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# Mental Health Service Utilization Among African-American Adolescents

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**MENTAL HEALTH SERVICE UTILIZATION AMONG  
AFRICAN-AMERICAN ADOLESCENTS**

by

**MARILYN FRANKLIN**

**DISSERTATION**

Submitted to the Graduate School

of Wayne State University,

Detroit, Michigan

in partial fulfillment of the requirements

for the degree of

**DOCTOR OF PHILOSOPHY**

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MAJOR: PSYCHOLOGY (Clinical)

Approved by:

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## DEDICATION

*This dissertation is dedicated to Zoey, my mother, my father, Brian, Billy, Mony and Abe. I could not have done this without any of them. They made me into the person that I am by being the exemplary people that they are and by letting me know that I have been loved every minute of my life. I can't help but to think I must have been a really great person in my past life in order to have been given such a great family in this life. They have given me the strength, motivation, and resources to keep moving forward in this process. I will forever be grateful for all of the encouragement, support, and patience they have provided me throughout this process. The sacrifices that my mother has made to support me in finishing graduate school are monumental, even though she acts like it's no big deal. It is a debt that could never be repaid. I can only hope that one day I am half as good of a mother to my daughter as my mother has been to me. For the past three decades, I have never had a conversation with my father that did not end with him telling me that he loves me and is proud of me. It means more to me than he could possibly know. Brian kept me going when I desperately wanted to quit and reminded me of just how important it was for me to finish in those times when I forgot. I am so lucky to have found a partner who lifts me up and supports me unconditionally in all of my endeavors. This dissertation is also dedicated to my family and friends that have forgiven my absence at countless celebrations and important events in pursuit of this degree. It is also dedicated to all of my adolescent clients in both New York and Detroit, who inspired and continue to inspire me to become a better clinician and researcher.*

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## CHAPTER 1

### Introduction

The 2010 United States Census found that there were 74.2 million children in the United States, and 24.8 million of those children were adolescents between the ages of 12 and 17. The overall proportion of children in the population, currently 24%, is projected to remain roughly the same over the next forty years (Federal Interagency Forum on Child and Family Statistics, FIFCFS; 2011). The racial and ethnic diversity of the United States has increased dramatically over recent decades, and continues to increase most rapidly among youth. At the time of the 2010 Census, 54% of children were non-Hispanic White, 23% were Hispanic, 14% were Black, and 4% were Asian. Population projections by the U.S. Census predict that by 2050 the percentage of Hispanic children will increase to 39% of the population, the percentage of White children will decrease to 38%, the percentage of African-American children will decrease to 13%, and the percentage of Asian children will increase to 6% (FIFCFS, 2011). More than half of the nation's children and adolescents are predicted to be ethnic minorities by the year 2023 (FIFCFS, 2011). These anticipated population changes in diversity make it important to better understand the relation between race/ethnicity and mental health service utilization among adolescents.

Although the majority of adolescents experience non-pathological development, a significant number experience mental health problems. Several epidemiological studies have documented a wide range of prevalence rates of emotional, behavioral, and cognitive problems among youth in the United States, ranging from 5% to 49% (Angold & Costello, 1995; McKay, Stoewe, McCadam, & Gonzalez, 1998; Richardson, 2001; United States Department of Health & Human Services (USDHHS), 1999). Recent data from the National Survey of Comorbidity-

Adolescent indicates that the prevalence of any psychological disorder in youth aged 13 to 18 is 46.3%, with 21.4% of youth experiencing a disorder classified as severe (Merikangas et al., 2010).

Despite the availability of effective treatments for mental health problems experienced among adolescents, the majority of adolescents with mental health needs do not receive mental health services. Estimates of youth with unmet mental health needs range from 50% to 70% among those with mental health concerns (Kataoka, Zhang, & Wells, 2002; Leaf et al., 2006; Merikangas et al., 2011; USDHHS, 1999). Further, among youth who do receive mental health services, many do not receive an adequate level of treatment (Brookman-Frazee, Haine, Gabayan, & Garland, 2008; Power, Eiraldi, Clarke, Mazzuka, & Krain, 2005; Thurston & Phares, 2008; USDHHS, 1999). There is substantial evidence of racial and ethnic disparities in the utilization of mental health services among adolescents.

Although rates of mental disorders are similar among ethnic minorities and Whites, minorities are less likely to receive mental health services and more likely to receive poor quality mental health services (USDHHS, 2001). Fox and colleagues (2007) analyzed two national data sets of adolescents, and found almost half of minority adolescents had unmet mental health needs in comparison to less than a third of White adolescents. Underutilization of mental health services by racial/ethnic minorities has been identified by the U.S Department of Health and Human Services (2001) as a major public health threat.

Racial/ethnic disparities in adolescent mental health care utilization must be better understood before they can be addressed. Research on the factors that predict mental health service utilization among African-American adolescents is particularly important due to the reported high rates of unmet need and challenges faced by this population. Existing research has

identified multiple facilitative and prohibitive predictors that are associated with the likelihood of mental health service utilization among adolescents. The generalizability of these findings to low-income African-American adolescents is uncertain, due to large variation in sample populations. Much of this research literature identifies differences between ethnic groups rather than focusing on the factors that have been associated with utilization within one specific ethnic group. Further, many studies focus on multiple predictive factors separately, which limits the ability to clarify which factors are most influential and important to target in attempts to increase utilization. The current study examined adolescent and parent factors that may facilitate mental health service utilization or serve as prohibitive factors in utilization among low-income, urban African-American adolescents. Potential facilitating factors included in the current study were levels of adolescent psychological symptoms, adolescent functional impairment, and caregiver strain. Potential prohibitive factors examined were attitudes towards adolescent treatment and barriers to treatment. The role of adolescent and parent perceptions of stigma in mental health service utilization were also explored, as stigma has been identified as particularly important to understanding the underutilization of treatment among African-American youth.

## **Background**

### **Importance of Mental Health Service Utilization among African-American youth.**

African- American adolescents are more likely to live in poverty than adolescents of other ethnic backgrounds. Data from the 2009 U.S. Census Bureau showed that approximately 36% of Black children were living in poverty, compared with 33% of Hispanic children and 12% of White, non-Hispanic children (FIFCFS, 2011). Further, children living in mother only or female headed households are five times more likely to be impoverished than children in two parent households (FIFCFS, 2011). According to the 2006 U.S. Census, Black adolescents were least likely among

all ethnic groups to live with two parents (National Adolescent Health Information Center, 2008). These characteristics are widely acknowledged as risk factors for maladaptive outcomes among youth.

African-American adolescents are likely to live in neighborhoods that have been impacted by poverty. Living in a disadvantaged neighborhood is associated with exposure to community crime, gang induced violence, drug infestation, and substandard or unstable housing conditions (Gonzalez, 2005; Xanthos, 2009). Youth living in these neighborhoods are at a greater risk of ending up in prison or dying from gun-related accidents, and are at a higher risk for developing disorders such as post-traumatic stress disorder (Xanthos, 2009). Living in deprived neighborhoods has also been associated with increased levels of aggression, anxiety, delinquency, depression, social withdrawal, poor quality education and low grade point average (Xanthos, 2009). Further, African-American parents living in impoverished neighborhoods may experience high levels of stress that may contribute to more irritable, authoritarian, and rejecting interactions and weakened relationships with their adolescent children (Xanthos, 2009). African-American adolescents that are exposed to these neighborhood and family characteristics may be at an elevated risk for developing emotional and behavioral problems (Copeland, 2006; Lindsey et al., 2010).

Poorer quality of mental health care is also associated with African-American families living in poverty (USDHHS, 2001), including under-diagnosis and ineffective treatment of mood disorders, prescribing of older and/or less utilized antidepressant medications, and over-diagnosis and treatment for psychotic disorders (Holden & Xanthos, 2009). With respect to African-American adolescent males, there may be over-diagnosis of conduct disorder and under-diagnosis of depression and suicidality (Holden & Xanthos, 2009). Holden and Xanthos (2009)

postulate that poorer quality of care is related to lack of cultural competency and bias in service delivery. Evidence for lack of cultural competency is described in terms of clinicians failing to take sociocultural context into account in identifying symptoms and diagnosing disorders, and a lack of diverse samples in research evaluating evidence based procedures.

Research on mental health service utilization has largely focused on family income rather than the residential context of youth. While family income is an important predictor of utilization, the socioeconomic level of the community is related to the availability and accessibility of mental health services and providers. Cummings (2014) investigated the impact of county residential context on mental health service use among depressed adolescents. This author found that adolescents in less affluent counties were less likely to receive services, even after controlling for family income. This suggests that families living in less affluent counties face similar socioeconomic barriers to treatment, regardless of family income. African-American youth living in poor counties are already at a high risk for negative outcomes, and this risk is likely to be exacerbated by the presence of mental health issues. It is important to identify the factors that play a part in mental health service utilization in order to improve long-term outcomes for African-American adolescents living in impoverished communities independent of family income level. The current study focuses on a sample of African-American adolescents in a relatively low income urban area, and also considers the role of family income in the likelihood of adolescents' mental health service utilization.

Interestingly, Cauce and colleagues (2002) reported that among African American adolescents living in urban areas, the concept of adolescence may be different than other populations. The authors discuss research that shows that African American youth might move directly from childhood to adulthood due to blurred generational boundaries, age condensed

families, and culturally defined expectations and definitions for successful outcomes prominent in urban environments. This is presumed to lead to adolescents taking on adult like or developmentally ambiguous roles from younger ages. It is unclear how this may or may not be related to decisions to seek mental health treatment among African-American adolescents. However, the current study examined both adolescent and caregiver perspectives on treatment related issues, which allows for exploration of the relative influence of adolescent and caregiver perspectives on treatment engagement.

**Importance of Addressing Mental Health Issues in Adolescence.** Adolescents may be particularly vulnerable to developing mental health problems due to the physical, mental and emotional changes associated with this stage of development (Xanthos, 2009). Further, changes in brain development and hormones may make adolescents more vulnerable to depression and prone to more risky behaviors than children or adults (Schwarz, 2009). Many children and adolescents experience a sub-threshold level of symptoms that may cause significant distress or impairment without meeting the criteria for formal diagnosis of a psychological disorder (Thomas, Temple, Perez, & Rupp, 2011). Even when considering just diagnosable disorders, estimates suggest that as many as one in five adolescents suffer from mental illness (Thomas, Temple, Perez, & Rupp, 2011). Kessler and colleagues (2012) analyzed recent data from the National Comorbidity Survey- Adolescent Supplement (NCS-A) which included 10,000 adolescents ages 13 through 18. These authors identified the 12-month prevalence estimates for various disorders experienced by adolescents. The 12-month prevalence rate for experiencing any disorder was 40.3% of adolescents. Anxiety disorders (agoraphobia, generalized anxiety, social phobia, specific phobia, panic disorder, PTSD, and separation anxiety) had the highest prevalence rates, with 24.9% of adolescents meeting criteria for these disorders. Behavior

disorders (ADHD, oppositional defiant disorder, conduct disorder, and eating disorder) were identified among 16.3% of adolescents. Mood disorders (major depressive disorder, dysthymia, and bipolar I or II disorder) were found among 10.0% of adolescents. Substance abuse disorders were the least prevalent, with 4.7% of adolescents reporting alcohol abuse and 5.7% of adolescents reporting drug abuse. With respect to African-American adolescents, there was a higher prevalence rate of anxiety disorders and a lower prevalence rate of substance abuse disorders.

Suicide is the third leading cause of adolescent death, with an estimated 500,000 to 1,000,000 suicide attempts among 15 to 24 year olds each year (Schwartz, 2009). Male adolescents have higher rates of completed suicide, but female adolescents have higher rates of suicide attempts. According to the 2009 High School Youth Risk Behavior Survey (CDC, 2011), 7,475 girls (8.1%) attempted suicide compared with 7,082 boys (4.6%). Further, girls reported higher rates of seriously considering suicide and making a plan to attempt suicide. Historically, there has been a gap in suicide rates between Caucasian and African-American adolescents, but this gap has narrowed. Data collected between 2001 and 2003 indicated that the suicide rate among African-American adolescents, particularly females, was increasing (Joe, Baser, Neighbors, Caldwell & Jackson, 2009). Joe and colleagues (2009) analyzed data from a nationally representative sample of African-American adolescents, finding a 2.8% prevalence of lifetime suicide attempts. Girls reported higher rates of suicidal ideation than boys (4.1% vs. 1.5%).

Many mental disorders classified as disorders of childhood and adolescence by the Diagnostic and Statistical Manual of Mental Disorders, 4<sup>th</sup> edition (APA, 1994), such as autism, attention-deficit hyperactivity disorder, learning disorders, and conduct disorder, are likely to

persist into adulthood. Additionally, the precursors of many mental disorders of adulthood originate in childhood and adolescence (Heflinger & Hinshaw, 2010). Knopf, Park, & Paul Mulye (2008) report that half of the mental illness diagnosed in adulthood start by age 14. Mental health treatment during adolescence has the potential to reduce the severity of future mental illness or increase the likelihood of mental health service utilization in adulthood when illness arises.

There is evidence to suggest that there may be differences in providers' identification and interpretation of adolescents' mental health symptoms based on race/ethnicity. Thomas and colleagues (2011) found that depressed Black adolescents reported similar rates of discussing symptoms of depression with an adult. However, Black adolescents were less likely to have received a diagnosis of depression and to have received treatment for depression. Overall, there are higher rates for treatment of externalizing disorders among ethnic minorities, and lower rates of treatment for internalizing disorders (Merikangas et al., 2011). Externalizing conditions, such as conduct disorder or hyperactive behavior, among African-American adolescents are typically identified by maladaptive behaviors in school or other public settings (Merikangas et al., 2011). Internalizing conditions, such as depression or anxiety, may require more self-report of symptoms or observations by close family members. This suggests that externalizing behaviors may be more rapidly recognized as mental health problems than internalizing disorders among African-American teenagers.

Mental health concerns that are not addressed in adolescence have a detrimental effect on both concurrent and future psychosocial functioning. Mental disorders among adolescents have been associated with poor academic performance, school dropout, family problems, early parenthood, substance abuse, suicide, more risky behaviors, violent behavior, increased



likelihood of contact with the juvenile justice system, and persistence and escalation of symptoms (Alexandre, Dowling, Stephens, Laris, & Rely, 2008; Knopf, Park, & Paul Mulye, 2008; Lindsey, Barksdale, Lambert, & Ialongo, 2010; Schwarz, 2009). Mental health treatment has the ability to effect improvement in adaptation and psychosocial outcomes, as well as identify risky adolescent behaviors associated with these outcomes and modify these behaviors.

