Chapter 10

The Impact of Attention Deficit/Hyperactivity Disorder in African-Americans; Current Challenges Associated with Diagnosis and Treatment

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Additional information is available at the end of the chapter

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1. Introduction

ADHD constitutes a serious issue in the African-American community. The Center for Disease Control and Prevention lists the African American males as leading other racial groups and gender in the diagnosis of learning and behavioral disorders, incarceration rates, new HIV infections, homicide and poverty. Although the reason for these observations are quite complex and multidimensional, some of the comorbidities found in untreated African Americans patients with ADHD include conduct disorder, oppositional defiant disorder, depression, anxiety disorders, learning disabilities, and alcohol or drug addiction. In addition, even though African American males living in poverty are most likely to be referred to mental health agencies for mental health services, they are the least likely to receive mental health services. In 2006, the number of children in the United States aged between 5 and 7 who were diagnosed with ADHD was 4.5 million. In the last decades the number of children diagnosed with ADHD who are on psychotropic medication continues to rise steadily. However, the impact of this steady rise has been skewed and not evenly distributed by ethnicity, socioeconomic status and gender as minorities (African Americans and Hispanics) are most often diagnosed or misdiagnosed. The incidence of ADHD appears to be similar in African-Americans and White populations. ADHD is diagnosed in 4.1% of all children with the greatest prevalence among Caucasian children (5.1%). However, when the prevalence of ADHD among male children are considered by race, African American children and adolescents are disproportionately diagnosed with ADHD, with an estimated prevalence rate of 5.65%, 4.3% for Hispanics, 3% for Whites; and 1.77% for females of all races. The prevalence of ADHD in African-Americans is most likely similar to that in the general population (3-5%); nevertheless, minority children have lower likelihood of receiving a diagnosis of

ADHD and of receiving any treatment. Reasons for this disparity are multifaceted and diverse and have not been fully elucidated. Among some of the identifiable barriers that attempt to explain these disparities are family-driven (parent, patient, and family) and Policy-driven (healthcare system and physician bias) obstacles.

The primary goals of treatment of ADHD are to decrease disruptive behaviors, enhance academic performance, improve interpersonal relationships with peers, family and friends, improve self-esteem, and promote independence. There are difficulties inherent in the diagnosis of ADHD. These include absence of specific diagnostic tests, the lack of specificity of symptoms, inability to observe symptoms that may not be present in an office setting, low rate of concordance in symptom-reporting among various informants (i.e. parents, teachers and parents) and a lack of a standard evaluative process. Although medical professionals may use different diagnostic routes to diagnose ADHD, most agree that the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) is the basis for an appropriate diagnostic process. Others have suggested the use of multiple methods of assessment which are culturally-sensitive and, which involves several people with varying degrees of relationship to the child to be the most effective way to reduce the bias associated with diagnosis. Whaley & Geller observed that the use of informal interviews and methods of assessment seem to increase the bias towards more diagnosis of ADHD towards African Americans. In recent years, following extensive research in this subject by major medical organizations such as the American Academy of Pediatrics (AAP) and the American Academy of Child and Adolescent Psychiatry (AACAP), guidelines have been published to assist physicians in making the diagnosis of ADHD. Efforts must be made to identify these barriers of the diagnosis and treatment of ADHD, awareness among healthcare providers, and the African-American and other Minority communities. The objective of this chapter is to examine the disparities in the diagnosis and treatment of ADHD in the minority groups in America, especially the African-American community, the factors associated with disparities and the impacts of these disparities. The strategies and interventions to address the issue will also be outlined.

