Issues in Mental Health Nursing, 31:670–678, 2010

ISSN: 0161-2840 print / 1096-4673 online
DOI: 10.3109/01612840.2010.496137

informa
healthcare

Adults with ADHD: Who Are We Missing?

Roberta Waite, EdD, RN, CS
Drexel University, School of Nursing, Philadelphia, Pennsylvania, USA

J. Russell Ramsay, PhD
Psychiatry University of Pennsylvania, School of Medicine, Center for Cognitive Therapy & Adult ADHD Treatment and Research Program, Philadelphia, Pennsylvania, USA

Attention deficit hyperactivity disorder (ADHD) has long been identified as a common disorder of childhood. There is increasing recognition that adults also are affected by this disorder. Many adults, however, are often undiagnosed or misdiagnosed until their child is diagnosed with the disorder. Improved recognition and treatment for parental ADHD needs to occur given the genetic and environmental etiologies of the disorder. This paper examines three areas where there is a dearth of data in extant literature: parental ADHD culture and ethnicity; parenting and undiagnosed ADHD; and professional care and ADHD, and focuses on parents from ethnic minority cultures.

Attention deficit hyperactivity disorder (ADHD) is a common and highly heritable neurodevelopmental disorder of childhood associated with substantial cognitive, family, social, behavioral, and academic impairment. Cross-cultural research reports that ADHD in childhood occurs in an estimated 3% to 7% of school-aged children (American Psychiatric Association, 2000; Prudent, Johnson, Carroll, & Culpepper, 2005; Rousseau, Measham, & Bathiche-Suidan, 2008). The National Comorbidity Survey Replication Study found 36% of adults in the United States (US) who met the criteria for ADHD as children continued to meet the diagnostic criteria as adults; 4.4% of the US population was estimated to have ADHD as adults, a percentage representing over 9 million American adults (Faraone & Biederman, 2005; Kessler et al., 2006). Not all adults with ADHD were necessarily diagnosed as children, as it is only relatively recently that ADHD has been acknowledged as a lifespan disorder (Faraone & Antshel, 2008).

Importantly, many adults recognize that they have exhibited features of the disorder when their children are diagnosed (Faraone, 2004; Goodman, 2007; Lamberg, 2003; Weiss & Murray, 2003). There is evidence of both a genetic and environmental component to ADHD (Biederman & Faraone 2005; Rowland, Lesesne, & Abramowitz, 2002; Rutter, Silberg, O'Connor, & Simonoff, 1999; Thapar, Holmes, Poulton, & Harrington, 1999). Rates of inheritance for ADHD are as high as 0.90 (Able, Johnston, Adler, & Swindle, 2007). However, Kessler et al. (2006) found that the overwhelming majority of adults with ADHD are undiagnosed and untreated, with one study reporting that only 11% of adults with ADHD were treated for the disorder (Kessler et al., 2006). Weiss, Hechtman, and Weiss (2000) noted that about one quarter of children presenting with ADHD will have a parent with ADHD, and more than half of all parents with ADHD will have a child with ADHD. These parents require immediate attention, as undiagnosed and untreated parental ADHD is associated with a wide range of impairments affecting individual well-being as well as family functioning.

Undiagnosed parents often suffer in silence with symptoms usually attributed to lack of motivation, intellectual deficits, or low self-esteem (Waite, 2007). Symptoms of ADHD also contribute to family stress because parental behavior has a significant impact on child development, leading to less optimal parenting (Collins, Maccoby, Steinberg, Hetherington, & Bornstein, 2000; Cuningham, 2007; Dwivedi & Banhatti, 2005; Leverton, 2003). The features of ADHD transcend the immediate family context by adversely affecting parents' interpersonal and occupational performance and can cause further impairments across psychological and academic domains (Adler & Cohen, 2004; Bierderman, 2004; Katragadda & Schubiner, 2007).

The cumulative effects of untreated parental ADHD not only pose a risk for individual impairment, but also have significant downstream family and public health costs. Goodman (2007) found that ADHD has a high comorbidity with other mental illnesses, particularly depression and anxiety disorders and increased health care utilization. It also has various other personal challenges (e.g., greater chance of job loss, strained or unstable relationships with significant others, high job turnover rate, lower work-performance ratings, and poor perceptions of their ability to provide emotional support) and societal costs

Address correspondence to Roberta Waite, Drexel University, School of Nursing, 1505 Race St., MS 1030, Philadelphia, PA 19102. E-mail: rlw26@drexel.edu

(increased risk of adult criminal activity and incarceration) (Goodman, 2007). The issue of undiagnosed parental ADHD has significant implications for school-age children, particularly those with ADHD. These parents are often primary caretakers and manage their child's needs and challenges with self-regulation, negotiate with health care and educational systems, and implement management techniques (e.g., behavior management techniques and medication compliance). Parental ADHD is associated with less consistent and more negative parenting strategies and is a risk factor for dropping out of behavioral parenting training treatments for children with ADHD (Chronis, Chacko, Fabiano, Wymbs, & Pelham, 2004).

There are important gaps in the extant adult ADHD research literature with regard to issues of undiagnosed and untreated ADHD among parents of children with the disorder, particularly in families from underserved minority backgrounds in the US (Biederman, Faraone, & Monuteaux, 2002; Waite & Tran, 2009). The purpose of this paper is to examine three pertinent areas: (1) parental ADHD culture and ethnicity; (2) parenting and undiagnosed ADHD; and (3) professional care, professional-client partnership, and ADHD.

PARENTAL ADHD-CULTURE AND ETHNICITY

Although ADHD is not environmentally caused, it is environmentally bound (Ramsay, 2010). The cultural matrix that influences one's perceptions and how one defines ADHD occurs within cultural contexts that need to be identified, appreciated, and incorporated into treatment plans to maximize effective mental and behavioral health service delivery and utilization (Quimbly, 2006). Culture is often described as the shared values, norms, behaviors, and attitudes of a group of people. According to Elliott and Urquiza (2006), culture, most often, has been tied directly to ethnicity, with ethnic group membership tacitly responsible for determining one's culture. However, a person's culture may be affected by membership in various groups (e.g., a community, a professional group, or a neighborhood), geographic region, or socioeconomic status. These factors influence an individual's attitudes, values, beliefs, and behaviors.

Ethnicity refers to a person's identification with a group of people of the same race or nationality who share a common and distinctive culture. Ethnicity focuses on connectedness based on commonalities, such as religion, nationality, or region where distinctive components of cultural patterns are shared and transmitted over time creating a common history (Turner, Wieling, & Allen, 2004).