### **Facilitative Predictors of Treatment Utilization**

One of the goals of the current study is to identify factors that may facilitate mental health service utilization for African-American adolescents. Facilitative predictors of treatment utilization have been identified in various adolescent samples, including symptom severity, functional impairment, and the impact of adolescent's symptoms on parental functioning. These factors facilitate treatment as they reflect ways of recognizing that an adolescent may need mental health services. However, there is evidence that these predictors may not have the same relation with treatment utilization among low-income African-American adolescents. Further, as these predictors have typically been studied independently, it is difficult to know the relative contribution of these predictors to treatment utilization. The current study looked at the role of symptom severity, functional impairment, and the impact of adolescents' symptoms on parental functioning in predicting treatment utilization among low-income African-American adolescents in order to identify those with significant and potentially unique relations with treatment. Both youth and caregiver assessment of these predictors were considered, in order to identify whether one perspective is more highly related to treatment engagement.

**Symptom Severity.** Adolescents are not likely to perceive their emotions and behaviors as problematic unless their symptoms are severe (Drauker, 2005). Parents are also more likely to recognize an adolescent's mental health problem when the symptoms are severe, suggest

multiple disorders, or stress or interfere with the parents' life. Several large scale adolescent focused research studies have identified an association between severity of symptoms and mental health service utilization of adolescents. Brookman-Fraze and colleagues (2008) found that adolescents' self report of symptoms is associated with the frequency of mental health visits to a greater extent than parents' or therapists' report of adolescent symptoms. Parents' recognition of a mental health problem appears to be more predictive of adolescents' service use in non-school based settings than in school-based clinics (Teagle, 2002). Moreover, there is evidence that symptom severity is not as significant of a predictor of service utilization among African-American youth as Caucasian youth (Freedenthal, 2007). Freedenthal (2007) found that African-American adolescents with more severe symptoms were no more likely to receive mental health treatment than those with less severe symptoms. Many questions remain about adolescent factors other than symptom severity that predict problem recognition, particularly among African American youth.

Problem threshold has been identified as a potential explanation for differences in the association between symptom level and treatment utilization. For example, what White parents deem to be symptoms of hyperactivity that merit clinical intervention, ethnic minority parents may perceive as excess energy or rambunctiousness that doesn't necessarily meet the threshold for seeking intervention (Rue & Xie, 2009). African-American parents who don't perceive their child's symptoms as meeting the threshold for intervention may be less likely to utilize mental health services. Several studies have found that when ethnic minorities experience severe conditions, they often don't seek services until the condition requires intensive or acute intervention, which may impact willingness to engage in outpatient treatment (e.g. Gaw, 1998).

**Functional Impairment.** Functional impairment may play an important role in adolescents' and parents' problem recognition and mental health service utilization among adolescents. Functional impairment refers to “the ways that psychological symptoms interfere with and reduce adequate performance and desired aspects of a child’s life.” (Rapee, Bogels, van der Sluis, Craske, & Ollendick, 2012). Most measures of functional impairment focus on identifying problematic functioning within the family, school, and social domains. Both psychological symptoms and functional impairment are required for the diagnosis of psychological disorders, reimbursement for mental health services, and guidelines for determining the need for inpatient or residential treatment (Winters, Collett, & Myers, 2005; Kramer, Phillips, Hargis, Miller, Burns & Robbins, 2004). While psychological symptoms are conceptually and empirically related to impairment in functioning, each has an independent effect on treatment utilization.

As expectations for normal behavior vary among different cultural contexts, it is possible to experience symptoms that do not interfere with adequate daily functioning within one’s individual social environment. Conversely, it is also possible to experience high levels of functional impairment in a given environment without a high level of psychological symptoms. Further, impaired functioning may be a result of psychological symptoms, may develop from similar origins as psychological symptoms, or may be a cause of psychological symptoms (Winters, Collett & Myers, 2005). Although functional impairment reflects a unique aspect of adolescent mental health, the majority of utilization studies focus on psychological symptoms rather than impairment. The relation between impairment in functioning and mental health service utilization has not been investigated explicitly among African-American adolescents.

Problem threshold is also related to the role of functional impairment in predicting service utilization among African-American families. The impact of symptoms on youth impairment depends on the cultural norms and expectations specific to the youth's environment. African-American caregivers may perceive some psychological symptoms as adaptive within their community, and might have a higher problem threshold for identifying functional impairment or seeking treatment despite higher levels of reported symptoms.

**Impact of Adolescent's Symptoms on Parental Functioning.** Parents are more likely to recognize a problem if their adolescent's symptoms cause the parent to experience increased stress related to those symptoms. This is often referred to as caregiver strain. There is evidence that caregiver strain is a normative response to children's emotional and behavior problems, and does not simply reflect the caregiver's own level of distress (Kang, Brannan, & Heflinger, 2005). Stress could be in the form of worrying about the adolescent, trying to manage the adolescent's behaviors, negative effects on parents' relations with family members and friends, and dealing with negative reports from schools or other systems in the adolescent's life. Caregiver strain is often categorized as objective or subjective in nature. Objective strain involves observable events experienced by the caregiver, such as financial problems, disruption of interpersonal relationships, and consequences at work. Subjective strain refers to feelings and concern about the child's symptoms, such as sadness, guilt, embarrassment, and worry. As the severity of the youth's symptoms increase, caregivers are likely to experience increased caregiver strain (Angold, Messer, Stangl, Farmer, Costello & Burns, 1998). Caregiver strain has been associated with the level of care required for adolescent mental health treatment. High caregiver strain is often related to inpatient or nonresidential intermediate services while lower strain is related to traditional outpatient services (Brannan, Heflinger & Bickman, 1997). Among

a rural sample in the Appalachian Mountains, researchers found that the more negative impact and burden a parent experienced, the more likely they were to recognize a problem and seek mental health treatment for their adolescent (Farmer et al., 1997).

Problem threshold has also been implicated in racial/ethnic differences in caregiver strain. One study found that African-American caregivers report less caregiver strain than caregivers from other backgrounds (Kang, Brannan, & Hefflinger, 2005). A second study found that African-American parents report more barriers to treatment than White parents, but also report lower levels of caregiver strain than White parents (Bussing et al., 2003; Kodjo & Auinger, 2004). These differences were attributed to problem threshold. It has been suggested that differences in problem threshold for caregiver strain may be related to social support, religious involvement, or illness attributions among African-American families.

Adolescent symptom level, adolescent functional impairment, and caregiver strain have been found to facilitate mental health service utilization in other populations. However problem threshold and other contextual factors make generalizability of these findings to African-American adolescents unclear. Families differ in their threshold for what level of adolescent symptoms, adolescent functional impairment or caregiver strain constitutes an adolescent mental health problem and is significant enough to merit help seeking. The current study adds to the emerging literature on treatment utilization by focusing on one demographic population to gain a deeper understanding of the association between these factors and treatment. This is likely to minimize variability in problem threshold between ethnic groups that has influenced treatment utilization findings in previous studies.

I expected that higher symptoms, functional impairment, and caregiver strain would increase the likelihood of current treatment enrollment, even if at lower rates than Caucasian

youth. When considered together, caregiver report was expected to show stronger relations than adolescent report. In addition to providing a comprehensive examination of these factors among African-American youth, this study examined these factors collectively to determine whether any factor showed unique relations with mental health service utilization. I was specifically interested in whether adolescent functional impairment and caregiver strain added uniquely to the likelihood of adolescent treatment engagement after accounting for psychological symptoms, the current gold standard for assessment and treatment recommendations. This was an exploratory goal without any specific hypothesis, but important because of the potential implications for increasing adolescent treatment engagement among African-American youth and families.

### **Prohibitive Predictors of Treatment Utilization**

A second goal of the current study is to identify factors that may prohibit mental health service utilization for African-American adolescents. Prohibitive factors in treatment utilization have been identified in various samples, including attitudes towards seeking treatment, barriers to treatment, and stigma. These factors may interfere with treatment engagement even when there are high levels of adolescent symptoms, functional impairment and caregiver strain. There is considerable overlap between attitudes, perceived barriers, and stigma related to mental health, however they are conceptually distinct constructs. These variables have typically been studied independently, making it difficult to know the relative contribution of these prohibitive factors to treatment utilization. Additional information about the relative importance of these barriers to treatment utilization is important for identifying potential targets of intervention for addressing underutilization. The current study examined caregiver and youth perceptions of attitudes towards seeking treatment, barriers to treatment, and mental health stigmatization to assess their

individual and unique associations with treatment engagement among African-American adolescents.

**Barriers to treatment.** Barriers to treatment have been broadly conceptualized to reflect concerns that are both socioeconomic and psychological in nature that may prevent mental health service utilization. The general consensus across research studies is that African-American families in low-income, urban neighborhoods may experience more socioeconomic barriers to treatment, and these barriers are more pronounced than families of other ethnicities in different neighborhoods (e.g. Thurston & Phares, 2008; Gonzalez, 2005; Snowden & Yamada, 2005). Financial barriers to mental health care include problems with cost and high rates of uninsured families, reported to be as high as 19.5% (Holden & Xanthos, 2009; USDHHS, 2001). Publically funded insurance programs often place limits and restrictions on the kind of mental health care received (Schwarz, 2009). Further, mental health care for families living in impoverished areas has been described as fragmented, with youth likely to receive care from multiple agencies, including schools, child welfare agencies, and the juvenile justice system (Xanthos, 2009). Lieberman and colleagues (2006) report that adolescents in lower income neighborhoods often deal with long wait times for appointments and multiple intake appointments when accessing services.

Socioeconomic barriers also include transportation, scheduling issues, child care conflicts, and frequent changes in phone number (Lieberman et al., 2006; Lindsey et al., 2010). Ongoing transportation problems can cause financial and emotional stress for families and make it difficult to attend therapy consistently (Gonzalez, 2005). Gonzalez (2005) points out that accessing mental health services can be challenging for parents who are employed in inflexible work settings that make it difficult to seek services during business hours. Richardson (2001)

asked parents about anticipated socioeconomic barriers to treatment. As many as one-third of the parents in this diverse sample anticipated difficulty in obtaining services, including difficulty getting an appointment, not knowing where to go for services, and dissatisfaction with available services. Less frequently endorsed barriers within this sample were problems with transportation, getting off work, length of appointment, and insurance coverage.

Barriers to treatment that are psychological in nature reflect expectations, beliefs, and perceptions of mental health services. These psychological barriers may influence the decision to seek treatment among adolescents. Draucker (2005) conducted a retrospective qualitative study among an ethnically diverse sample of 63 young adults who experienced depression as adolescents. The participants in this sample reported three fears that kept them from seeking treatment: providers would think they were “crazy” and hospitalize or medicate them, providers would violate confidentiality by telling parents or other authorities about the content of sessions, and providers would be unable to understand adolescents’ experiences. African-American young adults reported a belief that Caucasian therapists would not be able to relate to their problems or experiences. Youth who report these perceptions about therapy and therapists are likely to perceive more barriers to mental health services.

Racial/ethnic differences have also been found in psychological barriers to treatment among caregivers. Richardson (2001) examined social and cultural variation in mental health expectations in a diverse community sample, finding that White parents had more positive expectations about engaging in therapy. African American parents were twice as likely as White parents to expect providers to lack knowledge about how to help their child, three times more likely to expect providers to be untrustworthy and disrespectful, and more likely to expect poor quality of care or that the therapist would not care about their child. African-American parents



were also twice as likely to expect disapproval from family members, to be more concerned about others knowing about their children being in therapy, and to be embarrassed about seeking health care. These perceptions about therapy serve as barriers to seeking adolescent mental health treatment.

Higher levels of socioeconomic and psychological barriers to treatment have been associated with lower rates of treatment attendance beyond child and caregiver characteristics such as symptoms and impairment (Lee, August, Bloomquist, Mathy, & Realmuto, 2006; Kazdin et al., 1997). The current study hypothesized that higher levels of barriers to treatment would predict a decreased likelihood of mental health service utilization among African-American adolescents. When considered together, caregiver report was expected to show stronger relations than adolescent report.

**Attitudes towards Seeking Therapy.** Attitudes towards seeking therapy are also important in making the decision to seek treatment. Multiple studies have assessed the role of attitudes toward therapy in predicting mental health service utilization, finding that positive attitudes are associated with willingness to seek therapy (e.g. Thurston & Phares, 2008). Findings related to ethnic differences in attitudes towards treatment are mixed, however the majority of related studies have indicated that ethnic minorities have more positive attitudes towards treatment (Shim, Compton, Rust, Druss, and Kaslow, 2009). Caporino, Chen, & Karver (2014) looked at differences in attitudes towards treatment among a sample of Hispanic and non-Hispanic White adolescents. The results of this study showed no differences in attitudes to treatment related to ethnicity among adolescents, and the authors suggested that stigma rather than attitudes might explain differences in utilization rates. The authors also speculated that attitudes among caregivers might play a larger role in adolescent treatment utilization than

attitudes among youth. Thurston & Phares (2008) looked at differences between African-American and Caucasian parents' attitudes towards treatment. Results of this study indicated that African-American parents had significantly less positive attitudes towards treatment for themselves than Whites, though there were no observed racial/ethnic differences in attitudes toward treatment for children. This study also found that parents who had positive attitudes towards treatment were more likely to seek treatment for their children. In the current study of African-American adolescents, more positive attitudes towards treatment were expected to predict a greater likelihood of mental health service utilization. When considered together, caregiver report was expected to show stronger associations than adolescent report.

Barriers and attitudes related to seeking treatment have been associated with mental health service utilization in diverse samples. However, studies in this area typically focus on between group differences rather than within group differences. Further, most studies on these topics have examined caregiver and youth perspectives separately. The current study adds to the research literature by focusing on one demographic population and examining adolescent and caregiver perspectives in combination. I expect both prohibitive factors to be associated with decreased odds of adolescent mental health service utilization, and for caregiver report to be more strongly related to utilization than adolescent report. In addition to providing a comprehensive examination of these factors among African-American youth, this study examined these factors in combination to determine whether any factor showed unique relations with mental health service utilization. I was specifically interested in whether barriers or attitudes added uniquely to predicting adolescent treatment over and above the facilitative factors. This was an exploratory goal without any specific hypothesis, but important to conduct because it provides information regarding the role of prohibitive factors in preventing treatment

engagement when facilitative factors (such as symptoms, functional impairment, or caregiver strain) indicate the need for youth treatment.