2. Challenges in diagnosis and treatment of ADHD in African-Americans

2.1. Parent-driven barriers to care

2.1.1. Lack of knowledge/awareness about ADHD

Perceptions of ADHD-related symptoms among parents of African American children appear to differ in important ways from those of parents of White children. African American families from low to middle class incomes, compared with Whites, tend to view behavioral and emotional difficulties as problems of and for families, institutions and communities rather than as constituting individual psychopathology. It is not uncommon for African-American parents to perceive many of the symptoms and behaviors associated with ADHD to be variants of normal behavior and not in need of professional intervention. When compared with parents from other ethnic backgrounds, many African-American parents are not

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well-informed about the symptoms and treatment of ADHD. Indeed, studies suggest that African-American parents may be even more uninformed about ADHD, its causes, diagnosis and treatment than are parents form other ethnic and racial backgrounds. Bussing and colleagues (1998) conducted a study that sought to identify the differences in ADHD knowledge between 224 African-American parents and 262 White parents. They reported that only 69% of African-American parents compared with 95% of White parents had ever heard about ADHD ($p<0.01$), and that 36% of African-Americans knew "a lot", "some" or "a little" about ADHD, compared with 70% of White parents ($p<0.01$). In addition, as reported by African-American parents, only 18% of them received information about ADHD from their physician, compared with 29% of White parents ($p<0.01$). Equally important, the study found the effects of ethnicity on ADHD familiarity were independent of other covariates, such as socioeconomic status. Furthermore, the lack of knowledge about ADHD among the African-American community has been described as a "vicious cycle" that may be caused when members of this community seek medical advice from other individuals within their own ethnic background who are equally uninformed about ADHD.

2.1.2. Fear of over-, under-, and misdiagnosis

ADHD in African-American children is associated with comorbid disruptive behavior; mood and anxiety disorders. However, African-American families may not attribute the symptoms of ADHD to the disorder itself and are less aware than White families about the etiology of ADHD. For example, sugar intake has been reported as a common explanation for the symptoms of ADHD among members of the African-America community. ADHD symptoms in African-Americans are frequently missed or incorrectly diagnosed and comorbid disorders go unattended. African-American parents feel more uneasy than White parents about treating their children with pharmacologic interventions. Dos and other investigators evaluated parental perceptions of stimulant medication for the treatment of ADHD; they demonstrated that significant numbers of non-whites parents (63%) than white parents (29%) thought that counseling was the best choice of treatment, whereas 59% of white parents of white parents preferred medication over counseling compared with 36% of non-white parents. In addition, 16% of non-whites compared with 5% of white parents believed that the use of stimulants would lead to drug abuse. School officials are more likely to assign African-American children to special education classes (which is the only educational resource employed to address many black children with ADHD), although many of the symptoms they display may be resolved with proper treatment that would allow them to remain in their regular classes. Between 1980 and 1990, black children were placed in special education at more than twice the rate of whites.

2.1.3. Fear of social stigma

African-American parents (57%) are more likely to believe that their children's race or ethnicity and fears of being "labeled" remain one of the important factors preventing acceptance of the diagnosis and treatment of children with ADHD. Many parents fear the perceived social stigma of ADHD diagnosis, and some fear overdiagnosis and misdiagnosis.

The stigma of ADHD and lack of information about ADHD were found to be significant barriers to treatment of ADHD among African Americans [Table 1]. In their survey study, Omolara and colleagues (2007) found evidence of racial concerns about the stigma of ADHD diagnosis among African American participants. While some believe that a diagnosis of ADHD "gives children a label for the rest of their lives', others viewed that medicalization as a form of social control with historical roots.

In addition, pressures from family and friends to refrain from seeking treatment, fear of jeopardizing future employment or ability to serve in the military, concerns that parental skills will be questioned, and fear of the unknown are other factors that have been described by patient and families and these are thought to impact the diagnosis and treatment of ADHD. The African-American population fear of the unknown may be related in part to the consequences of the Tuskegee Experiment, which caused many in the community to lose trust in the field of medical research. However, African American health professionals were even found to be less likely to diagnose ADHD or prescribe stimulant medication treatment due to their social and culturally constructed views of the disorder.

It has also been demonstrated from studies that a substantial proportion of children from all races who are at a high risk for ADHD drop out of care, and that adolescent perceived stigma about ADHD is influential, above and beyond the perspectives of parents.

