-Hispanic Caucasian (n = 138, 86.3%), followed by African American (n = 12,

50

7.5%), Asian (n = 5, 3.1%), Hispanic (n = 4, 2.5%), and American Indian (n = 1, .6%). Of the 160 parent participants, 85 (53.1%) were female and 75 (46.9%) were male. The mean age of parent participants was 41, with ages ranging from 24 to 75. The majority of participants were married (n = 136, 85%), followed by divorced (n = 9, 5.6%), domestic partner (n = 6, 3.8%), single (n = 6, 3.8%), other (n = 2, 1.3%), and separated (n = 1, 1.3%).6%). When looking at educational level, the largest group of parent participants had some college credit but no degree (n = 45, 28.1%), followed by Bachelor's degree (n =34, 21.3%), high school graduate or equivalent of a high school diploma (n = 30, 18.8%), Master's degree (n = 24, 15%), Associate's degree (n = 10, 6.3%), Doctoral degree (n = 10, 6.3%), Doc 7, 4.4%), trade/technical/vocational training (n = 6, 3.8%), and some high school, no diploma (n = 4, 2.5%). Regarding relationship to the child whose behavior was rated, the majority of parent participants were biological parents (n = 134, 83.8%), followed by stepparents (n = 17, 10.6%), grandparents (n = 5, 3.1%), adoptive parents (n = 3, 1.9%), other (n = 1, .6%). Of the 80 parent dyads, 41.3% (n = 33) earned combined annual family incomes of \$100,000 or more, 23.8% (*n*=19) earned \$80,000 - 99,999, 15% (n=12) earned \$40,000 - 59,999, 11.3% (n=9) earned \$60,000 - 79,999, and 8.8% (n=7) earned \$20,000 - 39,999.

The majority of the children rated (N = 80) were Non-Hispanic Caucasian (n = 64, 80%), followed by African American (n = 7, 8.8%), biracial (n = 4, 5%), Asian (n = 3, 3.8%), and Hispanic (n = 2, 2.5%). Of the 80 children, 41 (51.25%) were female and 39 (48.75%) were male. The mean age of the children was 10, with ages ranging from 6 to 16.

Measures

Demographics. A demographics survey obtained background information from participants including respondent and child gender, age, and ethnicity, as well as the relationship of each respondent to the child being rated. Marital status and education level of respondent was collected. Socioeconomic status in terms of combined family income of the respondents was obtained.

Child Behavior Checklist for Ages 6-18 (CBCL/6-18; Achenbach & Rescorla, 2001). The Child Behavior Checklist for Ages 6-18 is one of several forms available in the Achenbach System for Empirically Based Assessment (ASEBA; Achenbach, 2014). It allows for assessment of a wide array of behaviors across multiple settings in school age children. Comprised of 113 items, such as "cries a lot," "fears going to school," and "gets in many fights," the CBCL/6-18 is written on a 5th grade reading level and items are rated on a 3-point Likert scale (Achenbach & Rescorla, 2001; Flanagan, 2005). Handscoring and computer-scoring options are available (Achenbach & Rescorla, 2001). This study used the computer scoring method to reduce potential error associated with handscoring, as cautioned by Flanagan (2005).

The CBCL/6-18 yields broadband scale scores for externalizing behaviors (EXT), internalizing behaviors (INT), and total problem behaviors. Additionally, it provides eight syndrome subscale scores (Anxious/Depressed, Withdrawn/Depressed, Somatic Complaints, Social Problem, Thought Problems, Attention Problems, Rule-Breaking Behavior, Aggressive Behavior) and six DSM-oriented subscale scores (Affective Problems, Anxiety Problems, Somatic Problems; Achenbach & Rescorla, 2001). The mean score for each scale is 50, with a standard deviation of 10 (Achenbach, 1991b). The CBCL/6-18 has good internal consistency reliability; coefficient alphas for the three

52

broadband scales ranged from .91 to .94 (Achenbach & Rescorla, 2001). Achenbach and Rescorla (2001) reported high concurrent validity between the CBCL/6-18 and other commonly used behavior assessments (e.g., CRS, BASC, DSM-IV Checklist; Conners, 1997; Hudziak, 1998; Reynolds & Kamphaus, 1992). Good discriminant validity was reported, as measured by the instrument's ability to differentiate among diagnoses with an accuracy rate of 79-85% (Flanagan, 2005; Watson, 2005).

Revised Adult Attachment Scale – Close Relationships Version (RAAS-CR;

Collins, 1996). The Revised Adult Attachment Scale – Close Relationships Version was derived from revising the Adult Attachment Scale (AAS; Collins & Read, 1990). The RAAS-CR is an 18-item scale developed to measure adult attachment style on three dimensions: comfort with closeness and intimacy (Close), comfort with depending on others (Depend), and concern about being rejected (Anxiety; Collins, 1996). Items such as "I am comfortable depending on others," "I find it relatively easy to get close to people," and "I often worry that other people don't really love me" assess respondents' levels of comfort with depending on others, comfort with closeness, and concern about being rejected. Items are rated on a 5-point likert scale. Compared to the AAS, Collins (1996) reported improved Cronbach's alpha coefficients ranging from .78 to .85. Brennan, Clark and Shaver (1998) found that the Close and Depend factors correlated with other commonly used measures avoidance with alpha coefficients of .86 and .79 respectively; and the Anxiety factor correlated with Brennan and colleagues' anxiety scale at .74. The RAAS-CR has had good test-retest reliability over a 4-year span (Kirkpatrick & Hazan, 1994). After a two-month period, test-retest correlations were .68 for Close, .52 for Anxiety, and .71 for Depend. Authors of the scale found that the

characteristics of the three dimensions of the RAAS-CR (Close, Depend, Anxiety) correlated well with Hazan and Shaver's (1987) three categories of adult attachment style (secure, anxious, avoidant). High scores on Close and Depend coupled with low scores on Anxiety correlated with secure attachment style. High scores on Anxiety and moderate scores on Close and Depend were correlated with anxious attachment style. Low scores on Close, Depend, and Anxiety correlated with avoidant attachment style. Collins (2008) defines a "high" subscale score as a subscale average that is above the midpoint (e.g., greater than 3) and a "low" subscale score as a subscale average that is below the midpoint (e.g., lower than 3).