### **Stigma Related to Seeking Mental Health Treatment**

A third goal of this study was to explore the role of stigma in mental health service utilization among African-American adolescents. Stigma has been identified as one of the most pervasive barriers to treatment utilization in this population. It has been theorized that African-Americans experience feelings of stigmatization by mainstream society due to ethnicity and socioeconomic status, and that being associated with mental health treatment adds another layer of stigmatization (Gonzalez, 2005). However, a large proportion of studies related to mental health stigma among African-Americans are theoretical or qualitative in nature. Quantitative studies focused on stigma related to seeking youth mental health treatment among African-Americans are limited. The existing research suggests that there are many forms of stigma that are closely related but distinct, including stigma related to mental health symptoms, stigma related to mental health institutions, and stigma related to seeking mental health treatment. Self-stigma and social-stigma are also intertwined, with some suggestion that social-stigma may lead to the internalization of self-stigma (Kranke et al, 2012). The current study focuses on stigma specifically related to seeking youth treatment among African-American adolescents and caregivers. Perspectives on self-stigma and social-stigma related to seeking treatment were explored, and higher levels of stigma were expected to be associated with a lower likelihood of treatment engagement.

**Sociocultural Factors Related to Mental Health Stigma.** Contextual factors related to race/ethnicity influence levels of self and social stigma about seeking mental health treatment experienced by African-American adolescents and caregivers. These contextual factors include

cultural mistrust, cultural responsiveness, cultural help-seeking patterns, and cultural norms and expectations. These factors serve to perpetuate feelings of stigma related to mental health service utilization. Cultural mistrust results from historical experiences of institutional racism, discrimination, and oppression (Gonzalez, 2005). This history of mistreatment may lead African-American caregivers to avoid seeking formal mental health treatment for their children. Many research studies have found evidence that African-Americans are more skeptical about the institution of health care and report high levels of actual or perceived mistreatment by health care providers (Thomas, Bazile, & Akbar, 2004). Social policies that lead to the removal of children from their parents' custody or require relinquishing custody to get higher levels of care may have a negative impact on African-American parents' level of trust in providers (Hinshaw, 2005). It has been reported that African-American adolescents experience similar levels of cultural mistrust as adults (Lindsey, Chambers, Pohle, Beall, & Lucksted, 2013).

Lack of perceived cultural responsiveness and cultural competence is a second contextual factor that influences mental health stigma among African-Americans. Some authors have theorized that the disproportionately low representation of ethnic minority staff in relation to increasing numbers of ethnic minority patients contribute to perceptions of lack of cultural responsiveness (Jerrell, 1998). Data from the Surgeon General's 2001 report on mental health disparities identified that only 2% of psychiatrists, 2% of psychologists, and 4% of social workers at that time were African-American (USDHHS, 2001). Low representation of African-American mental health providers may promote further stigma related to seeking mental health treatment. Holden & Xanthos (2009) discussed other issues in perceived cultural responsiveness and competence, such as clinicians failing to take sociocultural context into account in identifying symptoms and diagnosing disorders, and a lack of diverse samples in research

evaluating evidence based procedures. African-American research participants have indicated that they look for subtle cues such as ethnic minority reading material in the waiting room, diversity of the art in therapy and waiting rooms, and ethnic minority support staff as a reflection of cultural attitudes within service agencies (Thompson, Bazile, & Akbar, 2004). These experiences contribute to perceptions of lack of cultural responsiveness and cultural competence that perpetuate feelings of stigma related to mental health treatment.

Research on cultural help-seeking patterns indicates that African-American caregivers prefer to seek help through informal networks such as faith based institutions and community centers rather than formal settings such as schools, primary care clinics, or behavioral health clinics (McMiller & Weisz, 1996). Lower levels of stigma are associated with seeking treatment in these informal settings. Further, African-Americans have been found to utilize emergency room services to address psychological problems more frequently than outpatient services. Qualitative research indicates that emergency rooms may be preferred because others are unable to identify the reason for seeking services (Thompson, Bazile, & Akbar, 2004). These help-seeking patterns reflect an attempt to meet mental health need while reducing the effects of stigma related to treatment seeking.

Self and social stigma related to seeking mental health treatment among African-American adolescents and caregivers is also influenced by the desire to fit in with cultural archetypes and expectations (Copeland, 2006). Within the African-American community, males are expected to withhold their emotions, be silent about their feelings, take care of their problems on their own, and avoiding appearing weak in order to be perceived as masculine (Xanthos, 2009). Similarly, African-American females are expected to conform to cultural archetypes of the “strong black woman,” who is self-reliant and bears her burdens on her own without seeking

help (Nicolaidis et al., 2010). While these concepts are more deeply ingrained for caregivers, they also contribute to the socialization of African-American youth. These cultural expectations contribute to a sense of self and social stigma around seeking formal mental health treatment for both adolescents and caregivers.

The extent to which stigma related to mental health care systems may be transmitted from African-American caregivers to adolescents is unclear. Parents are responsible for the socialization of children and messages related to stigma may be transmitted to adolescents through direct and indirect communication about mental health treatment by parents (Copeland, 2006). Nicolaidis and colleagues (2010) qualitatively explored a small sample of African-American women about beliefs and experiences related to mental health care systems. Common themes that were revealed included intergenerational messages to avoid health care systems in general, mistrust of the health care system as a “White” system, and attributing negative experiences with health care to racism. Many women discussed the influence of earlier generations’ experiences of racism on their perceptions and beliefs. However, today’s youth may have differing perspectives of stigma related to mental health treatment because of national anti-stigma campaigns and marketing of different treatment options that is slowly becoming more prevalent in society (Moses, 2009). Thus, it is possible that adolescents’ perception of mental health stigma may differ from caregivers’ perception of stigma.

The current study examined African-American adolescent and caregiver perceptions of stigma in order to provide information about the extent to which levels of stigma directly impacts treatment engagement within this population. While it is difficult to disentangle stigma related to seeking treatment from other forms of mental health stigma, this study focuses specifically on

treatment seeking stigma as this may be a more modifiable target for interventions than long-standing stigma related to mental health institutions.

**Self-Stigma Related to Mental Health Treatment.** Self-stigma related to mental health treatment refers to the negative impact of seeking mental health services on an individual's self-esteem and sense of self-worth. Seeking formal mental health treatment requires patients to consult someone considered to be a mental health expert, which implies that there is a power differential and that the patient has a problem that the professional does not have. Thus, seeking mental health treatment may lead to feelings of inferiority or inadequacy that manifest as self-stigma related to treatment.

**Caregiver self-stigma.** Caregivers have been found to experience self-stigma related to seeking mental health treatment for their children that is distinct from seeking treatment for themselves. Seeking treatment for one's child may be perceived by caregivers as a personal failure and an inability to solve their child's problems. These perceptions contribute to negative beliefs about one's competence as a caregiver. Caregivers who internalize blame for their adolescents' mental health problems may be more likely to experience self-stigma related to seeking treatment. Caregivers with high levels of self-stigma related to treatment are often apprehensive about discussing their children's difficulties with mental health professionals (Gonzalez, 2005; Holden & Xanthos, 2009).

**Adolescent self-stigma.** Seeking mental health treatment may be particularly self-stigmatizing during adolescence. Two of the central developmental tasks of adolescence are identity formation and gaining autonomy. Seeking treatment may have a negative impact on some adolescents' sense of identity, ethnic identity, self esteem and perception of being "normal" (Hinshaw, 2005). For African-American youth, making the decision to seek therapy

may lead to feelings that one is not able to meet cultural expectations for managing one's own problems. Indeed, self-reliance may serve an adaptive function for youth in impoverished communities with limited resources (Lindsay et al., 2013). Further, as evidence shows that African-American adolescents are more likely to be referred to mental health services by others due to problematic externalizing behaviors, seeking treatment may interfere with a desire for autonomy and self-determination (Bender, Kapp, & Hahn, 2011; Cauce et al., 2002).

**Social-Stigma Related to Mental Health Treatment.** Social-stigma related to mental health treatment refers to the negative response perceived by an individual's family, peers, and community about treatment seeking. Widespread social stigma around mental illness may be related to media and news coverage that emphasizes negative aspects and outcomes related to mental health treatment (Wahl, 2003). Media such as television shows, movies, cartoons, and newspaper or magazine articles tend to portray people with mental illness as deranged, violent, and unpredictable. Many incorrectly assume that mental health treatment is associated with individuals who are violent, irrational, unpredictable, and unable to control their behaviors (Hinshaw, 2005). Positive portrayals of mental health treatment are rare, particularly with respect to African-American individuals. Consistent with contextual factors related to cultural mistrust, cultural responsiveness and competence, cultural help-seeking patterns, and cultural norms and expectations, many African American communities perpetuate the belief that therapy is associated with Caucasian people, and the idea that it is more culturally appropriate and socially acceptable to get help from extended family or church members (Draucker, 2005). For some adolescents and caregivers, the approval of family and friends may be a huge factor in the decision to seek services (Chandra & Minkovitz, 2006).



**Caregiver social-stigma.** Parents may experience social stigmatization by association with a mentally ill adolescent, which serves as a potential barrier to deciding to seek help (Brannan & Hefflinger, 2006; Hefflinger & Hinshaw, 2010). In many communities, problems of an adolescent are assumed to be a reflection of parenting failures. Richardson (2001) looked at the role of social-stigma in African-American parents' perceptions of mental health services for their adolescents. Higher levels of social-stigma related to mental health issues were found among African-American parents. In the presence of both social stigma and barriers, level of stigma was more predictive of mental health treatment in African-American adolescents. Of 235 parents interviewed, 29% reported that family members would not approve if they sought mental health care for their child. Twenty-seven percent reported they would be concerned if someone found out their child was seeing a mental health professional. Twelve percent expected to be embarrassed when taking their child to see a mental health professional. African-American caregivers have also expressed concern about their child experiencing social-stigma as a result of mental health treatment, which likely compounds the level of social-stigma associated with seeking youth treatment (Breland-Noble, Bell, & Burris, 2011).

**Adolescent social-stigma.** Social-stigmatization of mental health treatment by one's peers is a factor that becomes more important during adolescence and may have an influence on adolescents' decisions to seek services (Gonzalez, 2005). Chandra & Minkovitz (2006) investigated attitudes towards mental health treatment among 8<sup>th</sup> graders in a school setting. The majority of students in this sample reported turning to a friend or a parent to deal with problems rather than a counselor. Overall, 30% of this sample reported that they were not at all willing to use mental health treatment, 50% were somewhat willing, and 20% were very willing. A significant portion of this sample (52%) endorsed thinking that they did not want to talk about

mental health related problems with anyone, and 43% endorsed not being able to trust a counselor. Only 7% of this sample reported believing that there were no reasons that made it difficult to access treatment. Sixty percent of the students reported embarrassment about what other kids would say as a barrier to receiving mental health treatment. Over one third of the sample reported moderate to high levels of stigma, with boys reporting higher levels than girls. Boys were also more likely to indicate that peers should fix their problems on their own or wait for the problem to pass. Among those who reported moderate to high levels of stigma, many stated that they would not be willing to use mental health treatment. However, those who reported more knowledge and experience with mental health issues reported more willingness to access treatment. The majority of students in this sample (73%) indicated that they would turn to a friend or another adult if they experienced problems, which was associated with less willingness to use treatment. The majority of the students in this sample were White, making it unclear if these findings are generalizable to African-American adolescents.

Youth appear to be more vulnerable to media messages and more likely to believe negative stereotypes about mental health treatment portrayed in the media (Kranke, Guada, Kranke, & Floersch, 2012). Smith (2004) looked at adolescent males' views on mental health counseling among a sample of 98 teen males aged 12 to 18. The methodology of this study was described as a Freudian derivative involving free association around the words "counseling" and "mental health counseling." The responses obtained were largely pejorative and included: helping people with brain problems, mentally unstable, mental problems, crazy people, helping people with problems, psychological or psychiatric problems, personality problems, depression, mentally retarded, Down syndrome people, mental ward, unfortunate people, and needing aid. Adolescents may be less likely to decide to seek mental health services due to negative

perceptions among their peers. Again, the majority of participants in this research study were Caucasian, making the generalizability of these findings unclear.

The current study examined the relations between stigma about seeking youth mental health treatment and treatment engagement among African-American adolescents. This study builds upon previous research by using quantitative methods for looking at caregiver and adolescent perspectives on stigma related specifically to treatment seeking. Based on the existing research, I expected high levels of self- and social-stigma related to treatment to be associated with decreased odds of adolescent treatment. I also expected caregiver report to be more strongly related to utilization than adolescent report. In addition to examining the direct impact of stigma on utilization, this study also investigated the novel hypothesis that stigma moderates the relationship between predictive factors and treatment engagement. I anticipated that the positive associations between facilitative factors and treatment engagement would be stronger when stigma was low versus high; and that negative relations between prohibitive factors and treatment engagement would be stronger when stigma was high versus low.

### **Sociodemographic Correlates of Mental Health Service Utilization among Adolescents.**

A national survey of mental health service utilization in 2006 reported that 21.3% of adolescents have had some form of mental health treatment (Knopf, Park & Paul Mulye, 2008), and Merikangas and colleagues (2011) found that 36.2% of adolescents with mental health problems had received treatment. With respect to race/ethnicity, Caucasian youth are more likely to utilize mental health treatment than ethnic minority youth (Freedenthal, 2007; USDHHS, 2001). However, there are multiple sociodemographic characteristics that have been associated with mental health service utilization beyond race/ethnicity. Among youth, adolescents aged 12-17 are more likely to get treatment than 5-11 year old children. However,

older boys aged 16-17 have been identified as least likely to receive services (Knopf, Park & Paul Mulye, 2008). Multiple studies have found that boys tend to receive services more often than girls prior to adolescence, at which point girls begin to receive services more than boys (e.g. Chandra & Minkovitz, 2006; Merikangas et al., 2011; Thurston & Phares, 2008).

Sociodemographic characteristics of parents have also been associated with mental health service utilization among adolescents. Caucasian parents typically use more services than African-American parents (Thurston & Phares, 2008; USDHHS, 2001). Parents of younger age, ethnic minority race, lower educational attainment, and lower socioeconomic status have all been associated with increased rates of youth dropping out of treatment (Kazdin et al., 1997). Mothers are more likely to access services for youth than fathers (Burnett-Zeigler & Lyons, 2010; Thurston & Phares, 2008). Children whose families participate in government subsidies programs were found to be more likely to use mental health services (Gaskin, Kouzis, & Richard, 2008). Likewise, children whose families have health insurance are more likely to use services (Richardson, 2001). Family size and family structure have also been associated with mental health use (Merikangas et al., 2011). Findings related to family structure indicate that children in blended families, single parent families, and children not living with their parents were more likely to use mental health services, possibly due to levels of parent stress related to changes in family structure (Gaskin, Kouzis, & Richard, 2008).

The current study sought to identify the factors that are most strongly associated with mental health service utilization above and beyond sociodemographic factors. To this end, the sample consisted exclusively of African-American adolescents from an urban area with a high percentage of families living below the government established poverty level. Other sociodemographic correlates that have been previously associated with treatment were controlled

for statistically. This made it possible to determine whether the facilitative and prohibitive factors explored are predictive of treatment after accounting for demographic variables. This information is important because it focuses on identifying potentially modifiable targets of intervention for promoting mental health service utilization among African-American adolescents.