	African-American	White
Familiarity with ADHD		
"Not at all familiar" with ADHD	10%	2%
ADHD is a "very serious" condition	36%	28%
Know someone diagnosed with ADHD	56%	78%
Have a child with ADHD who is receiving treatment	46%	60%
Cultural Perceptions and Beliefs		
African Americans are more likely than other ethnic groups to be diagnosed with ADHD	41%	13%
African-American children are told more often than children of other ethnic groups that they have ADHD	33%	8%
Teachers are more likely to suspect ADHD in African-American children with learning or behavioral problems than in other ethnic groups	45%	12%
Very concerned about what others may think	13%	5%
Concern about treatment based on race or ethnic background prevents parents from seeking proper treatment	36%	13%
Limited access to healthcare professionals knowledgeable about ADHD prevents children from receiving appropriate treatment	44%	39%
Aware of treatments that help to lessen the symptoms of ADHD	66%	84%
Have sought help from a medical professional for suspected ADHD	86%	94%
Would be very concerned if their child was diagnosed with ADHD	71%	53%
Know where to go for help if their child is diagnosed with ADHD	64%	79%

Table 1. Most prominent difference between African-American and white respondents in perceptions and attitudes about ADHD

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2.2. Health system/clinician-driven barriers

A substantial number of obstacles to the successful diagnosis and successful treatment of ADHD overall are related to limitations in the diagnosis and treatment of ADHD in African-American patients. While some of these barriers are easier to remove, others may prove more difficult. Some of these barriers are race or ethnicity-related, while others may be attributable to limited access to healthcare or insurance coverage, low socioeconomic status of African-American patients and a dearth of culturally-competent mental healthcare providers. Bussing et al. (2003) found that African American children were less than half as likely to be assessed, diagnosed, and treated for ADHD as Caucasians. Their research survey among African American parents to determine common barriers to help seeking for their children with symptoms of ADHD found that across race, the most commonly cited barriers are system barriers, no perceived need and negative expectations of treatment outcomes.

2.2.1. Lack of culturally competent healthcare providers

It has been reported that during clinician-patient encounter, negative social stereotypes are known to shape behaviors and influence decisions made by healthcare providers. Race and ethnicity is known to adversely influence the medical care provided for other medical conditions. Minority patients with ADHD are likely to be affected by this practice as well. Historically, there has been a disproportionate pattern of diagnosis among minority populations in the category of disability. While some of this pattern of diagnosis may be related to minorities being disproportionately exposed to risk factors and psychosocial stressors and are more likely to be economically disadvantaged, the commonly used instruments of assessment which could provide misleading or invalid results when used alone to assess patients from various cultural backgrounds may explain the this phenomenon. Frequently, the quality of healthcare delivered is compromised when healthcare providers are culturally insensitive to patients. There are important cultural differences among individuals of diverse ethnic backgrounds pertaining to their attitudes and beliefs of illness, choice of care, access to care, and degree of trust toward authority figures or institutions and tolerances for certain behaviors. Investigators may have to use culturally sensitive diagnostic tools to assist them in uncovering important aspects about ADHD that may be unique to the African-American population.

2.2.2. Healthcare provider/teacher bias or prejudice

Humans have the inclination to perceive or label other people or things based on their initial impressions or due to harboring elements of discrimination and stigma. Healthcare workers and physicians who care for mental health patients are not exonerated from this attribute. Eack and colleagues (2008) reported that African-Americans were three times more likely as whites to receive a diagnosis of schizophrenia based on the physician perception of the truthfulness, suspicion of symptom denial, poor insight or "uncooperativeness" of their African-American patients. Without a good understanding of cultural nuances that may provide clues about other possible diagnoses and the stigma associated with a diagnosis of mental illness among the Black community, white

physicians may view black patients with suspicion which may color or affect their clinical judgment. Interestingly, the same study reported that this disparity did not appear to affect other US minority groups, such as Hispanics.

