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The Cross-Cultural Assessment of ADHD: Influence of Acculturation and Socioeconomic Status on Maternal Ratings of Black and White Boys

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The Cross-Cultural Assessment of ADHD: Influence of Acculturation and Socioeconomic Status

on Maternal Ratings of Black and White Boys

by

Charles Barrett

Dissertation Presented to the Graduate and Research Committee

of Lehigh University

in Candidacy for the Degree of

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In

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Abstract

Attention Deficit Hyperactivity Disorder (ADHD) affects many school-aged children. Although there are a variety of empirically supported treatment options for this disorder, the literature is far less advanced in its understanding of the cultural underpinnings impacting ADHD. Using a sample of 123 Black and White maternal figures that were primarily recruited from faith-based institutions and Parent Teacher Associations from Northeastern, Mid-Atlantic, and Southern cities, the present study investigated the relationship between scripted behaviors on a videotape that were indicative of ADHD and reported behaviors on a rating scale commonly used in the assessment process. To gain a better understanding of the factors that might influence behavior ratings, socioeconomic status (SES) and acculturation were also included in the analyses. Results from a series of MANVOA, ANOVA, and multiple regression analyses showed that maternal ethnicity was the most salient predictor of subsequent behavior ratings. Specifically, Black maternal figures assigned higher ratings to both Black and White children on the IA and HI dimensions of ADHD. Child ethnicity, SES, and acculturation, however, were not significantly related to rating scale results. Implications for researchers, as well as clinicians and parents, are presented with an emphasis on the importance of employing a multi-method and multi-informant assessment paradigm when working with culturally diverse children and families.

Chapter I

Statement of the Problem

School-age children and adolescents are frequently diagnosed with a variety of emotional and behavioral disorders. With estimated prevalence rates that range from 3 to 5 percent of the general population, Attention Deficit Hyperactivity Disorder (ADHD) is one of the most common conditions affecting these youngsters (American Psychiatric Association [APA], 2000). Although both neurological and biological factors have been implicated in its etiology through the involvement of the dopamine and norepinephrine neurotransmitter systems (Rappley, 2005), there is also the influence of environmental circumstance (Mychailyszyn, DosReis, & Myers, 2008). Therefore, the assessment process, which culminates in potentially life-changing diagnostic decisions, should never discount the role of cultural factors. For example, numerous studies focused on the assessment of ADHD have showed that a significant interaction exists between the ethnicity of the child who is being assessed and that of the individual who is involved in assessing the child, especially when behavior rating scales are included in the process (Mann et al., 1992; Mueller et al., 1995; Reid et al., 1998).

Children suspected of having behavioral and emotional disorders need to be properly assessed and diagnosed so that appropriate treatment and support services can be provided including behavioral therapies and/or pharmacological interventions. A widely practiced component of the assessment process for these types of problems includes the use of behavior

rating scales. According to Barkley (2006), school psychologists often use parent and teacher behavior rating scales to assess ADHD, as well as a myriad of other behavior and emotion problems, because they have been developed with large normative samples, are feasible for respondents to complete quickly, provide national comparison data for children of similar age and gender, and generally have robust psychometric properties. Reid and Maag (1994), however, noted that although rating scales are a useful component in the process of assessment and diagnosis, these measures identify disorders based on an individual's deviation from the mean of the normative group used to develop the scale. Stated differently, when a child's score falls significantly above the mean, there is preliminary evidence to suggest that he or she might have the disorder. In the same manner, if a child's score falls at or below the mean, the likelihood that he or she suffers from the condition of interest decreases. Further, as noted by Reid (1995), historically, few rating scales have included ethnic minorities in their normative samples, which limited the extent to which results obtained from these instruments could be applied to other populations. Although it is encouraging that most of the behavior rating scales that are currently used to assess a variety of social, emotional, and behavior problems in children and adolescents have been improved by their being developed using more diverse normative samples that are also geographically representative of the general population, the clinical utility

of these instruments with culturally diverse populations continues to warrant further investigation (Flowers & McDougale, 2010).

Black Children Consistently Rated Highest on Externalizing Behavior Problems

The literature provides mixed evidence that prevalence estimates of ADHD in the general population are consistent with diagnostic rates in Black children. Although Rowland and colleagues (2002) reported that prevalence rates were virtually equal between Black and White children, Miller, Nigg, and Miller (2009), in their review of the literature focused on ADHD in Black children between 1990 and 2007, reported that although Black youth were rated as displaying more ADHD symptoms compared to their White peers, they were also 33% less likely to receive a clinical diagnosis of having this condition. In the same manner, numerous studies have reported that Black children, compared to those from other ethnic backgrounds, consistently received higher ratings from both parents and teachers on a variety of externalizing behavior problems, including ADHD (Epstein, March, Conners, & Jackson, 1998; Epstein et al., 2005; Reid, Casat, Norton, Anastopoulos, & Temple, 2001; Reid et al., 1998). For example, in a study conducted by DuPaul, Anastopoulos, Power, Reid, Ikeda, and McGoey (1998) that assessed the factor structure and psychometric properties of a parent rating scale designed to measure ADHD symptoms, Black children, compared to their White counterparts, received higher Hyperactivity-Impulsivity (HI), Inattention (IA) and Total Score ratings on the AD/HD Rating Scale-IV Home

Version (ARS-IV Home Version; DuPaul et al., 1998). These data are significant because Black children, even when rated by their own parents who were presumably of the same ethnicity, continued to receive higher scores on externalizing behavior problems than other children.

Recent growth trends have shown that there are increasing numbers of culturally diverse children living in the United States who might also be identified as having special needs (Rescorla et al., 2007a). These authors also noted that assessing children's need for mental health services has been a significant goal of the global public health agenda. For these reasons, it is incumbent upon both the research and practice communities to critically examine the assessment and diagnostic paradigms that are presently employed to determine if they are culturally sensitive and appropriate for the populations that will eventually require a variety of special education and related services to support behavior problems (Reid, 1995). Included in this careful investigation is the determination that assessment instruments are able to be easily administered, scored, and interpreted by a wide range of professionals and also "multiculturally robust," which involves demonstrating that they produce consistent data across multiple and diverse societies (Rescorla et al., 2007b). These data further underscore the phenomenon that individuals from different societies (e.g., ethnic groups, socioeconomic levels) are likely to have different thresholds for what constitutes problem behaviors. For example, it would not be

surprising that topographically similar behaviors would be interpreted, and responded to, differently as a function of an individual's group membership.

Influence of Culture and Context on Subsequent Ratings of Children

To better understand differences between ethnicities, issues related to race and diversity (e.g., cultural expectations, socioeconomic status, and acculturation) are important (Kendall & Hatton, 2002). Although there have been large scale studies conducted to address the relationship between culture and assessment (e.g., Rescorla et al., 2007a; Rescorla et al., 2007b), few have specifically included Black participants to better understand the role of cultural factors in the development and expression of ADHD. For this reason, Kendall and Hatton (2002) and Miller, and colleagues (2009) accurately noted that the available ADHD research, which has primarily included White children, is not always helpful when working with ethnic minorities and further advocate for additional research about ADHD in ethnic minority groups.

As put forth by Bauermeister, Berrios, Jimenez, Acevedo, and Gordon (1990), determining if the behaviors that children of different ages and sexes display in various contexts are deviant from acceptable standards is important because a great deal of research on psychopathology has been based on Western ideas and philosophical approaches to behavior (Weisz, Suwanlert, Chaiyasit, Wess, Walter, & Anderson, 1988). Therefore, topographically similar behaviors are likely to be interpreted differently across social and cultural environments.

Related to this idea is the realization that whether or not a behavior is considered to be a serious problem is dependent on the context in which it occurs (Weisz et al., 1988).

Rohde, Szobot, Polanczyk, Schmitz, Martins, and Tramontina (2005) stated that a psychiatric diagnosis must incorporate the influences of ethnicity and values in order for it to be both comprehensive and culturally valid. These issues are particularly salient to children because the expression of what might be understood as a disorder is heavily dependent on the environmental circumstances in which they live and where problem behaviors occur. As Livingston (1999) noted that there are often different environmental demands and expectations between the home and school settings, when ethnic minority children attend schools embedded within the majority culture, behavioral differences are likely to be better understood by viewing them through a cultural lens. Further, the factors that determine what is acceptable are also culturally determined (Reid, 1995). As an illustration of this idea, although DSM-IV-TR (APA, 2000) criteria for ADHD seem to be objective, there remains a great deal of subjectivity involved in its interpretation. In fact, Lambert, Puig, Lyubansky, Rowan, and Winfrey (2001) as well as Rohde and colleagues (2005) reported that the manner in which individuals determine when a behavior is considered to be occurring at a level that is functionally impairing is impacted by variables such as ethnicity and SES.

Another important idea to consider when evaluating children from diverse cultural backgrounds is the person contributing information to this process (Youngstrom, Loeber, & Stouthamer-Loeber, 2000; Zimmerman, Khoury, Vega, Gil, & Warheit, 1995). For example, Lambert, Sandoval, and Sassone (1978) suggested that reports of child behavior problems might be a reflection of the evaluator rather than the child. These authors further recommended specifying the environments in which problem behaviors occur, the individual responsible for making clinical decisions about the child's behavior, and considering factors that are specifically related to the child rather than environmental influence.

Environmental influence is one example of the ecological lens through which children, especially those from ethnically diverse backgrounds, should be viewed in the process of culturally-sensitive assessment. Acculturation, however, is another factor that should be examined but has not been studied extensively as it relates to child behavior problems, assessment, and diagnostic patterns. The inclusion of this variable is important because it has the potential to provide additional information about how an individual's experiences, values, and expectations are not only highlighted throughout the assessment process but impact data that are collected (e.g., from behavior rating scales).

Acculturation

Acculturation can be described as a model for explaining and understanding ethnic group differences (Landrine & Klonoff, 1994) and reflects the degree to which an individual identifies with, or conforms to the attitudes, lifestyles, and values of, the dominant or mainstream culture (Lee, 1997). Further, acculturation refers to the process by which ethnic minorities participate in the traditions, values, beliefs, assumptions, and practices of the dominant society (acculturated), remain immersed in their own cultures (traditional), simultaneously participate in the traditions of their own cultures and the dominant society (bicultural), or reject the beliefs and practices of both their native cultures and the dominant society (marginal) (Landrine & Klonoff, 1996).

Ferguson, Bornstein, and Pottinger (2012), however, have proposed a tridimensional model of acculturation and adaptation that seeks to view individuals, namely Blacks or African Americans, as products of multiple cultures. Essentially, these authors suggest that Black immigrants to the United States can potentially orient to one of three cultures—the native culture, European American culture, or African American culture—rather than the traditional bidimensional model of either the mainstream or native culture. Having an appreciation for acculturation may help to decrease ethnocentric beliefs about group differences and promote an understanding of all people as cultural products rather than members of homogenous groups (Klonoff & Landrine, 2000; Landrine & Klonoff, 1994).

Because a comprehensive understanding of Black American, also known as African American, behavior must appreciate the central role of African American culture (Landrine & Klonoff (1996), acculturation can be instrumental in informing such an understanding. Acculturation can also provide a parsimonious explanation of the relationship between culture and behavior, which has been lacking for Black individuals. As a consequence of its development, acculturation has the potential to both predict and explain the nature and direction of ethnic group differences. For example, highly acculturated ethnic minorities usually score similarly to their White counterparts on various tests because both groups likely subscribe to similar beliefs, values, and ways of thinking. In the same manner, acculturation can show that between-group differences are not a reflection of inherent deficits within a particular ethnicity but rather an example of the degree of familiarity with, and extent of immersion in, the native versus the mainstream culture. After behaviors have been predicted and explained as a function of acculturation, clinically speaking, it allows the opportunity for intervention, if necessary (Landrine & Klonoff, 1996).

Although acculturation seeks to measure between-group differences, it also has implications for within-group variation. Stated differently, individual members of ethnic groups should be viewed heterogeneously, rather than homogeneously, in relation to others who share their ethnic background. To illustrate this idea, Rescorla and colleagues' (2007a) cross-cultural

examination of the Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001) showed greater within-society (e.g., ethnic group) variation in parent-reported problem scores than between-society variation. These data illustrate the important idea that ethnic group membership does not always account for between group differences. Additionally, these data show that cultural diversity is not only applicable between groups but it is of equal importance within a single ethnicity. Another example of this phenomenon is that most of the arguments that are used to challenge the generalizability of research findings to ethnic minority individuals have been based on the limitation that most empirical studies have been conducted using White participants. Although this argument is valid, it is also incomplete. Viewing individuals as merely members of ethnic groups while ignoring other aspects of their cultural existence is not only overly simplistic, but unfair to both Black and White research participants. Stated differently, as the concept of White ethnicity denies the more subtle historical, cultural, and political differences among various European American groups, likewise, the idea of a homogenous Black ethnicity does not appreciate the richness and variability throughout different groups of African Americans (Landrine & Klonoff, 1996).

Acculturation in Black Americans, therefore, is important for three reasons. First, it is more beneficial to understand these individuals in terms of their culture rather than only their ethnicity. Second, differences between Blacks and other ethnic groups are better understood as a

function of culture rather than ethnicity. Last, differences within Blacks are a product of various degrees of immersion in their culture or the mainstream society (Landrine & Klonoff, 1996).

Although the study of acculturation in Black Americans can offer meaningful contributions to better understand the influences that impact the behavior of this group, Snowden and Hines (1999) accurately pointed out that Black Americans, historically, have been considered significantly less in acculturation research than other cultural minority groups. Further, most acculturation research has been conducted with recent immigrant groups to the United States (e.g., Asian Americans and Hispanic Americans) and have asked questions about their use and proficiency in the English language, their length of residence in the United States, their compliance with traditional cultural beliefs, and their observance of cultural traditions (Balls, Organista, Organista, & Kurasaki, 2003). While some of these factors (e.g., English-language proficiency and length of residence in the United States) are easier examined in various immigrant groups, they are more challenging and not always appropriate to the study of acculturation in Black Americans (Snowden & Hines, 1999). As a result, few studies have measured the phenomenon of acculturation in Black Americans.