### **Current Study**

The current study explored the adolescent and caregiver factors that are associated with mental health service utilization among African-American adolescents. Facilitative and prohibitive factors related to treatment have been identified in various samples, but it is unclear how generalizable these findings are to this underserved population. More information on the underlying factors related to treatment utilization is needed in order to design and implement interventions to increase treatment engagement.

Mental health service utilization has been operationalized in several ways. Some studies define utilization as attending at least one therapy session (e.g. Harrison, McKay & Bannon, 2004). These studies look at differences in predictors of attending at least one treatment session as compared to attending no sessions. Other studies define utilization in terms of attendance and retention, assessing the total number of sessions attended continuously or categorically (e.g. Merikangas et al, 2011). The current study defined utilization in terms of current therapy attendance. Differences in facilitative and prohibitive factors amongst adolescents who are currently in treatment and those who are not in treatment were explored.

The first study aim was to examine the individual and additive relations between facilitative factors and concurrent mental health service utilization among a sample of urban African-American adolescents. Relative to this aim and based on the literature reviewed, I

expected that: (1) higher ratings of youth psychiatric symptoms, youth functional impairment, and caregiver strain would each be associated with a greater likelihood of concurrent mental health service utilization; (2) when adolescent and caregiver report were considered together, caregiver ratings of youth functioning would be more strongly associated with treatment; and (3) functional impairment and caregiver strain would contribute to the likelihood of treatment engagement above and beyond reports of youth psychological symptoms.

The second study aim was to examine the individual and additive effects of prohibitive factors and concurrent mental health service utilization among African-American adolescents. Relative to this aim and based on the literature reviewed, I expected that: (1) higher ratings of barriers to treatment and more negative attitudes towards treatment would each be associated with a decreased likelihood of concurrent mental health service utilization; and (2) when adolescent and caregiver report were considered together, caregiver ratings of prohibitive factors would be more strongly associated with treatment. In addition to these hypotheses, I explored whether prohibitive factors predicted a decreased likelihood of treatment above and beyond reports of facilitative factors. No specific hypotheses were rendered in regard to this aim due to a lack of published data on the topic.

The third study aim was to examine the direct and moderating effects of stigma about mental health treatment and concurrent mental health service utilization among African-American adolescents. Relative to this aim and based on the literature reviewed, I expected that: (1) higher ratings of self and social-stigma would each be associated with a decreased likelihood of concurrent mental health service utilization; and (2) when adolescent and caregiver report were considered together, caregiver ratings of stigma would be more strongly associated with treatment. With respect to moderating effects, I expected that: (1) stigma would moderate the

associations between caregiver and youth reports of facilitative factors (psychological symptoms, functional impairment, and caregiver strain) and treatment, such that facilitative factors would be more strongly related to treatment engagement for those reporting low versus high stigma; and (2) stigma would moderate the associations between caregiver and youth reports of prohibitive factors (barriers and attitudes) and treatment, such that prohibitive factors would be more strongly related to a decreased likelihood of treatment for those reporting high versus low stigma.

## CHAPTER 2

### Methods

#### Participants

Participants were recruited from an integrative adolescent primary care health clinic and two Baptist churches in Detroit, Michigan. The church sites were added after 12 months of data collection at the adolescent clinic in order to facilitate recruitment. Participants recruited from the primary care health clinic are referred to as the Clinic sample. Participants recruited from the church sites are referred to as the Church sample. Caregiver and adolescent dyads at both sites were deemed eligible for the study based on the following factors: self-reported African-American ethnicity, adolescent between the ages of 13-18 years old, and caregiver (legal guardian) and youth both willing to participate. The adolescent's mental health status and treatment engagement were not included in the eligibility criteria,

A total of 90 dyads participated in the study. Seventy-four dyads (82%) were recruited from the Clinic site, and 16 dyads (18%) were recruited from the Church site. Table 1 shows the results of comparisons between the two samples on demographic characteristics. Adolescent age, PPVT Standard Score, caregiver age, relationship between caregiver and youth, and caregiver education were comparable between the two samples. However, there were significant differences in adolescent gender, caregiver partner status, caregiver employment status and family income. The Church sample had a higher percentage of male adolescents, caregivers that were married or living with a partner, employed caregivers, and a higher family income.

Eighteen caregivers completed the study with more than one child. A total of 71 dyads (79%) consisted of a unique caregiver-adolescent pair, while 19 dyads (21%) included a sibling participant. Two subsamples were created to reflect these two groups of dyads. The "unique"



subsample consisted of dyads with caregivers that completed the study with one child ( $n = 53$ ), and the “non-unique” subsample consisted of dyads with caregivers that completed the study with more than one child ( $n = 37$ ). The unique and non-unique subsamples were comparable on all demographic information and study variables except for family income and youth attitudes towards treatment. Youth in the unique sample had a lower family income and more positive attitudes towards treatment than youth in the non-unique sample.

The overall sample included 61 (68%) adolescent females and 29 (32%) adolescent males (who were between the ages of 13 to 18 years ( $M = 14.91$ ,  $SD=1.57$ ). Youths’ PPVT standard scores ranged from 51 (Extremely Low category) through 123 (Moderately High), with an average score of 87.43 (Low Average). The overall sample included 71 unique (79%) and 18 (21%) non-unique caregivers. Amongst unique caregivers, age ranged from 25 to 64 years ( $M = 42.60$ ,  $SD = 9.01$ ) old. Sixty-eight caregivers were female (96%) and 3 caregivers (4%) were male. Fifty-nine caregivers (84%) were biological or step parents, 8 caregivers (11%) were another relative, and 3 caregivers (4%) were foster or adoptive mothers. With respect to education, 8 caregivers (12%) had not completed high school, 19 caregivers (28%) obtained a high school diploma or GED, 24 caregivers (36%) completed some college, and 16 caregivers (24%) obtained an associate’s, bachelors, or masters degree. Thirty-eight caregivers (54%) were unemployed and 29 caregivers (41%) were employed. Thirty-one caregivers (44%) were single, 18 caregivers (25%) were married, 8 caregivers (11%) were divorced, 4 caregivers (6%) were separated, 3 caregivers (4%) were living with a partner, and 3 caregivers (4%) were widowed. The family income for 31 caregivers (44%) was less than 20,000 a year, between 20,000 and 50,000 for 27 caregivers (38%) and greater than 50,000 for 9 caregivers (13%).

## Procedure

Institutional review boards of the academic institution and hospital where this research took place approved all procedures for the study. The study procedures were reviewed and approved by the pastors of the church recruitment sites. Adolescents and primary caregivers were recruited either by a trained research assistant or our recruitment flyer (see Appendix B). Families who expressed interest and met eligibility criteria were scheduled for either a lab or home visit. Participants were initially asked to complete the two hour interview either at the primary care clinic or research lab. When the procedures were modified to include the church recruitment sites, we also added the option of scheduling home visits in order to facilitate participation.

The majority of participants completed the study prior to the option of home visits was added. A total of 69 dyads (78%) scheduled lab visits and 20 dyads (22%) scheduled home visits. These two subsamples were compared on demographic variables. Adolescent age, adolescent gender, PPVT Standard Score, caregiver age, relationship between caregiver and youth, and caregiver education were comparable between the two samples. However, there were significant differences in caregiver partner status, caregiver employment status and family income. The home visit sample had a higher percentage of caregivers that were married or living with a partner, employed caregivers, and a higher family income.

At the time of the scheduled appointment, caregivers and adolescents indicated their willingness to participate in the study and were then separated to complete the study. The study was conducted in a face-to-face format by a trained research assistant. Youth less than 18 years of age provided written informed assent, and their legal caregivers provided written informed consent. Participants who were 18 years old and their caregivers each supplied written informed

consent. Adolescent participants completed a semi-structured interview including demographic information, questionnaires, two story-telling tasks, and a receptive vocabulary task. Caregiver participants completed a similar semi-structured interview and questionnaires. At the end of the study, caregivers and adolescents each received \$20 in the form of cash or a gift card for their participation. Initially, all participants received gift cards. At the time we added the new recruitment sites and the option of home visits, we also added the incentive of cash in a further attempt to facilitate participation.

### **Measures**

Many of the existing measures used in the current study were not developed for adolescent or parent samples. Because of a lack of equivalent measures available to assess these constructs, extant measures with good psychometric properties were adapted for this study sample. Modifications to the existing measures will be described where relevant, and the original and modified versions are available in the Appendices section. Table 2 provides a summary of study measures.

**Demographics.** Adolescent and caregiver participants each completed a demographic questionnaire (see Appendix C). Adolescents were asked to report age, gender, ethnicity, grade level, and their relationship to the caregiver participating in the study. Caregivers were asked to report age, ethnicity, partner status, educational level, employment status, family income, and their relationship to the adolescent participating in the study. For purposes of data reduction in the primary study analyses, multi-categorical demographic variables were collapsed to reflect fewer categories based on conceptual meaning and distributional characteristics. Caregiver partner status categories of single, separated, divorced and widowed were coded as Single, while married and living together were coded as With Partner. Caregiver education was coded into the

following categories: less than high school, high school degree or GED, some college, and associates, bachelors, or master's degree. Family income was coded as less than 20,000, between 20,000 and 50,000, and more than 50,000 for some analyses and used as a continuous variable in others. Relationship to caregiver was coded as Biological Parent and Other Caregiver.

**Receptive Vocabulary.** Adolescent participants were administered the Peabody Picture Vocabulary Test, Fourth Edition (PPVT-4; Dunn & Dunn, 2007) to assess receptive vocabulary and estimate intellectual functioning. Adolescents viewed four pictures and selected the picture that best illustrated the meaning of a stimulus word provided by a research assistant. From participants' responses, a standard score ( $M = 100$ ;  $SD = 15$ ) was calculated. Administration of the PPVT-4 typically takes less than 20 minutes. Significant correlations between the standard score on previous editions of the PPVT and WISC-III full scale score have been found ( $r = 0.85$ , Hodapp & Gerken, 1999;  $r = 0.60$ ; Carvajal, Hayes, Miller, Wiebe, & Weaver, 1993). The PPVT-4 demonstrates acceptable validity and internal consistency when normed on adolescent populations ( $\alpha = 0.96-0.98$ ; Dunn & Dunn, 2007).

**Psychological Symptoms.** Adolescents and caregivers were asked to report adolescent psychological symptoms using questionnaires.

**Youth report:** Adolescent participants completed the Pediatric Symptom Checklist-Youth Version, adapted from the Pediatric Symptom Checklist (Murphy & Jellinek, 1988; see Appendix D). This measure was developed to screen for current psychological symptoms in primary care clinics, and the items reflect potential psychosocial problems. Adolescents were asked to rate how well each symptom described them using a 3-point scale (0 = never, 1 = sometimes, 2 = often). Higher scores reflect more psychological symptoms, with a score of 30

indicating the need for further investigation of reported problems and possible referral to mental health services. Sample items include: *Less interested in school*, *Feel that you are bad*, and *Do not listen to rules*. Adequate internal consistency was found in the current sample ( $\alpha = 0.87$ ). Within the current sample, 19 adolescents (21%) endorsed a level of psychological symptoms that suggested a potential need for mental health treatment.

**Caregiver report:** Caregiver participants completed the Child Behavior Checklist (Achenbach, 1991a; see Appendix E). This is a parent-report measure on which caregivers were asked to report how true each psychological symptom was for their adolescent in the last 6-months using a 3-point scale (0 = not true, 1 = somewhat/sometimes true, 2 = very/often true). The 118 items on this questionnaire reflect specific emotional and behavioral problems. Sample items include: *Cries a lot*, *Disobedient at school*, and *Breaks rules at home, school, or elsewhere*. Total raw scores are converted to T-scores, with higher T-scores reflecting more psychological symptoms. T-scores of 59 and below reflect symptoms in the Normal range, scores between 60 and 63 reflect symptoms in the Borderline range, and scores of 64 and above reflect symptoms in the Clinical range. Acceptable internal consistency was found in the current sample ( $\alpha = 0.54$ ). Within the current sample, 49 adolescents (54%) were rated in the Normal range, 10 adolescents (11%) were rated in the Borderline range, and 31 adolescents (34%) were rated in the Clinical range.

**Functional Impairment.** The Youth and Caregiver versions of the Columbia Impairment Scale (Bird et al., 1996) were used to assess adolescent and caregiver perception of adolescents' functional impairment (see Appendix F). This measure was developed and evaluated among a large heterogeneous clinical and community sample of youth aged 9-17, and asks about interpersonal relationships and functioning at work, school, and home. The 13 items are scored

on a 5-point scale reflecting the extent to which each behavior describes a current problem for the adolescent (0 = No problem, 2 = Some problem, 4 = Very Bad Problem). Respondents are also given the option of identifying each item as “not applicable/don’t know.” Total possible scores range from 0-52, with higher scores reflecting more impairment in functioning. Sample items include: *Getting along with his/her father/father figure*, *With feeling nervous or afraid*, and *With school work*. Adequate internal consistency was found for both the adolescent ( $\alpha = 0.76$ ) and caregiver ( $\alpha = 0.85$ ) measures. Within the current sample, adolescent total scores ranged from 0 to 29 ( $M = 13.19$ ,  $SD = 7.82$ ), and caregiver total scores ranged from 0 to 34 ( $M = 13.17$ ,  $SD = 8.76$ ).

**Caregiver Strain.** Caregivers’ self-reported stress related to adolescents’ mental health symptoms was assessed using the Caregiver Strain Questionnaire (Brannan, Heflinger, & Bickman, 1997; see Appendix G). This 21-item measure asks caregivers to rate the impact of their child’s emotional or behavior problems on their own functioning and relationships over the past 6 months using a 5-point scale (1 = Not at all a problem, 5 = Very much a problem). Total possible scores range from 21 through 105, with higher scores reflecting more caregiver strain related to their children. Sample items include: *Interruption of personal time*, *Feeling resentful towards child*, and *Feeling worried about child’s future*. This measure has been validated among African-American parents and demonstrated good reliability and validity (Kang, Brannan, & Heflinger, 2005). One item on this measure was deleted from the current study analyses, even though the measure was technically reliable with this item included. This item (Relating well to child) was the only positively worded item in the questionnaire and it proved confusing to a number of participants, resulting in a fair amount of missing data. Strong internal consistency was found for this measure in the current sample before deleting this item ( $\alpha = 0.91$ ), and

improved after this item was deleted ( $\alpha = 0.93$ ). Within this sample, caregiver strain total scores ranged from 20 through 96 ( $M = 37.71$ ,  $SD = 16.78$ ).