Conscious (Explicit) or unconscious (Implicit) bias or prejudices held by healthcare providers and sometimes racially-motivated discrimination by mental healthcare personnel can cause the cross-cultural diagnosis of ADHD to be challenging. In addition, biases expressed by the evaluators, interviewers or the researcher may influence the outcomes of scoring the behavioral expressions of African-American children. Depending on this held biases or cultural expectations of what constitutes "normal behaviors", non-African American evaluators may rate American-American children with higher levels of hyperactive or disruptive behaviors even when the behavior is normal within the context of cultural expectations. It is not uncommon for parents and patients of ethnic minorities to report discrimination in receiving health care. Gingerich and colleagues (1998) reviewed several comparative studies in the 1970 which used teachers' ratings to compare the prevalence of hyperactivity, a component of ADHD among ethnic minorities and white children. They reported one large study conducted using 1700 elementary school children from rural and urban Texan locations in which African-American children were rated as more hyperactive than expected based on their representative population when compared with schools located in white, middle-class neighborhoods where they found that the frequency of hyperactivity was consistent across all ethnic groups. The biases held by health care workers or mental health service providers can result in either under or over-diagnosis of ADHD in African-American children.

2.2.3. Dearth of African-America healthcare providers

This factor may prevent the optimal care of Africa-American children with ADHD. More minority clinicians are needed to alleviate the intercultural issues of trust and communications that often arise. In 1985, out of the 30,000 Psychiatrists registered to practice in American, only about 600 were Black (Bell, Fayen & Mattox, 1998). In spite of the efforts and progress made in promoting diversity of healthcare professionals among the physician workforce, the concern about a lack of diversity continues to be an impediment to access and care, especially in the minority populations. Thus, despite some initial progress, African Americans, Latinos/Hispanics, and Native Americans continue to be underrepresented in the U.S. physician workforce. The American Medical Association Council on Medical Education Report 7 (2007) put the total number of US physicians involved in patient care in 2006 as 723,118. When categorized into Race/Ethnicity, 71.4% of these physicians were white, 15.8% were Asian, 6.4% were Hispanic, and 4.5% were Black/African-Americans. The American Medical Association report in 2012 puts the total number of Black physicians in the workforce at 3.5%, indicating a decline (Table 2). Complicating access to care, most of these physicians set up their practices in urban areas to the detriment of rural communities.

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2.2.4. Limited access to mental health care

African-American families are less likely than their white counterparts to have access to the healthcare system. This may partly be due to the lower socioeconomic class and higher poverty levels among African-Americans. African-Americans tend to lack insurance coverage for psychiatric or psychological evaluations, behavior modification programs, school consultations, parent management training, and other specialized program. Substantial costs barriers exist resulting in out-of-pocket costs. Pastor and Reuben reported a significantly wide and long-standing gap in the rate of the diagnosis of ADHD based on the type of health insurance coverage. They reported that those with Medicaid insurance are most likely to be diagnosed with ADHD, followed by those with private insurance coverage, while those without insurance ended at a distant third. Even when they have insurance, the capitation imposed by the State Mental Health Services further makes access to care very difficult or inadequate, especially, for African Americans and other minority populations. Low income African American caregivers are often frustrated and feel helpless while trying to navigate the maze of the care system. There is no funded special education category specifically for ADHD. This limited access to healthcare system will contribute to less diagnosis of ADHD

Race/Ethnicity	Number	Percentage
White	519,840	54.5
Black	33,781	3.5
Hispanic	46,507	4.9
Asian	116,412	12.2
American Native/Alaska Native	1,594	.16
Other	13,019	1.3
Unknown	223,071	23.4

Total physicians by race/ethnicity – 2008

(Total physicians = 954,224)

Table 2. Source: Physician Characteristics and Distribution in the US, 2010 Edition. American Medical Association.

3. Impact of ADHD in African-Americans

Comorbidities associated with ADHD include Conduct Disorders, Opposition Defiant Disorders (ODD), Depressive Disorders, Anxiety disorders, Learning disabilities and Alcohol and Drug addiction. Samuel and colleagues (1999) stated that African-American children with ADHD have higher levels of comorbid psychopathology (Opposition Defiant Disorder, Severe Major Depression, Bipolar Depression, and Separation Anxiety) than in African-American controls. They also reported that when compared to their Caucasian counterparts,