Rater Ethnicity

Children's interactions with various adults in different settings lead to the likelihood that they will display different behaviors across environments. Because of this, the cross-cultural

assessment of ADHD should also include learning more about adult attitudes toward child behavior problems. This idea was demonstrated in a study by Lambert, Puig, Lyubansky, Rowan, and Winfrey (2001) whose results showed that Black parents' attitudes and thresholds about children's behavior and emotional problems were different from teachers' perspectives. In addition to ethnic group differences, one possible explanation for this result is that teachers and other professionals working with Black children in the United States are often members of different social and economic communities (Puig, Lambert, Rowan, Winfrey, Lyubansky, Hannah, & Hill, 1999), which leads to different attitudes, beliefs, and levels of tolerance toward behavioral problems (Lambert et al., 2001).

The importance of studies such as Lambert and colleagues' (2001) investigation is further supported by knowing that child and adult ethnicity are variables that may influence adult ratings of children's behavior. Using various vignettes, these authors examined perceptions of internalizing and externalizing behavior problems in Black children using a sample of Black parents, and mostly White teachers, psychologists, psychiatrists, social workers, nurses, and substance abuse counselors who had experience working with Black children. Specifically, the authors were interested in determining if parents' ratings of behavior problems differed significantly from those of professionals.

After reading each vignette, participants answered several questions using a 7-point Likert scale about cause, problem severity, prognosis, referral, and intervention needs. One of the most significant results was that 86% of parents, compared to 55% of clinicians, attributed the child's externalizing problems to child rearing practices. Stated differently, although Black families interpreted the child's problems as being related to family issues that could be resolved by the family or within the family, professionals perceived these problems as clinical disorders that required referral for an evaluation and subsequent intervention. These data are also consistent with Black parents who were more likely to view their children as being "bad" rather than describing their behavior problems using a medical label (Bussing, Schoenberg, & Perwien, 1998; Bussing, Schoenberg, Rogers, Zima, & Angus, 1998). Another important finding reported by Lambert et al. (2001) was that Black parents' perceptions about the likelihood of behavior problems improving were significantly higher than White professionals'. In sum, because several results were consistent by ethnicity rather than by status (e.g., parent versus professional), this study showed that there are similarities between Black individuals, which are unrelated to professional status.

Culture is a highly complex phenomenon and encompasses a group's beliefs, values, and normative standards (Guerra & Jagers, 1998). Due to this complexity, when conducting culturally sensitive assessments of ethnic minority children for ADHD, several factors can

impact diagnostic decisions including socioeconomic status (SES) of the target child and informants completing behavior rating scales, parental perceptions of ADHD, and the consistency or agreement between rating scale and direct observation data.

According to Guerra and Jagers (1998) fair assessments for different cultural groups should include a consideration of whether or not the constructs that are being measured were free from bias. Further, the absence of this consideration inevitably leads to group differences without proper explanations for these results. For example, these authors mentioned the problematic practice of viewing Eurocentric standards as superior and the most appropriate evaluative metric while there is considerably less known and understood about how children from ethnic minority groups develop, which leads to them being described as disadvantaged and deviant.

Socioeconomic Status

Several studies have shown that SES can impact child behavior ratings (Hannah, & Hill, 1999; Lambert et al., 2001; Puig, Lambert, Rowan, Winfrey, Lyubansky, Hannah, & Hill, 1999). Specifically, Langsdorf, Anderson, Waechter, Madrigal, and Juarez (1979) reported that the highest incidences of hyperactivity were in schools located in low SES neighborhoods with majority Black or Mexican American students. In another study, school psychologists, parents, and teachers watched videotapes of African American, Mexican American, and White boys,

along with reading brief descriptions of each child, which indicated if they were from a middle or lower SES background. Results showed that although parents were more influenced by the child's ethnicity, school psychologists attributed higher ratings of hyperactive behavior to children from lower SES backgrounds. Further, low SES African American and Mexican American children received higher ratings of hyperactive behavior than White children (Stevens, 1981).

More recently, Rescorla and colleagues (2007b) sought to compare teacher ratings of behavioral and emotional problems on the Teacher Report Form (TRF; Achenbach & Rescorla, 2001) using a very large ($N=30,957$) and diverse sample of children and adolescents representing 21 countries. Results showed an inverse relationship between countries' per capita income and problem scores reported on the TRF. This is to say that the poorest countries were more likely to assign higher ratings of problem behaviors to their children and adolescents. Additionally, data showed that two out of the three countries who ranked highest in per capita income also reported the lowest problem scores for its youth using this instrument (Rescorla et al., 2007b).

In another study by Phillips and Lonigan (2010), these authors sought to examine the relationship between parent and teacher rating scale data and direct observation behavior ratings of 166 middle-income and 199 low-income students. Using direct observations, as well as a

modified version of the Conners Teacher Rating Scale-28 (CTRS-28; Conners, 1989) and the Emotionality, Activity, Sociability, and Impulsivity Temperament Survey (EASI; Buss & Plomin, 1975), consistent with previous research, low-income children were rated as having more behavioral problems than their middle-income counterparts by both parents and teachers. Across income groups, however, observer ratings were generally significantly lower than both parent and teacher rating scale results, which showed that direct observation data were inconsistent with rating scale results. Last, as these authors reported that SES and ethnicity were confounded for both children and teachers (e.g., most teachers and students were White in the middle-income group and most teachers and students were Black in the low-income group), the explanation for Black children receiving higher ratings cannot be attributed to the bias of White teachers (Phillips & Lonigan, 2010).

Parental Perceptions of ADHD

Few studies have examined the differences between Black and White parents' knowledge and attitudes about ADHD. For example, Bussing, Schoenberg, and Perwien (1998) showed that compared to White parents, Black parents were four times more likely to implicate sugar as causing ADHD, three times less likely to attribute a role to genetic causes, four times less likely to use a medical label to describe their child's behavioral problems, and four times more likely to call them "bad." They also reported that compared to White parents, Black parents were less

likely to expect a lifelong course of ADHD. One aspect of Lambert and colleagues' (2001) study included gathering information from parents and professionals about their views related to behavior problems. One of the most significant results of this study was that Black families were more likely to interpret children's behavior problems as being related to family issues that could be resolved by the family or within the family, rather than a clinical disorder that required professional intervention (see also Davison & Ford, 2001). Similar to Bussing, Schoenberg, and Perwien (1998), Black families were less likely to expect a lifelong course of the disorder (Lambert et al., 2001).

Correlation between Rating Scale and Direct Observation Data

Several studies have shown differential outcomes when rating scale data are compared to direct observations. For example, when Sonuga-Barke, Minocha, Taylor, and Sandberg (1993) compared teachers' rating scale results of British and Asian students to actual behavioral observations, data showed that their ratings were inconsistent with observed behaviors. Further, despite several studies including videotaped vignettes of behavior that were similar across ethnicities (e.g., the only difference was the ethnicity of the child displaying the behaviors), disparate ratings by both child and rater ethnicity continued to emerge. For example, Stevens' (1981) study showed that parents rated Black children as displaying higher frequencies of hyperactive behaviors than their Mexican American and White counterparts.

In another study, Mann et al. (1992) investigated if the rates of ADHD symptoms were different for mental health professionals from China, Indonesia, Japan, and the United States. After rating the hyperactive and disruptive behaviors of four male children, the authors concluded that perceptions of hyperactivity were different between countries, which led to differential results from its diverse participants. Similarly, using teachers from China, Indonesia, Japan, Thailand, and the United States, Mueller et al. (1995) investigated the perceptions of disruptive behaviors. After watching videotapes of Japanese and White boys and completing a 17-item behavior checklist to measure the extent to which they observed certain behaviors on the tape, results showed that there were differential effects based on the cultural background of the rater, which suggests that expectations for behavior are impacted by cultural affiliation or identification (De Ramirez & Shapiro, 2005; Mueller et al., 1995).

To test the idea that a group of primarily White teachers' ratings of Black and Hispanic children's ADHD symptoms would be less consistent with direct observation data compared to White children's ratings using two behavior rating scales and observation data, Hosterman, DuPaul, and Jitendra (2008) reported results that did not support their hypothesis and were also different than most of the studies previously conducted in this area. Specifically, teacher ratings of ADHD symptoms and direct observations of on-task behavior were more consistent in Black

and Hispanic children compared to their White counterparts (Hosterman, DuPaul, & Jitendra, 2008).

Critical Gaps in the Research Literature

Miller and colleagues (2009) noted that although the literature has improved, there remains a great deal to understand about ADHD in Black children and adolescents. Through these authors' comprehensive review of the literature, one of their many important contributions was their explanation of the seemingly inconsistent data that while Black children received higher ratings of ADHD symptoms using a variety of parent and teacher behavior rating scales, they were also diagnosed less frequently than their White counterparts. Miller and colleagues commented that although Black children consistently received higher ratings, these scores were not necessarily associated with the same degree of significant disability or impairment as their White peers. They further noted that of the existing behavior rating scales commonly used to assess ADHD, it was unclear if any of these instruments adequately measured this condition in Black children and adolescents (Flowers & McDougale, 2010; Miller, Nigg, & Miller, 2009).

The present study sought to address several deficiencies in the literature. First, as most ADHD research has been conducted using White children, data from these studies are not always helpful when working with ethnic minorities. Related to studies that have included direct observation data along with rating scale information, most have been conducted in school

settings and included teachers or other school personnel (e.g., Mueller et al., 1995; Sonuga-Barke et al., 1993; Stevens, 1981) as raters rather than parents. Further, most of the published literature has included comparisons between White and Hispanic groups (e.g., DeRamirez & Shapiro, 2005). The present study, however, is unique in that comparisons were made between Black and White parents. Including Black parents is an important contribution to the literature because although some studies showed that Black children were identified as displaying a greater amount of ADHD symptoms compared to other groups (DuPaul et al., 1998), there has been little research conducted about this group specifically (DuPaul & Barrett, 2003; Miller et al., 2009). Further, although Black parents have been included in several qualitative studies about ADHD (e.g., Bussing & Perwien, 1998; Bussing et al., 1998; Davison & Ford, 2001) and valuable information has been obtained from these investigations (e.g., that Black, compared to White parents, expected a shorter duration of their children's ADHD problem behaviors rather than a lifelong course, which might also impact the degree to which both groups seek professional care and subsequent differential diagnosis rates; Miller et al., 2009), the present study is quantitative in its design. Next, few studies have published data on the effects of SES on subsequent ratings of children's behavior. Further, when these data are available, although valuable, SES levels are usually only reported for the target child rather than the raters. The present study statistically controlled for the effects of the rater's SES to determine its impact on behavioral ratings

assigned to children. Similarly, few studies have considered the impact of acculturation on subsequent child behavior ratings. To date, only deRamirez and Shapiro (2005) have included acculturation to gain a more complete understanding of the many social and cultural influences that impact ratings of children's behavior. And although these authors' contribution is valuable, they were specifically interested in acculturation within a Hispanic population of teachers rather than Black parents. Systematically accounting for the impact of acculturation is further underscored by Miller and colleagues' (2009) recommendation that future studies should explore the impact that various aspects of Black culture, identity, and experience have on the perception of ADHD throughout the Black community as well as inform culturally-responsive assessment and diagnostic practices for Black children and adolescents.

The present study also incorporated several important features. First, only parents, specifically maternal figures, were used as informants, and comparisons were made between Black and White individuals. Second, scripted vignettes of Black and White boys displaying behaviors that were indicative of ADHD were shown to Black and White maternal figures who rated the severity of their symptoms to determine if reported group differences between Black and White children were consistent with actual behaviors. Third, the influence of SES was considered as a covariate. Last, the potential impact of acculturation on subsequent ratings of Black and White children was studied within the Black sample.

Research Questions and Hypotheses

(1) Are reported group differences between Black and White children using the ADHD-IV Rating Scale Home Version consistent with observed group differences through watching videotaped vignettes?

It was hypothesized that reported group differences between Black and White maternal figures using the ADHD-IV Rating Scale Home Version would not be consistent with observed group differences. Although both Black and White maternal figures observed the same behaviors of the Black and White child in the videotaped vignettes, it was hypothesized that the Black child would receive higher ratings than the White child from both Black and White maternal figures on the ADHD-IV Rating Scale Home Version (Epstein, March, Conners, & Jackson, 1998; Epstein et al., 2005; Phillips & Lonigan, 2010; Reid, Casat, Norton, Anastopoulos, & Temple, 2001; Reid et al., 1998).

(2) To what extent were between-rater differences accounted for by the effects of SES of the rater?

It was hypothesized that there would be an inverse relationship between rater SES and ratings of ADHD symptoms. As rater SES level increased, behavior ratings would decrease (Phillips & Lonigan, 2010; Rescorla et al., 2007b).

(3) Within the sample of Black maternal figures, to what extent did acculturation account for subsequent ratings of Black and White children?

It was hypothesized that there would be a positive relationship between acculturation level and subsequent ratings assigned to Black children. As acculturation level increased, higher ratings would also be assigned (Deater-Deckard, Atzaba-Poria, & Pike, 2004).

Chapter II

Literature Review

ADHD: A Social and Cultural Phenomenon

Despite being recognized in the Diagnostic and Statistical Manual of Mental Disorders—Fourth Edition-Text Revision (DSM-IV-TR; APA, 2000), Bauermeister and colleagues (1990) put forth the idea that ADHD is a Western concept and the instruments used to assess its symptoms have been developed through a Western paradigm of what constitutes a disorder. For this reason, although one culture perceives a certain behavior as deviant and discourages its expression, another culture accepts and encourages the same action. Different ideas about, and responses to, topographically similar behaviors underscore the necessity of research agendas that critically examine the cultural influences and attitudes that are inherently related to psychopathology. There have, however, been few empirical investigations of how ethnic group membership impacts perceptions and practices concerning ADHD (Bussing, Schoenberg, & Perwien, 1998; Bussing, Schoenberg, Rogers, Zima, & Angus, 1998; Davison & Ford, 2001).