Procedure

Prior to data collection, approval for this study was obtained from the Human Use Committee (Human Subjects Consent Form, Appendix A). Standards for ethical human research were followed. Participation was voluntary and participants were informed of their right to discontinue participation at any time with no consequence. Personally identifiable information was kept private and confidentiality was ensured. Participants were recruited from one of several clinics in the Northern Louisiana region. Cohabitating parent dyads who sought psychological services from one of the participating clinics were provided with an offer to participate. A therapist or psychologist from the participating clinics, instructed by the researcher regarding confidentiality and data collection procedures, provided an initial packet of information to the parent explaining the purpose of the study with a request for participation and a written informed consent form. Incentive in the form of entry into a drawing for a \$25 gift certificate to a local business was offered for participation. Informed consent forms and survey packets were

labeled with corresponding number codes but administered and collected in separate envelopes in order to ensure anonymity. Participants who did not complete an informed consent form were removed from the sample. Participants were allowed to complete the surveys in the clinic or take them home to complete, with instructions to return the completed survey packet and informed consent packet to the individual from whom it was administered in an enclosed envelope marked 'confidential' and addressed to the researcher. Participants were instructed not to discuss or compare answers while completing surveys. All data was securely stored in the office of the primary researcher and only the primary researcher had access to completed surveys and raw data. Demographic and background information was obtained from respondents, as well as for the child being rated. See appendix B for information on the demographic questionnaire. Each participant completed an adult attachment style survey (RAAS-CR; Collins, 1996; Appendix C) and a pediatric behavior rating (CBCL/6-18; Achenbach & Rescorla, 2001; Appendix D). Scores for adult attachment style and behavior ratings were obtained via paper survey questionnaires and standardized protocols. All surveys were arranged in pairs for distribution to cohabitating parents with packets marked "co-parent A" and "coparent B." Each survey pair was coded with a matching number, followed by either "A" or "B" in order to distinguish between co-parents and allow for calculation of absolute discrepancy scores.

CHAPTER THREE

RESULTS

The purpose of this chapter is to present the results of an examination of the relationship between parent attachment styles and inter-parental discrepancy on pediatric behavior assessment scales. Sample characteristics are presented first, followed by descriptive statistics of the variables, and analysis of demographic variables. Finally, the results of the research are presented by hypothesis.

Preliminary analyses of child, parent, and family demographic variables were conducted using independent samples *t*-tests and Pearson's correlation. Group differences on the independent variables as stated in hypotheses 1 and 2 were assessed using independent samples *t*-tests. Parametric assumptions were assessed prior to analysis. The assumptions of interval level data and independence were satisfied (Warner 2008; Field 2005). Normality of distribution was assessed using skewness and kurtosis scores (Field, 2005). Additionally, homogeneity of variance was assessed using the Levene's test. Statistics that did not satisfy the assumption of homogeneity were analyzed according to Field's (2005) recommendations.

Preliminary Analysis

Preliminary exploratory analysis. Data were screened for missing values and other potential problems with the data (e.g., data entry errors, outliers). There were no missing values. Survey scores and composite scale scores were calculated, as well as

56

descriptive statistics, including means, standard deviations, and alpha scores.

Participants' attachment styles were determined based on the RAAS-CR and labeled "anxious," "avoidant,", or "secure" according to the model used by Collins (1996). Preliminary analysis of parent, family, and child demographic variables (age, gender, ethnicity, educational level, SES) and participant attachment style were conducted to determine if the sample is representative of the national distribution of attachment styles (Mickelson, Kessler, & Shaver, 1997).

Parent dyads were categorized according their particular combination of attachment styles (e.g., 1 = same style, 2 = different style). Hypothesis 1 and 2 were examined using independent samples *t*-test. In hypothesis 1, the independent variable was parent dyad attachment style combinations and the dependent variable was parent dyad internalizing discrepancy scores. In hypothesis 2, the independent variable was parent dyad attachment style combinations and the dependent variable was parent dyad attachment style combinations and the dependent variable was parent dyad attachment style combinations and the dependent variable was parent dyad attachment style combinations and the dependent variable was parent dyad externalizing discrepancy scores. After conducting an independent samples *t*-test, violations of assumptions were handled using Levene's test for equality of variances. Follow up analyses were conducted using two-way analysis of variance (ANOVA).

Descriptive statistics for adult attachment style measures. Descriptive statistics for the Revised Adult Attachment Scale – Close Relationships (RAAS-CR) were obtained and compared to normative samples. The majority of the current study participants had secure attachment styles (n = 113, 70.6%), followed by avoidant (n = 29, 18.1%), and anxious (n = 18, 11.3%). Of the 80 parent dyads, 55% (n = 44) had the same attachment style (e.g., secure/secure, avoidant/avoidant, anxious/anxious) and 45% (n = 126, n = 126

36) had different attachment styles (e.g., secure/anxious, secure/avoidant,

avoidant/anxious).