African-American youths have a tendency to be more resistant or unable to seek treatment, only doing so when their symptoms are more severe. This may be responsible for a broader spectrum of the severity of ADHD symptoms in African-American youths. Epstein (2005) attributed the exhibition of more ADHD symptoms in African-American youths to fact that they are exposed to more ADHD-related risk factors. This concept was supported by Stein and colleagues (2002) who reported that African-American youth may be exposed to these risk factors at higher rates other than other youth, which may account for the higher prevalence of ADHD in African-Americans. In the general population, some of the risk factors associated with the development of ADHD and related pathology include low socioeconomic status (SES), juvenile detainee status, prenatal marijuana exposure and exposure to environmental toxins. Lead, one of the most thoroughly studied environmental toxins, is linked to impaired attention, hyperactivity, and aggression even at low levels of exposure. Bazargan and colleagues (2005) found that African-Americans living in Public Housing reportedly have higher incidence of ADHD than in the general population as a whole (19%) as compared to the pooled rate of 5%. The increased exposure resulted from paints used in housing before 1950s which contained a high percentage of lead. Other risk factors attributable to higher incidence of ADHD in African-Americans include low socioeconomic status, lack of access to healthcare (Kendall & Hatton, 2002) and high incidence of low birth weight (Breslau & Chilcoat, 2000). The higher incidence and symptomatology of ADHD in African-Americans has its consequences some of which will be further elucidated.

3.1. ADHD among African-American youth and the criminal justice system

There appears to be an epidemic of incarceration, especially of African-American males in the United States of America. Compared to the rest of the industrialized world, America has the highest rate of incarceration, currently at about 738 per 100,000. The Justice Department reports that there are about 2.3 million inmates incarcerated in America. In 2010, Dick and Sharon Kyle, a pair of citizen journalists and information activists reported (www.LAProgressive.com) in an article titled "More Black Men in Prison than Were Enslaved II" that by race, Black males continued to be incarcerated at an extraordinary rate. They pointed out that Black males make up 35.4 percent of the jail and prison population, even though they make up less than 10 percent of the overall U.S population. They also observed that four percent of U.S. black males were in jail or prison in 2009, compared to 1.7 percent of Hispanic males and 0.7 percent of white males. This translated to black males being locked up at almost six times the rate of their white counterparts.

Black and colleagues (2010) reported that although Attention Deficit/Hyperactivity Disorder (ADHD) is associated with comorbid psychiatric diagnoses and antisocial behavior that contribute to criminality, yet studies of ADHD in offenders are few. Out of the 319 offenders they evaluated using the Mini International Neuropsychiatric Interview and Medical Outcome Health Survey; ADHD was present in 68 (21.3%) subjects. Offenders with ADHD were more likely to report problems with emotional and social functioning and to have a higher suicide risk scores. Other psychopathologies identified in offenders with ADHD include higher rates of mood, anxiety, psychotic and somatoform disorders. They are also more like-

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ly to have antisocial and borderline personality disorders. To reduce the impact of ADHD on the rate of incarceration of African-American youth, they recommended that Prison Administrators be trained to recognize the symptoms of ADHD and recommend offenders for further intensive screening rather than commitment to prisons first.