To examine the perceptions associated with labeling and treating children with ADHD, Davison and Ford (2001) used a sample of Black and White educators, medical professionals, social workers, and counselors who worked extensively with Black children and families within school, home, and medical settings in a Midwestern Black community. The results of this qualitative study showed that Black parents were less agreeable to an ADHD diagnosis than

White middle class families living in the same region who were more likely to embrace the biological and genetic explanations for this condition. The authors also reported that Black parents were more likely to be distrustful of the educational system, perceived a lack of cultural awareness of White educators, and felt that an ADHD label was associated with a social stigma within their communities (Davison & Ford, 2001).

The comprehensive assessment of ADHD in children and adolescents involves the use of diagnostic interviews with parents and teachers, the completion of behavior rating scales by parents and teachers, as well as classroom observations, educational testing, and other assessment measures (e.g., adolescent self-report) as necessary (Barkley, 2006). Rating scales, because they highlight the degree of deviance a child's behavior is from the acceptable standard and are based on comparisons to others of the same age and gender through the eyes of a parent or teacher, are a particularly useful component of the evaluative process. There are, however, limitations associated with these instruments. First, although they appear to be objective, rating scales are only as accurate as the perceptions of the persons responsible for their completion. Related to this, Davison and Ford's (2001) investigation implied that the rating scales used to assess ADHD might be ethnocentric if they have been developed based on the "White woman" system, which is representative of most elementary school teachers in the United States. Further, if ethnic minority children do not behave in a manner that [White] teachers feel is acceptable

based on established behavioral expectations, their differences are viewed as disordered (Davison & Ford, 2001).

Further, the idea of control is also related to ADHD as a disorder of social and cultural construction. Specifically, Davison and Ford's (2001) respondents indicated that Black children might be forced to conform to a standard that has been established by what the authors termed an "oppressive social and racial hierarchy" (p. 268). For example, whereas White culture might value an individual's ability to control his impulses, physical expressiveness and exuberance are characteristics that are desirable, acceptable and encouraged in the Black tradition. Additionally, because these behavioral and emotional expressions are embedded within a larger cultural experience, accurately interpreting them requires an understanding of the cultural values and belief systems that influence diverse students' observable behavior (Davison & Ford, 2001).

In another qualitative study, Bussing, Schoenberg, and Perwien (1998) sought to examine variations in parental knowledge about ADHD while controlling for the effects of SES and ethnicity. Results showed that although 83% of parents had heard of ADHD, Black parents were less likely to have heard of it compared to their White counterparts. Another important finding, which was similar to Davison and Ford (2001), was that Black parents were less likely to attribute its existence to genetic causes or use medical terms to refer to the disorder. For example, 32% of Black parents, compared to only 9% of White parents, labeled their children as

“bad” rather than having a behavioral disorder. Last, after statistically controlling for the effects of SES, between-group differences remained. Interestingly, fewer Black parents, compared to White parents, received information about ADHD from their physicians and also knew less about the disorder. An explanation stated by the authors was that the lack of “popularity” of the disorder in the Black community was coupled with less conversation about it. In sum, the results of this study showed that Black parents were less likely to view behaviors that may be indicative of ADHD as pathological (Miller et al., 2009), and also would not seek information about it because those in their social network did not view it as a problem.

Assessment of ADHD Symptoms

The disproportionate representation of ethnic minority students in various special education categories throughout the United States continues to be an issue of concern (Sullivan, A’Vant, Baker, Chandler, Graves, McKinney, & Sayles, 2009). Specifically, Black students have consistently been over-identified, compared to their representation in the general population, as being intellectually and emotionally disabled and are also most likely to be placed in more restrictive settings that are separate from their typically developing peers (Blanchett, 2006). Although most of the disproportionate representation data has been focused on students with intellectual disabilities, emotional disabilities, and specific learning disabilities (United States Department of Education, 2009), conceptually and philosophically, this issue has far-

reaching implications for each of the federal categories for which children can be eligible to receive special education support services. For this reason, it is imperative to critically examine the reasons that lead to disproportionate representation in all disability categories, which include biased assessment practices, misinterpretation of ethnically diverse students' behavior, and a lack of understanding and experience working with diverse populations (Sullivan et al., 2009).

Disproportionality is also indicative of a two-fold problem. First, is the disproportionate over-representation of ethnic minority students as being in need of special education support services. Second, and equally important, however, is the disproportionate under-identification of minority students as being in need of special education support services compared to their membership in the general population. While a great deal of attention has been given to over-identification, the under-identification of students is also problematic as these youngsters may be denied access to special education services, and necessary behavioral and pharmacological treatments (Langsdorf, Anderson, Waechter, Madrigal, & Juarez, 1979; Blanchett, 2006).

The phenomenon of disproportionality has implications beyond special education eligibility and placement but the process by which students are assessed for a variety of learning and behavior problems. For example, one plausible explanation that might account for disproportionate data between groups is that the instruments used during academic and behavioral assessments might be less valid when applied to culturally diverse children. Due to

the increasing numbers of ethnically diverse youngsters living in the United States, the problems associated with assessing these students, and the possibility of disproportionate diagnosis rates, there has been heightened awareness and interest in the cross-cultural assessment of ADHD (Reid, 1995; Hosterman, DuPaul, & Jitendra, 2008).

Although one of the attractive components of using behavior rating scales as part of an ADHD assessment is that large samples have been used to develop its standards, (Barkley, 2006), historically speaking, this quality did not guarantee that the normative group was also representative of the population for which the rating scale will eventually be used. Clinically speaking, it can be problematic when normative data obtained using one culture are applied to other cultural groups. To avoid inaccurate conclusions, best practice standards have suggested that in addition to using large normative samples, instruments should also demonstrate adequate reliability and validity for all the populations with which they will be used (Reid et al., 1998). To highlight the cross-cultural differences in professionals' assessment of behavior using rating scales, Mann et al. (1992) asked mental health professionals to rate videotaped vignettes of children's behavior. Results showed that behavior ratings varied based on the professionals' ethnicity. In a similar study, which used teachers from China, Indonesia, Japan, the United States, and Thailand, Mueller et al. (1995) also found cross-cultural differences through ratings of observed behavior. Very importantly, in both studies, each participant watched the same

videotaped scenarios. Further, because the tapes were virtually identical, rating scale differences support the idea that perceptions of behavior might vary as a function of the rater's ethnicity.

In another study, Sonuga-Barke, Minocha, Taylor, and Sandberg (1995) measured the extent to which teachers' ratings of behavior were consistent with behavioral observations. Similar to the Mann and colleagues (1992) and Mueller and colleagues (1995) studies, although the behaviors being rated were identical, results showed that Asian students received significantly higher ratings compared to their English peers. A unique feature of this study was that raters and children were members of different cultural groups, which allowed authors to examine whether or not rating scales led to differential effects across different cultural groups. Of the few studies available in this area, Langsdorf and colleagues (1979), found that Black students were overidentified with ADHD compared to Mexican American students who were proportionally underidentified.

All of these studies have been conducted using samples of children in schools and teachers served as the informants. Phillips and Lonigan (2010), however, included both parents and teachers in their methodology investigating the relationship between direct observation data and rating scale results. Similar to the studies that used teachers as informants, Phillips and Lonigan (2010) reported that Black children received higher ratings than their White peers using both parent and teacher rating scales. Additionally, these data were not corroborated by direct

observations. In other words, direct observations of students' behavior were significantly lower than results reported on parent and teacher rating scales (Phillips & Lonigan, 2010). To add to the data reported by Phillips and Lonigan (2010), further studies are necessary to determine whether or not the same pattern of results would emerge if parents were used as raters.

These studies also point to the importance of cultural factors when assessing ethnically diverse children for ADHD. Despite this reality, however, it is possible that between-group differences are due to the manner in which the scale performs or even actual behavioral manifestations. To address the first of these possibilities, Jarvinen and Sprague (1996) used the ADD-H Comprehensive Teacher's Rating Scale (ACTeRS; Ullman, Sleator, & Sprague, 1984) to determine if the items functioned differently for White, Mexican American, and Black children. The results showed that although there were differences between groups on the items, this could have been the product of an interaction between informant and child characteristics. Related to this, one of the limitations of this study was that information about rater characteristics was not collected, which prevented further analyses. In sum, Jarvinen and Sprague (1996) concluded that there were no systematic differences that favored either of the groups. Very importantly, although there were mean score differences between groups on each of the ACTeRS subscales, it cannot be concluded that the scale is a biased instrument.

In another study, Reid and colleagues (1998) sought to examine the cross-cultural equivalence of the ADHD Rating Scale-IV School Version (ARS-IV School Version; DuPaul et al., 1998) for Black and White male children, specifically. Consistent with other studies, mean scores were higher for Black, compared to White, children on both the HI and IA dimensions of the scale. An important diagnostic implication, which the authors suggested from these results, was that higher thresholds (e.g., 95th or 98th percentile vs. 90th percentile) should be considered when working with Black children. One of the limitations of this study was that all of the respondents were White teachers. For this reason, results for Black children might have been influenced by the rater's ethnicity. Also, because behavioral observations were not included, it is possible that there were actual behavioral differences between the two groups. Third, rater SES was not examined for its impact on subsequent results. To address these issues, future studies should include behavioral observations along with rating scale information and include parents, rather than teachers, as the informants.

Cultural Equivalence of Behavior Rating Scales

Marsella and Kameoka (1989) highlighted several points that should be considered when determining the degree to which a rating scale is equitable across different cultural groups. First, rating scales should have conceptual equivalence to ensure that each culture has a similar understanding of what is being measured. Second, measures should demonstrate normative

equivalence so that the standards that have been developed for what constitutes a disorder in one culture are applicable to, and appropriate for, other groups. To strengthen this aspect of rating scales, ethnic minority children should be proportionally reflected in normative samples as their representation in the general population (Reid & Maag, 1994). Additionally, there should also be accurate representation by age, gender, SES, and geographic location. As an example of the lack of normative equivalence that was at one time commonplace in behavior rating scales used to assess ADHD symptoms, Reid (1995) reported that only 5 out of 11 included ethnic minority participants in their normative groups and gave information to the extent of their participation. For this reason, before behavior rating scales were improved to being developed according to the present and widely accepted standard of including normative samples that are both ethnically diverse and representative of the general population, identifying ADHD in minority children, especially with an emphasis on data gathered from these instruments, was not without its limitations.

Marsella and Kameoka (1989) also recommended that behavior rating scales demonstrate acceptable levels of linguistic equivalence, which is the extent to which its content (e.g., the words and phrases that are used) has similar meaning across groups. Last, scale equivalence refers to groups having a common understanding of how its results will be used. The absence of scale equivalence can lead to different ratings based on a misunderstanding of the intent behind

various items. Reid (1995) also noted the importance of raters having a common understanding about the metric (e.g., Likert descriptions) applied to various instruments. For example, when individuals from different cultures do not have the same ideas of what *not at all* or *very often* mean, ratings may not be directly comparable across ethnicities.

Rescorla and colleagues (2007a) evaluated the cultural equivalence of the Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001). Specifically, they sought to examine whether or not the 2001 revisions were more multiculturally robust using a very large sample ($N = 55,508$) that was also representative of 31 diverse societies. Results showed that the 112 parent-reported problem items and 17 subscales evidenced similar internal consistency reliability, mean scale scores, and mean item scores across ages, genders, and cultures.

In a similar study that sought to examine the consistency of teacher-reported problems for children and adolescents in 21 countries using the TRF (Achenbach & Rescorla, 2001), Rescorla et al. (2007b) reported consistent results across these diverse societies. For example, correlations between internal consistency coefficients averaged .90. Very importantly, the effects of country, gender, and age on various scale scores were also minimal. Based on these findings, the authors concluded that, despite differences in social, political, educational, and economic systems, the TRF functions similarly across diverse societies (Rescorla et al., 2007b).

Relationship Between Observed and Reported Differences

Few studies have focused on Black children with ADHD (Miller et al., 2009). Because of this, those that have focused on children of similar heritage, but who live in different social societies, can help determine the behavior problems that are culturally determined compared to those that are more likely to be environmentally based. For example, if similar behavior problems are observed between groups of Black children living in different societies (e.g., the United States vs. the Caribbean), there is evidence to support the idea that the behaviors are culturally, rather than environmentally, determined. On the other hand, if there are differences within racial groups who live in different societies, the respective environments are likely to be contributing factors (Puig et al., 1999; Rescorla et al., 2007a; Rescorla et al., 2007b).

Puig and colleagues (1999) used structured direct observations of emotional and behavioral problems of children living in Jamaica and the United States to determine similarities and differences in classroom behavior displayed by Black children in classroom settings. The importance of this study is that it included only Black children from two nations with very different social structures. For example, although Jamaicans are the majority group in their country, Blacks are a large minority group in the United States. Further, the two countries' educational systems are very different. Notably, whereas other Jamaicans usually instruct Jamaican children, Black children living in the United States are often taught by White individuals. As a result, both the value systems and thresholds for problem behaviors may be

different for teachers who are from the same ethnic background as their students compared to those that are not (Puig et al., 1999).

The study's sample consisted of 102 children between the ages of 6 and 11. Fifty-four were Jamaican, and 48 were Black. All teachers in Jamaica were Black, and American teachers were mostly White. Children were observed during regular classroom activities and their behaviors were recorded using the Direct Observation Form (DOF), which was designed as a correlate to the Teacher Report Form (TRF; Achenbach, 1991). The Jamaican observer team included a Caribbean and three White Americans. The United States observer team included a Caribbean, an Asian, and three Whites.

Results showed that the Total problem scores were higher for Black children in the United States compared to children in Jamaica. Jamaican children, however, received higher observer ratings than Black children. Between groups, teacher ratings were higher than observer ratings. One possible explanation for Jamaican children receiving higher ratings is because they were observed by a different cultural group than those who rated their behavior. Therefore, the expectations of the Jamaican teachers are likely to have been different from those of the American observers who may have used American standards to rate behaviors as problematic (Puig et al., 1999).

These results highlight the importance of the ethnic match between raters and children. Because most teachers that rated Black children in America were White, it is possible that they had a lower tolerance for behavior compared to Jamaican teachers' threshold for their Jamaican students. Further, Puig et al. (1999) noted that because Jamaican teachers were more likely to be involved with their students' home lives than teachers in the United States, a greater understanding of how family situations could have affected behavior in school may have also impacted subsequent rating scale results.