**Attitudes towards seeking youth treatment.** Adolescents and caregivers each received the 10-item Attitudes Towards Seeking Professional Psychological Help-Short Form (ATSPPH; Fischer & Farina, 1995; see Appendix H). This measure was originally developed in 1970 and revised in 1995. The authors report internal reliability of the short form at 0.84 among a convenience sample of college students (Fischer & Farina, 1995). Items reflecting attitudes towards seeking psychological help are rated on a 4-point scale (1 = Disagree, 2 = Partly Disagree, 3 = Partly Agree, 4 = Agree), with five reverse scored items. Total possible scores range from 10 through 40. Scores ranging from 10-25 points reflect more positive attitudes, and scores from 26-40 reflect more negative attitudes. For the current study, the caregiver version of this measure was modified to reflect attitudes towards seeking psychological help for one's child. For example, "If I believed I was having a mental breakdown, my first inclination would be to seek professional help" instead stated: "If I believed my child was having a mental breakdown, my first inclination would be to seek professional help for my child." Both the adolescent and caregiver versions of the ATSPHH were modified in terms of vocabulary and reading level (see Appendix H). Because these scales were modified for the current study, Principal Components Analyses with Varimax rotations were conducted on each scale. Results were consistent with the original scale structure, and all items were retained. Both scales demonstrated adequate internal consistency within this sample, with alpha coefficients of .70 on the youth version and .81 on the caregiver version. Within this sample, 80 adolescents (89%) and 84 caregivers (93%) reported scores between 10 and 25, reflecting positive attitudes towards seeking psychological help.

**Barriers to treatment.** Adolescent and parent perceptions of barriers to treatment were assessed using the Barriers to Treatment Participation Scale (Kazdin, 1997; see Appendix I). This instrument was developed and evaluated among children aged 3-13 and families referred for outpatient mental health treatment, with reported internal consistency on the parent rated measure of .86 for both coefficient alpha and the Spearman-Brown coefficients (Kazdin et al, 1997). Items on this measure present barriers that may contribute to therapy dropout and asks respondents to indicate the degree to which each barrier applies to them. The BTPS consists of one total barriers score that is the sum of four subscales: Stressors and Obstacles, Perceived Relevance of Treatment, Relationship with the Therapist, and Treatment Demands and Issues. The Stressors and Obstacles subscale reflects events that may interfere with participating in and coming to treatment. A sample item from this subscale is: *Getting a baby sitter so you can come to sessions with your child will be difficult.* The Perceived Relevance of Treatment subscale measures the extent to which treatment is relevant to the adolescent's problems. A sample item from this subscale is: *You will probably lose interest in coming to sessions.* The Relationship with the Therapist subscale refers to items involving the alliance and bonding with the therapist. A sample item from this subscale is: *The therapist might not support you or your efforts.* The Treatment Demands and Issues subscale reflects concerns and complaints about treatment. A sample item from this subscale is: *Treatment takes too long.* This measure was designed for parents, and was therefore adapted for adolescents in this sample. Adolescents in the current study were administered the Relationship with the Therapist and Perceived Relevance of Treatment subscales of this measure, as these subscales contained items most applicable to adolescents rather than caregivers. Items were modified to reflect adolescent perspectives. For



example, “Treatment will not focus on your child’s life and problems” instead stated “Treatment will not focus on your life and problems.”

Items reflecting barriers to receiving psychological help were rated on a 5-point scale (1 = Not at all, 2 = A little, 3 = Neutral, 4 = A fair amount, 5 = A lot) indicating the extent to which the respondent anticipated each barrier. Higher scores reflect more perceived traditional barriers to treatment. For the current study, a total barriers score was developed for caregivers incorporating all 42- items from the four subscales of this measure, with a total possible range of scores from 42 through 210. The caregiver traditional barriers scale demonstrated adequate internal consistency ( $\alpha = 0.93$ ). Caregiver scores ranged from 42 through 145 ( $M = 65.00$ ,  $SD = 21.06$ ). A total barriers score for adolescents was developed incorporating the 14-items from the Perceived Relevance and Relationship with Therapist subscales. Both scales demonstrated adequate internal consistency, with an alpha coefficient of .70 on the Relationship with Therapist scale and .77 on the Perceived Relevance scale. Adolescent scores on the Relationship scale ranged from 6 through 26 ( $M = 11.33$ ,  $SD = 4.51$ ), with total possible scores ranging from 6 through 30. Adolescent scores on the Relevance scale ranged from 8 through 40 ( $M = 17.70$ ,  $SD = 6.48$ ), with total possible scores ranging from 8 through 40.

**Stigma.** Self-stigma and social-stigma related to psychological help were assessed for both adolescents and caregivers. A single stigma score was calculated from the self- and social-stigma variables for each adolescent and caregiver for the purpose of study analyses.

**Self-Stigma:** Adolescent and caregiver perceptions of self-stigma related to mental health care were assessed using the 10-item Self-Stigma of Seeking Psychological Help Scale (Vogel, Wade, & Haake, 2006; see Appendix J). This questionnaire was developed and evaluated among college students to measure the impact of seeking psychological help on individuals’ self-esteem,

with a reported uni-dimensional factor structure and high internal consistency ( $\alpha = 0.91$ ) and validity (Vogel, Wade, & Haake, 2006). Participants were asked to respond on a 5-point Likert scale indicating how much they endorse each item (1 = Strongly Disagree, 2 = Disagree, 3 = Agree and Disagree Equally, 4 = Agree, 5 = Strongly Agree), with five reverse scored items. Total possible scores range from 0 through 50, and higher scores indicate more negative perceived self-stigma related to seeking psychological help. For the current study, the caregiver version of this measure was modified to reflect stigma related to mental health care for one's child. For example, "Seeking psychological help for yourself would make you feel less intelligent" instead stated "Seeking psychological help for your child would make you feel less intelligent." The items on both the adolescent and parent measure were modified for age appropriate vocabulary and reading level (see Appendix J). Other sample items include: *It would make you feel inferior to ask for psychological help for yourself (your child)* and *You would feel okay about yourself if you made the choice to seek therapy for yourself (your child)*.

The adolescent version of the self-stigma measure had low internal consistency ( $\alpha = 0.58$ ) in this sample. Because this measure was adapted and modified for the current study, Principal Component Analyses with Varimax rotations were conducted using SPSS to evaluate whether the underlying factor structure looked similar to the original sample. First, a maximum likelihood factor analyses was performed on each scale. The results indicated three factors for each scale, rather than the one-factor structure reported in the original sample. Two of the ten items loaded on the third factor. There was a large eigenvalue discontinuity after the second factor was extracted, (i.e. eigenvalues for the first, second, and third factors were 2.09, 2.06, and 1.21, respectively). The solution for the factor structure without those two items accounted for 41.52% of the variance. I removed those two items and re-ran reliability analyses, with

acceptable reliability ( $\alpha = 0.65$ ). The two items removed from the youth scale were as follows: “Your self-confidence would remain the same if you went to a therapist for a problem you could not solve” and “You would feel worse about yourself if you could not solve your own problems.” The resulting 8-item youth self-stigma scale had total possible points ranging from 8 through 40, with youth scores in this sample ranging from 8 through 34 ( $M = 17.30$ ,  $SD = 4.88$ ).

The caregiver version of this measure had moderate internal consistency ( $\alpha = 0.69$ ). Reliability analyses indicated that internal consistency improved by removing three items. I removed these three items and re-ran reliability analyses, with acceptable reliability ( $\alpha = 0.78$ ). The three items removed from the caregiver scale were as follows: “Your self-esteem would improve if your child talked to a therapist,” “Your view of yourself would not change just because you made the choice for your child to see a therapist,” and “You would feel worse about yourself if you could not solve your child’s problems.” The resulting 7-item caregiver self-stigma scale had total possible points ranging from 7 through 35, with caregiver scores in this sample ranging from 7 through 23 ( $M = 11.40$ ,  $SD = 4.15$ ).

***Social-stigma.*** Adolescent and parent perceptions of social stigma were assessed using the 5-item Stigma Scale for Receiving Psychological Help Scale (Komiya, Good, & Sherrod, 2000; see Appendix K). This measure was developed to assess perceptions of social stigmatization regarding receiving psychological treatment. The instrument has been evaluated among undergraduate college students and demonstrated acceptable internal consistency ( $\alpha = 0.72$ ) and construct validity (Komiya, Good, & Sherrod, 2000). Participants were asked to respond on a 4-point scale indicating the extent to which they agreed with each item (1 = Disagree, 2 = Partly Disagree, 3 = Partly Agree, 4 = Agree). Total possible scores range from 4 through 20, and higher scores indicate more perceived social stigma associated with seeking

psychological help. Komiya, Good & Sherrod (2000) report an internal consistency of .72 and a one-factor structure confirmed by exploratory factor analysis. For the current study, the parent version of this measure was modified to reflect stigma related to receiving psychological help for one's child. For example, "A person should not tell other people if they have seen a psychologist" instead stated "A person should not tell other people if their child has seen a psychologist." Both the adolescent and parent version were modified in terms of vocabulary and reading level (see Appendix K). Because these scales were modified and adapted for the current study, Principal Components Analyses with Varimax rotations were conducted on the youth and caregiver scales and confirmed a single factor structure with good fit to the data. Both the youth and caregiver versions of this measure demonstrated adequate internal consistency within this sample, with an alpha coefficient of .72 on the youth measure and .75 on the caregiver measure. Total scores within this sample ranged from 4 through 20. Youth social-stigma scores ranged from 5 through 20 ( $M = 10.33$ ,  $SD = 3.59$ ). Caregiver social-stigma scores ranged from 5 through 20 ( $M = 10.51$ ,  $SD = 3.88$ ).

**Mental Health Service Utilization.** Mental Health Service Utilization was assessed by self-report. Adolescents were asked to identify whether they were currently in treatment and if they had ever been in treatment in the past. Caregivers were asked the same questions about their child and themselves. For the purpose of subsequent analyses, adolescents were coded as currently in treatment if this was endorsed by either adolescent or caregiver report. Twenty-six adolescents (29%) in this sample were identified as currently receiving treatment. A total of 53 adolescents (59%) were identified as having either current or past treatment. With respect to caregivers, 41 (58%) reported either current or past treatment. Adolescent current treatment was

used as the dependent variable in study analyses, while adolescent past treatment and caregiver current or past treatment were used for the purpose of describing the sample.

## CHAPTER 3

### Results

#### Preliminary Analyses

Prior to analyses, the data were screened for accuracy of data entry, missing values, univariate and multivariate outliers, skewness and kurtosis. No out of range values were detected and the means and standard deviations of each variable were plausible. Complete demographic data was obtained for 86 participants (96% of sample). There were four caregiver participants with missing values for partner status, caregiver education, employment status, and family income. One of these four caregiver participants was also missing caregiver age data. These four participants could not be contacted to obtain this missing data. With respect to the primary study variables, there was minimal missing data. There were four missing values on the Caregiver Barriers scale, and one missing value on both the Caregiver Attitudes towards Seeking Professional Help and Caregiver Strain scales. No corrections were made for this missing data. The Youth Functional Impairment scale contained five missing values, and the Caregiver Functional Impairment scale contained one missing value. Both versions of this scale contain items pertaining to relationships with caregivers and siblings that were rated as “non-applicable” by a high number of youth and caregiver participants. To account for the missing and non-applicable responses on both versions of this measure, mean scores were created to include participants who responded to at least 80% of the items on each scale, resulting in complete data for these two scales.

The Youth Attitudes towards Seeking Professional Help, Youth Self-Stigma, and Youth Barriers total scores each contained one univariate outlier. The Caregiver Strain and Caregiver Barriers total scores each contained two univariate outliers. These values were changed to the

next highest values that were not an outlier for subsequent analyses. There were no multivariate outliers.

The following youth variables were significantly skewed: Attitudes towards Seeking Professional Help ( $z=3.323$ ), Self-Stigma ( $z=2.268$ ), and Barriers ( $z=3.083$ ). The following caregiver variables were significantly skewed: Attitudes towards Seeking Professional Help ( $z=2.948$ ), Self-Stigma ( $z=3.039$ ), Barriers ( $z=5.768$ ), and Caregiver Strain ( $z=4.929$ ). Scales with significant skew were transformed using a square-root transformation with the exception of Caregiver Strain (log transformation) and Caregiver Barriers (inverse transformation) due to substantial skew. The transformations reduced the skew to acceptable levels. Raw scores are reported for descriptive statistics. Transformed scores were used to compute all regression analyses.

### **Descriptive Analyses**

Means and standard deviations of all demographic variables are presented in Table 1. I compared the differences in these characteristics between the adolescent clinic ( $n =74$ ) and church samples ( $n =16$ ). There were significant differences in youth gender, caregiver partner status, caregiver employment status, and family income. The church sample contained a higher proportion of male adolescents, and caregivers in the church versus the clinic sample were more likely to be married/living with partner, employed, and to have a higher family income.

Descriptive statistics for the youth and caregiver independent variables are presented in Table 3 and Table 4. While all variables had plausible means and standard deviations, variability was somewhat limited on the Caregiver Barriers and Caregiver Self Stigma scales. The patterns of correlation coefficients among the primary study variables were examined and are displayed in Table 5. Several significant associations were found. Youth and caregiver report were

positively correlated on the following variables: psychological symptoms, functional impairment, and attitudes towards treatment. Youth report of psychological symptoms was strongly associated with youth report of functional impairment and moderately associated with caregiver report of functional impairment. Likewise, caregiver report of psychological symptoms was strongly associated with caregiver report of functional impairment and moderately associated with youth report of functional impairment. Youth who reported higher levels of psychological symptoms also reported higher levels of barriers to treatment. However, caregivers who reported higher levels of psychological symptoms reported fewer barriers to treatment and more positive attitudes towards treatment. Youth who reported more negative attitudes towards treatment also reported more barriers to treatment. However, caregivers who reported more negative attitudes towards treatment reported fewer barriers to treatment. Caregiver report of caregiver strain was associated with youth and caregiver report of psychological symptoms, youth and caregiver report of functional impairment, caregiver attitudes towards treatment, and caregiver barriers to treatment. Youth who reported higher levels of stigma also reported more negative attitudes towards treatment and more barriers to treatment. Caregivers who reported higher levels of stigma also reported more negative attitudes towards treatment, but reported fewer barriers to treatment.

Relationships between potential covariates and the independent variables were first examined using bivariate relations. Potential covariates included youth age, youth gender, youth PPVT standard scores, caregiver relationship to youth, caregiver age, caregiver education, caregiver partner status and family income. Demographic characteristics were selected as covariates for study analyses based on their bivariate association with the dependent variable of current adolescent treatment in order to maintain adequate power for the analyses. The



dependent variable showed significant bivariate associations with PPVT standard score,  $t(88) = 2.191, p = .031$ , and family income,  $t(84) = 2.341, p = .022$ , with lower PPVT scores and lower family income among youth currently in treatment. Therefore I included both as covariates in all tests of primary hypotheses.