Research that examines parents affected by ADHD is important given its known implications on virtually all adult roles (Barkley, Murphy, & Fischer, 2008). Family studies of children with ADHD indicate that about 20% of mothers, 30% of fathers, and 37% of siblings also have ADHD (Biederman et al., 1992; Pauls, 1991). Importantly, much of the research on adult ADHD has neglected to identify the race and/or ethnicity of the study samples (Pauls, 1991) or does not represent adequate diversity in their samples. For example, while the sample from Bierderman and colleagues (1992) consisted of white, non-Hispanic individuals, participants from the lowest socioeconomic status (SES-VI) were excluded "to minimize the potential confounds of social chaos" (p.733). Researchers at the University of Maryland's ADHD Program conducted one of the first systematic studies of preschool children with ADHD and found that **parents** of children with ADHD are 24 times more likely to have the disorder than are parents of children without ADHD (Chronis et al., 2003). Of the participants with ADHD, their sample was comprised of individuals identified as white (60.7%), African American (25%), and other (14.3%). Likewise Biederman et al. (1995) and Minde et al. (2003) found that between 40% and 60% of parents with ADHD had a child with ADHD. However, the race and ethnicity of participants were not reported.

Parental ADHD often presents a significant barrier to the effective treatment of childhood ADHD (Biederman et al., 1995; Biederman et al., 2002; Collins et al., 2000; Leverton, 2003); and, considering mothers' typical role in the development and rearing of children, undiagnosed maternal symptoms of ADHD can be particularly problematic (Quinn, 2005; Waite & Tran, 2009). Women who seek an evaluation for ADHD from community practitioners often do not receive this diagnosis because their history does not fit the stereotypic ADHD patterns of young, hyperactive boys (Quinn, 2008). Women with ADHD not only have higher rates of adolescent pregnancy and substance abuse than non-ADHD mothers (Arnold, 1996; Ninowski, Mash, & Benzies, 2007), but they are also more likely to provide inattentive, inconsistent, or impulsive care giving (Banks, Ninowski, Mash, & Semple, 2008; Chronis-Tuscano et al., 2008; Psychogiou, Daley, Thompson, & Sonuga-Barke, 2008; Quinn, 2005). Importantly, ethnic diversity in the aforementioned research is limited. Samples were mainly Caucasian (90% or higher; Ninowski et al., 2007, Psychogiou et al., 2008). However, there was one study that was more inclusive (36.2% Caucasian, 40.6% African American, 4.3% Hispanic, 1.4% Native American, 7.2% mixed, 1.4% other, 8.7% refused; Chronis-Tuscano et al., 2008).

Given what we know about the adverse effects of untreated ADHD, Biederman, Faraone, and Monuteaux (2002) recommended that screening for parental ADHD be a standard component of the assessment of ADHD in children. However, there is a dearth of data that examines adult or parental ADHD among ethnic minority populations in the US, as most data comes from European-American populations (Waite & Tran, 2009). Psychiatric diagnoses, such as ADHD, not only reflect dysfunction in adaptive processes and systems, but also are historically and culturally situated and are shaped by negotiated interactive processes that are, in turn, influenced by sociopolitical factors (Escobar & Vega, 2006). Discussions of undiagnosed parental ADHD must therefore consider cultural and ethnic factors, especially when there are children with ADHD in these families. Culture influences the same issues that are central to mental health, parenting, and child rearing practices, such as behavioral

expectations, tolerance, language, emotion, attention, attachment, traumatic experiences, conduct, personality, motivation, and limit setting. Undoubtedly, cultural context plays an important role, not only in structuring the environment in which an undiagnosed parent with ADHD functions, but also in the way a parent understands ADHD (Bailey & Owens, 2005; Dwivedi & Banhatti, 2005; Gingerich, Turnock, Litfin, & Rosen, 1998; Koro-Ljungberg, Bussing, Williamson, Wilder, & Mills, 2008; Waite & Tran, 2009). Parents may interpret their own behavior based on their respective sociocultural and ethnic experiences combined with what they observe in their children with ADHD.

Although these sorts of cultural attitudes and beliefs in parents with ADHD would be helpful to understand, there has been little if any research on this topic. In fact, the most useful data have emerged from recent studies conducted with children diagnosed with ADHD representing children from diverse ethnic and cultural groups (Bussing, Schoenberg, Rogers, Zima, & Angus, 1998; Guevara et al., 2005; Hervey-Jumper, Douyon, & Franco, 2006). More specifically, data on parental perspectives about their child's ADHD could shed light on their perceptions and beliefs about the disorder. These factors may influence parents' proactive engagement in their personal treatment for ADHD.

Existing research on parental response to children with ADHD has indicated that educated European-American parents: (1) have a low threshold of tolerance for persistent ADHD symptoms; (2) are more likely to consider these symptoms as indicative of a medical disorder; and (3) are quicker to seek professional help for their children than are parents from other backgrounds (Stevens, Harman, & Kelleher, 2005). Novello (2006) found that parents with less educational attainment perceive behaviors characteristic of ADHD as "naughty" or even normal. Research findings also suggest that parents from ethnic minority groups (mainly African American and Hispanic) in comparison to European-American parents:

- are not well informed about symptoms and have less knowledge of ADHD (Bussings, Gary, Mills, & Garvan, 2003; Pastor & Reuben, 2005; Perry, Hatton, & Kendall, 2005);
- are less likely to accept an ADHD diagnosis because of the stigma of mental health conditions (Bussings, Schoenberg, & Perwien, 1998);
- have a higher threshold for seeking services (Bussings et al., 2003; Stevens et al., 2005); and
- have a unique cultural perspective on the illness and interventions than control groups (Cuffe, Moore, & McKeown, 2005; Koro-Ljungberg et al., 2008).

In the US, most of what we know about parental ADHD comes from studies of middle class, European-American families (Biederman et al., 1992; Biederman et al., 1999; Todd, Joyner, Sun, Reich, & Neuman, 2004). Hinnenthal, Perwien, and Sterling (2005) found that a lack of education about adult ADHD, including its symptom presentation and associated impairments, may also be related to the low diagnosis rate among parents.

Future exploratory research on undiagnosed parental ADHD among diverse cultural groups is needed in order to understand the person-environment dynamics that may affect identification of ADHD and treatment utilization. This information will address the gap in knowledge that hinders evidence-based practice and culturally proficient patient care for more diverse populations affected by ADHD, particularly parents.