Descriptive statistics for internalizing and externalizing behavior scores. Descriptive statistics for the CBCL/6-18 were obtained and compared to normative samples. The mean internalizing behavior score generated by individual parents/caregivers on the CBCL/6-18 was 59.75 (range = 57.91 - 61.59) and the mean externalizing behavior score on was 58.73 (possible range = 50.6.91 - 60.56). The mean internalizing behavior discrepancy score was 6.73, and the mean externalizing behavior discrepancy score was 5.75. Additionally, variable descriptive statistics are included in Table 1.

Table 1

Summary of Internalizing and Externalizing Behavior Composite and Discrepancy Scores

Scores	М	SD	Skew	Kurt
Internalizing Composite Scores	59.75	11.77	07	77
Externalizing Composite Scores	58.73	11.68	24	42
INT Discrepancy Scores	6.73	4.91	1.02	1.57
EXT Discrepancy Scores	5.75	4.64	1.05	1.08

Note. M = mean. SD = standard deviation. Skew = skewness. Kurt = kurtosis.

Demographic differences in study variables. Preliminary analyses were conducted to determine whether there were significant relationships between demographic variables and the study variables (e.g., adult attachment style, behavior discrepancy scores). Demographic variables included child's age, gender, and ethnicity, and parent age. Field (2005) suggests that it is preferable for samples to be larger in size and similar in size across conditions. Therefore, due to small sample size and unequal representation, ethnicity was categorized as Caucasian or non-Caucasian.

Bivariate correlation analyses were performed to examine whether internalizing and externalizing behavior discrepancy scores of parents were related to the age of the child. The correlation between internalizing behavior discrepancy scores and age of the child was not significant, r(78) = +.09, p = .45 (two-tailed). Likewise, the correlation between externalizing behavior discrepancy scores and age of the child was not significant, r(78) = -.08, p = .46, two-tailed. These findings suggest that child's age was not significantly related to the discrepancy in parents' ratings of internalizing and externalizing behaviors.

Group differences in internalizing behavior discrepancy scores for male and female children were analyzed using independent samples *t*-test. Preliminary analysis with Levene's test indicated that the homogeneity of variance assumption was met, F =.29, p = .59. The result of the *t*-test was not significant, t(78) = .49, p = .63. Group differences in externalizing behavior discrepancy scores for male and female children were analyzed using independent samples *t*-test. Preliminary analysis with Levene's test indicated that the homogeneity of variance assumption was met, F = .02, p = .88. The result of the *t*-test was not significant, t(78) = .59, p = .56. These findings suggest that child's gender was not related to parent discrepancy scores.

Group differences in internalizing behavior discrepancy scores for Caucasian and non-Caucasian children were analyzed using independent samples *t*-test. Preliminary analysis of internalizing discrepancy scores indicated that the assumption of homogeneity was met, F = 2.57, p = .11. The result of the *t*-test was not significant, t(78) = -.36. p = .72.

Group differences in externalizing behavior discrepancy scores for Caucasian and non-Caucasian children were analyzed using independent samples *t*-test. Preliminary analysis of externalizing discrepancy scores indicated that the assumption of homogeneity was violated, F = 5.58, p = .02; therefore, the *t*-test results were interpreted using Levene's test with equal variances not assumed. The result of the *t*-test was significant, t(18.67) = -2.43, p = .03, d = -1.12, suggesting that there was significant difference in the discrepancy scores (EXT) between the two groups. Specifically, the mean discrepancy score (EXT) for non-Caucasian children (M = 8.75, SD = 5.84) was significantly higher than the mean discrepancy score (EXT) for Caucasian children (M =5.00, SD = 4.00). On average, there was more inter-parental discrepancy on externalizing behavior ratings of non-Caucasian children than Caucasian children. Group differences among child on internalizing and externalizing behavior discrepancy scores are presented in Table 2.

Table 2

-	Internalizing		Extern	alizing	
	<i>M</i>	SD	<i>M</i>	SD	
Male	7.00	4.75	5.44	4.28	
Female	6.46	5.03	6.05	4.98	
Caucasian	6.63	5.21	5.00	4.00	
Non-Caucasian	7.13	3.59	8.75	5.84	

Summary of Internalizing and Externalizing Behavior Discrepancy Scores by Child Demographic Variable
Note. M = mean. SD = standard deviation.

Data Analysis

Hypothesis 1. It was hypothesized that parent dyads with different attachment styles (e.g., secure/anxious, secure/avoidant, anxious/avoidant; as measured by the RAAS-CR) would have higher mean dyad internalizing behavior discrepancy scores (as measured by the CBCL/6-18 INT composite score for parent A subtracted from parent B in a dyad) than parent dyads with the same attachment style combinations (secure/secure, anxious/anxious, avoidant/avoidant; as measured by the RAAS-CR). An independent samples *t*-test was performed to examine this hypothesis. Preliminary analysis with Levene's test indicated that the homogeneity of variance assumption was met, F = 2.85, p = .095. Research suggests that skewness and kurtosis absolute values of less than 1.96 indicate that the sample does not significantly deviate from normality (Field, 2005). In the present analysis, the highest skewness and kurtosis values within each group indicated that the data (INT) meet the assumption of normal distribution (see Table 3, for skewness and kurtosis values). The result of the *t*-test was significant, t(78) = -3.35, p = -3.35, p.001, d = .74, suggesting that there was significant difference in the discrepancy scores (INT) between the two groups. Specifically, the average discrepancy score of parents/caretakers with different attachment styles (M = 8.64 SD = 5.60) was significantly higher than parents/caretakers with the same attachment styles (M = 5.16, SD = 3.64). These findings support Hypothesis 1, that parent dyads with different attachment styles (e.g., secure/anxious, secure/avoidant, anxious/avoidant; as measured by the RAAS-CR) would have higher mean dyad internalizing behavior discrepancy scores. See Table 3 for a summary of results for Hypothesis 1.