Associations between the potential covariates and other study variables are summarized in Table 6. Youth age, caregiver relationship to youth, and caregiver educational level were not significantly related to any of the primary study variables. Female adolescents reported greater functional impairment than males,  $t(88) = -1.987$ . Higher PPVT scores were related with higher youth ratings of barriers to treatment ( $r = .214, p = .044$ ). Older caregivers reported more negative attitudes towards treatment for their child ( $r = -.222, p = .036$ ). Caregivers with family incomes less than 20,000 reported more youth psychological symptoms than caregivers with family incomes greater than 50,000,  $F(2, 83) = 3.10, p = .05$ . When considered as a continuous variable, lower family income was also associated with caregiver reports of more youth psychological symptoms ( $r = -.216, p = .046$ ) and caregiver strain ( $r = -.230, p = .033$ ).

Female adolescents reported higher levels of self-stigma about mental health treatment than males,  $t(88) = 2.455, p = .016$ . Adolescents with employed caregivers reported higher levels of self-stigma than adolescents with unemployed caregivers,  $t(84) = -2.552, p = .013$ . High levels of youth social-stigma about treatment were associated with employed caregivers ( $t(84) = -2.033, p = .045$ ) and caregivers that were married or living with a partner ( $t(84) = -2.213, p = .030$ ). Caregivers reported higher levels of self-stigma about mental health treatment for female adolescents than male,  $t(88) = -2.248, p = .027$ . Higher levels of caregiver social-stigma about child treatment was related to older caregiver age ( $r = .231, p = .029$ ) and higher youth PPVT scores ( $r = .279, p = .008$ ).

## Data Analytic Strategy for Primary Hypotheses

My goal in the current study was to examine how adolescent and caregiver reports of adolescent functioning, potential treatment barriers, and mental health stigmatization were associated with mental health service utilization among urban African-American adolescents. It is important to understand the independent and combined effects of these factors on utilizing mental health services.

My general data analytic strategy involved a series of binary logistic regressions predicting current adolescent therapy participation (a dichotomous outcome) from each of three predictors (i.e., adolescent functioning, treatment barriers, mental health stigmatization) after accounting for youth PPVT scores and family income. The small proportion of missing data in the analyses was handled by listwise deletion within a given regression.

## Primary Analyses

**Hypothesis 1.** The first study aim was to identify the constructs that contribute to therapy attendance among the adolescents in this sample. Based on existing literature, I expected that higher levels of adolescent psychological symptoms, adolescent functional impairment, and caregiver strain would each be associated with a greater likelihood of adolescents' current participation in therapy. A secondary aim was to identify the relative significance of adolescent and caregiver ratings of these predictors to adolescents' participation in therapy.

A series of four binary logistic regressions was conducted to examine whether adolescent adjustment and caregiver strain were related to current treatment participation, coded as yes or no. For each regression, the dependent variable was current therapy participation. Predictor variables included youths' psychological symptoms (youth and caregiver reports), youths' functional impairment (caregiver and youth reports), and caregiver strain. In order to maintain

adequate power for the current sample size, the independent variables were entered into separate regressions by construct. Significant predictors from the three separate regressions were included as independent variables in a fourth regression to assess which predictors showed unique relations with adolescent treatment. In all four regressions, PPVT and family income were entered covariates in the first block, followed by the relevant independent variables in the second block. Table 7 shows the results from the first three regressions, and Table 8 shows the results from the fourth and follow-up logistic regressions. Nagelkerke's  $R^2$  was used to estimate how much variance was accounted for by each regression model. Each of the four models accounted for significant variance in treatment participation.

***Psychological Symptoms.*** The final model predicting treatment participation from caregiver and youth reports of youths' symptom levels showed that youth PPVT but not family income was significantly related to being in treatment (OR = .96,  $p = .05$ ). Lower PPVT was associated with greater odds of adolescents' current treatment participation. After controlling for PPVT and family income, caregiver ratings of youths' psychological symptoms were significantly related to a greater likelihood of youth treatment (OR = 1.07,  $p = .027$ ). Youth ratings of psychological symptoms were unrelated to their treatment participation.

***Functional Impairment.*** The final model predicting treatment participation from caregiver and youth reports of youths' functional impairment levels showed that youth PPVT but not family income was significantly related to being in treatment (OR = .95,  $p = .05$ ). Lower PPVT was associated with greater odds of adolescents' current treatment participation. After controlling for PPVT and family income, caregiver ratings of youths' functional impairment were significantly related to a greater likelihood of youth treatment (OR = 4.26,  $p = .004$ ). Youth ratings of functional impairment were unrelated to their treatment participation.

**Caregiver Strain.** The final model predicting treatment participation from caregiver strain showed that youth PPVT but not family income was significantly related to being in treatment (OR = .95,  $p = .026$ ). Lower PPVT was associated with greater odds of adolescents' current treatment participation. After controlling for PPVT and family income, caregiver strain was significantly related to a greater likelihood of youth treatment (OR = 1.056,  $p = .001$ ).

Because youths' symptoms, functional impairment, and caregiver strain were highly related (see Table 5), a fourth logistic regression examined whether any of the significant predictors from the prior three models showed unique associations with adolescent treatment when considered together. After controlling for family income and youth PPVT, caregiver ratings of youth symptoms, youth functional impairment, and caregiver strain were entered in a single block. None of these predictors emerged as significant in this model, which is likely due to the high inter-correlations amongst these variables. However, caregiver rating of functional impairment did approach significance in this model (OR = 3.68,  $p = .058$ ).

Given the high relations amongst the predictor variables in the fourth regression, I ran three follow-up logistic regressions that compared the relative unique associations of caregiver ratings of youth symptoms, youth functional impairment, and caregiver strain to treatment. Because treatment recommendations are frequently based on assessments of youth symptoms, I wanted to assess whether caregivers' views of their children's functional impairment and about their own caregiving strain added to their decisions to engage in mental health services. Toward this end, the first regression used caregiver ratings of youths' psychological symptoms and functional impairment as predictors. The second regression used caregiver ratings of youths' symptoms and caregiver strain as predictors. The third regression used caregiver ratings of functional impairment and caregiver strain as predictors. Table 7 presents the results of these

three regressions. When predicting treatment from caregiver ratings of youths' symptoms and functional impairment, higher ratings of functional impairment but not psychological symptoms was associated with treatment participation, (OR = 4.50,  $p = .018$ ). When predicting treatment participation from caregiver rating of psychological symptoms and caregiver strain, neither factor was significantly related to a greater likelihood of youth treatment. However, caregiver strain approached significance in this model (OR = 1.04,  $p = .090$ ). When predicting treatment from caregiver ratings of youth functional impairment and caregiver strain, higher rates of functional impairment but not caregiver strain was associated with treatment participation (OR = 3.96,  $p = .016$ ).

**Hypothesis 2.** The second study aim was to identify the types of barriers that may interfere with youth therapy participation. Based on existing literature, I expected that barriers to treatment and attitudes towards treatment would each be related to decreased likelihood of adolescents' current participation in therapy. As with Aim 1, a secondary aim was to identify the relative significance of adolescent and caregiver ratings of these predictors to participation in therapy.

A series of two binary logistic regressions was conducted to examine whether the two types of barriers were related to current treatment participation. Predictor variables included youth and caregiver reports about barriers to treatment and attitudes towards treatment. The data analytic approach for this hypothesis was similar to that for Hypothesis 1. In order to maintain adequate power for the current sample size, caregiver and youth reports for the independent variables were first entered into separate regressions by construct. In both regressions, PPVT and family income were entered covariates in the first block, followed by the relevant independent variables in the second block. Table 9 shows the results from the final model of the

two logistic regressions. Each of the models accounted for significant variance in treatment participation, and Nagelkerke's  $R^2$  was used to evaluate variance explained by each model.

***Attitudes towards seeking youth treatment.*** The final model predicting treatment participation from caregiver and youth reports of attitudes towards treatment showed that youth PPVT but not family income was significantly related to being in treatment (OR = .95,  $p = .031$ ). Lower PPVT was associated with greater odds of adolescents' current treatment participation. After controlling for PPVT and family income, caregiver ratings of attitudes towards treatment were significantly related to a greater likelihood of youth treatment (OR = .24,  $p = .004$ ). Youth ratings of attitudes towards treatment were unrelated to their treatment participation.

***Barriers to Treatment.*** The final model predicting treatment participation from caregiver and youth reports of barriers to treatment showed that neither youth PPVT nor family income was significantly related to being in treatment. After controlling for PPVT and family income, neither youth nor caregiver ratings of barriers to treatment were related to youth treatment. However, youth rating of barriers did approach significance in this model (OR = .43,  $p = .058$ ).

To follow up on Hypothesis 1 and 2, I ran a follow-up regression to examine whether caregiver attitudes towards treatment decreased odds of treatment participation even after accounting for youth functioning. These results are displayed in Table 10. Given the interrelations between caregiver reports of youth symptoms, youth functional impairment, and caregiver strain, I created a composite score for caregiver report of youth functioning from the mean of the standardized scores of the three indicators. After controlling for youth PPVT and family income, caregiver report of youths' functioning and attitudes towards mental health treatment were each significantly related to treatment participation. Consistent with previous analyses, poorer youth functioning was significantly related to greater likelihood of being in

treatment (OR = 3.95,  $p = .001$ ). After controlling for youth functioning, more negative caregiver attitudes towards treatment were significantly related to decreased likelihood of youth treatment (OR = .32,  $p = .023$ ).

**Hypothesis 3a.** The third study aim was to identify the direct effects of stigma on youth therapy participation. Based on existing literature, I expected that self-stigma and social-stigma would each be related to decreased likelihood of adolescents' current participation in therapy. As with Aims 1 and 2, a secondary aim was to identify the relative significance of adolescent and caregiver ratings of these predictors to participation in therapy.

A series of two binary logistic regressions was conducted to examine whether treatment-related stigma was related to current treatment participation. Predictor variables included youth and caregiver reports of self-stigma and social-stigma. The data analytic approach for this hypothesis was similar to that for Hypotheses 1 and 2. In order to maintain adequate power for the current sample size, caregiver and youth reports for the independent variables were first entered into separate regressions by construct. In both regressions, PPVT and family income were entered covariates in the first block, followed by the relevant independent variables in the second block. Table 11 shows the results from the final model of the two logistic regressions. Each of the models accounted for significant variance in treatment participation, and Nagelkerke's  $R^2$  was used to evaluate variance explained by each model.

**Self-stigma.** The final model predicting treatment participation from caregiver and youth reports of self-stigma about mental health treatment showed that neither family income nor youth PPVT was significantly related to being in treatment. After controlling for PPVT and family income, neither youth nor caregiver ratings of self-stigma were related to youth treatment.

**Social-stigma.** The final model predicting treatment participation from caregiver and youth reports of social-stigma about mental health treatment showed that youth PPVT but not family income was significantly related to being in treatment ( $OR = .95, p = .021$ ). Lower PPVT was associated with greater odds of adolescents' current treatment participation. After controlling for PPVT and family income, neither youth nor caregiver ratings of social-stigma were significantly related to a greater likelihood of youth treatment. However, caregiver rating of social-stigma did approach significance in this model ( $OR = 1.14, p = .053$ ).

**Hypothesis 3b.** The second part of the third study aim was to explore whether stigma moderates the associations between (1) facilitative predictors (psychological symptoms, functional impairment, and caregiver strain) and adolescent treatment; and (2) prohibitive predictors (attitudes, barriers) and adolescent treatment.

A series of four binary logistic regressions were conducted to explore whether stigma moderated the association between the facilitative and prohibitive predictors and treatment. For each regression, the dependent variable was current therapy participation. Predictor variables included youth functioning (youth and caregiver), attitudes towards treatment (youth and caregiver), and barriers to treatment. The youth functioning variables included the composite score for caregiver report discussed computed for Hypothesis 2 analyses and parallel composite scores computed for youth report of symptoms and functional impairment. I did not calculate composite or summary scores for prohibitive predictors of treatment because the inter-correlations between these variables were only modest ( $r$ 's .32 to .57 within reporter; see Table 5). For the moderator variable of stigma, I used the summary caregiver and youth POMP stigma scores discussed in the methods section. All variables entered were centered to avoid problems with multicollinearity (Aiken & West, 1991). The interaction terms were computed by



multiplying the centered values for stigma with the centered value for each predictor variable. Each regression included three blocks: PPVT and family income were entered as covariates in the first block, followed by the main effects of the relevant predictors and stigma in the second block, and the interactions between each predictor and stigma in the third block. Tables 12 and 13 show the results from the four logistic regressions. Each of the four models accounted for significant variance in treatment participation.

For each regression, the facilitative and prohibitive predictors continued to show significant relations with adolescent treatment participation after controlling for PPVT and income. Caregiver and youth reports of poorer youth functioning were each associated with greater odds of adolescent treatment engagement. Caregiver report of negative attitudes towards treatment and youth report of barriers to treatment were associated with decreased odds of adolescent treatment. Caregiver and youth reports of stigma about mental health treatment showed no direct relations with treatment and did not moderate associations between predictor variables and adolescent treatment.

## CHAPTER 4

### Discussion

The purpose of this study was to examine how facilitative and prohibitive factors related to adolescent mental health service utilization among African-American adolescents when considered alone and in combination. The results of this study indicated that youth psychological symptoms, youth functional impairment, caregiver strain related to youth functioning, and attitudes towards seeking treatment for youth are related to treatment utilization among African-American adolescents. Barriers, self-stigma related to youth treatment, and social-stigma related to youth treatment were not associated with adolescent treatment. Although both caregiver and youth perspectives of each construct were assessed, only caregiver ratings were found to be predictive of treatment attendance. This is consistent with previous research indicating that caregivers typically make the decision to seek therapy, while youth may often be opposed to seeking treatment (Breland, McCarty, Zhou, McCauley, Rockhill, Katon & Richardson, 2014; Hawley & Garland, 2008). Also consistent with extant literature, family income was related to many of the study variables, including treatment participation, and was controlled for in the primary study analyses.

**Facilitative Predictors of Treatment.** The existing literature on mental health service utilization identifies severity of adolescent psychological symptoms as the most predictive factor of adolescent treatment. However, there is some evidence that indicates that this association might not exist among African-American adolescents. The current study suggests that the relationship between symptoms and treatment might vary by reporter. Caregiver and adolescent ratings of symptoms were significantly correlated in this sample; however, when considered together, only caregiver ratings of symptoms were associated with increased odds of adolescent

treatment. Although caregiver ratings of youth symptoms may be more influential in the decision to seek treatment, youth ratings of their symptoms may be more relevant to youth engagement and retention in treatment.