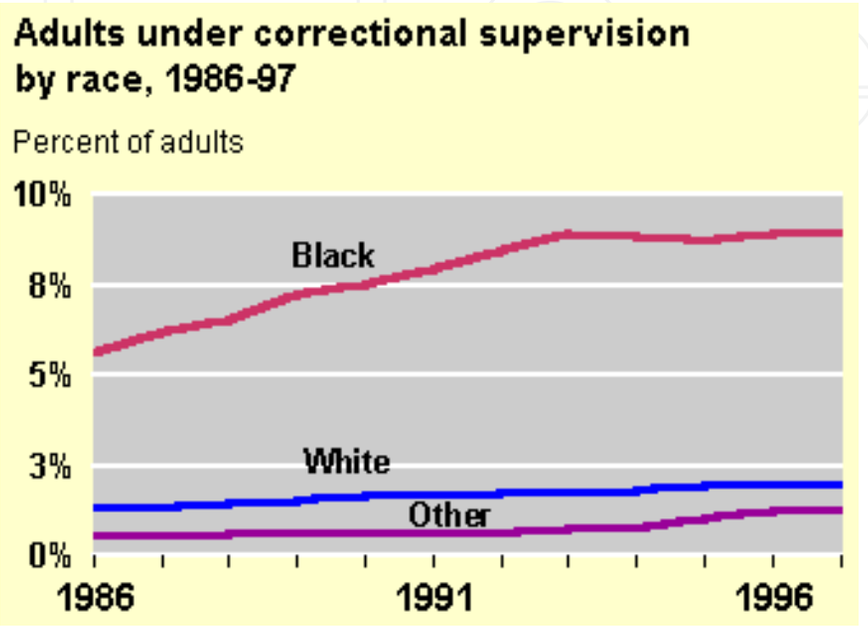

Figure 1. Source: www.prisonerhealth.org

Figure 2. Source: Justice Policy Institute Report: The Punishing Decade, & U.S. bureau of Justice Statistics Bulletin. NCJ219416. Prisoners in 2006.

3.2. ADHD and substance abuse disorder in African-Americans

Records show that many American youth are caught up in our juvenile justice system. Significant proportions of the arrests are due to either possession of or use of substances, particularly marijuana and crack cocaine. The United States Department of Justice puts the estimate of yearly arrest of juveniles at 2.5 million with approximately over a 100,000 youth under the age of 18 years incarcerated daily. Minority youth in the African-America and Hispanic population are overrepresented, accounting for more than 60% of juvenile offenders in the juvenile justice system. Interestingly, many of these detained youth have psychiatric disorders and are housed in detention facilities that lack mental health services, thereby compounding the problem.

Individuals with substance abuse disorders exhibit hyperactivity, inattention and impulsivity which are core symptoms of ADHD. These symptoms may promote antisocial behaviors which may contribute or exacerbate substance use or abuse. Conversely, substance use could worsen the symptoms of ADHD.

Studies of substance abusers and delinquents revealed a higher prevalence of ADHD comorbidity. ADHD is associated with an earlier onset of psychoactive substance use disorders, independent of psychiatric comorbidities. Retz et al. (2007) stated that children with ADHD show higher levels of substance use disorder comorbidity, particularly when it is associated with social maladaptation and antisocial behavior. Addicted delinquents with ADHD showed worse social environment and a higher degree of psychopathology, including internalizing and externalizing behaviors, when compared to addicted delinquents without ADHD. Retz and coworkers (2007) systematically examined 129 young male prison inmates for ADHD and substance use disorder. They found that 64.3% showed harmful alcohol consumption and 67.4% fulfilled DSM-IV criteria for any drug abuse or dependence. Further analysis showed that 28.8% of the participants had a diagnosis of ADHD combined type and 52.1% showed ADHD residual type. The outcome of these results should suggest adequate therapeutic interventions for addicted young prison inmates, considering the ADHD comorbidity, which is associated with additional psychopathology and social problems.

3.3. ADHD, African-American children/youth, and the school system

The core symptoms of ADHD, hyperactivity, inattention and impulsivity, are associated with poor developments in several areas of normal functioning. This may be reflected in African-American children with ADHD as poor academic achievements and comportment at school. Biederman and other investigators found that while hyperactivity declines over the course of the disorder, inattention symptoms persist into adulthood. Currie and Stabile, (2006) stated that this persistence of the inattention component of ADHD may be associated with numerous functional deficits, including educational failure. ADHD symptoms affect social functioning, interactions with teachers, peers, siblings and overall quality of life. Non-African-American teachers are more likely to rate African-American children as more hyperactive and disruptive in class than children from other ethnic backgrounds. The Office of Special Education Report (2005) revealed that although African-American children represent

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only 15% of the US population in 2001, they were overrepresented in specific learning disabilities (18%), mental retardation (34%) and are more likely to be emotionally disturbed (28%). The National Center for Education Statistics (2001) documented that African-American males make up the majority of students described as "emotionally disturbed" and are more likely to be suspended, expelled from school or subjected to corporal punishment than their white or female peers. In addition to living in extreme poverty and other social dysfunctions, it has been suggested that ADHD may be contributory to the high rates of school drop-out among African-American youth