PARENTING AND UNDIAGNOSED ADHD

While researchers and clinicians have documented difficulties that ADHD causes for adults as a group, including increased attention paid to how the syndrome affects parenting behaviors, there is little information about parents with ADHD from ethnic minority cultures (Psychogiou et al., 2008; Waite & Tran, 2009). Undiagnosed parental ADHD is likely to reduce the quality of parenting and increase the risk of negative and chaotic parenting. Research indicates that parents with ADHD have difficulty with instrumental and organizational tasks of parenting that include: being consistent; monitoring child activities; managing child behavior, performing household tasks; tracking finances; setting limits; and managing daily routines (Chronis-Tuscano et al., 2008; Olaniyan et al., 2007; Ray, Croen, & Habel, 2009). Parenting skills are synonymous with task organization, time management, and management of frustration; thus, parents with deficits in these areas may endure significant stress and a sense of inadequacy and failure (Weiss et al., 2000).

Common symptoms related to ADHD in parents, particularly when it is unrecognized and untreated, may compound troubling behaviors exhibited by their children. Empirical research has found that parents with ADHD who have children with ADHD display lax parenting styles (Harvey, Danforth, McKee, Ulaszek, & Friedman, 2003) and higher levels of over-reactivity than parents without ADHD (Arnold, O'Leary, & Edwards, 1997). Importantly, these studies did not indicate race and/or ethnicity; however, they both indicated that the average family income for their samples was $55K yearly.

Inattention and impulsivity place parents at risk for vacillating between harsh and lenient parenting behaviors; this inconsistency influences and is shaped by children's behavioral problems that result from core difficulties associated with ADHD. More specifically, poor impulse control on the part of parents (1) makes it difficult for parents to refrain from expressing negative emotions during discipline encounters, (2) leads to permissiveness, (3) causes a parent to place short-term goals ahead of long-term goals, and (4) leads parents to acquiescing to a child's coercive behavior (Weiss et al., 2000). Similarly, parents who have difficulty with sustained attention may have difficulty with consistent monitoring of children's behaviors, not to mention difficulties with self-monitoring their own parenting behaviors and making adjustments accordingly (e.g., reduced error sensitivity). This is even more difficult when supervising

children who have ADHD because they require a great deal of patience, monitoring, and consistency (Weiss et al., 2000). Untreated parental ADHD, therefore, is associated with higher levels of family conflict and less family cohesion when compared to parents without ADHD (Ninowski et al., 2007).

Mothers with ADHD, in particular, have been found to have lower levels of self-esteem in parenting and markedly higher levels of depression, self-blame, and social isolation compared to mothers without ADHD (Chronis-Tuscano et al., 2008; Epstein et al., 2000; Ninowski et al., 2007). Fathers with ADHD were reported to demonstrate more negative, critical, overreactive, and authoritarian discipline; however, this decreased among fathers reporting fewer ADHD symptoms (Arnold et al., 1997).

Given the myriad impairments and health risks (e.g., mood, anxiety, and substance use disorders; marked inattention, distractibility, organization difficulties, poor efficiency) associated with adult ADHD, it has been conjectured that parents with undiagnosed ADHD who participate in family treatment/parent training programs designed for their children or teens with ADHD would have difficulty implementing the suggested coping strategies (Molina & Pelham, 2003; Spencer, Bierderman, & Mick, 2007). This could lead to increased risk of the family dropping out of these programs (Sonuga-Barke et al., 2002). Furthermore, these impairments are not limited to parents who meet full diagnostic criteria, but also extend to parents who have subclinical levels of ADHD (Faraone & Biederman, 2005; Ninowski et al., 2007).

When viewed against the backdrop of diversity in American society and variance in parenting norms and resources among populations, undiagnosed ADHD may have serious implications for parents from ethnic minority cultures (Garcia Coll & Pachter, 2002). Parenting styles vary among racial and cultural groups, and some parenting behaviors associated with positive behavioral outcomes in some groups, may not produce similar outcomes in the context of other groups. For example, Olaniyan et al. (2007) conducted research on beliefs about ADHD in parenting in a sample of African American parents who did not have ADHD and did not have any children with ADHD. The findings indicated that some African American parents preferred to respond to their children's behavior problems through *parenting* practices, namely strict discipline; these same parents perceived that European-American parents would rely more heavily on health professionals when faced with the same situation (Olaniyan et al., 2007). Bradley (2002) postulates that the emphasis of disciplinary styles and strategies are used by parents in order to prepare their children to excel in a society that can be racially biased and hostile toward African Americans. As such, future research on parenting and ADHD among ethnic minority populations should consider distinguishing between the independent effects of cultural orientation, social class, and minority status on parenting and acknowledge the complex interrelationships among these factors (Garcia Coll & Pachter, 2002; Garcia Coll et al., 1996). These types of data can be critical to developing strategies to promote positive child outcomes.

Given the high rates of ADHD among parents of children with ADHD (Chronis, 2004; Chronis et al., *2004*) different types and delivery methods of evidence-based parent training programs may be needed for parents of different cultural groups in which one or both parents has ADHD. If cultural issues related to beliefs about and style of parenting are not considered when teaching parent training programs, trainers may limit access to services or contribute to an intervention approach that is seen as inappropriate and unreasonable by the very participants these programs are designed to help. Consequently, the result may be premature dropout or nonadherence to the parenting intervention strategies.

Understanding the help-seeking patterns of diverse families for intervention is a necessity. There are several clinically relevant factors that affect parent training outcomes, for example, (1) some families may prefer attending parent training groups in community settings (e.g., church, school) rather than in a clinic environment, (2) the family unit may include non-blood related kin, and (3) family members may have different functional roles with regard to supervising the child. For example, Power, Russell, Soffer, Blom-Hoffman, and Grim (2002) encouraged the inclusion of extended family members in some circumstances, such as when working with Asian, Hispanic, and African American families. In fact, in order to provide an intervention that is culturally sensitive, appealing, and effective, the use of parent training programs modified to be relevant for families from specific cultures has been suggested. The development of resourceful family programs such as these should include feedback from members of a particular community that could take place through focus groups. Then these individuals could take part in training to be co-facilitators of treatment to enhance the cultural sensitivity and social validity of the program.

PROFESSIONAL CARE, PROFESSIONAL-CLIENT PARTNERSHIP, AND ADHD

Although ADHD has been established as one of the more impairing psychiatric disorders insofar as it has been found to create problems in most domains of life, it is also a condition that has been found to be quite responsive to treatment. That is, there are many evidence-based practice treatments for individuals with ADHD across the lifespan that can help to improve functioning. However, there are many barriers that may interfere with availability of, access to, or utilization of these treatments. The purpose of this section is to provide a brief overview of the treatments available to parents affected by ADHD and to discuss various impediments to making use of these approaches.