Stevens (1981) used videotaped vignettes to examine the relationship between ethnicity, socioeconomic status and hyperkinetic behavior for Black, White, and Mexican American students. In addition to the tapes, there were also brief descriptions of the child to allow the raters to determine if the child was of low, middle, or high SES background (e.g., details about parental occupation and where the family lived). After school psychologists, teachers, and parents viewed the tapes of children interacting with their peers, the three groups produced different results. Although parents were influenced the most by the ethnicity of the child, both ethnicity and the perceived SES of the child influenced school psychologists. School psychologists also attributed more hyperkinetic behavior to lower SES Black and Mexican American children compared to their White peers. Based on the observable behaviors, the ratings between the participant groups should not have differed significantly. These data,

however, show that rater characteristics can influence an assessment that is seemingly objective (Stevens, 1981).

In the same manner, Sonuga-Barke and colleagues (1993) showed that teachers' ratings of Asian children's hyperactive behavior were higher than direct observations of their behavior. In other words, although they were rated as equally hyperactive as their English classmates using a behavior rating scale, direct observation data showed that they were less hyperactive.

In an attempt to test the hypothesis that a group of primarily White teachers' ratings of Black and Hispanic children's ADHD symptoms would be less consistent with direct observation data compared to White children's ratings using two behavior rating scales and observation data, Hosterman, DuPaul, and Jitendra (2008) reported results that did not support their hypothesis and were also different than most of the studies previously conducted in this area. As their findings showed the opposite phenomenon—that teacher ratings of ADHD symptoms and direct observations of on-task behavior were more consistent in Black and Hispanic children compared to their White counterparts—one important implication of these data is the possibility that teacher ratings of minority children might, in fact, be more accurate than previously believed or even more accurate than teacher ratings of majority culture students. Further, these data also suggest the potential for White students to be referred at a lower rate than their minority peers,

which might also lead to underrepresentation of White students in various categories eligible for special education support services (Hosterman, DuPaul, & Jitendra, 2008).

Importance of Acculturation

According to Landrine and Klonoff (1994), acculturation refers to the extent to, and the process through which ethnic minorities participate in the traditions, values, beliefs, assumptions, and practices of the dominant White society (acculturated), remain immersed in their own cultures (traditional), or participate in the traditions of their own cultures and of the dominant White society (bicultural). Using this approach, many ethnic differences can be understood as a manifestation of acculturation, which may help to decrease ethnocentric beliefs about group differences, and facilitate an understanding of all people as cultural products rather than members of a homogenous group (Klonoff & Landrine, 2000; Landrine & Klonoff, 1994). Although acculturation is currently conceptualized as an individual's adaptation to the mainstream culture (Cauce, 2002), some authors suggest that there is no universally accepted definition of the term (Smokowski, David-Ferdon, & Stroupe, 2009).

Acculturation is a framework for predicting the nature and the direction of ethnic group differences. Without considering acculturation, the implications of empirical findings are limited (Landrine & Klonoff, 1994). Because, however, the primary focus of acculturation research has been exclusively devoted to immigrant groups, the concept has not been applied to African

Americans. One reason is that African Americans have been considered a racial rather than an ethnic group (Balls Organista, Organista, & Kurasaki, 2003). Another reason is that because they, African Americans, are Americans, differences from the majority culture (e.g., Whites) can be explained by other demographic factors such as geographic location or SES (Balls Organista, Organista, and Kurasaki, 2003; Landrine & Klonoff, 1994).

To address this issue, the African American Acculturation Scale (AAAS; Landrine & Klonoff, 1994), a 74-item scale measuring eight theoretical dimensions of African American culture, was the first scale developed to assess acculturation in African Americans. Individuals were asked to rate their agreement with each item using a 7-point Likert scale, ranging from 1 (totally disagree), to 7 (totally agree). Higher scores on this scale reflected high agreement with the items and showed that the individual had a traditional cultural orientation or was immersed in African American culture. Lower scores were indicative of low agreement with the items and reflected an acculturated orientation or low immersion in African American culture (Klonoff & Landrine, 2000). Although several studies (e.g., Kimbrough, Molock, & Walton, 1996; Klonoff & Landrine, 1996; Landrine & Klonoff, 1996) using the AAAS have showed that levels of acculturation play an important role in African American behavior, it has never been used with adults to explain differences in perceived ADHD behaviors in children (Klonoff & Landrine, 2000).

Similarly, few studies of children have considered the contribution of acculturation on subsequent behavior. For example, to identify gifted Hispanic students using behavior ratings, Masten and Plata (2000) investigated if there were differences between teacher ratings of White and Hispanic students' behavior based on the student's acculturation level. As a measure of acculturation, 150 Hispanic and White fifth grade students completed the Children's Hispanic Background Scale (CHBS; Martinez, Norman, & Delaney, 1984) and teachers completed the Scales for Rating Behavior Characteristics of Superior Students (SRBCSS; Renzulli, Hartman, & Callhan, 1971). Results showed that there was a positive relationship between Hispanic students' acculturation level and teacher ratings. Specifically, that data showed that teachers' ratings of students' acculturation levels might, in some way, impact their placement and representation in gifted education programs and Hispanic students who are higher in acculturation might be referred more often than their lower acculturated peers (Masten & Plata, 2000).

Deater-Deckard, Atzaba-Poria, and Pike (2004) used a sample of White and Indian families living in London to study the impact of quality parent-child interactions on child behavior and emotion problems. Results showed that acculturation accounted for approximately 50% of the between group difference in responsiveness, cooperation, and reciprocity in parent-child relationships. Further, Indian parents who spoke their native language less frequently,

emigrated earlier, and had less traditional attitudes towards Asian culture (more acculturated), were more similar to White parents than their Indian counterparts who maintained stronger ties to their native culture (less acculturated).

DeRamirez and Shapiro (2005), using a sample of 187 Hispanic and White teachers, sought to investigate the relationship between observed and reported behaviors on the ARS-IV School Version (DuPaul et al., 1998). Teachers watched a 12-minute videotaped vignette of either a Hispanic or White student, which yielded four possible combinations: Hispanic teacher watching a Hispanic student; Hispanic teacher watching a White student; White teacher watching a Hispanic student; and White teacher watching a White student. After watching the vignette, which showed the student displaying behaviors indicative of ADHD (e.g., looking around the classroom, playing with objects, interrupting the teacher), teachers were asked to complete the ARS-IV School Version (DuPaul et al., 1998). Teachers that self-identified as Hispanic also completed the Short Acculturation Scale for Hispanics (SASH; Marin, Sabogal, VanOss Marin, Otero-Sabogal, & Perez-Stable, 1987). One important result was that although Hispanic teachers rated the Hispanic student on the videotape as more hyperactive and impulsive than White teachers, after controlling for the effects of acculturation, there were no longer any significant group differences. This also supports the idea that cultural values (e.g., acculturation) rather than ethnicity was a more salient predictor of teachers' ratings (DeRamirez & Shapiro, 2005).

Races and Ethnic Groups

Discussions about acculturation must also consider the important distinction between races and ethnic groups. According to Landrine and Klonoff (1996), the concept of race is supported by a “theoretical model of difference” as they are arbitrary social and political designations based on physical criteria such as skin color or complexion. On the other hand, ethnic groups are culturally determined. Whereas viewing individuals as members of racial groups focuses on their physical characteristics, ethnicity, however, highlights individuals’ culture as more salient in the explanation of behavioral differences. Related to this idea, Balls Organista, Organista, and Kurasaki (2003) contend that African Americans are not members of a racial group but rather an ethnic or cultural group. And, because of this, they further assert that the best way to understand ethnic minorities (e.g., African Americans) is to measure the extent to which these individuals participate in their own native culture rather than the dominant or mainstream society through measuring levels of acculturation. For example, Balls Organista, Organista, and Kurasaki (2003), suggest examining Black Americans’ traditional cultural beliefs, values, and practices instead of assuming that they are American and therefore, not uniquely different from the dominant society.

Theories of Acculturation

There are many models of acculturation, which seek to explain the process and outcome of adaptation of ethnic minorities to a multicultural society in which their culture is not dominant. Two of these models, which were put forth by LaFromboise, Coleman, and Gerton (1993), are Assimilation and Alternation.

The assimilation model of acculturation contends that ethnic minorities adapt to a multicultural society by abandoning their native culture and choosing to subscribe to the tenets of the dominant culture. Assimilation is also a one-way process that moves individuals away from their native culture and produces acculturated (assimilated) minorities. Individuals that assimilate often experience several stressors throughout their acculturation process including rejection by both the majority group and native culture. According to Landrine and Klonoff's (1996) theoretical model of African American acculturation, all major aspects of the native culture are absent from assimilated-acculturated individuals' cultural-behavioral repertoire. According to Smokowski, David-Ferdon, and Stroupe (2009) assimilation involves unidirectional changes that are made by minority individuals to adjust to the mainstream society.

Alternation can be viewed as an additive model of acculturation, in which the mainstream culture is added to the native culture. Consequently, individuals simultaneously participate in two cultural traditions and eventually become bicultural. The various Alternation models explain biculturalism differently. Although some assert that it involves switching cultural repertoires by

displaying the dominant culture's behavior in some settings and the native culture's in others, others explain it as simultaneously participating in two cultures by selecting some aspects of the native (e.g., religion, music, food) and some aspects of the mainstream culture (e.g., speech, values). Landrine and Klonoff (1996) refer to individuals that alternate between two well-developed, distinctly different, cultural-behavioral repertoires as alternating-bicultural. Further, individuals who have not only selected but blended aspects of their native culture with the dominant culture into a single, unified, cultural-behavioral repertoire are referred to as blended-bicultural.

Despite their contributions to the literature, Landrine and Klonoff (1996) reported that none of these existing models sufficiently describe the complex phenomenon of acculturation among African Americans. One explanation for their limited applicability is that they have been developed on new immigrant populations (e.g. Italians, Russians), which also assumes that minority individuals always begin their lives as traditional and eventually become either bicultural or acculturated. Such an assumption, however, is erroneous because it is possible for minorities (e.g., African Americans) to begin their lives as acculturated or bicultural, for example, depending on the acculturation status of their parents.

To address the limitations of these existing models, Landrine and Klonoff (1996) proposed another theoretical model of acculturation. One of its unique features is that it does not

assume a one-way direction of change that is always away from the native culture, which has been asserted by other approaches. Instead, these authors put forth the idea that acculturation is a fluid and dynamic process that affords individuals the possibility to not only change from acculturated to traditional, but also from traditional to acculturated, as well as circular movement (e.g., from traditional to acculturated and back to traditional).

Summary and Conclusion

Because of the social and cultural influences associated with behavior and specifically ADHD, further research should be conducted that investigates these phenomena and their relationship to children's functioning. The extant literature has not adequately addressed these facets of ADHD and consequently, disparities exist between groups that are assessed for the disorder using behavior rating scales. One way to gain a better understanding of the multidimensional nature of ADHD is to add direct observation ratings of children's behavior to results that are reported using rating scales, which can inform the relationship between what the child displays and what raters perceive his behavior to be. Second, the inclusion of SES would show whether or not there are differences in how mothers from different social and economic strata perceive children's behavior. Last, acculturation, which considers the background and experiences of the person evaluating a child, is a relatively unexplored area of ADHD research. Its contribution, however, has the potential to provide invaluable information that promotes a

greater understanding of contextual variables that lead to an ADHD diagnosis for a specific child.

Chapter III

Methods

Participants

Participants ($N = 123$) for the present study were selected from suburban cities located in the Northeast ($n = 14$), Mid-Atlantic ($n = 64$), Southeastern ($n = 32$), and Midwest ($n = 13$) regions of the United States. Whereas most Black maternal figures were recruited from the Southeast ($n = 32$), followed by the Mid-Atlantic ($n = 20$) and Midwest ($n = 7$), most White maternal figures were recruited from the Mid-Atlantic ($n = 44$), followed by the Northeast ($n = 14$) and Midwest ($n = 6$) (see Table 4). Inclusion criteria included being the legal guardian, primary caregiver (e.g., grandparent), or biological parent of a child enrolled in grades K through 12. Participants were also included if they self-identified as either Black or White. Finally, only female respondents were included to minimize gender confounds. Further, because previous research has generally included samples of teachers that were primarily female (e.g., Reid et al., 1998), continuing in this pattern would potentially allow meaningful comparisons between these two groups (parents and teachers). Although the sample was not stratified according to low, middle, and high SES levels, the mean SES levels for both Black and White participants fell in the middle range (Black participants mean Hollingshead Index = 57.36, $SD = 8.75$; White participants mean Hollingshead Index = 59.72, $SD = 5.97$).

In order to determine the sample size necessary to obtain a medium effect size (.50), with adequate power (.80), which is also statistically significant at the $p < .05$ level using an analysis of variance (ANOVA) statistical procedure, power analysis results showed that approximately 64 Black and 64 White participants were needed for each group (Cohen, 1992). The final sample, however, included 59 Black participants and 64 White participants who were recruited from various community organizations including school divisions, Parent Teacher Associations (PTA), and faith-based institutions (e.g., churches).

Design

Black and White maternal figures were randomly assigned to one of two conditions. One group consisted of Black and White maternal figures ($N = 59$) who watched a videotaped vignette of a Black child displaying behaviors that were indicative of, but not in the clinically significant range for, ADHD. The other group consisted of Black and White maternal figures ($N = 64$) who watched a videotaped vignette of a White child displaying the same type/level of ADHD behavior. This design resulted in four possible combinations: Black maternal figure watching a Black child ($n = 29$); White maternal figure watching a Black child ($n = 30$); Black maternal figure watching a White child ($n = 30$); and White maternal figure watching a White child ($n = 34$).

The primary reason for having children only display borderline levels of behavior was that previous research in this area has used non-referred samples or children without ADHD (Mann et al, 1995; Mueller et al., 1995; Sonuga-Barke et al., 1993; Stevens, 1981).

Consequently, a child displaying at-risk levels of ADHD behavior allowed the raters the opportunity to complete the rating scale without the “obvious” realization that the child is displaying behaviors that are clinically significant for the disorder.