Table 3

	М	SD .	Skew	Kurt	· · · · · · · · · · · · · · · · · · ·
Group 1	5.16	3.64	.46	82	
Group 2	8.64	5.60	.81	.87	

Participant Internalizing Discrepancy Scores

Note. M = mean. SD = standard deviation. Skew = skewness. Kurt = kurtosis. Group 1 = same attachment style. Group 2 = different attachment styles.

Hypothesis 2. It was hypothesized that parent dyads with different attachment styles (e.g., secure/anxious, secure/avoidant, anxious/avoidant; as measured by the RAAS-CR) would have higher mean dyad externalizing discrepancy scores (as measured by the CBCL/6-18 EXT composite score for parent A subtracted from parent B in a dyad) than parent dyads with the same attachment style combinations (secure/secure, anxious/anxious, avoidant/avoidant; as measured by the RAAS-CR). An independent samples *t*-test was performed to examine this hypothesis. Preliminary analysis indicated that there was more within group variance than expected, F = 5.77, p = .02; therefore, the t-test results were interpreted using equal variances not assumed. Examination of skewness and kurtosis scores (EXT) indicated that the data meet the assumption of normal distribution (see Table 4, for skewness and kurtosis values). The result of the ttest was significant, t(59.03) = -2.41, p = .02, d = .55, suggesting that there was significant difference in the discrepancy scores (EXT) between the two groups. Specifically, the average discrepancy score of parents with different attachment styles (M= 7.14, SD = 5.38) was significantly higher than parents with the same attachment styles (M = 4.61, SD = 3.61). These findings support Hypothesis 2, that parent dyads with different attachment styles (e.g., secure/anxious, secure/avoidant, anxious/avoidant; as

measured by the RAAS-CR) would have higher mean dyad externalizing discrepancy

scores See Table 4 for a summary of results for Hypothesis 2.

Table 4

Participant Externalizing Discrepancy Scores

	М	SD	Skew	Kurt	
Group 1	4.61	3.61	.72	32	
Group 2	7.14	5.38	.84	.37	

Note. M = mean. SD = standard deviation. Skew = skewness. Kurt = kurtosis. Group 1 = same attachment style. Group 2 = different attachment styles.

CHAPTER FOUR

DISCUSSION

General Overview of Results

The purpose of this study was to examine the relationship of parent attachment styles and inter-parental discrepancy on pediatric assessment scales. The participants of this study were 160 adults, split into 80 parent dyads. Parent dyads were grouped according to attachment style (e.g., same style, different style).

Studies of national distribution of attachment style report that over half the population (56 - 62%) falls into the secure attachment style, followed by 23 - 25% avoidant attachment style, and 11 - 19% anxious attachment style (Hazan & Shaver, 1987; Mickelson et al., 1997; Stein et al., 2002). Comparatively, 70.6% of the current study participants were categorized with secure attachment style, followed by 18.1% avoidant attachment, and 11.3% anxious attachment. Notably, Mickelson, Kessler, and Shaver (1997) found that secure attachment style is predicted by several demographic variables and is more common among respondents who are white, female, married, age 45 or older, and who have at least one year of college credit. Avoidant attachment style is found more often in African American males or males of "other" non-white ethnic backgrounds, and anxious attachment style was more common among younger individuals, from African-American or Hispanic ethnic groups, with comparatively less education and lower incomes. The majority of participants in this study were White,

64

married, had at least some college credit, and had higher incomes. Therefore, it is not surprising that this study sample contained more individuals with secure attachment styles than the national distribution (Mickelson et al., 1997).

Similarities and differences between internalizing and externalizing behavior rating scores from the 160 parent/caregiver participants were analyzed and compared to other study results. Schroeder and colleagues (2010) found significant differences in inter-parental discrepancy based on the type of behavior being rated. Specifically, they reported more discrepancy on internalizing behavior (e.g., anxiety, depression, withdrawal) scores than externalizing behavior (e.g., hyperactivity, aggression, conduct problems) scores. The current study found more discrepancy between parents/caregivers on internalizing behavior ratings than externalizing behavior ratings, supporting the results reported by Schroeder and colleagues (2010). Greater inter-parental discrepancy on internalizing behaviors than externalizing behaviors is not surprising considering externalizing behaviors are more overt, thus more easily identified and quantified.

Demographic Variables

Previous studies have reported inconsistent results regarding correlations of child age and inter-parental discrepancy on behavior rating scores. Results of a meta-analysis conducted by Duhig and colleagues (2000) indicated higher inter-parental discrepancy on both internalizing and externalizing behavior scores for younger children compared to adolescents. Schroeder and colleagues (2010) found that age of the child moderated interparental discrepancy on ratings of Attention. Conversely, Konold and colleagues (2004) reported child age did not predict inter-parental discrepancy on internalizing or externalizing behavior ratings. The current study results were consistent with findings reported by Konold and colleagues (2004); child age was not significantly related to inter-parental discrepancy on internalizing or externalizing behavior scores. Failure to find significant differences in internalizing and externalizing behavior discrepancy scores based on age of the child in the current study may be due to unequal distribution of age of children, as well as the small sample size. The study sample was comprised of 80 children between the ages of six and 16, of which one third were in the 6- to 7-year-old range.