Professional Care: Treatments

The treatment for ADHD with the strongest empirical support across all age ranges is pharmacotherapy. In particular, in numerous controlled studies (Dodson, 2005; Prince, Wilens, Spencer, & Biederman, 2006) stimulant medications have been

found to be effective in reducing the core symptoms of ADHD in patients of all ages. A primary benefit of medications is that they improve individual functioning at the "point of performance" in the important life domains often affected by ADHD, such as academic, occupational, and interpersonal functioning, including parenting. There are other medication options that have been found to be effective in the treatment of ADHD for those who do not respond to or cannot tolerate the side effects of stimulants, though their effect sizes are not as high as those achieved by the stimulants.

Despite the positive findings associated with medications, there are some issues related to pharmacotherapy that may create barriers to its use. Although the first line medications used in the treatment of ADHD are generally safe and well-tolerated, they are not without side effects. For some individuals the discomfort associated with side effects outweighs the benefits, while other patients may simply not experience therapeutic improvements. What is more, some individuals may have medical health issues, namely cardiac risk profiles that obviate the use of medications for ADHD. However, considering the potential negative effects of ADHD on important domains of functioning, including increased lifetime risk for substance use problems, driver-caused accidents, and a lifestyle that would predict health problems in later adulthood (Barkley et al., 2008), the potential benefits provided by medications are thought to outweigh the relatively minimal risks associated with their use.

The aforementioned concerns about medications may create barriers to their use by adults seeking help for their own ADHD, as well as for those making decisions regarding the care of their children. In particular, some cultures are skeptical about psychiatric medications. Relatively cursory media stories that include some overblown and distorted accounts of research results and some targeted anti-medication campaigns may fuel negative outlooks about medications (Barkley, 2006). Furthermore, some minority groups may view medications as well as other psychiatric/psychological treatments as attempts to "medicalize" what are deemed to be issues better handled by local communities or families.

Even with effective medication treatment, there may be residual coping problems that require additional psychosocial interventions or educational interventions. In fact, for families averse to medication management, the nonmedication treatments may be the first that are pursued. Behavioral treatments have been found to be effective in improving internalizing symptoms and to have positive effects on parenting, at least insofar as negative parenting behaviors are reduced (Wells et al., 2006). There is also a strong and growing evidence base supporting the use of psychosocial treatments, namely cognitive behavioral therapy (CBT) for adults with ADHD, most often as an adjunct to pharmacotherapy. Whereas medications are beneficial in improving the core symptoms of ADHD, psychosocial treatments target the impairments that interfere with day-to-day functioning. A small study of adults who sought CBT for adult ADHD and who declined concurrent medication treatment reported greater ethnic diversity than has typically been found in psychosocial outcome studies for this clinical population (Ramsay & Rostain, 2007), providing preliminary pilot data that some groups may seek out other forms of treatment before medications.

Professional-Client Partnership

During the professional-client partnership, individual assessment and collaborative decision making is helpful. This is critical for clients to live successfully with chronic health conditions such as ADHD. Active collaboration in setting goals, learning self-management skills, and participating in actions and behaviors that will improve one's lifestyle should be at the forefront of this partnership. An active partnership is critical because the majority of time spent managing ADHD takes place when an individual is in his or her own community rather than in the provider's office. Clients are able to gain a better understanding about their condition and this is important from a cultural perspective.

As discussed earlier, preference for treatment not using medication is common. Use of medications for ADHD can be seen as placing the "problem" on the individuals to improve their abilities to meet life's demands. As has been reviewed above, there are many behavioral interventions that can help improve the well-being and functioning of adults with ADHD. Thus, these circumstances do not have to cause a conundrum for the client or provider. Through collaborative efforts, clients and providers discuss varied strategies that may benefit the client's life goals in, for example, work and academic settings and well as in the client's family).

There are also strategies to make environmental modifications (e.g., work and educational accommodations) to assist individuals coping with ADHD. Students with ADHD who attend post-secondary institutions may qualify for academic accommodations if the person can document that the symptoms create learning impairments that meet or exceed the threshold for qualifying as a learning disability. The rules and laws that govern qualification for academic accommodations differ at different levels of education and an individual considered "learning disabled" in one setting may not be so categorized in another setting.

The impairments associated with ADHD, inasmuch as they could affect occupational functioning in otherwise qualified employees, could result in protected workplace accommodations. However, disability accommodations for ADHD-related impairments are more challenging to document and require that workers inform employers as early as possible in order to secure the accommodations needed. Workers also are often justifiably reticent to disclose their ADHD diagnosis out of concern that they will be treated differently or will not be hired in the first place. While there has not been a legal precedent of an employee with ADHD obtaining workplace accommodations, there are anecdotal reports of workers with ADHD negotiating informal accommodations (e.g., modified work hours, use of a reduced

distraction room) or implementing accommodations on their own (e.g., using scheduling software) (Mapou, 2009; Ramsay, 2010).

Although they have not yet been studied, there is increased interest in treatment approaches for families affected by ADHD. This includes special issues faced by families in which there are both children and parents/caregivers diagnosed with ADHD (with interventions modified to address parental ADHD) (Ramsay, Power, & Soffer, 2009), marital/relationship therapy for couples in which at least one partner has ADHD, and other interventions for managing the effects of ADHD on social functioning. Social skills training has not been studied in adults with ADHD; however, such studies may not yield results that generalize outside the consulting room, presumably because the difficulty for adults with ADHD is not lack of knowledge of social skills but rather difficulties with implementation due to impulsive behaviors or inattention to social cues.

Despite the availability of treatments that individually or in combination should provide improvements for many individuals with ADHD, there remain many barriers to their utilization, with recent research suggesting that only 10% of adults with ADHD receive specialized treatment within a year. Based on the limited diversity in study samples of adults with ADHD, it would be reasonable to predict that the rates of identification and treatment of adults with ADHD in minority groups is even lower than the rates reported in the research literature. Constantine and Sue (2006) report that barriers persist because of limited availability of mental health professionals from diverse ethnic groups:

> the limited multicultural competence of available service providers, the Eurocentric values inherent in many traditional theoretical orientations and approaches to counseling, and some counselors' tendency to emphasize culturally deficit models over models of cultural strength and resilience in conceptualizing the development, experiences, and health of diverse racial and ethnic populations (p. 38).

It is therefore important to look at the educational and experiential aspects of how practitioners gain their knowledge about adult ADHD and how this knowledge is translated into practice.