Instrumentation

The *ADHD-IV Rating Scale Home Version* (ARS-IV Home Version; DuPaul, Power et al., 1998) was used in this study. This is an 18-item scale that is directly adapted from the DSM-IV-TR (APA, 2000) two-dimensional construct of ADHD symptoms list. The odd-numbered items assess the inattentive (IA) dimension of the disorder, and the even-numbered items assess the hyperactive-impulsive (HI) dimension of ADHD. Three scores are yielded from the scale: IA, HI, and Total.

The items ask the respondent to describe the frequency of the specific behavior as seen in the home over the past 6 months by selecting a single response on a 4-point Likert scale (0, never/rarely to 3, very often). Higher scores are indicative of greater ADHD-related behavior.

DuPaul, Power et al. (1998) reported high levels of internal consistency for the scale's Total score (.92), which is a combination of the sum of the IA (.86) and HI (.88) dimensions.

Test-retest reliability was also reported for the three scores: Total, .85, IA, .78 and HI, .86.

There was moderate interrater agreement between parents and teachers using the ARS-IV School Version (DuPaul, Power et. al., 1998). Related to the scale's concurrent and discriminant validity, using the Conners Parent Rating Scale-48 (CPRS-48; Conners, 1989) between 37 and 66% of the variance was shared with the ARS-IV Home Version. Compared to the IA factor, there were also stronger correlations between the HI subscale of the ARS-IV Home Version and the Conduct Problems, Impulsive-Hyperactive, and Hyperactivity Index of the CPRS-48. Last, neither the HI nor IA dimensions were significantly correlated with the CPRS-48 Anxious ratings, which shows that the ARS-IV Home Version measures hyperactive, impulsive, and inattentive behaviors rather than anxiety (DuPaul et al., 1998).

Acculturation was measured using the *African American Acculturation Scale—Revised* (AAAS-R; Klonoff & Landrine, 2000), which is a 47-item scale measuring eight theoretical dimensions of African American culture: Religious Beliefs and Practices (10 items), Preference for Things African American (9 items), Interracial Attitudes (7 items), Family Practices (4 items), Health Beliefs and Practices (5 items), Cultural Superstitions (4 items), Racial Segregation (4 items), and Family Values (4 items). Compared to the original version of the scale (African American Acculturation Scale; Landrine and Klonoff, 1994), the revised instrument demonstrated more robust psychometric properties (Klonoff & Landrine, 2000).

Specifically, the new subscales' internal consistency reliabilities ranged from .67 to .89 (Family Values, .67; Racial Segregation, .76; Cultural Superstitions, .76; Health Beliefs and Practices, .77; Family Practices, .79; Interracial Attitudes, .87; Preference for Things African American, .89; and Religious Beliefs and Practices, .89). In its entirety, the scale's internal consistency was reported to be .93. Last, validity analyses and analyses for social class showed that the AAAS-R also measures what it purports to assess (Klonoff & Landrine, 2000).

The format of assessing various aspects of African American culture was selected because acculturation scales developed for other ethnic groups typically assess different elements of the culture of interest (Landrine & Klonoff, 1996). Black participants were asked to rate their agreement with each item using a 7-point Likert scale, ranging from 1 (totally disagree), to 7 (totally agree). Higher scores on this scale reflect high agreement with the items and show that the individual has a traditional cultural orientation or is immersed in African American culture. Conversely, lower scores are indicative of low agreement with the items, and reflect an acculturated orientation or low immersion in African American culture (Klonoff & Landrine, 2000). Because the scale only measured the extent to which an individual is immersed in African American culture, scores in the middle range are less interpretable than those at the extremes. In other words, it only allows for meaningful comparisons between individuals who are highly acculturated and highly traditional (Landrine & Klonoff, 1996).

It is important to note that the eight theoretical dimensions mentioned above were not the result of factor analytic data procedures. Instead, Landrine and Klonoff (1994) reported that these dimensions were decided upon based on a review of the literature on African American culture. More specifically, the authors, along with seven other African Americans from diverse regions in the country, developed items that reflected each theoretical category. Items, which at least three individuals listed, were included in the original scale (189 items).

Through a series of analyses, a revised version (AAAS-R), which consists of 47 items and correlates .97 with the original version, is recommended for use in studying acculturation in Black Americans rather than the AAAS (Klonoff & Landrine, 2000). It is important to note that there was no overlap in participants involved in the original version's development and the final revision.

The *Hollingshead (1975) Index* was used to measure SES. Each participant was asked to report the highest occupational level in the household, which was converted to an index score based on Hollingshead (1975). Indices ranged from 10 to 90, with higher scores indicative of higher socioeconomic status. The mean score for Black participants was 57.36 ($SD = 8.75$) and the mean score for White participants was 59.72 ($SD = 5.97$). There was not a significant difference in mean SES scores between groups ($t = -1.74 [101], p = .086$).

Procedure

Participants were recruited from various community organizations in Northeastern, Mid-Atlantic, Southeastern, and Midwestern suburban cities including Parent Teacher Associations (PTA), and two large (e.g., 1,500 to 3,500 parishioners), predominantly Black, faith-based institutions. Related to the faith-based institutions, email announcements and letters were sent to ministry groups that would potentially provide individuals who met the inclusion criteria (e.g., married couple's ministry, children's choir and teen choir parents). These communications briefly described the purpose of the project, the time investment required, and contact information to answer any questions. Additional participants were also included through the efforts of a professor teaching an undergraduate course at a Midwestern university, a high school research program designed for juniors and seniors located in suburban New York City and a hockey league for elementary-aged children living in suburban cities throughout Northern Virginia, approximately 35 miles from Washington, D.C. To accommodate participants' schedules, numerous data collection sessions were conducted, which provided dinner or a \$5.00 gift card to a national retail store.

Recruitment and data collection took place between November 2010 and March 2012. Each maternal caregiver who agreed to participate and satisfied the inclusion criteria was informed that she was being asked to participate in a study that involved the study of children's

behavior. They were also informed that upon completion of their participation, they would be debriefed about the study. As all maternal caregivers who volunteered to participate satisfied the inclusion criteria, no participants were excluded from the study.

Each participant completed an informed consent form and demographic information sheet, which included age, ethnicity, and occupation/highest occupational level in the household. After participants were randomly assigned to either watch the Black or White child, they were shown the respective videos. Data collection took place in various locations including a faith-based institution, public school, public hockey rink, and private residences. After watching the videotapes, each participant completed the ARS-IV Home Version. Additionally, Black maternal figures completed the AAAS-R.

Two separate videotaped vignettes were produced of a Black boy and a White boy displaying sub-clinical levels of behavior, which may be indicative of ADHD in January 2010 and November 2010. Both children were videotaped in a semi-structured setting (e.g., free play time with at least one other peer and/or adult who are of the same ethnicity as the target child) where there were specific behavioral expectations. Behaviors that were displayed throughout the 13-minute analog situations included running around, fidgeting, throwing objects, interrupting conversations, and looking around (inattention).

To ensure that the only difference between the two tapes was the target child's ethnicity, both children were of the same general age (10 years old), build, and gender (male). Moreover, participants were told who the target child was in the video.

Because there aren't published normative data for ADHD observational codes, to obtain consensus that the videotapes were indicative of ADHD behavior, a panel of experts that included seven Black and White doctoral graduate students in school psychology (at least fourth year) and school psychology interns working in a suburban Washington, D.C. school system watched the recording of either the Black or White child. Each expert was given a 12-item questionnaire (see Figure 1) to assess the behavior of the target child in relation to the peer comparison. Six questions were presented to determine whether or not the target's child's behavior, in relation to the peer comparison, was more inattentive, more impulsive, showed a higher activity level, and overall was more characteristic of ADHD. Further, six questions were presented to determine whether or not the comparison peer's behavior, in relation to the target child, was less inattentive, less impulsive, showed a lower activity level, and overall was less indicative of ADHD. Having achieved consensus from the panel of experts about both the Black and White videotapes, they were shown to the participants. Specifically, 100% of the experts agreed that the White peer comparison's behavior was less inattentive, less impulsive, showed a lower activity level, and overall was less indicative of ADHD in relation to the target child.

Similarly, 100% of the experts agreed that the White target child's behavior was more inattentive, more impulsive, showed a higher activity level, and overall was more indicative of ADHD in relation to the target child. Related to the Black peer comparison, 100% of the experts agreed that his behavior was less impulsive, showed a lower activity level, and overall was less indicative of ADHD in relation to the target child. In the same manner, 86% of the experts also reported that the Black target child's behavior was more impulsive, showed a higher activity level, and overall was more indicative of ADHD in relation to the peer comparison.

Data Analysis

To assess the internal consistency of both the ARS-IV Home Version and the AAAS-R with this specific participant sample, Cronbach's alpha was used for the Total score of the AAAS-R and both HI and IA scores on the ARS-IV Home Version. The following analyses were used to address each research question:

Research Question 1: Are reported group differences between Black and White children using the ADHD-IV Rating Scale Home Version consistent with observed group differences? A 2 (mother ethnicity) x 2 (child ethnicity) multivariate analysis of variance (MANOVA) was used to assess how parent and child ethnicity were related to reported ratings of hyperactive-impulsive and inattentive behaviors. As a measure of clinical significance, eta squared effect sizes were

reported to reflect the magnitude of the relationship between maternal and child ethnicity and behavior rating scores.

Research Question 2: To what extent are these differences accounted for by the effects of SES of the rater? Using a 2 (mother ethnicity) x 2 (child ethnicity) multivariate analysis of covariance (MANCOVA), and SES as a covariate, differences in mothers' HI and IA ratings were examined while controlling for SES.

Research Question 3: Within the sample of Black maternal figures, to what extent does acculturation account for subsequent ratings of Black and White children? A multiple regression analysis was performed to determine the amount of variance in Black maternal figures' behavior ratings that was accounted for by acculturation. In this analysis, the predictor variables—child race and maternal figure's acculturation score/level—were entered simultaneously rather than stepwise. The outcome variables were IA and HI scores on the ARS-IV Home Version. All results were analyzed using an alpha level of $p < .05$.

Because statistical procedures involving covariates and regression equations are conceptually similar, there are several reasons that account for these parallel analyses. First, because the ANCOVA seeks to statistically control for the effects of a variable, findings represent group differences after removal of variance accounted for by the covariate. Thus, in this case, findings represent group differences while statistically controlling for influence of SES.

For all univariate analyses of variance (ANOVA and ANCOVA) an alpha level of .025 was used rather than .05. The regression analysis is also being included because this will allow for the development of a model, which shows how much of the variance is explained by several independent variables. Rather than isolating one variable through a covariate analysis, the rationale supporting a regression analysis is that several independent variables can be considered for their unique contribution to explained variance in rating scale scores.

For research questions 1 and 2, in addition to reporting MANOVA results, eta squared will also be included as a measure of the magnitude of effect. The rationale for including this statistic is that it indicates the proportion of variance that can be accounted for in the dependent variable (rating scale scores reported by maternal caregivers) by differences in the levels of an independent variable (maternal caregiver's ethnicity, child's ethnicity) and the interaction of these two variables.

Chapter IV

Results

Multivariate Analysis of Variance (MANOVA) is a statistical procedure that tests whether or not mean differences between groups on a combination of dependent variables are likely to occur beyond chance occurrences. For example, as it relates to the present study, are there significant group differences between Black and White maternal figures' ratings on the IA and HI dimensions of the ARS-4 Home Version? The validity of results obtained from a statistical MANOVA is based on following several assumptions. Those that are pertinent to the present study will be briefly mentioned below.

First, MANOVA is based on the assumption that there is normality and equal variance. One way to ensure that these principles are followed is to include more participants in each cell than the number of dependent variables. For example, the present study employed a four-cell design: Black maternal figure viewing the Black child ($n = 29$); Black maternal figure viewing the White child ($n = 30$); White maternal figure viewing the Black child ($n = 30$); and White maternal figure viewing the White child ($n = 34$). As there were only two dependent variables, ARS-4 IA score and ARS-4 HI score, and there were generally more than 30 participants in each cell, this assumption was not violated. Although equal cell sizes are ideal, they are not necessary. In the present study, however, the cell sizes were generally equal.

Next, there should be dependence or lack of independence among observations or

participants. A threat to not following this assumption occurs when the study participants are tested twice (e.g., administering a pre-test and post-test to the same individuals). Although there are no statistical procedures to guard against violating this assumption, because the maternal figures in the present study were not tested twice through pre- and post-test measurement, and the testing conditions did not present a circumstance that would lead maternal figures to respond in a similar manner (e.g., a very noisy room or the instructions were confusing), this assumption was not violated and ARS-4 IA scores were not systematically related to ARS-4 HI scores.

A third assumption of MANOVA is homogeneity of variance/covariance, which is related to differences in the amount of variance detected in one group compared to another for the same dependent variable. In the present study, this assumption was violated as there was a significant difference in covariance matrices between groups.

Internal consistency means and standard deviations for all measures categorized by maternal and child race are presented in Tables 1 and 2. Acceptable levels of internal consistency were obtained for both the IA (.91) and HI (.84) dimensions of the ARS-4 Home Version. Similarly, the internal consistency for the AAAS-R was .85.

Research Question 1

A 2 (maternal race) x 2 (child race) multivariate analysis of variance (MANOVA) was used to assess how maternal and child race are related to maternal ratings of hyperactive-

impulsive and inattentive behaviors. There was a significant main effect for maternal race, Wilks' lambda = .89, $F(2, 118) = 7.20$, $p = .001$, partial eta squared = .11. The main effect of child race, as well as the interaction between maternal and child race, were not statistically significant. To follow-up the significant main effect of maternal race, separate univariate analyses of variance (ANOVAs) were conducted to assess the main effects for each dimension of the ARS-IV Home Version. There were significant univariate main effects for maternal race found for the HI dimension, $F(1, 119) = 12$, $p = .001$, partial eta squared = .092 as well as the IA dimension, $F(1, 119) = 13$, $p < .001$, partial eta squared = .099 with Black maternal figures providing higher ratings than White maternal figures on both dimensions (see Figure 2). No statistically significant main effect for child race or interaction between child and maternal race was found for either dimension. Because Black maternal figures (M age = 39.78; $SD = 6.56$) were significantly younger than White maternal figures (M age = 44.16; $SD = 6.32$) ($F(1, 118) = 14.05$, $p < .001$; partial eta squared = .11), the analyses were also conducted with maternal age as a covariate. These analyses yielded the same findings: there was a significant main effect of maternal race on both dimensions with no statistically significant main effect for child race or interaction between child and maternal race found for either dimension.