Harvey and colleagues (2013) assert that previous studies have failed to present a clear pattern of consistent results regarding child gender and inter-parental discrepancy on child behavior rating scores. Many previous studies found that child gender did not affect or moderate inter-parental discrepancy (Achenbach et al., 1987; Crane et al., 2011; Duhig et al., 2000; Hughes & Gullone, 2010; Kolko & Kazdin, 1993; Langberg et al., 2010). Some studies reported that inter-parental discrepancy was moderated by child gender, albeit to a greater extent in young children (Campbell, 1993; Dave' et al., 2008; Gagnon et al., 1992). Schroeder and colleagues (2010) found that gender was a moderator only for the CBCL/4-18 Anxious/Depressed scale. The current study found that no significant differences in internalizing or externalizing behavior discrepancy scores based on child gender. The gender of the children in the current study sample was evenly distributed (41 females, 39 males). Therefore, problems with the sample distribution by gender are not likely related to the failure to find significant differences based on gender of the child. These findings likely provide further support of the nature of inconsistencies in current literature. Child gender may indeed be unrelated to inter-parental discrepancies on behavior ratings.

Adult Attachment Style and Inter-parental Discrepancy on Behavior Scores

Hypothesis 1 stated that parent dyads with different attachment styles would have higher mean dyad internalizing discrepancy scores than parent dyads with the same attachment style combinations. Hypothesis 2 stated that parent dyads with different attachment styles would have higher mean dyad externalizing discrepancy scores than parent dyads with the same attachment style combinations. Results supported both hypothesis 1 and 2. Specifically, parent dyads with different attachment styles (secure/anxious, secure/avoidant, anxious/avoidant) had larger discrepancy on internalizing and externalizing pediatric behavior scales then parent dyads with the same attachment style (secure/secure, anxious/anxious, avoidant/avoidant).

Practical Implications

The findings of this study yield important practical implications. The ultimate purpose of this research study was to determine diagnostic variables outside of the child that are associated with inter-parental discrepancy on behavior ratings for two primary purposes, (a) to improve accuracy of diagnosis and (b) to identify other variables (e.g., parent or family specific factors) that would better inform intervention selection.

Parent/caregiver ratings are an essential tool used in pediatric psychological diagnosis (Achenbach, McConaughy, & Howell, 1987). Currently, there is lack of consensus regarding why inter-parental discrepancy on pediatric behavior assessment scales between cohabitating parent raters exists (Baldwin et al., 1993; Collins & Read, 1994; Hesse, 1999; Hughes, & Gullone, 2010; Main et al., 1985; Mikulincer & Shaver, 2007; Mikulincer et al., 2009; Pascuzzo et al., 2013; Pesonen et al., 2004; van der Oord et al., 2006; Waters & Waters, 2006; Youngstrom, et al., 2000). Without a clear understanding of why this discrepancy occurs, clinicians must rely on subjective methods to interpret discrepant results. There are multiple ways in which to handle inter-parental discrepancy, including treating it as rater error, arbitrarily using data from only one respondent, combining data from respondents with discrepant scores, or confronting respondents about their discrepant ratings (Gingerich et al., 2011; Kraemer et al., 2003; Nguyen et al., 1994; Offord et al., 1996). All of these methods have the potential to be problematic and can lead to different, possibly incorrect, diagnostic impressions. Understanding how adult attachment style affects the manner in which parents perceive and report their children's behavior could reduce the amount of clinician subjectivity involved in interpreting discrepant ratings presented by cohabitating parents. The development of a more objective method for handling inter-parental discrepancies could improve accuracy of pediatric psychological diagnosis.

The symptoms identified by parents, as well as the resulting diagnostic impressions, are key factors in treatment approach and intervention (WHO, 2013). Given the significance of accurate diagnosis in the treatment planning process, clarification of inter-parental discrepancies has the potential to affect treatment outcomes. This study is the first to examine differences in adult attachment style and the effects on inter-parental discrepancy on behavior ratings. Future research with diverse and larger samples would be beneficial. If future studies find similar results, it may be worthwhile for clinicians to evaluate parent attachment styles by administering an assessment of adult attachment style when inter-parental discrepancy on behavior ratings exists. In these cases, if it is determined that parent dyads have different attachment styles, clinicians may wish to rely less heavily on parent ratings for pediatric psychological diagnosis.

Several studies have investigated the impact of negative or distorted perceptions on of the rater on children's behavior rating scores. Depression appears to lead to negative bias on pediatric behavior rating scales, resulting in exaggeration of problem behaviors and elevation of behavior rating scores (Chi & Hinshaw, 2002; Richters, 1992). This important element should be considered during pediatric psychological evaluations, as it relates to both diagnosis and treatment recommendations. Recognizing and correctly interpreting inter-parental discrepancy on behavior ratings may prevent incorrectly labeling a child with a diagnosis based on exaggerated parent ratings. Further, by understanding the association between depression and anxious attachment style in the adults, as well as the association between inter-parental discrepancy ratings and attachment style differences, clinicians can be alerted to parental factors that may otherwise go undisclosed when a child is referred for psychological evaluation due to behavior concerns. If a parent shows signs of depressed mood or distorted perceptions based on the objective data they provide about the child's behavior, it may be appropriate to make treatment recommendations for the parent (e.g., individual counseling, psychoeducation for parents regarding the effects of mood disorder).