3.4. The economic impacts of ADHD on African-American families

There is evidence that ADHD places a substantial economic burden on patients, their families and third-party payers. Pelham and his colleagues (2007) projected that the economic impact of education and medical services for children diagnosed with ADHD as at 2005 was conservatively estimated at $36-$52 billion per year, which makes ADHD an important economic and social issue. It is also true that most African-American families live in poverty and are less likely to be insured or have access to mental health services. ADHD leads to increased costs in healthcare and other domains, which is likely to have economic implications for African-American families, their children with ADHD diagnosis and the society in general. Das and colleagues documented a correlation between ADHD, employment status and financial stress in middle-age individuals with ADHD. They also reported significant impairment in health, personal and social domains in their study group.

The economic implications of ADHD on African-America families may include the costs related to common psychiatric and medical comorbidities of ADHD, the indirect costs associated with work loss among adults with ADHD, the costs of managing accidents among individuals with ADHD and the costs associated with the legal issues engendered by the criminality and deviant behaviors among individuals with ADHD. Chow and colleagues (2003) reported that the economic difficulties imposed on African-Americans due to poverty and lack of health insurance makes it more likely that African-Americans resort to the use of emergency services when they receive mental health care.

3.5. ADHD and the risk of sexually transmitted diseases among African-Americans

A comparative study on self-reported risky sexual behaviors was conducted by Flory and colleagues (2006) in young adults (ages 18 to 26) with and without childhood attention deficit/hyperactivity disorder diagnosis. Among the participants were 175 males with a Pittsburg Longitudinal Study (PALS) diagnosis of childhood ADHD. The controls were 111 demographically similar males without childhood ADHD diagnosis. The conclusion drawn from this study is that childhood ADHD predicted earlier initiation of sexual activity and intercourse, more sexual partners, more casual sex, and more partner pregnancies. Although they pointed out that childhood conduct problems did contribute significantly to risky sexual behaviors among participants with ADHD, they also observed an independent contribution of ADHD, which suggested that the characteristic deficits of the disorder or other associated features may be useful childhood markers of later vulnerability. White and col-

leagues (2012) reported that ADHD symptoms were associated with greater sexual victimization during adolescence and engagement in risky sexual behaviors. The same study also found a strong association between ADHD symptoms, sexual victimization as well as risky sexual behaviors which is stronger for black women than their white counterparts. Risky sexual behaviors result in increased incidence of Sexually Transmitted Diseases (STDs), HIV/AIDS and unplanned teen pregnancies among African-American youth. Currently, The Center for Disease Control and Prevention (CDC) ranks African-American males as leading other races and gender groups in incarceration rates, new HIV infections, homicide deaths, poverty rates, and diagnosed learning disorders. In addition, the 2011 CDC Report on "African Americans and sexually Transmitted Diseases" showed that STDs take an especially heavy toll on African Americans, particularly young African American women and men. Although African Americans represent just 14 percent of the U.S. population, yet they account for approximately half of all reported chlamydia and syphilis cases and almost three-quarters of all reported gonorrhea cases.

3.6. Impact of ADHD on family structure and cohesion among African-Americans

Das and colleagues reported that inattention symptoms associated with ADHD significantly affects multiple life domains in mid-life. Marriages, spousal relationships, social interactions and health-related quality of life are all negatively impacted by ADHD symptoms. The families of children with ADHD have to contend with a greater number of behavioral, developmental and educational disturbances which often requires that more time, commitment, logistics and energy be spent. ADHD can put a strain on family relationships, especially for partners that have different views on discipline and parenting styles. The stress may be elevated if either parent feels they are bearing the burden of dealing with the child with ADHD, like taking time off to deal with behavioral problems, school attendance, medical consultations or meeting as part of ADHD management. Parents can feel overwhelmed or find it challenging to cope with their child's disruptive behaviors. Parents may feel socially isolated if they start avoiding social events or family gatherings in hope of avoiding behavioral problems associated with their child's diagnosis. The child with ADHD may unintentionally hurt other kids or their siblings during plays or damage property, thereby causing strained relationships. Spousal relationships may be strained. There is the danger of both or either parents spending so much time on the child with ADHD that they do not spend enough time cementing their relationship as couples. This may lead to domestic conflicts, violence and sometimes divorce. The level of attention paid by parents to the child with ADHD may engender sibling jealousy and rival with the family