Research Question 2

A 2 (maternal race) x 2 (child race) multivariate analysis of covariance (MANCOVA), using SES as a covariate, was used to examine the differences in maternal HI and IA ratings while controlling for the effects of SES. Results were nearly identical to the previous MANOVA wherein there was a statistically significant main effect for maternal race, Wilks' Lambda = .90, $F(2, 117) = 6.61, p = .002$, partial eta squared = .102. No significant main effect for child race or the interaction between child and maternal race was obtained. Separate ANOVAs indicated significant maternal race main effects for HI ($F[1, 118] = 10.91, p = .001$; partial eta squared = .085) and IA ($F[1, 118] = 12.01, p = .001$; partial eta squared = .092). No statistically significant main effect for child race or interaction between child and maternal race was found.

Research Question 3

Black maternal caregiver scores on the AAAS as a function of child race are displayed in Table 3. There was no significant difference between AAAS ratings for each child race group ($t[57] = .45, p = .65$). A multiple regression analysis was performed to determine the amount of variance in Black maternal figures' behavior ratings that was accounted for by acculturation and child race. The outcome variables were IA and HI scores on the ARS-IV Home Version. As it relates to the IA dimension, the overall regression was statistically significant, multiple $R = .32, F(2, 56) = 3.26, p = .046$. While child's race was a significant predictor of IA ratings, standardized beta weight = $-.31, p = .017$, maternal figures' acculturation level was not a

significant predictor of IA ratings, standardized beta weight = .12, $p = .60$. As it relates to the HI dimension, the overall regression was not significant, multiple $R = .23$, $F(2, 56) = 1.67$, $p = .198$. Thus, neither acculturation nor child race were statistically significant predictors of Black maternal figures' HI ratings.

Chapter V

Discussion

The current study was designed to address limitations of prior investigations in several ways. First, by recruiting a sample of maternal caregivers, it sought to contribute the perspective of parents' ratings on children's behavior in the home environment. Next, by only including Black and White participants, it explored specific cross-cultural differences between these two ethnic groups. Additionally, SES and acculturation variables were included in the analyses to add further insight into the complex interplay of these factors on the subsequent ratings of children's behavior.

Research Question 1

The results of the present study showed that maternal race was the most salient predictor of child behavior ratings. Specifically, Black maternal figures assigned higher ratings to the Black and White child on both the HI and IA dimensions of the ARS-IV Home Version. In light of this information, which might seem contradictory or inconsistent with diagnostic patterns that show lower diagnosis rates for Black children (Miller et al., 2009), researchers and practitioners should be intrigued to continue investigating the reasons that account for consistently higher ratings from Black parents. For example, as put forth by Miller et al. (2009), the discrepancy between rating scale results and diagnostic patterns could possibly be due to the fact that

symptoms that are being rated in Black children do not have the same disabling meaning as in their White counterparts.

There are numerous explanations that can be put forth to help explain the most robust effect of the present study—the impact of maternal race on child behavior ratings. First, although the design of the current study allowed both Black and White maternal figures to view the same videotaped vignettes, it is plausible, however, that parents of different races had different perceptions of the children’s behavior. For example, as Davison and Ford (2001) pointed out, one reason for Black maternal figures’ higher ratings of Black children could be a function of the value she places upon “physical expressiveness” and “exuberance” (Davison & Ford, 2001, p. 268). Further, as these authors expressed the idea that Black parents, compared to White parents, were more likely to call their children “bad”, it is also possible that Black maternal figures’ higher ratings were simply a reflection of a “bad” child rather than a clinically disordered child. Interestingly, the latter perception is supported in Black maternal figures’ behavior ratings being consistently higher than their White counterparts on both the HI and IA dimensions for both the Black and White children that were viewed in the present study’s vignettes. Last, data from the present study might be related to some of the ideas put forth by Marsella and Kameoka (1989) pertaining to the importance of instruments that are used in the

assessment process demonstrating acceptable levels of conceptual, linguistic, and scale equivalence.

As the study's most significant findings were centered on how maternal race impacts subsequent ratings of children, and Black maternal figures assigned the highest ratings to both the Black and White child, these data should be considered independent of the children who were viewed in the videos. Conceptually, differences in parent ratings completed by Black and White maternal figures could be a function of these groups not having the same understanding of what was being measured by each item or even the scale in its entirety. For example, as a group, Black maternal figures might have one idea of the item, "*Is easily distracted*", that was different from White maternal figures. Essentially, if these groups did not agree on what an item or set of items was asking, rating scale score differences should not be thought of as incorrect or necessarily completely reflective of the child's behavioral presentation. Conversely, such between-group differences should be expected. Additionally, if Black and White maternal figures did not have a shared understanding of what constitutes a disorder or disordered behavior, this difference could have also impacted their ratings (Miller et al., 2009). Using the dimensions of HI and IA behavior as an example of this phenomenon, systematic between-group differences about what qualifies as merely more HI or more IA versus clinically disordered HI and IA behavior could also help to explain the data gathered from the present study.

Concerning linguistic equivalence, while some might view this concept as only being relevant to groups who do not share a common language or dialect (e.g., comparisons between English speaking and non English-speaking groups), it is also applicable to groups who speak the same language but are members of different cultural or ethnic groups. In the present study, rating scale differences between groups as a function of linguistic equivalence might be related to how Black, compared to White, maternal figures understood or interpreted various words and phrases on the ARS-IV Home Version. Similar to conceptual equivalence, when Black and White maternal figures read the item, “*Is easily distracted,*” for example, it is possible that the two groups did not have a shared understanding of what it meant to be “easily distracted.”

Last, scale equivalence, which is the perception of how information collected on an instrument will ultimately be used, is likely a contributing factor that impacts subsequent behavior ratings. Taking into account the discriminatory history of Black individuals as a marginalized group in the United States through systematic practices such as segregation and Jim Crow Laws, it is possible that they could have a more skeptical or what might seem to be a defensive position about how their responses would be interpreted by others. In fact, Davison and Ford (2001) and Bussing, Schoenberg, and Perwien (1998) reported that Black parents may not trust medical or educational professionals concerning evaluations of their children and may view an ADHD label as a means to target their children for discriminatory purposes.

These reasons illustrate an important phenomenon that was revealed in the present study: that maternal figure ethnicity—independent of child ethnicity or even an interaction between maternal and child ethnicity—was the most significant contributing factor to subsequent behavior ratings of children. Philosophically, these data suggest a necessary shifting of the current paradigms that might be routinely employed by researchers and clinicians. Although the child who presents with significant behavioral difficulty is ultimately the center of informative research and effective clinical practice, he or she should not be the only focus of these efforts. As data from the present study showed that there are factors that have less to do with the target child (e.g., conceptual, linguistic, and scale equivalence) than might have been previously understood, it is urgent to continue broadening our understanding of what leads to behavior ratings through an examination of rater characteristics.

Research Question 2

A second aspect of the present study involved a consideration of the impact of rater SES on behavior rating scale results. Including SES as a covariate (i.e., statistically controlling for the effects of SES) did not alter findings with respect to main effects of child and maternal race as well as their interaction. In other words, SES did not appear to be significantly related to HI or IA ratings on the ARS-IV Home Version.

Rather than dismissing the role of SES on behavior ratings of children, there are at least two plausible explanations that are worth highlighting. First, the lack of significant contribution of SES to behavior ratings might not be a reflection of the SES construct but rather related to statistical power. In other words, SES might be a significant predictor of HI and/or IA ratings but due to an insufficient sample size, this conclusion cannot be put forth with adequate confidence. Future studies, therefore, should increase the total sample size, which would likely provide sufficient statistical power, and more adequately assess this very important aspect of the research agenda.

Another explanation for the lack of significant contribution of SES to rating scale results might be related to the similar levels that were obtained for both Black and White participants. In other words, because mean SES levels were virtually equivalent across racial groups, SES did not provide any unique explanatory contribution to the results. As previous studies have not been conducted that examined the impact of the rater's SES on subsequent behavior ratings, future studies should include participants from a more diverse range of SES backgrounds.

Research Question 3

Concerning the third research question, and similar to the SES results, Black maternal figures' acculturation level was not a significant predictor of either HI or IA ratings. These results are quite different than those reported by deRamirez and Shapiro (2005), which showed

that Hispanic teachers' acculturation levels were significant predictors of their ratings of both Hispanic and White children's behavior. Due to the inconsistent data found in the present study compared to deRamirez and Shapiro (2005), there are several issues related to the construct of acculturation in Black individuals that should be noted to better understand these results.

First, acculturation is a phenomenon that has more commonly been examined in immigrant ethnic minority groups. For this reason, Black people, also known as African Americans, who were born in the United States, have not always been considered significantly different from other (e.g., White) Americans who were also born in this country to the extent that their degree of cultural affiliation with the mainstream or majority culture warranted systematic examination. Since the 1970's, however, various theories and constructs of racial identity and acculturation have been put forth in an attempt to better understand both within- and between-group differences in Black and White Americans (Cross, 1995; Pope-Davis, Liu, Ledesma-Jones, & Nevitt, 2000; Thomas, 1971).

The constructs of acculturation and racial identity development likely have important implications for the results of the present study. First, while the process of racial identity development refers to how individuals view themselves as part of a collective group based on their shared experience within that ethnic group (Cross, 1995), acculturation refers to the process by which individuals identify with other ethnic groups (Pope-Davis et al., 2000). Essentially, as

racial identity development seeks to explain differences within a particular ethnic group, acculturation seeks to explain differences between ethnic groups. Further, although a study conducted by Pope-Davis and colleagues (2000) showed that acculturation as measured by a version of the AAAS (Landrine & Klonoff, 1994) was empirically related to a model of racial identity development, the two constructs remain very different (Pope-Davis et al., 2000).

Concerning the present study, perhaps examining the five stages of racial identity development in Black individuals (Cross, 1995) might have provided more insightful information about the participants' attitudes, beliefs, and values. Specifically, the model is divided into the following stages: Pre-Encounter, Encounter, Immersion/Emersion, Internalization and Internalization-Commitment. Although there will be variability, individuals in each stage are also characterized by certain ways of thinking about their ethnic group membership. For example, Blacks in the Pre-Encounter stage typically have an inferior sense of their ethnicity in relation to the majority culture. While individuals in this stage might not be consciously aware of it, they also seek to resolve their internal tension with race and ethnicity by attempting to be accepted by Whites and distancing themselves from their Black counterparts. Following Pre-Encounter is the Encounter stage, which is often the result of either personal experience with the reality of racism or by learning about the racist struggles of others in their ethnic group. At this time, Black individuals realize that they are not members of the majority

culture and focus on their membership in a group that is subject to racism. Next is the Immersion/Emersion stage, which is a two-fold process that involves actively embracing one's own ethnic heritage while simultaneously avoiding those things that represent the majority culture. It is characterized by immersing oneself in "all things Black" and avoiding "all things White." Conceptually, in some ways it can be viewed as the opposite of the Pre-Encounter stage when the individual is trying to avoid all things Black and assimilate to the White culture. Fourth, is the Internalization stage in which Black individuals have the ability to negotiate an effective balance between being connected to their own ethnic heritage while also developing meaningful relationships with White individuals. In the final stage, Internalization-Commitment, individuals are not only concerned about their personal experience being Black in a majority culture, but they are committed to the needs of their entire ethnic group (Cross, 1995).

As one of this study's research questions sought to examine the extent to which Black participants' cultural identification impacted subsequent behavior ratings, the analysis was centered on within-group differences in Black individuals rather than between-group differences between Black and White respondents. For this reason—an examination of within-group differences—focusing on racial identity development would have likely been more meaningful to determine if individuals' placement within the model would have predicted subsequent behavior ratings on the ARS-IV Home Version. For example, because individuals in the Pre-

Encounter stage think in a manner that essentially tries to minimize or even deny their ethnic group membership, it is reasonable to expect that their ratings might be more similar to White individuals. Also, as individuals in the Encounter stage are acutely aware of the realities of racism, they are likely to be more skeptical about the uses of data collected from rating scales, which could impact the veracity of their results. Similarly, as those in the Immersion/Emersion stage are actively pursuing things that are representative of Black culture and purposely avoiding things that are perceived to be indicative of White culture, a Black individual's ratings might be very different from a White person's. An individual in this stage could likely be dismissive of the Western concept of ADHD (Bauermeister et al., 1990) and produce behavior ratings to support their lack of support of the construct. Very importantly, as data from the present study showed, all of these explanations are centered on the impact of parent ethnicity on subsequent ratings rather than exclusively focusing on the target child who might have been referred due to experiencing behavioral difficulty.

Although Black maternal figures' acculturation level was not a significant predictor of either HI or IA ratings, child race, however, was a significant predictor of Black maternal figures' IA ratings. Specifically, White child race predicted lower ratings and Black child race predicted higher ratings. Such a result is intriguing for several reasons. First, child race was not a significant predictor of Black maternal figures' HI ratings. These data suggest that a child's IA

behavior—as viewed by a Black maternal figure—provides more predictive value than a child’s HI behavior. As the regression model predicted higher ratings of Black children’s IA behavior, one possible explanation for these data is that Black maternal figures might be more sensitive to detect IA behaviors in children of the same race. With regards to neither Black nor White children’s behavior predicting subsequent HI ratings, this might be functionally related to Black parents, as a group, valuing HI actions as being indicative of healthy childhood behavior in all youngsters. Further, it might be due to Black parents being more likely to call their children, and possibly other children, “bad”, rather than disordered, because they don’t associate the same disabling meaning to various behaviors as their White counterparts. As these explanations are initial attempts to better understand the unique contribution of boys’ behavior and the predictive value it provides for Black maternal figures’ IA ratings, future investigations should continue to explore this phenomenon.