Another reason mental health professionals should have insight about the relationship between inter-parental discrepancy on behavior ratings, parent attachment style differences, and potential mood disorders in parents, is that family systems therapy may be a more effective treatment choice due to the potential negative cycle that occur between depressed parents and their children. Clinicians should remain alert to signs of depression in parents when a parent endorses an attachment style other than secure. Both anxious and avoidant attachment styles are associated with depression in adults (Catazaro

69

& Wei, 2010). Chi and Hinshaw (2002) observed that depressed mothers had negatively distorted perceptions of their children's behavior, which led to a reciprocal interaction between mother and child, resulting in a cycle of self-fulfilling prophecy in which the child began exhibiting more exaggerated behaviors than before. Negative interaction cycles between parent and child can be addressed in family systems therapy.

Conceptual Implications

Findings of current study indicate that dyads comprised of parents with different attachment styles are more likely to have larger inter-parental discrepancy on pediatric ratings of both internalizing and externalizing behavior. These findings provide converging evidence that adult attachment style may moderate inter-parental discrepancy on behavior ratings, by way of factors identified in the Attribution Bias Context (ABC) Model, proposed by De Los Reyes and Kazdin (2005). The ABC Model is a theoretical framework for understanding informant discrepancies based on an individual's perspective and recall, and source monitoring. This model uses parents' divergent perspectives (e.g., positive, negative, optimistic, pessimistic) with regard to recall of child behaviors, and the effects of source monitoring on acquisition of memories, to provide a conceptual framework that explains inter-parental discrepancy. However, the model fails to link parents' perspective styles to attachment styles, when the two appeared to be inherently related.

Perceptions of self, interpersonal relationships, and others' behavior differ among the different adult attachment styles (e.g., secure, anxious, avoidant) (Baldwin et al., 1993; Collins & Read, 1994; Hesse, 1999; Hughes & Gullone, 2010; Main, Kaplan, & Cassidy, 1985; Mikulincer & Shaver, 2007; Mikulincer et al., 2009; Pascuzzo et al.,

70

2013; Pesonen et al., 2004; van der Oord et al., 2006; Waters & Waters, 2006; Youngstrom et al., 2000). For example, compared to individuals with secure attachment styles, those with anxious attachment styles tend to be more dissatisfied with interpersonal relationships and generally hold more negative views of themselves and others (Carnelley et al., 1994; Collins & Read, 1990; Simpson, 1990). Individuals with avoidant attachment styles also tend to be less satisfied with interpersonal relationships and attempt to suppress their emotional responses (Carnelley et al., 1994; Collins & Read, 1990; Mikulincer & Orbach, 1995; Simpson, 1990). Further, individuals with avoidant attachment style appear to have more positive self-views, but view others more negatively (Bartholomew & Horowitz, 1991; Collins & Read, 1990).

Limitations

There are several limitations of this study that must be addressed. It would be beneficial to obtain larger sample size with participants recruited from a larger geographic area, as well as a broader range of socioeconomic backgrounds in order to obtain a more representative sample and increase the generalizability of the current findings. Participants were recruited from the Southern region of the United States, which may limit generalizability of results geographically. The study sample was relatively small, causing difficulties with making comparisons by ethnic groups. Further, the sample was comprised mostly of families with private medical insurance or with the financial means to afford a private psychological evaluation of their child. As such, the sample may be unrepresentative of the larger population, which would include families living below the poverty line who cannot afford private insurance or who qualify for Medicaid or other government-funded insurance which was not accepted by the clinics in which data from this study was collected. Lastly, participants were only recruited from clinical settings. Future studies may consider collecting inter-parental discrepancy data in both clinical and non-clinical settings for comparisons.

This study was designed to assess the effects of parent attachment styles on interparental discrepancy of cohabitating parents/caregivers on ratings of pediatric internalizing and externalizing behavior. As such, the chosen statistical method analyzed parent dyads as a single variable and calculated an absolute difference score for each dyad's internalizing and externalizing behavior ratings of a single child to assess discrepancy. This statistical design precluded any analysis of individual parent demographics using discrepancy scores where the assumption of independence of observations was required. Due to this limitation, differences among each possible attachment dyad combination (e.g. secure/secure, secure/anxious, secure/avoidant, anxious/anxious, anxious/avoidant, avoidant/avoidant), could not be examined. Using larger sample sizes would allow comparisons among each possible attachment pair, which may result in more comprehensive understanding of how attachment affects interparental discrepancy.

Implications for Future Research

Schroeder and colleagues (2010) reported that inter-parental discrepancy occurs in a number of ways. Overall, there was more inter-parental discrepancy on internalizing types of behaviors. Schroeder and colleagues (2010) found that parent gender moderated inter-parental discrepancy on scales that measured anxiety, depression, and attention. Further, female parents rated symptom severity higher than male parents. Female parents also reported more problematic behaviors than male parents when children were analyzed by diagnostic group. Christensen and colleagues (1992) reported that female parents gave significantly more negative ratings than male parents. Further, results of this study found that cohabitating parents disagreed twice as often as they agreed when rating child behavior. Considering the current study findings of significant differences between parent dyads based on attachment styles (e.g. same style, different style), future research in this area using a statistical analysis that allows for analysis of individual parent demographics may yield valuable findings. Additionally, the current study measured differences across broad composite scales of internalizing and externalizing behavior, rather than specific scales, such as anxiety, depression, or attention. Because previous studies have found significant parent gender differences on more specific types of behavior, it may be beneficial for future studies to include analysis of differences on individual behavior scales.