As with psychological symptoms, youth functional impairment was also associated with a greater likelihood of treatment participation. Functional impairment represents the level of problems in daily functioning experienced by an adolescent at home, school, and in interpersonal relationships. Conceptually, functional impairment is related to level of psychological symptoms. This is consistent with findings in the current study indicating that rating of youth symptoms was positively correlated with ratings of youth functional impairment, for both youth and caregiver reporters. Adolescent and caregiver ratings of functional impairment were significantly interrelated, but when considered together, only caregiver ratings of functional impairment were associated with increased odds of adolescent treatment.

A study investigating disagreement in ratings of youth functional impairment by reporter suggested that adolescents and parents may interpret questions about impairment differently, or vary in their threshold for identifying behaviors as problematic (Kramer et al., 2004). Further, parents may lack knowledge of adolescents' behaviors outside of the home that contribute to impairments in functioning. While caregiver ratings of youth functional impairment are most important in predicting the odds of an adolescent being in treatment, youth ratings offer valuable information about impairment that may not likely to be captured with caregiver report alone.

While functional impairment reflects problems in youth functioning in the current study, caregiver strain reflects problems in caregiver functioning specifically related to youth symptoms and impairment. Caregiver strain has been associated with adolescent psychological symptoms and adolescent treatment attendance in other populations. Within the current sample, similar

associations were found. Caregiver rating of their strain was highly correlated with their ratings of youths' psychological symptoms and functional impairment. Higher levels of caregiver strain were associated with increased odds of adolescent treatment, suggesting that caregivers are more likely to seek treatment when their child's symptoms cause them to experience higher levels of objective and subjective stress and strain. Beyond initial engagement of youth in treatment, caregiver strain has also been associated with more parental participation and attendance at therapy sessions (Haine-Schlagel, Brookman-Frazee, Fettes, Baker-Ericzen & Garland, 2012).

Caregiver rating of youth psychological symptoms, caregiver rating of youth functional impairment, and caregiver rating of caregiver strain were each associated with increased odds of adolescent treatment. Although these factors have shown independent associations with adolescent treatment attendance, research on their combined effects is limited. Due to the high associations between these constructs, it is difficult to disentangle the relative influence of each construct. However the results of this study indicate that caregiver ratings of youth functional impairment contribute uniquely to the likelihood of adolescent treatment, even when considering caregivers' perceptions of youths' symptoms and their own role strain. Similarly, after accounting for youth symptoms, caregivers' role strain added more information about the likelihood of treatment engagement. This contradicts many previous findings that psychological symptoms are the most influential factor in seeking treatment in other populations.

Although functional impairment is a key consideration in the diagnosis and treatment of psychological disorders, it is often overlooked in research on mental health service utilization. Functional impairment is a relatively new and currently emerging area of focus within this literature. Functional impairment is important because it offers the possibility of identifying youth in need of treatment that may not be detected by report of psychological symptoms. As

such, it should be emphasized in conversations with caregivers regarding the decision to seek treatment. Caregivers are more likely to directly report psychological symptoms than functional impairment, however functional impairment offers a more comprehensive way of considering a child's ability to meet expectations in their daily lives. Increasing caregiver awareness of dysfunction is likely to increase the odds of adolescent engagement and retention in treatment. With respect to African-American adolescents, the concept of functional impairment may have added relevance. As normal behavior is influenced by sociocultural context, it is possible that emotional or behavioral concerns may not be seen as symptomatic by caregivers to the extent that these emotions and behaviors are not considered abnormal in comparison to an adolescent's peers. Caregivers might also attribute emotional and behavioral concerns to a child's temperament rather than viewing these problems as psychological symptoms. However, functional impairment offers the ability to identify problems in daily life that is not contingent on the recognition or endorsement of psychological symptoms.

**Prohibitive Predictors of Treatment.** Attitudes towards seeking treatment have been identified as prohibitive factors in youth treatment utilization. Both caregiver and youth attitudes towards youth treatment were explored in the current study. The majority of participants in this sample reported positive attitudes towards seeking treatment, with 89% of adolescents and 93% of caregivers endorsing positive attitudes. This is consistent with previous literature indicating that African-Americans do not have more negative attitudes towards treatment than Whites. Caregiver and youth ratings of attitudes towards treatment were significantly interrelated, but when considered together, only caregiver ratings of negative attitudes were associated with decreased odds of adolescent treatment. This is consistent with previous research findings that caregiver attitudes play a larger role in influencing youth treatment than youth attitudes. Even

when controlling for caregiver ratings of youth functioning, negative caregiver attitudes towards treatment predicted a decreased likelihood of treatment engagement. This finding highlights the need for programming and interventions geared towards reducing negative caregiver attitudes towards treatment in order to increase the likelihood of mental health service utilization for adolescents.

Barriers to treatment have also been identified as a factor that prohibits adolescents from receiving mental health services, even after controlling for child and caregiver characteristics. Barriers incorporate both economic concerns and perceptions of treatment-related characteristics. For the purpose of the current study, caregivers were asked about economic and treatment-related perceptions that may serve as barriers to treatment. Youth were only asked about barriers related to perceptions of treatment-related characteristics. Adolescent and caregiver ratings of barriers were not interrelated. Neither caregiver nor youth ratings of barriers to treatment were related to adolescent treatment at the bivariate level. This suggests that among the African-American families in this study, barriers to treatment do not prohibit the initiation of mental health services for youth.

Youth ratings of barriers were approaching significance in the regression models predicting adolescent treatment, with fewer reported barriers among those more likely to be in treatment. This finding is unique within the current study, as caregiver and not youth ratings were found to be associated with increased odds of treatment for other study variables. This suggests that it is important to target adolescent perceptions of barriers related to perceived relevance of treatment and relationships with therapists. Altering these perceptions might contribute to adolescents' willingness to engage in mental health treatment.

Stigma about youth mental health treatment is widely considered to be the most significant prohibitive factor in adolescent treatment in African-American populations. However, empirical studies focused on this topic are limited and only recently emerging. The current study assessed caregiver and adolescent ratings of self- and social-stigma about seeking youth mental health treatment. Ratings of self-stigma and social-stigma were correlated for both adolescent and caregiver reports. However, caregiver and adolescent reports of each variable were not interrelated. Neither adolescent nor caregiver perspectives on self-stigma were related to adolescent treatment status. Neither adolescent nor caregiver ratings of social-stigma were related to treatment, although caregiver ratings were approaching significance. Interestingly, caregiver ratings of social-stigma were associated with an increased likelihood of treatment rather than a decreased likelihood as predicted. Within the context of a cross-sectional study, this result is difficult to explain but may suggest that participation in therapy may lead to increased amounts of caregiver social-stigma. This association suggests that caregiver social-stigma related to seeking youth treatment is another area of importance to target in both research and interventions geared towards increasing utilization.

Based on the emphasis on stigma in extant literature regarding African-American adolescent mental health service utilization, I explored whether stigma moderated the association between the facilitative and prohibitive predictors and treatment. Caregiver and youth reports of stigma about mental health treatment showed no direct relations with treatment and did not moderate associations between predictor variables and adolescent treatment. These findings are in contradiction to research that identifies stigma as among the important barriers to treatment among African-American youth. However, it is consistent with recent findings of no

relationship between stigma and treatment among African-American adults (i.e. Alvidrez, Snowden, & Patel, 2010).

While stigma was not predictive of adolescent treatment, it was related to the facilitative and prohibitive variables of interest in the current study. This is congruent with extant research among African-American adults (Connor, Koeske, & Brown, 2009). Higher levels of self-stigma among youth were related to more negative youth attitudes towards seeking treatment and more youth reported barriers to treatment. Interestingly, higher levels of social-stigma among youth were related to youth report of psychological symptoms and caregiver report of youth functional impairment. This suggests that youth experience more social-stigma related to factors that are likely to facilitate treatment, yet self-stigma is more related to factors that are likely to prohibit treatment. This may reflect an internalization of social-stigma among youth. Among caregivers, higher levels of self-stigma were similarly related to more negative attitudes towards youth treatment and fewer reported barriers. It is difficult to understand these findings without more information regarding contextual factors, which are likely to derive from qualitative data. It is also difficult to interpret these findings without data regarding the role of previous treatment in influencing current stigma and attitudes towards treatment. However, these findings highlight the importance of considering stigma in conjunction with other factors associated with treatment utilization.

### **Limitations and future directions**

There are four limitations of the current study that should be considered in evaluating the results. The first concerns the sample size, which limited the power to detect associations and the number of variables that could be included in regression models. The majority of adolescents were not currently in treatment, which further limited the ability to find statistically significant



differences between the treatment and non-treatment groups. A second limitation is the cross-sectional design of the study, which prevents the examination of the relations amongst these variables over an extended period of time. It is not possible to investigate questions about the direction of relationships between predictive factors and treatment, such as identifying whether treatment leads to increased or decreased levels of facilitative and prohibitive factors over time. It was also not possible to explore whether ratings of stigma change pre- and post- treatment engagement. A third limitation is the face-to-face interview format used for data collection. We decided to administer questionnaires using this format instead of having participants complete these questionnaires independently. This decision was made in order to maximize participants' understanding of the items in light of potential problems with reading level and comprehension of questions. However, this face-to-face format may have unintentionally contributed to social desirability among participants and had an impact on participants' willingness to express negative perspectives related to therapy.

The fourth and final limitation is related to the use of a community sample with no inclusion of criteria related to mental health functioning or treatment engagement. The use of a community sample rather than a clinical sample limited the range of psychological symptoms reported and current adolescent mental health treatment status. Adolescents currently experiencing acute severe symptoms and impairment might be expected to be found in inpatient or residential settings. It is possible that caregivers of adolescents with more acuity might express different attitudes, barriers, or stigmatizing beliefs about youth treatment. Further, mental health issues are not as likely to be salient for families recruited from community rather than clinical recruitment sites. Many of the perspectives offered by participants were likely to reflect hypothetical treatment-seeking situations rather than actual intentions to seek-treatment.

Finally, it is likely that adolescents and caregivers with more stigmatizing beliefs about seeking mental health treatment would also possess stigmatizing beliefs about research studies, and thus decline to participate in a research study.

Future directions for research on treatment utilization among African-American adolescents should include the development of stigma scales specific to this population. The current findings suggest that the influence of stigma about mental health treatment on utilization within this population may be over-estimated. However, qualitative studies strongly suggest that stigma serves as a serious barrier to seeking treatment (Alvidrez, Snowden, & Patel, 2010; Thompson, Bazile & Akbar, 2004). This suggests that quantitative measures of stigma developed in other populations do not capture the elements of stigma that are most relevant to seeking treatment within this group. This could be related to simple linguistic characteristics of measures or reflect more complex underlying mechanisms related to stigma. More integration between qualitative and quantitative studies might be helpful in formulating measures relevant to identifying stigma in this population.

This study also suggests future directions for developing interventions related to increasing mental health service utilization for African-American youth and families. As psychological symptoms, functional impairment, and caregiver strain all predicted an increased likelihood of treatment, providing psychoeducation to both youth and caregivers regarding the recognition of these concerns and the potential benefits of therapy is key. Negative caregiver attitudes, negative caregiver social-stigma, and youth perceptions of barriers all showed associations with treatment engagement. In order to minimize the impact of these potentially prohibitive factors, it is important to provide substantial outreach to families before treatment becomes necessary. This increases the likelihood of seeking treatment for youth if psychological symptoms or functional

impairment emerge. Extensive advertising to increase public awareness of availability of treatment in a variety of community based locations may be effective. Health promotion campaigns have been successfully implemented in Black churches, although the vast majority of these interventions have focused on physical rather than psychological health (Breland-Noble, Bell & Burriss, 2011). Incorporation of the church or other neighborhood institutions in community based efforts is likely to increase utilization and have a positive impact on stigma, attitudes towards treatment, and perceived barriers to treatment. Due to frequently reported mistrust of mental health institutions, psycho-educational interventions should include an emphasis on confidentiality and the protection of mental health treatment under the HIPAA act.

This study suggests that there may be a generational shift in perceptions of prohibitive factors related to mental health treatment. Caregiver and youth report were inter-related on the facilitative predictor variables of psychological symptoms and functional impairment. However, caregiver and youth report were not inter-related on the prohibitive variables of barriers to treatment, self-stigma, and social-stigma. Additionally, while caregiver and youth report of attitudes towards treatment were inter-related, the correlation was at a lower level than report of symptoms and impairment. Taken together, these findings might suggest youth perspectives on these prohibitive factors might be more influenced by peers than caregivers. To the extent that youth and caregivers have differing perspectives regarding prohibitive factors in treatment utilization, recent media campaigns and other outreach efforts may have had a positive influence on contemporary perceptions of therapy. This is an interesting area to explore in future research.

### **Strengths**

This study builds on previous research related to mental health service utilization by focusing exclusively on an urban African-American adolescent sample, which reflects an

underrepresented population in research. This addresses questions in extant research regarding the generalizability of findings in other populations. It also allows more exploration of within-group characteristics related to treatment utilization as compared with the between-group characteristics that dominate current research in this area. Further, this study looked at the combined effects of both facilitative and prohibitive factors independently identified as associated with treatment which offers a more comprehensive view of underlying motivations for therapy attendance. This further provides insight into the relative significance of these factors and the most important modifiable targets to address in intervention efforts. As research on utilization often focuses separately on either caregiver or adolescent perspectives on treatment factors, the inclusion of both reporters in the current study allowed for a comparison of the relative influence of each perspective.

### **Clinical Implications**

Mental health care providers or screening instruments geared toward identifying African-American adolescents in need for treatment should not focus solely on psychological symptoms and diagnosis of disorders. Functional impairment in meeting daily expectations at home, school, and in interpersonal relationships may be more important to emphasize with adolescents and caregivers in making decisions to seek-treatment. Caregivers may be more likely to understand the potential need for treatment and benefits of interventions in improving adolescent functioning within the context of functional impairment. Focusing on addressing emotional and behavior symptoms that might be perceived as related to child temperament or considered by caregivers to be adaptive for the adolescent is likely to be ineffective in engaging families in treatment. Similarly, increasing awareness of caregiver strain and the potential for reducing this strain through youth treatment may be a mechanism for increasing utilization.

Barriers to treatment were not predictive of treatment in this study, but youth report of these barriers showed a trend towards significance. These findings suggest that youth perceptions of the relevance of treatment and the ability to establish relationships with mental health providers may serve as a barrier to treatment. This was the only youth rated variable that appeared to have more of an association with treatment than caregiver report. Previous findings have indicated that African-American families may perceive professional boundaries maintained in the field as a lack of caring or connection, contributing to stigmatizing feelings regarding treatment. Therefore, a clinical approach that allows for more flexibility in boundaries or explanations of the reasons for maintaining boundaries is likely to be received more positively in this population. More visibility and integration of mental health professionals in the community is also likely to decrease concerns about the therapeutic relationship.