As child race was a significant predictor of Black maternal figures’ IA ratings, the eta squared effect size was calculated to determine the magnitude of difference accounted for by these maternal figures’ ratings of the Black child versus the White child. Results showed a pooled effect size of .66, which is greater than the results reported by Miller and colleagues (.45; 2009). Not only do these data show that Black maternal figures, on average, assigned IA ratings

to the Black child that were .66 standard deviation units higher than the White child, but the present sample also exceeded prior studies that examined racial differences related to IA ratings.

Limitations

Despite the contributions of the present study to the body of evidence related to the cross-cultural assessment of ADHD, there are several limitations that are worth addressing. First, although the sample size was adequate to achieve sufficient power to address research questions one and three, as previously stated, as it relates to question two, it is likely that additional participants are necessary to adequately examine this idea. One possible explanation for this phenomenon is that 128 participants were originally proposed to participate in the study. The final data set, however, included only 123 respondents. Although the five fewer respondents did not impact the results gained from the ANOVA and regression analyses, it is possible that the MANCOVA was more sensitive to sample size reduction. This issue is further supported by the fact that the interaction between maternal and child race was approaching statistical significance. In other words, because there is a positive correlation between sample size and statistical power, the inclusion of a few more participants would likely confirm whether or not SES was indeed a significant predictor. Another possibility is that due to the loss of one degree of freedom associated with the ANCOVA, this may have diminished statistical power. Another factor that could have impacted the MANCOVA is related to one of the assumptions on which this analysis

is founded. Specifically, there must be homogeneity of covariance or the covariate must be equally distributed between the groups. In the present study, however, data showed that there was not homogeneity of covariance or there was a significant difference in covariance matrices across groups.

Related to the study's design and instrumentation used, although acceptable coefficient alphas were reported for both dimensions of the ARS-IV, one HI item, "*Interrupts or intrudes on others*", was inadvertently omitted from the protocol. Parenthetically, this missing item might be associated with the slightly lower, yet acceptable, coefficient alpha that was reported for the HI, compared to the IA, dimension of the scale (see Table 1). Future studies should include the complete version of the ARS-IV Home Version.

Despite the random assignment of participants to each group to lessen the probability of systematic bias, study participants were not randomly selected from the general population. For this reason, future studies should be careful to recruit sufficient participants to produce a range of acculturation and SES levels. For example, most of the Black maternal figures described themselves as having a Traditional cultural orientation (see Table 5). It is also important to note that this was an analog study and different results might have emerged if maternal figures were rating their own children in naturalistic settings rather than watching videotaped vignettes of scripted behavior.

As the sample of maternal figures who participated in the present study were selected from various cities throughout the United States, another limitation is that participants' perspectives on child rearing practices (e.g., perceptions on IA and HI behavior) might differ systematically as a function of geographic location. In the same manner, Black maternal figures' acculturation might have also been impacted by geographic location. To mitigate these potential confounds, future studies should seek to sample participants from the same geographic location to better control for the impact of geographic location on subsequent child behavior ratings.

As the inclusion criteria for the present study included participants self-identifying themselves as either Black or White and being the female parent or legal guardian of a child enrolled in grades K through 12, it is possible that maternal figures' ratings were impacted as a function of the age of their children or those in their care. For example, it is plausible that maternal figures' perceptions and interpretations of the child actor's behavior that was viewed in the present study could have been the result of whether or not their own children were either older or younger than the child actor. Future studies, therefore, should recruit maternal figures who care for children within the same age range (e.g., similar to the age of the child actor used on the videotaped vignette). Similarly, as data was not collected on maternal figures' beliefs, expectations and parenting practices, such information would also be helpful to provide

additional explanatory evidence in an attempt to better understand the pattern of differences reported in the present study.

Implications for Practice

The present study, although focused on Black and White children, provides helpful insight for clinicians working with children from a variety of ethnic backgrounds. First, as advised by Barkley (2006), comprehensive ADHD assessments should continue to follow a multi-method, multi-modal, and multi-informant approach. As numerous investigations have shown that variables other than the child's behavior can impact subsequent results on rating scales (deRamirez and Shapiro, 2005; Mann et al., 1992; Mueller et al., 1995; Sonuga-Barke et al., 1993; Stevens, 1981), culturally-responsive clinicians should seek to collect as much relevant data as possible and look for consistent patterns to formulate the most accurate diagnostic impressions.

Similarly, and consistent with research from Davison and Ford (2001) as well as Puig and colleagues (1999), clinicians working with not only Black families, but those that are different from the clinician's ethnic background, should attempt to grow in their understanding of these families' cultural values, beliefs, systems, and expectations. Developing such an understanding will likely lead to a more comprehensive and culturally sensitive interpretation of the data, which takes into consideration families' perceptions of behavior and disorder. Although ADHD has

been the condition of focus for the present study, the more salient principle is developing an appreciation for the complexities involved in using behavior rating scales in the assessment process for a variety of emotional and behavior problems. As it pertains to diagnostic patterns across ethnic groups, in support of Langsdorf et al. (1979), clinicians should be mindful of both the disproportionate over-identification as well as the disproportionate under-identification of children with emotional and behavior problems for reasons that are quite possibly independent of the child. Based on the limitations of behavior rating scales, clinicians working with Black families might want to consider using more conservative diagnostic criteria (e.g., 95th or 98th percentile thresholds compared to 90th percentile) in an attempt to avoid potential over-identification of their children (Reid et al., 1998).

Another idea put forward by Miller et al. (2009), involves the use of race-specific measures in the process of assessment and diagnosis as it is unclear if existing instruments are able to adequately measure ADHD in Black children (Flowers & McDougale, 2010). For example, The Terry has demonstrated some promise and cultural sensitivity, but lacks thorough empirical support. The Terry is based on the Dominic-R (Valla, Bergeron, Bidaut-Rusell, St-Georges, & Gaudet, 1997), which is a series of 99 pictures of a child, Dominic (or Dominique), engaging in behaviors that are symptomatic of various childhood DSM-IV mental disorders. Coupled with each picture is also a statement depicting the symptoms, and participants are asked

to indicate if they behave in a manner that is similar to Dominic (or Dominique). An African American version of the Dominic-R (Valla, Bergeron, Bidaut-Rusell, St-Georges, & Gaudet, 1997), The Terry involves presenting a rater with pictorial representations of a child displaying symptoms that are consistent with DSM-III-R and DSM-IV diagnostic criteria for a variety of conditions (e.g., ADHD) and asking the rater whether or not the target child has behaved like the African American boy, Terry, in the picture. Although this instrument represents an improvement upon the technology employed in cross-cultural assessments, because few empirical studies have examined this measure, its clinical utility cannot be stated with certainty.

Very importantly, clinicians, in the absence of other evidence, are encouraged to operate from the assumption that parents' ratings of their children's behavior are honest appraisals of their perceptions. Therefore, these data should be respected for their contribution to overall clinical impressions and diagnostic decisions. Despite the concern about the limitations of behavior rating scales and how they could lead to higher scores for Black children, the results of the present study do not support this idea. Instead, more emphasis on parent (i.e., rater) characteristics (e.g., race, stage of racial identity development and/or acculturation level and SES) should become a critical element of clinicians' multi-faceted approach to assessment and diagnosis. Clinicians who possess, or seek to develop, what might be understood as a healthy skepticism about the data that they are presented with will ultimately place themselves in a

position that allows them the opportunity to think critically as they not only analyze but synthesize multiple pieces of information in their attempts to formulate an accurate and comprehensive impression that is in the best interest of the child.

Although it is important to suggest plausible explanations for Black maternal figures' tendency to produce higher ratings compared to White parents using behavior rating scales measuring ADHD symptoms, living in an increasingly diverse society makes it equally necessary to offer suggestions to help practitioners effectively manage the potential challenge of reconciling these data with what seems to be conflicting evidence in clinical practice. First, given their tendency to endorse either more symptoms or symptoms to a greater degree, clinicians should consider placing less emphasis on Black parents' rating scale data, especially in the absence of supporting evidence. Very importantly, this recommendation is different than what has been suggested by Reid et al., (1998). Although these authors suggested adjusting diagnostic thresholds for Black children to lessen the likelihood of over-identification, the present idea seeks to view rating scale data to a different degree compared to other aspects of the evaluation. Further, this practice is not an attempt to minimize Black parents' contribution to the assessment process through rating scale information. Rather, given the potential limitations of these instruments, the approach seeks to promote equitable clinical practice by adjusting the degree to which these data might contribute to overall impressions and diagnostic decisions.

Next, although valuable for all parents, interviewing Black parents should become embedded in routine clinical practice. As they are more likely to endorse higher symptom ratings, engaging them in a meaningful discourse about their ideas related to behavior and disorder will likely provide invaluable information to better understand rating scale data. Last, clinicians are challenged to broaden their understanding and interpretation of rating scale data as a function of rater, rather than within-child, characteristics. For example, as put forth by Bronfenbrenner (1979), when working with Black families, having an appreciation for the ecological systems in which they reside would be very beneficial. Specifically, results provided by Black maternal figures should not lead to conclusions about the target child in a linear fashion but rather consider important variables such as the community and family system in which the rater resides for their impact on subsequent child behavior ratings.

Implications for Future Research

The present study can serve as a launching point for future investigations. Although the focus was on Black and White maternal figures, a similar methodology should be applied to compare other ethnic minority groups to their White counterparts to determine if the same pattern of results would emerge. For example, would similar results be obtained using a group of Hispanic and White mothers or Asian and White mothers? Or, are these results unique to Black and White individuals?

Next, while the ARS-IV was the instrument of interest in the present study, there are a myriad of behavior rating scales such as the Conners Comprehensive Behavior Rating (CBRS; Conners, 2008) and the Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001) that are commonly used in the ADHD assessment process. Including these in future studies would also inform clinical practice concerning how children are perceived by different ethnic groups of raters using various measures.

Third, while the present study only included maternal figures to be consistent with previous research that has historically involved female respondents, future studies should include male participants (e.g., fathers and/or father figures) to determine if there are meaningful differences between male and female perceptions, as well as between ethnic groups of Black and White fathers, of behaviors related to ADHD using rating scales. Similarly, girls should be

added to study designs to examine both male and female perceptions of female behavior. Black and White teachers should also be included as study participants in the same manner that Hispanic and White teachers have been examined (deRamirez & Shapiro, 2005).

Last, applying qualitative research methods would be helpful to determine whether or not respondents' rating scale information is also indicative of an underlying diagnosable condition. This is to say that by adding a single "yes" or "no" format question, "*Do you believe that the child you watched in the video has ADHD?*", to the present study's design, responses could be analyzed to determine if more Black, compared to White, mothers felt that the child they viewed indeed had ADHD. Researchers may also develop more detailed questions that probe participants' thought patterns and perceptions in order to understand why racial groups may view the same child's behavior differently. These data would inform whether or not more Black versus White parents perceive children as having ADHD and assist researchers as they continue to unravel the issues associated with the consistency between information provided from observations, rating scales, and diagnostic decisions.

Although the present study's results confirmed, to some degree, its hypotheses, more work is necessary in this area. While it was expected that Black children would receive higher ratings than their White counterparts on both the HI and IA dimensions on the ARS-IV Home Version, it was not expected that maternal race would be the most significant predictor of these

results. Additionally, SES and acculturation did not provide any meaningful prediction to subsequent behavior ratings. The phenomenon of Black, compared to White, maternal figures assigning higher ratings to both Black and White children was one of the results reported by DuPaul and Barrett (2003). Taken together, these studies illustrate a key issue facing clinicians in the cross-cultural assessment process that involves behavior rating scales: What can be concluded from these data? Questions such as, “Should Black parents’ rating scale data be interpreted with more caution because they tend to assign higher ratings to children?” or even the converse, “Should White parents’ rating scale data be interpreted with more caution because they tend to assign lower ratings to children?” are crucial to consider.

Conclusions

The responsibility that faces both clinicians and researchers is to ultimately serve children and families in a manner that is equitable and that leads to successful outcomes. Putting this principle into practice includes developing an understanding, appreciation, and constant consideration of the idea that difference is not synonymous with disorder. Very importantly, it must acknowledge the central role that factors other than the child’s behavior can impact outcomes. For example, as it relates to Black parents, learning about how aspects of their culture, identity, and experience influence their perceptions of ADHD would be invaluable and

inform more appropriate assessment and diagnostic practices for Black children (Miller et al., 2009).

Further, it must involve the awareness that differing views about a child's behavior in the same or different contexts from various individuals also does not necessarily equate to the veracity of one perspective at the expense of another. At the very least, the data should provide the impetus to continue exploring the underlying causes of these diverse opinions. Engaging informants to find out what their perceptions contribute to the assessment process is critical to help shift the attention from within-child characteristics to rater characteristics that are nonetheless significant. Such information will also be helpful to better understand data obtained from different sources. As the ultimate goal of assessment is not necessarily to uncover what is different about the child, a willingness to explore and examine such rater characteristics will inevitably lead to an equally important, albeit less considered question of assessment: why child behavior is perceived differently by different people.