Parent specific variables that were not included in the current study, such as anxiety, depression, role stress, parenting stress, and dyadic satisfaction, have been found to influence or moderate inter-parental discrepancy on behavior ratings (Chi & Hinshaw, 2002; Christensen et al., 1992; Dave' et al., 2008; Langberg et al., 2010; MacLeod et al., 1999; Richters, 1992; van der Oord et al., 2006). Research should include subjective parent variables, such as stress, satisfaction, and mood, in analysis of differences in parent dyad attachment style on pediatric behavior ratings.

Although there has been extensive research on parent specific variables, prior to 2005, there was a conceptual gap in the research and theoretical framework had not yet been proposed (De Los Reyes & Kazdin, 2005). In 2005, De Los Reyes and Kazdin proposed the ABC Model as a theoretical framework for understanding these

discrepancies based on the factors that influence inter-parental discrepancy (perspective and recall, and source monitoring). Research to explore parent attachment style differences, the factors described in the ABC model, and inter-parental discrepancies on behavior ratings may provide valuable information and a more fully supported conceptual model of inter-parental discrepancy.

This study examined parent dyads with either the same attachment style or different attachment styles. Given that significant inter-parental discrepancies were found more often in parent dyads with different attachment styles than the same attachment style, it may provide useful insights to examine parent dyads of all attachment style combinations (e.g., secure/secure, secure/anxious, secure/avoidant, anxious/anxious, avoidant/avoidant).

Lastly, the current study focused on discrepancies between parents only. However, discrepancies occur among other collateral raters such as teachers. Future research that includes teacher behavior ratings along with parent ratings may be beneficial for comparison.

APPENDIX A

HUMAN SUBJECTS CONSENT FORM



OFFICE OF UNIVERSITY RESEARCH

MEMORANDUM

TO:	Ms. Laura Beliech Harris and Dr. Doana Thomas
FROM:	Dr. Stan Napper, Vice President of Research & Development
SUBJECT:	Human Use Committee Review
DATE:	May 19, 2016
RE:	Approved Continuation of Study HUC 1276
TITLE:	"Adult Attachment Style and Inter-parental Discrepancy on Pediatric Behavior Assessment Scales"

HUC 1276

The above referenced study has been approved as of May 19, 2016 as a continuation of the original study that received approval on February 15, 2015. This project will need to receive a continuation review by the IRB if the project, including collecting or analyzing data, continues beyond May 19, 2017. Any discrepancies in procedure or changes that have been made including approved changes should be noted in the review application. Projects involving NIH funds require annual education training to be documented. For more information regarding this, contact the Office of University Research.

You are requested to maintain written records of your procedures, data collected, and subjects involved. These records will need to be available upon request during the conduct of the study and retained by the university for three years after the conclusion of the study. If changes occur in recruiting of subjects, informed consent process or in your research protocol, or if unanticipated problems should arise it is the Researchers responsibility to notify the Office of Research or IRB in writing. The project should be discontinued until modifications can be reviewed and approved.

If you have any questions, please contact Dr. Mary Livingston at 257-5066.

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APPENDIX B

DEMOGRAPHIC SURVEY

Parent Consent Form Completed Demographics Please answer the following questions regarding YOURSELF. 1. Age: _____ 2. Gender: ____ 3. Marital status: _____ 4. Race/Ethnicity: 5. Relationship to the child you are rating: _____ 6. What is your relationship to the co-parent who is also rating the child? _____ 7. Highest level of education? ____ 8. Estimated combined family income yearly? A) less than \$20,000 B) \$20,000 - 39,999 C) \$40,000 - 59,999 D) \$60,000 - 79,999 E) \$80,000 - 99,000 F) \$100,000 or more 9. Parish (or county) in which you currently reside? 10. Do both you and the co-parent who is also participating in this survey live in the same home? _____ yes _____ 110 Please answer the following questions regarding THE CHILD you are rating. 1. Age: _____

2. Gender: _____ 3. Race/Ethnicity:

4. Current or highest grade: _____

5. Grades repeated:

6. Any current psychological/mental health or learning disorders diagnosed by a licensed professional? (e.g., ADHD, autism, conduct disorder - *please list all*)

7. Medications the child is currently taking? (please list)

APPENDIX C

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REVISED ADULT ATTACHMENT SCALE

Consent Form Completed___

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4

The following questions concern how you generally feel in important, close relationships in your life. Think about your past and present relationships with people who have been especially important to you, such as family members, romantic partners, and close friends. Respond to each statement in terms of how you generally feel in these relationships.

Please use the scale below by placing a number between 1 and 5 in the space provided to the right of each statement. ----..... .

IZ	· · · · · · · · · · · · · · · · · · ·
Not at all	Very
characteristic	characteristic
ofme	ofme
 I find it relatively easy to get close to people. 	
2) I find it difficult to allow myself to depend on others	
3) I often worry that other people don't really love me	
4) I find that others are reluctant to get as close as I would like	
5) I am comfortable depending on others.	
6) I don't worry about people getting too close to me	
7) I find that people are never there when you need them	
B) I am somewhat uncomfortable being close to others	
9) I often worry that other people won't want to stay with me	
10) When I show my feelings for others, I'm afraid they will not fe	el the same about me_
11) I often wonder whether other people really care about me	•
12) I am comfortable developing close relationships with others	
13) I am uncomfortable when anyone gets too emotionally close to	me
14) I know that people will be there when I need them.	
15) I want to get close to people, but I worry about being hurt	
16) I find it difficult to trust others completely.	
17) People often want me to be emotionally closer than I feel comi	ortable being.
18) I am not sure that I can always depend on people to be there v	vhen I need them

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APPENDIX D

CHILD BEHAVIOR CHECKLIST 6–18

Please be sure to answer all items.