IMPLICATIONS FOR GAPS IN CULTURAL KNOWLEDGE ABOUT ADULT ADHD AMONG PRACTITIONERS

ADHD, particularly adult ADHD, remains a clinical specialty in which most health care practitioners do not receive any formal training. Clinicians specializing in the assessment and treatment of children will likely be exposed to issues of ADHD during training in developmental disorders and may become somewhat proficient at screening based on clinical experience and continuing education. However, most practitioners treating adults are not familiar with adult ADHD, have not been trained in screening or treatment, and possibly gain their experience "on the fly" as they start to see patients with the diagnosis. Thus, even when a family or an individual reaches out for professional help, it may be difficult to find a clinician experienced with adult ADHD.

There also may be regional variations in the availability of health care professionals experienced in ADHD as well as in the use of treatment options, such as prescription patterns or resources available in local post-secondary institutions. Health care professionals may vary on their familiarity with ADHD or may hold opinions on the disorder or treatment options based on misinformation because they may not be familiar with current research or may base their views of ADHD on anecdotal information. Thus, specialized help may not be available to underrepresented groups, even when it is sought—though it should be noted that many European-American families may experience the same plight depending on where they live.

There are other barriers to accessing care, such as limited insurance benefits or the possibility that treatment of ADHD is not covered by their plans, though this situation may be addressed by the recently passed Mental Health Parity Act. However, the cost of medications, even for families with prescription coverage can be prohibitive. Moreover, the cost for families may be multiplied when there are several individuals in a family who require prescriptions and other forms of treatment, not to mention the time and effort required to keep track of, coordinate, and attend the requisite appointments (Ramsay, 2009). Young adults in college (including community college) may require extra semesters in order to complete graduation requirements. The prospect of taking extra time to finish college has caused families difficulties because the students with ADHD ran the risk of no longer being covered under their families' insurance plans, though recent health care legislation has extended the age of coverage of young adults under a parent's insurance plan up to the age of 26 years-old (Tumulty, Pickert, & Park, 2010). Although there is increased attention paid to the situation faced by college students with ADHD, high school students with ADHD are at greater risk for dropping out of high school than their non-ADHD peers, which would suggest that many of these individuals are in GED programs.

Even when individuals and families have access to and utilize evidence-based treatments, these treatments require persistence and follow through in order to reap their benefits. Adults with ADHD face difficulties with treatment follow through, particularly with psychosocial treatments (Ramsay, 2009). While there have been improvements in the dissemination of accurate, science-based information about ADHD to health care professionals and to people with ADHD, there remain gaps in knowledge that may affect treatment, even among clinicians familiar with ADHD. Many families and adults who have questions about the assessment and treatment of ADHD for themselves may first consult with a primary care provider or pediatrician. Primary care providers are often pressed for time and may not be familiar with available screening instruments, experienced clinicians in their communities, or reputable ADHD organizations that may be a source of useful information. Moreover, some practitioners may hold opinions that ADHD is overdiagnosed

or "not real," and may be dismissive of initial questions or concerns. On the other hand, some providers may be too quick to diagnose and treat what seem to be symptoms of ADHD without referring the patient for a thorough assessment to rule out other medical, psychiatric, or learning issues. The problem in the assessment of ADHD is the common misdiagnosis, whether a false positive or false negative diagnosis.

Community nurses, physicians, licensed clinical social workers, couple and family therapists, and psychiatrists who treat ADHD, but who do not have a particular clinical expertise, may be placed in the position of providing treatment because there are no other options for the adult with ADHD. Community care licensed health providers, while making appropriate medication selection and being understandably conservative based on limited experience treating the syndrome and concerns about safety, may prescribe doses of these medications that are too low to treat symptoms adequately (Dodson, 2005). They may also be reticent to employ polypharmacy (e.g., combining stimulants with non-stimulants, using both short and long-acting stimulants) approaches for managing both the core symptoms of ADHD and managing comorbid conditions (e.g., depression, anxiety).

Moreover, while medications for ADHD are the most effective single treatment option based on available research, it does not mean that medications alone are sufficient treatment for many individuals with ADHD. Licensed practitioners may not be familiar with psychosocial and educational interventions for people with ADHD. In fairness, many clinicians may be placed in the position of offering treatment because there are no other options available to families and individuals with ADHD. Many adults with ADHD initially seek treatment for symptoms of mild depression or anxiety, or for coping difficulties regarding work problems or problems completing tasks, only to later learn that their symptoms fit a profile consistent with ADHD. Psychotherapists may misinterpret common features of adult ADHD as evidence of core clinical problems related to resistance or low self-esteem, which may result in "treatment failure" (Ratey, Greenberg, Bemporad, & Lindem, 1992). ADHD is a developmental syndrome requiring ongoing efforts to manage its effects on functioning. The metaphor of managing a chronic health condition, such as diabetes, has been used to illustrate the need for ongoing treatment. Consistent medication management is often required, at least to manage more complex settings, such as school or work. Various coping strategies and environmental supports for adults can be effective and may require ongoing treatment support and, at the very least, consistent implementation outside of treatment.

Although there remain many barriers to effective treatment, there have been many improvements in available treatment options and in the dissemination of information to health care professionals and individuals with ADHD. However, there are many underserved populations and a great deal of misinformation that may interfere with the utilization of treatment. There is also a need to ensure that current and future health care professionals are familiar with screening tools for ADHD to use with patients of all ages in order to provide appropriate referrals. Finally, there needs to be greater availability of access to clinicians who can provide evidence-based culturally sensitive treatments to families and individuals affected by ADHD.

CONCLUSION

The effects of ADHD are well-documented; however, a segment of the population that has been missed in extant literature and research are parents from ethnic minority cultures who are affected by ADHD, but who remain undiagnosed and untreated. Childhood ADHD has significant implications for parents of these children given the high heritability of the disorder. Improved recognition and treatment for parental ADHD is needed given the genetic and environmental etiologies of the disorder. Also, with improved educational and experiential training among mental health professionals as well as parity in insurance coverage, these parents may have access to improved services, thereby mitigating poor health, educational, occupational, and relational concerns.

Declaration of interest: The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

REFERENCES

Able, S., Johnston, J., Adler, L., & Swindle, R. (2007). Functional and psychosocial impairment in adults with undiagnosed ADHD. *Psychological Medicine*, *37*, 97–107. doi:10.1017/S0033291706008713

Adler, L., & Cohen, J. (2004). Diagnosis and evaluation of adults with attention deficit/hyperactivity disorder. *Psychiatric Clinics of North America*, *27*, 187–201. doi:10.1016/j.psc.2003.12.003

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: Author.