4. Conclusion

Strategies and interventions

A number of strategies and interventions have been suggested to improve outcomes and reduce the impact of ADHD in African-Americans. These should be targeted at early diagno-

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sis and treatment of ADHD, increasing awareness about ADHD, removing the stigma of mental illness, elimination of healthcare disparities, enabling access to healthcare and teaching the benefits of ADHD treatment. The importance of early diagnosis and prompt treatment cannot be overemphasized. Instead of using one-size-fits-all or the traditional diagnostic parameters, clinicians should incorporate ethnically-sensitive structured parent questionnaires or rating scales to aid in the diagnosis of ADHD in African American children. It is also suggested that care be tailored to suit the needs of African-American children with ADHD and their care-givers. This may engender more corporation and acceptance of a diagnosis of ADHD in their children and compliance with treatment programs. It is important to have an integrated health care system where patients and their families can have greater access to culturally sensitive materials or programs that will educate them about the symptoms of ADHD and the benefits of proper treatment that will improve behaviors. Parents, caregivers and mental health counselors should be involved in all the stages of diagnosis and treatment planning of African-American children with ADHD. This strategy will enable them to become partners in their own care and secure their cooperation as much as possible. This will also decrease the rate of discontinuity of care since management of ADHD of ADHD requires adherence to treatment regimens and medical appointments.

Odom and colleagues evaluated and demonstrated the usefulness of increasing awareness of ADHD through educational intervention in mothers, predominantly African Americans and reported increase in parental confidence and satisfaction among those who were taught about ADHD; since these qualities are needed in coping with this chronic illness. Same education and training should be provided to teachers who serve the African American populations.

As earlier stated, clinicians may consider using ethnically sensitive, structured questionnaires or rating scales to aid in the diagnosis of ADHD in African Americans. Obtaining a thorough medical history, conducting a thorough physical examination and utilization of guidelines on the diagnosis and evaluation of ADHD is imperative rather than relying too heavily on questionnaires for the diagnosis of ADHD.

Substantial strides at improving outcomes can be made by clinicians and healthcare providers by initiating pilot programs that will track the efficacy of a longitudinal care model whereby primary care physicians will collaborate with mental healthcare professionals. Furthermore, schools, primary care providers and service agents should be incorporated into this collaborative effort to monitor symptoms of ADHD and the response to treatment since a successful management of ADHD is contingent on cooperation and open communication among these caretakers. It is very important that adequate numbers of minority healthcare providers be accessible in schools, clinics and hospitals to address the potential issues of cross-cultural bias and mistrust. Thus, healthcare organizations must recruit and retain a diverse staff whose demographic characteristics are representative of the service area

Healthcare institutions must consider ways of offering improved access to medical services and raising the level of awareness in the community. For example, community events, churches and day care centers could be used to disseminate information and teach about

ADHD in order to raise awareness regarding the importance of treatment and to lessen fears of stigmatization in the community.

It is important that care be tailored to suit the needs of various ethnic groups, such the African American community. Culturally competent medical care ensures that all patients will receive care that is compatible with their cultural beliefs and practices. The need to increase cultural competence in healthcare is described in detail in "Healthy People 2010", which is a statement of national health objectives that are designed to identify the most significant preventable threats to health and to establish national goals to reduce these threats. The criminal code of sentencing and guidelines for African-Americans with a diagnosis of ADHD needs to be reviewed with a view to the elimination of the zero tolerance policy. Instead of confining African American youths to the prison In conclusion, healthcare providers must be diligent in their commitment to reduce or remove barriers to the proper diagnosis and treatment of ADHD in African Americans. There is the need to increase awareness in the African American community regarding the symptoms of ADHD and its treatment, and to improve cultural awareness and sensitivity towards African-American patients among clinicians to reduce the challenges involved in the cross-cultural diagnosis.

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