Below is a list of items that describe children and youths. For each item that describes your child now or within the past 6 months, please circle 2 if the item is very true or often true of your child. Circle 1 if the item is somewhat or sometimes true of your child. If the item is not was of your child, eitale the 0. Please answer all items as well as you can, even if some do not seem to apply to your child.

<u>0 = Not Tri</u>	ie (as far as you know) 1 = Somewhat or :	Someticaes Tr	rue 2=Very True or Often True
0 1 2 0 1 2 0 1 2 0 1 2 0 1 2	 Acts too yoeng for his/her age Drinks alcohol without parents' approval Argues a lot Fails to finish things he/she starts There is very little he/she enjoys 	0 1 2 0 1 2 0 1 2 0 1 2 0 1 2 0 1 2	 Feels he/she has to be perfect Feels or complains that no one loves him/her Feels others are out to get him/her Feels worthless or inferior Gets hust a lot, accident - prone
012 012 012 012	6. Bowel Movements outside tailet 7. Bragging, boasting 8. Can't concentrate, can't pay attention for long 9. Can't got his/her mind off certain thoughts; obsessions (describe)	0 1 2 0 1 2 0 1 2 0 1 2 0 1 2 0 1 2	 37. Gets in many fights 38. Gets tensed a lot 39. Hangs around with others who get in trouble 40. Hears sounds or voices that aren't there 41. Impulsive or acts without thinking 42. Heards around a structure in the structure
1 2 1 2	 Can't sit still, restless, or hyperactive Clings to adults or too dependent Complains of loncliness Confused or seems to be in a fog Cries a lot Cruel to animals Cruelty, ballying, or meanness in others Daydreams or gets lost in his/her thoughts Deliberately harms self or attempts suicide Demands a lot of attention Destroys his/her own things Destroys things belonging to his/her family or 	0 1 2 0 1 2	 42. Would miner be above inthe with obsers 43. Lying or cheating 44. Bites fingernails 45. Nervous, high strong, or tense 46. Nervous movements or twitching 47. Nightmores 48. Not liked by other kids 49. Constipated, doesn't move howels 50. Too fearful or anxious 51. Peels dizzy or lightheaded 52. Peels too guilty 53. Over cats 54. Overtired without good reason
 1 1 2 	othess 22. Disobedient at bome 23. Disobedient at school 24. Doess't ent well 25. Doess't get along with other kids 26. Doess't seem to feel guilty after misbehaving 27. Easily jealons 28. Breaks rules at home, school, or else where 29. Pears certain animals, situations, or places, (other than school) 30. Pears going to school 31. Pears he/she might think or do something had	0 1 2 0 1 2	 S5. Overweight S6. Physical problems without known medical cause a. Aches or pains not stomachache or headache b. Headhches c. Nausea, feeds sick d. Problems with eyes not if corrected by glasses e. Rashes or other skin problems f. Stomachaches g. Vomiting h. Other (describe)

Consent Form Completed_

Parent

Be sure to answer all ttems.

1 = Somewhat or Sometimes True

Consent Form Completed

2=Very True or Often True

0 1 2	57. Physically attacks people	012	84. Strange behavior
012	S8. Picks mose, skin, or other body parts	012	85. Strange ideas
012	59. Plays with own sex parts in public	012	S6. Stubburn, sullen, or irritable
012	60. Plays with own sex parts too much	012	87. Sudden changes in mood or feelings
0 1 2	61. Poor schoolwork	012	88. Sulks a lot
012	62. Poorly encodinated or clumsy	012	89. Suspinions
012	63. Prefers being with older kids	012	90. Swearing or obscene language
0 I Z	64. Profers being with younger kids	012	91. Talks about killing self
012	65. Refuses to salk	012	92. Talks or walks in sleep
• 1 2	66. Repeats certain acts over and over; compulsions	012	93. Talks too much
012	67. Runs away from home	012	94. Teases a lot
012	68. Screams a lot	012	95. Temper tantrums or hot temper
0 I Z	69. Secretive, keeps things to self	012	96. Thinks about sex too much
012	70. Sees things that aren't there	012	97. Threatens people
012	71. Self-conscious or easily emborrassed	012	98. Thumb-sucking
0 1 2	72. Sets fires	012	99. Smokes, chews, or sniffs tobacco
9 1 2	73. Sexual problems	012	100. Trouble steeping
6 1 2	74. Showing off or clowning	012	101. Truancy, skips school
012	75. Too shy or timid	012	102. Under active, slow moving, or lacks energy
012	76. Sleeps less than most kids	012	103. Unhappy, sid, or depressed
912	77. Skeeps more than most kids during day and/or night	012	104. Unusually loud
012	78. Inattentive or easily distracted	012	105. Uses daugs for nonmedical purposes (don't
012	79. Speech problem		include alcohol or tobacco)
012	80. Stares blankly	012	106. Vandalism
012	81. Steals at home	012	107. Wets self during the day
012	82. Steals outside the home	012	103. Weis the bed
012	83. Stores up too many things he/she doesn't need	012	109. Whines
	(describe)c	012	110. Wishes to be of apposite sax
		012	111. Withdrawn, doesn't get involved with others
		012	112. Worries
		012	113. Please write in any problems your child has
		012	that were not listed above
		012	
		012	
		012	

83

Parcot

0 = Not True (as far as you know)

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