Arnold, E. (1996). Sex differences in ADHD: Conference summary. *Journal of Abnormal Child Psychology*, *24*(5), 555–570. doi:10.1007/BF01670100

Arnold, E. H., O'Leary, S. G., & Edwards, G. H. (1997). Father involvement and self-reported parenting of children with attention deficit-hyperactivity disorder. *Journal of Consulting and Clinical Psychology*, *65*, 337–342. doi:10.1037/0022–006X.65.2.337

Bailey, R., & Owens, D. (2005). Overcoming challenges of diagnosis and treatment of ADHD among African Americans. *Journal of the National Medical Association*, *97*(10), 5s–10s.

Banks, T., Ninowski, J., Mash, E., &Semple, D. (2008). Parenting behavior and cognitions in a community sample of mothers with and without symptoms of attention-deficit/hyperactivity disorder. *Journal of Child and Family Studies*, *17*(1), 28–44. doi:10.1007/s10826–007-9139–0

Barkley, R. A. (2006). *Attention-deficit hyperactivity disorder: A handbook for diagnosis and treatment* (3rd ed.). New York, NY: Guilford.

Barkley, R. A., Murphy, K., & Fischer. M. (2008). ADHD in adults: What the science says. New York, NY: Guilford.

Biederman, J. (2004). Impact of comorbidity in adults with attention-deficit/hyperactivity disorder. *Journal of Clinical Psychiatry*, *65*(Suppl. 3), 3–7.

Biederman, J., & Faraone, S. (2005). Attention–deficit hyperactivity disorder. *Lancet*, *366*, 237–248. doi:10.1016/S0140–6736(05)66915–2

Biederman, J., Faraone, S., Keenan, K., Benjamin, J., Krifcher, B., & Moore, C. (1992). Further evidence for family-genetic risk factors in attention-deficit/hyperactivity disorder. Patterns of comorbidity in probands and

relatives in psychiatrically and pediatrically referred samples. *Archives of General Psychiatry*, *49*(9), 728–738.

Biederman, J., Faraone, S. V., Mick, E., Spencer, T., Wilens, T., Kiely, K., Warburton, R. (1995). High risk for attention deficit hyperactivity disorder among children of parents with childhood onset of the disorder: A pilot study. *American Journal of Psychiatry*, *152*, 431–435.

Biederman, J., Faraone, S. V., Mick, E., Williamson, S., Wilens, T., & Spencer, T. (1999). Clinical correlates of ADHD in females: Findings from a large group of girls ascertained from pediatric and psychiatric referral sources. *Journal of the American Academy of Child and Adolescent Psychiatry*, *38*, 966–975. doi:10.1097/00004583–199908000-00012

Biederman J., Faraone S., & Monuteaux M. (2002). Impact of exposure to parental attention-deficit hyperactivity disorder on clinical features and dysfunction in the offspring. *Psychological Medicine*, *32*, 817–827. doi:10.1017/S0033291702005652

Bradley, C. (2002). Parenting: A community responsibility. In J. Sanders & C. Bradley (Eds.), *Counseling African American Families* (pp. 29–40). Alexandria, VA: American Counseling Association.

Bussings, R., Gary, F., Mills, T., & Garvan, C. (2003). Parental explanatory models of ADHD: Gender and cultural variations. *Social Psychiatry and Psychiatric Epidemiology*, *38*(10), 563–575.

Bussings, R., Schoenberg, N., & Perwien, A. (1998). Knowledge and information about ADHD: Evidence of cultural differences among African American and white parents. *Social Science & Medicine*, *46*(7), 919–928.

Bussing, R., Schoenberg, N., Rogers, K., Zima, B., & Angus, S. (1998). Explanatory models of ADHD: Do they differ by ethnicity, child gender, or treatment status? *Journal of Emotional and Behavioral Disorders*, *6*, 233–2443. doi:10.1177/106342669800600405

Chronis, A. (2004, January). Study urges treatment of parents of ADHD children. *Black Issues in Higher Education*, Retrieved from, http://findarticles.com/p/articles/mi_m0DXWis_25_20/ai_1133763201

Chronis, A. M., Chacko, A., Fabiano, G. A., Wymbs, B. T., & Pelham, W. E. (2004). Enhancements to the standard behavioral parent training paradigm for families of children with ADHD: Review and future directions. *Clinical Child and Family Psychology Review*, *7*, 1–27. doi:10.1023/B:CCFP.0000020190.60808.a4

Chronis, A. M., Lahey, B. B., Pelham, W. E., Kipp, H., Baumann, B, & Lee, S. S. (2003). Psychopathology and substance abuse in parents of young children with ADHD. *Journal of the American Academy of Child and Adolescent Psychiatry*, *42*, 1424–1432. doi:10.1097/00004583-200312000-00009

Chronis-Tuscano, A., Raggi, V., Clarke, T., Rooney, M., Diaz, Y., & Pian, J. (2008). Associations between maternal attention-deficit/hyperactivity disorder symptoms and parenting. *Journal of Abnormal Child Psychology*, *36*(8), 1237–1251. doi:10.1007/s10802-008-9246-4

Collins, W. A., Maccoby, E. E., Steinberg, L., Hetherington, E. M., & Bornstein, M. H. (2000). Contemporary research on parenting: The case for nature and nurture. *American Psychologist*, *55*, 218–232. doi:10.1037/0003-066X.55.2.218

Constantine, M. G., & Sue, D. (2006). *Addressing racism*. Hoboken, NJ: Wiley.

Cuffe, S., Moore, C., & McKeown, R. (2005). Prevalence and correlates of ADHD symptoms in the national health interview survey. *Journal of Attention Disorders*, *9*(1), 392–401. doi:10.1177/1087054705280413.

Cuningham, C. (2007). A family-centered approach to planning and measuring the outcome of interventions for children with attention-deficit/hyperactivity disorder. *Journal of Pediatric Psychology*, *32*(6), 676–694. doi:10.1093/jpepsy/jsm021

Dodson, W. W. (2005). Pharmacotherapy of adult ADHD. *Journal of Clinical Psychology*, *61*, 589–606.

Dwivedi, K., & Banhatti, R. (2005). Attention deficit/hyperactivity disorder and ethnicity. *Archives of Disease in Childhood*, *90*, 10–12. doi:10.1136/adc.2004.058180

Elliott, K., & Urquiza, A. (2006). Ethnicity, culture, and child maltreatment. *Journal of Social Issues*, *62*(4), 787–809. doi:10.1111/j.1540-4560.2006.00487.x

Epstein, J. N., Comers, C. K., Erhardt, D., Arnold, L. E., Hechtrnan, L., Hinshaw, S. P., Vitiello, B. (2000). Familial aggregation of ADHD characteristics. *Journal of Abnormal Child Psychology*, *28*, 585–594. doi:10.1023/A:1005187216138

Escobar, J., & Vega, W. (2006). Cultural issues and psychiatric diagnosis: Providing a general background for considering substance use diagnoses. *Addiction*, *101*(s1), 40–47. doi:10.1111/j.1360-0443.2006.01598.x

Faraone, S. V. (2004). Genetics of adult attention-deficit/hyperactivity disorder. *Psychiatric Clinics of North America*, *27*, 303–321. doi:10.1016/S0193-953X(03)00090-X

Faraone, S. V., & Antshel, K. (2008). Diagnosing and treating attention-deficit/hyperactivity disorder in adults. *World Psychiatry*, *7*(3), 131–136.