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Table 1

Internal Consistency

Instrument	Construct	Coefficient Alpha
ARS-IV Home Version	IA	.91
	HI	.84
AAAS—R	Total	.85

Table 2

Descriptive Statistics

Child Race	Parent Race	<i>N</i>	Mean Age	Standard Deviation	Mean HI Score	Standard Deviation	Mean IA Score	Standard Deviation	Hollingshead Index	<i>N</i>
Black	Black	29	39.78	6.56	20.41	4.70	21.72	4.56	57.36	59
	White	30	44.16	6.32	15.80	6.67	16.33	6.72	59.72	64
White	Black	30			18.77	3.32	18.57	5.08		
	White	34			17.44	3.70	16.59	5.96		

Table 3

Between Group Differences for the African American Acculturation Scale

Parent Race	Child Race	<i>N</i>	Mean AAAS Score	Standard Deviation
Black	Black	29	222.83	33.88
	White	30	218.87	33.86

Table 4

Descriptive Statistics: Black and White Maternal Figures by Geographic Location

Maternal Figure Race	Northeast	Mid-Atlantic	Southeast	Midwest
Black	0	20	32	7
White	14	44	0	6

Table 5

AAAS—R Post-Hoc Total Score Interpretation

AAAS—R Score	Classification	N
235-329	Traditional	20
189-234	Bicultural/Traditional	29
188	Bicultural	1
142-187	Acculturated/Bicultural	8
47-141	Acculturated	1

Figure 1

Expert Review Panel Questionnaire

Enclosed is a “short film.” The target child is “CJ.” Throughout the film he will be wearing either a white t-shirt or a sweatshirt with a gray stripe. The other child is “Justin” who will be playing with “CJ” and wearing a black sweater. Please view the film, which is approximately 13 minutes in duration, and indicate whether or not “CJ” or “Justin” are displaying behaviors that are characteristic of Attention Deficit Hyperactivity Disorder (ADHD) by responding to the following questions:

Item	Question	Yes	No
1	After viewing “CJ,” compared to “Justin,” is he displaying more inattentive behaviors?		
2	After viewing “CJ,” compared to “Justin,” is he displaying more inattentive behaviors that are characteristic of ADHD?		
3	After viewing “CJ,” compared to “Justin,” is he displaying more impulsive behaviors?		
4	After viewing “CJ,” compared to “Justin,” is he displaying more impulsive behaviors that are characteristic of ADHD?		
5	After viewing “CJ,” compared to “Justin,” is his activity level higher?		
6	After viewing “CJ,” compared to “Justin,” is his activity level higher and more characteristic of ADHD?		
7	After viewing “Justin,” compared to “CJ,” is he displaying less inattentive behaviors?		
8	After viewing “Justin,” compared to “CJ,” are his inattentive behaviors less characteristic of ADHD?		
9	After viewing “Justin,” compared to “CJ,” is he displaying less impulsive behaviors?		
10	After viewing “Justin,” compared to “CJ,” are his impulsive behaviors less characteristic of ADHD?		

11	After viewing “Justin,” compared to “CJ,” is his activity level lower?		
12	After viewing “Justin,” compared to “CJ,” is his activity level less characteristic of ADHD?		

Reviewer Number: 1 2 3 4 5

Years of Graduate Study: 1 2 3 4 5 6 7 8

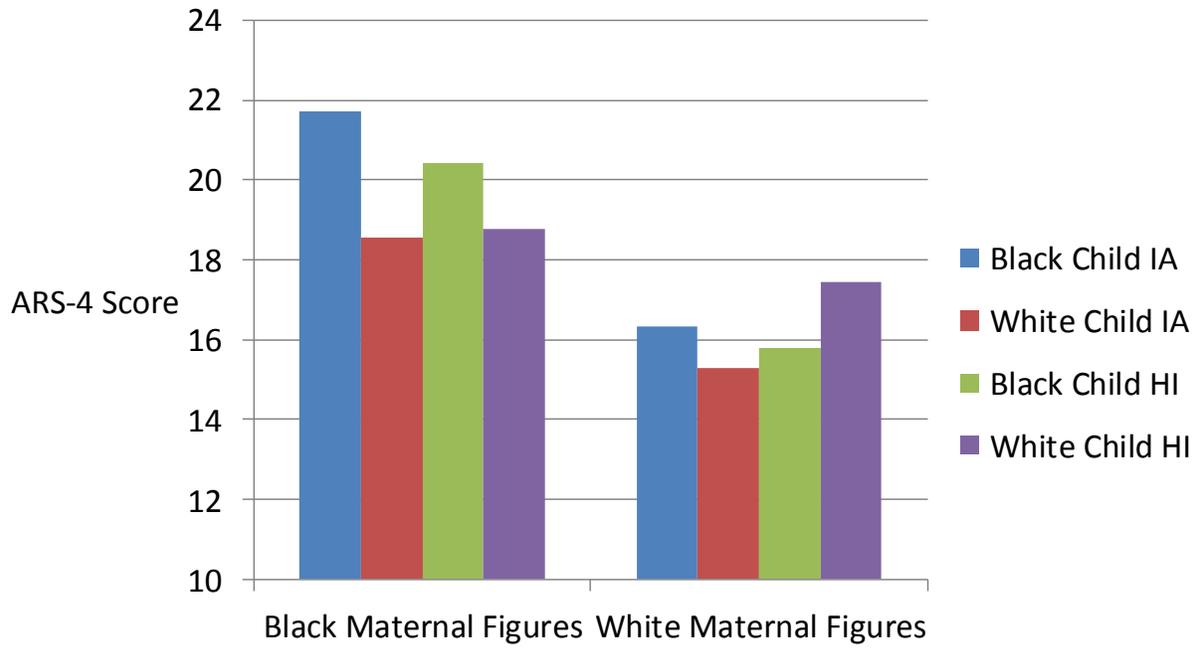
Major:

Gender (please circle one): M F

Ethnicity (please circle one): Black White Other

Figure 2

ARS-4 Home Version: Black and White Maternal Figures IA and HI Ratings



Charles A. Barrett

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EDUCATION

Lehigh University, Bethlehem, Pennsylvania

American Psychological Association Full Accreditation

National Association of School Psychologists Approved

National Council for Accreditation of Teacher Education Approved

Doctor of Philosophy Candidate, School Psychology

Degree Anticipated: May 2013

Lehigh University, Bethlehem, PA

M. Ed., Human Development, January 2004

Program: School Psychology

Saint John's University, Jamaica, NY

B.A., Psychology and English, Cum Laude, May 2002

AWARDS

2000, Saint John's University

Phi Eta Sigma National Honor Society

2001-2002, Saint John's University

Ronald E. McNair Scholars Program

SCHOOL EXPERIENCES

July 2008 – Present

School Psychologist, Loudoun County Public Schools, Ashburn, Virginia

Currently providing a range of diagnostic psychological services to children and families in three schools (elementary and high school) located in an ethnically diverse suburban community. Services included administration, scoring, and interpretation of a variety of cognitive batteries for the presence of learning disabilities and intellectual deficiencies; administration, scoring, and interpretation of rating scales for a variety of social, emotional, and behavior problems; classroom behavioral observations; report writing; teacher and parent consultation for a variety of academic and behavior problems; design of prevention and intervention treatment packages for a variety of academic and behavioral problems; member of multidisciplinary teams, including the Clinical Team, Child Study Team, Crisis Response Team, Eligibility Committee, and Positive Behavioral Interventions and Supports (PBIS) Team; group counseling; and crisis intervention.

August 2007 – June 2008

School Psychologist Intern, Baltimore City Public Schools, Baltimore, Maryland

Provided a range of psychological and educational services to children and families in an inner city elementary and middle school, which primarily serves an ethnically diverse population. Services included administration, scoring, and interpretation of a variety of cognitive and achievement tests for the presence of learning disabilities and giftedness; administration, scoring, and interpretation of behavior rating scales for a variety of behavior problems (e.g., ADHD); report writing; teacher and parent consultation for a variety of academic and behavior problems; design of prevention and intervention treatment packages for a variety of academic and behavioral problems; member of multidisciplinary teams, including the Student Support Team and Child Study Team; individual and group counseling; and crisis intervention.
Supervisor: Michael Oidick, Ph. D.

SUPERVISED SCHOOL AND CLINICAL EXPERIENCES

September 2005 – August 2006

Pediatric School Psychology Leadership Training Project, Hospital-Based Practicum Sacred Heart Hospital, Allentown, Pennsylvania

Provided a range of psychological and educational services to children and families through an inner city hospital clinic, which served primarily low-income and ethnically diverse clients.

Services included intelligence and achievement testing for the presence of learning disabilities, consultation with families and teachers for a variety of academic and behavioral problems (e.g., ADHD, reading problems), intervention development and implementation for academic and behavioral problems, family counseling, and individual counseling (e.g., smoking cessation, high school drop-out). Also participated in the multidisciplinary ADHD Assessment Program by conducting semi-structured parent and child interviews, and administering and interpreting behavior rating scales to evaluate the presence of ADHD and other social/emotional/behavior disorders (e.g. Depression, Anxiety).

Supervisor: Patricia Manz, Ph. D.

September 2005 – June 2006

School-Based Practicum, Allentown School District, Allentown, Pennsylvania

Co-facilitated anger management and coping skills groups with high school students.

Administered and interpreted intelligence and achievement tests to high school and elementary school students for the presence of learning disabilities and giftedness. Responded to crisis situations (e.g., death of a student).

Supervisor: George Grim

September 2004 – July 2005

**Pediatric School Psychology Leadership Training Project, Hospital-Based Practicum
The Children's Hospital of Philadelphia, Philadelphia, Pennsylvania**

Participated in a multi-disciplinary approach to pediatric feeding problems by conducting parent interviews, behavioral observations of feeding, intervention development, feedback to parents, and report writing. Observed family counseling sessions for a variety of social, emotional, and behavioral problems.

Supervisor: Valerie Cheng, Ph. D. and Stephen Soffer, Ph. D.

September 2004 – June 2005

**School-Based Practicum, The School District of Philadelphia
Philadelphia, Pennsylvania**

Provided services to children, teachers, and families for a variety of academic problems.

Designed and implemented the LET'S READ intervention, a home-school collaboration through a small group repeated reading program for children at-risk for reading problems based on curriculum-based assessment. Also consulted with teachers and families about behavioral problems (e.g., classroom management interventions, ADHD).

Supervisor: Patricia Manz, Ph. D.

January 2004 – May 2004

Course Practicum, Assessment and Intervention in Educational Consultation

Allentown School District, Allentown, Pennsylvania

Conducted teacher, parent, and student interviews and curriculum-based assessments in reading, math, spelling, and written expression with elementary school students. Consulted with teachers and Instructional Support Team to develop academic interventions based on assessment results. Presented assessment and progress monitoring results to instructional team both verbally and in the form of psychoeducational reports.

Supervisor: Edward Shapiro, Ph.D.

August 2003 – December 2003

Course Practicum, Behavioral Assessment

Allentown School District, Allentown, Pennsylvania

Assessed elementary students at-risk for emotional and behavioral difficulties. Conducted parent, teacher, and student interviews, administered and interpreted behavior rating scales, and performed systematic direct observations of classroom behavior. Communicated assessment results and recommendations for behavioral interventions both verbally and in the form of psychoeducational reports.

Supervisor: Edward Shapiro, Ph.D.

August 2003 – December 2003

Course Practicum, Consultation

Allentown School District, Allentown, Pennsylvania

Conducted problem identification, problem analysis, and treatment evaluation interviews for students with behavioral problems. Consulted with the parent of an elementary school student in developing, implementing, and evaluating an intervention for behavioral difficulties.

Supervisor: Patricia Manz, Ph.D.

January 2003 – May 2003

Course Practicum, Assessment of Intelligence

Quakertown Community School District, Quakertown, Pennsylvania

Administered and interpreted ability and achievement tests to children and adults.

Communicated assessment results in the form of psychoeducational reports.

Supervisor: Kevin Kelly, Ph.D.

RELEVANT WORK AND RESEARCH EXPERIENCE

January 2012 – May 2012

Adjunct Professor, George Mason University, Fairfax, Virginia

Taught a 300-level required undergraduate course, Principles of Learning, for students majoring in psychology and neuroscience. Responsibilities included developing and teaching weekly lectures to students; coordinating lectures with laboratory activities facilitated by graduate student teaching assistant; developing and grading appropriate assignments and assessments to measure progress toward course objectives and learning targets.

September 2002 – August 2004

Data Collector, Project Achieve, Lehigh University, Pennsylvania

An early intervention study funded by a NIMH grant that provides assessment, consultation, and parent education services to families of preschool-age children at-risk for ADHD. Administered and scored various screening assessment tools (i.e., Conner's Rating Scales, Achenbach Scales, Social Skills Rating System, Parenting Stress Index) to teachers and parents; administered and scored ability and achievement instruments to children (i.e., Differential Ability Scales, Preschool Language Scale Fourth Edition, Battelle Developmental Inventory, Bracken Scales of Early Learning, Dynamic Indicators of Basic Literacy Skills); and conducted assessments of home and school environments using standardized assessments (i.e., Early Childhood Environment Rating Scale Revised, HOME Inventory). Prepared assessment reports for parents. Primary Investigators: George DuPaul, Ph.D. and Lee Kern, Ph.D.

September 1999 – May 2002

Research Assistant, Initiative for Minority Student Development and Ronald E. McNair Scholars Program, Saint John's University, Jamaica, New York

Researched self-esteem and anger in adolescents. Assisted in the planning, development, and evaluation of a research project. Presented results in poster-session at The Association for the Advancement of Behavior Therapy, November 2001.

Supervisor and Mentor: Raymond DiGiuseppe, Ph. D.

POSTER PRESENTATIONS

November 2001

Does High or Low Self Esteem Induce Anger?: A State Induction Experiment with Foster Care Adolescents. Presented at The 35th Annual Conference of The Association for the Advancement of Behavior Therapy. Philadelphia, Pennsylvania.

May 2005

Assessment of ADHD in Black Males: Appreciating the Parent Perspective to Bring Families and Schools Together? Presented at The 5th Annual Cross-University Collaborative Mentoring Conference. The University of Pennsylvania, Philadelphia, Pennsylvania.

May 2006

The Pre-referral Process with Culturally and Linguistically Diverse Students. Presented at Pediatric School Psychology Leadership Training Project Diversity Seminar. Lehigh University, Bethlehem, Pennsylvania.

August 2006

Assessment of ADHD in Black Males: Appreciating the Parent Perspective. Presented at The 114th Annual Conference of The American Psychological Association, Student Affiliates in School Psychology. New Orleans, Louisiana.

October 2007

Cross-Cultural Assessment of ADHD: Influence of Acculturation and Socioeconomic Status on Parent Ratings of Black and White Boys. Presented at The 37th Annual Conference of The National Black Child Development Institute. Chicago, Illinois.

PUBLICATIONS

DuPaul, G. J & Barrett, C. A. (2003). Assessment of ADHD in Ethnic Minority Youth: Issues and Misconceptions. *Attention, 9, 6, 34-37.*