Faraone, S. V., & Biederman, J. (2005). What is the prevalence of adult attention deficit/hyperactivity disorder? Results of a population screen of 966 adults. *Journal of Attention Disorders*, *9*, 384–391. doi:10.1177/1087054705281478

Garcia Coll, C., Lamberty, G., Jenkins, R., McAdoo, H. P., Crnic, K., Wasik, B. H., & Vazquez Garcia, H. (1996). An integrative model for the study of developmental competencies in minority children. *Child Development*, *67*(5), 1891–1914. doi:10.2307/1131600

Garcia Coll, C., & Pachter, L. M. (2002). Ethnic and minority parenting. *Handbook Parenting*, *4*, 1–20.

Gingerich, K., Turnock, P., Litfin, J., & Rosen, L. (1998). Diversity and ADHD. *Journal of Clinical Psychology*, *54*, 415–426. doi:10.1002/(SICI)1097–4679(199806)54:4<415::AID-JCLP3>3.0.CO;2-M

Goodman, D. (2007). The consequences of attention-deficit/hyperactivity disorder in adults. *Journal of Psychiatric Practice*, *13*(5), 318–327. doi:10.1097/01.pra.0000290670.87236.18

Guevara, J., Feudtner, C., Romer, D., Power, T., Eiraldi, R., Nihtianova, S., . . . Schwarz, D. F. (2005). Fragmented care for inner-city minority children with attention-deficit/hyperactivity disorder. *Pediatrics*, *116*(4), e512–e517. doi:10.1542/peds.2005–0243

Harvey, E., Danforth, J. S., McKee, T., Ulaszek, W. R., & Friedman, J. L. (2003). Parenting of children with attention-deficit/hyperactivity disorder: The role of parentalADHD symptomatology. *Journal of Attention Disorders*, *7*, 31–42. doi:10.1177/108705470300700104

Hervey-Jumper, H., Douyon, K., & Franco, K. (2006). Deficits in diagnosis, treatment and continuity of care in African-American children and adolescents with ADHD. *Journalof the National Medical Association*, *98*(2), 233–238.

Hinnenthal, J., Perwien, A., & Sterling, K. (2005). A comparison of service use and costs among adults with ADHD and adults with other chronic diseases. *Psychiatric Services*, *56*(12), 1593–1601. doi:10.1176/appi.ps.56.12.1593

Katragadda, S., & Schubiner, H. (2007). ADHD in children, adolescents, and adults. *Primary Care: Clinics in Office Practice*, *34*, 317–341. doi:10.1016/j.pop.2007.04.012

Koro-Ljungberg, M., Bussing, R., Williamson, P., Wilder, J., & Mills, T. (2008). African-American teenagers' stories of ADHD. *Journal of Child and Family Studies*, *17*, 467–485. doi:10.1007/s10826–007-9168–8

Lamberg, L. (2003). ADHD often undiagnosed in adults. *The Journal of the American Medical Association*, *290*(12), 1565–1567. doi:10.1001/jama.290.12.1565

Leverton, T. (2003). Parental psychiatric illness: The implications for children. *Current Opinion in Psychiatry*, *16*(4), 395–402.

Mapou, R. L. (2009). *Adult learning disabilities and ADHD: Research-informed assessment*. New York, NY: Oxford University Press.

Minde, K., Eakin, L., Hechtman, L., Ochs, E., Bouffard, R., Greenfield, B., & Looper, K. (2003). The psychosocial functioning of children and spouses of adults with ADHD. *Journal of Child Psychology and Psychiatrq*, *44*(4), 637–446. doi:10.1111/1469–7610.00150

Molina, B. S., & Pelham, W. E. (2003). Childhood predictors of adolescent substance use in a longitudinal study of children with ADHD. *Journal of Abnormal Psychology*, *112*, 497–507. doi:10.1037/0021-843X.112.3.497

Ninowski, J., Mash, E., & Benzies, K. (2007). Symptoms of ADHD in first time expectant mothers: Relations with parenting, cognitions and behavior. *Infant Mental Health Journal*, *28*(1), 54–75. doi:10.1002/imhj.20122

Novello, A. C. (2006). Eliminating child health disparities: A call to action. *Journal of National Medical Association*, *98*(2), 265–270.

Olaniyan, O., dosReis, S., Garriett, V., Mychailyszyn, M., Anixt, J., Rowe, P., & Cheng, T. (2007). Community perspectives of childhood behavioral problems and ADHD among African American parents. *Ambulatory Pediatrics*, *7*(3), 226231. doi:10.1016/j.ambp.2007.02.002

Pastor, P. N., & Reuben, C. A. (2005). Racial and ethnic differences in ADHD and LD in young school-age children: Parental reports in the National Health Interview Study. *Public Health Representative*, *120*(4), 383–392.

Pauls, D. L. (1991). Genetic factors in the expression of attention-deficit hyperactivity disorder. *Journal of Child and Adolescent Psychopharmacology*, *1*, 353–360. doi:10.1089/cap.1991.1.353

Perry, C. E., Hatton, D., & Kendall, J. (2005). Latino parents' accounts of attention deficit hyperactivity disorder. *Journal of Transcultural Nursing*, *16*(4), 312–321. doi:10.1177/1043659605278938

Power, T. J., Russell, H. F., Soffer, S. L., Blom-Hoffman, J., & Grim, S. M. (2002). Role of parent training in the effective management of attention-deficit/hyperactivity disorder. *Disease Management and Health Outcome*, *10*, 177–126. doi:10.2165/00115677-200210020-00007

Prince, J. B., Wilens, T. E., Spencer, T. J., & Biederman, J. (2006). Pharmacotherapy of ADHD in adults. In R. A. Barkley (Ed.), *Attention-deficit hyperactivity disorder: A handbook for diagnosis and treatment* (pp. 704–736). New York, NY: Guilford.

Prudent, N., Johnson, P., Carroll, J., & Culpepper, L. (2005). Attention-deficit/hyperactivity disorder: Presentation and management in the Haitian American child. *Primary Care Companion: Journal of Clinical Psychiatry*, *7*(4), 190–197. doi:10.4088/PCC.v07n0409

Psychogiou, L., Daley, D., Thompson, M., & Sonuga-Barke, E. (2008). Do maternal attention-deficit/hyperactivity disorder symptoms exacerbate or ameliorate the negative effect of child attention-deficit/ hyperactivity disorder symptoms on parenting? *Development and Psychopathology*, *20*, 121–137. doi:10.1017/S0954579408000060

Quimbly, E. (2006). Ethnography's role in assisting mental health research and clinical practice. *Journal of Clinical Psychology*, *62*(7), 859–879. doi:10.1002/jclp.20277

Quinn, P. (2005). Treating adolescent girls and women with ADHD: Gender-specific issues. *Journal of Clinical Psychology*, *61*(5), 579–587. doi:10.1002/jclp.20121

Quinn, P. (2008). Attention-deficit/hyperactivity disorder and its comorbidities in women and girls: An evolving picture. *Current Psychiatry Reports*, *10*, 419–423. doi:10.1007/s11920-008-0067-5

Ramsay, J. R., & Rostain, A. L. (2007). Psychosocial treatments for attention-deficit hyperactivity disorder in adults: Current evidence and future directions. *Professional Psychology: Research and Practice*, *38*, 338–346.

Ramsay, J. R. (2009). Evidenced-based psychosocial treatments for adult ADHD: A review. *Current Attention Disorders Reports*, *1*, 85–91. doi:10.1007/s12618-009-0012-5

Ramsay, J. (2010). *Nonmedication treatments for adult ADHD: Evaluating impact on daily functioning and well-being*. Washington, DC: American Psychological Association.

Ramsay, J. R., Power, T., & Soffer, S. (2009, October 8). *Innovative program: PENN-CHOP family-based treatment program for ADHD*. Paper presented at the 21st International Conference of CHADD, Cleveland, OH.

Ratey, J., Greenberg, S., Bemporad, J. R., & Lindem, K. (1992). Unrecognized attention-deficit hyperactivity disorder in adults presenting for outpatient psychotherapy. *Journal of Child and Adolescent Psychopharmacology*, *4*, 267–275.

Ray, G., Croen, L., & Habel, L. (2009). Mothers of children diagnosed with ADHD: Health conditions and medical care utilization in periods before and after birth of the child. *Medical Care*, *47*(1), 105–114. doi:10.1097/MLR.0b013e31817e18c0

Rousseau, C., Measham, T., & Bathiche-Suidan, M. (2008). DSM-IV, culture and child psychiatry. *Journal of the Canadian Academy of Child and Adolescent Psychiatry*, *17*(2), 69–75.

Rowland, A., Lesesne, C., & Abramowitz, A. (2002). The epidemiology of attention-deficit/hyperactivity disorder: A public health view. *Mental Retardation and Developmental Disabilities Research Review*, *8*, 162–170. doi:10.1002/mrdd.10036

Rutter, M., Silberg, J., O'Connor, T., & Simonoff, E. (1999). Genetics and child psychiatry: Empirical research findings. *Journal of Child Psychology and Psychiatry*, *40*, 19–55. doi:10.1111/1469-7610.00423

Sonuga-Barke, E. J. (2002). Psychological heterogeneity in AD/HD—a dual pathway model of behaviour and cognition. *Behavioural Brain Research*, *130*(1–2), 29–36.

Sonuga-Barke, E. J., Daley, D., & Thompson, M. (2002). Does maternal ADHD reduce the effectiveness of parent training for preschool children's ADHD. *Journal of the American Academy of Child and Adolescent Psychiatry*, *41*(6), 696–702. DOI: 10.1097/00004583_200206000-00009.

Stevens, J., Harman, J. S., & Kelleher, K. J. (2005). Race ethnicity and insurance status as factors associated with ADHD, treatment patterns. *Journal of Child and Adolescent Psychopharmacology*, *15*(1), 88–96. doi:10.1089/cap.2005.15.88

Thapar, A., Holmes, J., Poulton, K., & Harrington, R. (1999). Genetic basis of attention deficit and hyperactivity. *British Journal of Psychiatry*, *174*, 105–111. doi:10.1192/bjp.174.2.105

Todd, R., Joyner, C., Sun, T., Reich, W., & Neuman, R. (2004). Family factors and sampling approach differentially influence attention deficit/hyperactivity disorder subtypes. *Molecular Psychiatry*, *9*, 260–263. doi:10.1038/sj.mp.4001406

Tumulty, K., Pickert, K., & Park, A. (2010, April 5). America, the doctor will see you now. *Time*, *175*(13), 24–32.

Turner, W., Wieling, E., & Allen, W. (2004). Developing culturally effective family-based research programs: Implications for family therapists. *Journal of Marital and Family Therapy*, *30*(3), 257–270. doi:10.1111/j.1752–0606.2004.tb01239.x

Waite, R. (2007). Women and attention deficit disorders: A great burden overlooked. *Journal of the American Academy of Nurse Practitioners*, *19*(3), 116–125

Waite, R., & Tran, M. (2009). Explanatory models and help-seeking behavior for attention-deficit/hyperactivity disorder among a cohort of postsecondary students. *Archives of Pyschiatric Nursing*, Retrieved from, http://www.sciencedirect.com.ezproxy2.library.drexel.edu/science?_ob=MImg&_imagekey=B6WB7-4XFXSSG-B1&_cdi=6703&_user=95578&_pii=S0883941709001162&_orig=search&coverDate=10%2F15%2F2009&_sk=999999999&view=c&wchp=dGLzVzb-zSkzk&md5=eb4a9ecc8a207ced4c44a2568e687dbf&=/sdarticle.pdf" DOI: 10.1016/j.apnu.2009.08.004

Weiss, M., Hechtman, L. T., & Weiss, G. (2000). ADHD in parents. *Journal of the American Academy of Child & Adolescent Psychiatry*, *39*(8), 1059–1061.

Weiss, M., & Murray, C. (2003). Assessment and management of attention-deficit hyperactivity disorder in adults. *Canadian Medical Association Journal*, *168*, 715–722.

Wells, K. C., Chi, T. C., Hinshaw, S. P., Epstein, J. N., Pfiffner, L., Nebel-Schwalm, M., . . .Wigal, T. (2006). Treatment-related changes in objectively measured parenting behaviors in the multimodal treatment study of children with attention-deficit/hyperactivity disorder. *Journal of Consulting and Clinical Psychology*, *74*(4), 649–457.