### **Conclusion**

Findings from this study are important in identifying the specific facilitative and prohibitive factors to target when developing interventions to increase mental health service utilization among African-American adolescents. Although caregiver perspectives are more associated with increased odds of adolescent being in treatment, adolescent perspectives offer additional information that helps to elaborate or explain caregiver report of treatment-related factors. Self- and social-stigma were not found to be as important in predicting adolescent treatment as previously indicated. However, stigma is clearly related to both facilitative and prohibitive factors that predict treatment in ways that are not easily captured in quantitative analysis. More research needs to be done with larger samples to more fully understand the complex relationship among facilitative factors, prohibitive factors, stigma and adolescent mental health service utilization among African-American adolescents.

Table 1  
Descriptive  
Statistics for the  
Whole Sample and  
by Recruitment Site

Youth Variables	Whole Sample		Adolescent Clinic Sample		Church Sample		$\chi^2$ (df)/ t(df)
	N	Mean SD	N	Mean SD	N	Mean SD	
Gender <sup>1</sup>	61	.68 .47	55	.74 <sup>a</sup> .44	6	.38 <sup>b</sup> .50	8.168(1)**
Age	90	14.91 1.52	74	14.92 1.56	16	14.88 1.36	.104 (88)
PPVT Standard Score	90	87.43 12.50	74	87.00 11.89	16	89.44 15.28	-.706 (88)
Caregiver Variables							
Age	89	42.29 9.01	73	42.63 9.22	16	40.75 8.08	.754(87)
Relationship to Youth <sup>2</sup>	76	.84 .36	61	.82 .38	15	.94 .25	1.283(1)
Partner Status <sup>3</sup>	58	.64 .47	54	.73 <sup>a</sup> .42	4	.25 <sup>b</sup> .45	16.126(1)**
Employment Status <sup>4</sup>	47	.52 .50	44	.63 <sup>a</sup> .49	3	.19 <sup>b</sup> .40	10.223(1)**
Education							
Less than High School	12	.14	9	.13	3	.19	1.244(1)
High School Diploma/GED	23	.27	20	.29	3	.19	
Some College	30	.35	25	.36	5	.31	
College Degree	21	.24	16	.23	5	.31	
Family Income							
Less than 20,000	37	.43	37	.53	0	0	27.794(2)**
20,000 – 50,000	35	.41	28	.40	7	.44	
More than 50,000	14	.16	5	.07	9	.56	

<sup>1</sup> Values represent proportion of female adolescents

<sup>2</sup> Values represent proportion of biological parent caregivers

<sup>3</sup> Values represent proportion of

single/separated/divorced/widowed caregivers

<sup>4</sup> Values represent proportion of unemployed caregivers

<sup>ab</sup> Values with different superscripts denote statistically significant differences

\*\*  $p < .01$

APPENDIX A

Table 2

*Summary of Measures*

Construct	Measure by Reporter	
	Adolescent	Parent
Demographic Questionnaire	Youth Report	Parent Report
<b>FACILITATIVE FACTORS:</b>		
<i>Youth psychiatric symptoms</i>	Pediatric Symptom Checklist – Youth version	Child Behavior Checklist
<i>Youth functional impairment</i>	Columbia Impairment Scale- Youth Version	Columbia Impairment Scale- Parent Version
<i>Impact of youth's symptoms on parental stress</i>		Caregiver Strain Questionnaire
<b>PROHIBITIVE FACTORS:</b>		
<i>Logistic barriers to youth treatment</i>	Barriers to Treatment Participation Scale- <b>Modified</b>	Barriers to Treatment Participant Scale
<i>Attitudes towards therapy for youth</i>	Attitudes Towards Seeking Professional Help Scale- Short Form- <b>Modified</b>	Attitudes Towards Seeking Professional Help Scale- Short Form- <b>Modified</b>
<i>Self-stigma about mental health treatment for youth</i>	Self Stigma of Seeking Psychological Help Scale- <b>Modified</b>	Self Stigma of Seeking Psychological Help Scale- <b>Modified</b>
<i>Social stigma about mental health treatment for youth</i>	Social Stigma for Receiving Psychological Help Scale- <b>Modified</b>	Social Stigma for Receiving Psychological Help Scale- <b>Modified</b>
<b>DEPENDENT VARIABLE:</b>		
<i>Current treatment attendance</i>	Self-report	Parent-report

Table 3

*Descriptive Statistics for Youth Study Variables*

	Mean	Standard Deviation	Possible Range	Observed Range
Self-Reported Psychological Symptoms	21.72	9.79	0-70	4-52
Self-Reported Functional Impairment	13.19	7.82	0-52	0-29
Attitudes towards Treatment- self	20.31	4.97	10-40	10-37
Self-Reported Barriers to Treatment	29.03	10.49	14-70	14-66
Youth Self-Stigma about treatment	17.30	4.88	5-40	8-34
Youth Social Stigma about treatment	10.33	3.59	5-20	5-20



Table 4

*Descriptive Statistics for Caregiver Study Variables*

	Mean	Standard Deviation	Possible Range	Observed Range
CGR Youth Psychological Symptoms	58.08	11.48		29-88
CGR Youth Functional Impairment	13.17	8.76	0-52	0-34
Caregiver Reported Self-Strain	37.71	16.78	20-100	20-96
CGR Attitudes towards Treatment for Youth	16.58	5.43	10-40	10-33
CGR Barriers to Treatment	65.00	21.06	42-210	42-145
CGR Self-Stigma about Youth Treatment	11.40	4.15	5-35	7-23
CGR Social Stigma about Youth Treatment	10.51	3.88	5-20	5-20

*Note:* CGR = Caregiver report.

Table 5

*Correlations amongst Primary Study Variables*

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. YR Sxs	—	.419**	.782**	.478**	.298**	.131	-.044	.223*	-.190	.065	.023	.232*	-.023
2. CGR Sxs		—	.436**	.754**	.687**	.008	.283**	.000	-.217*	-.104	.014	.163	.087
3. YR FI			—	.496**	.359**	.092	-.058	.204	-.175	.103	.064	.192	.023
4. CGR FI				—	.733**	.000	-.259*	.021	-.229*	-.041	.030	.253*	.145
5. CGR Strain					—	.021	-.244*	.083	-.256*	-.131	.048	.149	.186
6. YR Attitudes						—	.315**	.572**	-.152	.329**	.316**	.093	.014
7. CGR Attitudes							—	.140	-.329**	.198	.406**	-.062	.103
8. YR Barriers								—	-.127	.258*	.127	.266*	-.036
9. CGR Barriers									—	-.045	-.278**	-.039	-.362**
10. YR Self-Stig										—	.119	.329**	-.047
11. CGR Self-Stig											—	-.010	.408**
12. YR Soc-Stig												—	
13. CGR Soc-Stig													—

*Note:* YR = youth reported; CGR = caregiver reported; sxs = youth psychological symptoms; FI = youth functional impairment; strain = caregiver strain; attitudes = attitudes towards seeking treatment for youth; barriers = logistical barriers to treatment; self-stig = self-stigma about youth treatment; soc-stig = social-stigma about youth treatment. + p < .10, \* p < .05, \*\* p < .01.

Table 6

*Summary of Covariate Analyses*

	Covariates of significant bivariate correlations	Covariates of significant multivariate correlations
YR Psychological Symptoms		
CGR Psychological Symptoms	Family Income (continuous)	Family Income (categorical)
YR Functional Impairment		Youth Gender
CGR Functional Impairment		
CGR Caregiver Strain	Family Income (continuous)	
YR Attitudes		
CGR Attitudes	Caregiver Age	
YR Barriers	PPVT	
CGR Barriers		
YR Self-Stigma		Youth Gender, Employment
CGR Self-Stigma		Youth Gender
YR Social-Stigma		Employment, Partner Status
CGR Social-Stigma	PPVT, Caregiver Age	
Current Adolescent Treatment	PPVT, Family Income	Employment, Youth Gender

*Note:* PPVT = Peabody Picture Vocabulary Test; YR = youth reported; CGR = caregiver reported; symptoms = youth psychological symptoms; impairment = youth functional impairment, strain = caregiver strain, attitudes = attitudes towards seeking treatment for youth; barriers= barriers to treatment; self-stigma = self-stigma about youth treatment; soc-stigma = social stigma about youth treatment.

Table 7

*Hypothesis 1: Results of Logistic Regressions Predicting Adolescent Treatment from Facilitative Predictors*

	B	S.E.	Wald	Exp(B)	C.I. for Exp(B)		$\chi^2$ (df) for Model	Model R <sup>2</sup>
					Lower 5%	Upper 5%		
<b>Youth Psychological Symptoms</b>								
Block 1								
PPVT	-.047	.024	3.763 <sup>+</sup>	.954	.909	1.000		
Income	-.259	.165	2.460	.771	.558	1.067		
Block 2								
YR Symptoms	.040	.033	1.491	1.041	.976	1.111		
CGR Symptoms	.062	.030	4.443 <sup>*</sup>	1.064	1.004	1.128	21.90(4) <sup>*</sup>	.321
<b>Youth Functional Impairment</b>								
Block 1								
PPVT	-.051	.026	3.807 <sup>+</sup>	.950	.902	1.000		
Income	-.282	.167	2.844 <sup>+</sup>	.754	.543	1.047		
Block 2								
YR Impairment	.496	.519	.910	1.641	.593	4.543		
CGR Impairment	1.437	.507	8.023 <sup>**</sup>	4.207	1.557	11.371	27.82(4) <sup>**</sup>	.395
<b>Caregiver Strain</b>								
Block 1								
PPVT	-.055	.025	4.996 <sup>*</sup>	.946	.902	.993		
Income	-.925	1.014	.831	.397	.054	2.895		
Block 2								
CGR Strain	.055	.017	10.157 <sup>**</sup>	1.056	1.021	1.092	19.26(3) <sup>**</sup>	.286

*Note:* Values reported are for final model with all blocks/variables entered. PPVT = Peabody Picture Vocabulary Test; Income = family income; CGR = caregiver reported; YR = youth reported; symptoms = youth psychological symptoms; impairment = youth functional impairment, strain = caregiver strain.

+  $p < .10$ , \*  $p < .05$ , \*\*  $p < .01$ .

Table 8

*Hypothesis 1: Results of Logistic Regressions Predicting Adolescent Treatment from Significant Facilitative Predictors*

	B	S.E.	Wald	Exp(B)	C.I. for Exp(B)		$\chi^2$ (df) for Model	Model R <sup>2</sup>
					Lower 5%	Upper 5%		
<b>Combined caregiver facilitative predictors</b>								
Block 1								
PPVT	-.054	.026	4.306*	.947	.900	.997		
Income	-1.133	1.085	1.091	.322	.038	2.700		
Block 2								
CGR Symptoms	.007	.040	.035	1.007	.932	1.089		
CGR Impairment	1.303	.687	3.603 <sup>+</sup>	3.682	.958	14.143		
CGR Strain	.017	.023	.568	1.018	.973	1.065		
							25.59(5)**	.367
<b>Psychological Symptoms – Functional Impairment</b>								
Block 1								
PPVT	-.051	.026	3.845*	.950	.902	1.000		
Income	-.269	.162	2.741 <sup>+</sup>	.764	.556	1.051		
Block 2								
CGR Symptoms	.009	.039	.053	1.009	.935	1.089		
CGR Impairment	1.548	.645	5.758*	4.704	1.328	16.664		
							29.96(4)**	.384
<b>Psychological Symptoms – Caregiver Strain</b>								
Block 1								
PPVT	-.055	.025	4.820*	.946	.901	.994		
Income	-.830	1.037	.641	.436	.057	3.329		
Block 2								
CGR Symptoms	.050	.033	2.318	1.051	.986	1.120		
CGR Strain	.035	.021	2.883 <sup>+</sup>	1.036	.995	1.079		
							21.72(4)**	.319
<b>Functional Impairment – Caregiver Strain</b>								
Block 1								
PPVT	-.054	.026	4.278*	.948	.900	.997		
Income	-1.159	1.075	1.162	.314	.038	2.581		
Block 2								
CGR Impairment	1.375	.573	5.760*	3.955	1.287	12.156		
CGR Strain	.018	.023	.671	1.019	.975	1.065		
							25.55(4)**	.367

*Note:* Values reported are for final model with all blocks/variables entered. PPVT = Peabody Picture Vocabulary Test; Income = family income; CGR = caregiver reported; symptoms = youth psychological symptoms; impairment = youth functional impairment, strain = caregiver strain. +  $p < .10$ , \*  $p < .05$ , \*\*  $p < .01$ .

Table 9

*Hypothesis 2: Results of Logistic Regressions Predicting Adolescent Treatment from Prohibitive Predictors*

	B	S.E.	Wald	Exp(B)	C.I. for Exp(B)		$\chi^2$ (df) for Model	Model R <sup>2</sup>
					Lower 5%	Upper 5%		
<b>Attitudes towards seeking treatment</b>								
Block 1								
PPVT	-.051	.024	4.664*	.950	.906	.995		
Income	-.289	.155	3.456 <sup>+</sup>	.749	.553	1.016		
Block 2								
YR Attitudes	.462	.542	.725	1.587	.548	4.595		
CGR Attitudes	-1.421	.504	7.960**	.241	.090	.648	19.70(4)**	.292
<b>Barriers to Treatment</b>								
Block 1								
PPVT	-.032	.022	2.002	.969	.927	1.012		
Income	-.267	.144	3.418 <sup>+</sup>	.766	.577	1.1016		
Block 2								
YR Barriers	-.824	.453	3.318 <sup>+</sup>	.438	.181	1.065		
CGR Barriers	-40.197	63.779	.397	.000	.000	6.776	13.72(4)**	.211

*Note:* Values reported are for final model with all blocks/variables entered. PPVT = Peabody Picture Vocabulary Test; Income = family income; CGR = caregiver reported; YR = youth reported; attitudes = attitudes towards seeking treatment for youth; barriers= barriers to treatment; <sup>+</sup> p < .10, \* p < .05, \*\* p < .01.

Table 10

*Hypothesis 2: Results of Logistic Regression Predicting the Effect of Caregiver Attitudes on Treatment when Controlling for Caregiver Rating of Youth Functioning*

	B	S.E.	Wald	Exp(B)	C.I. for Exp(B)		$\chi^2$ (df) for Model	Model R <sup>2</sup>
					Lower 5%	Upper 5%		
Block 1								
PPVT	-.062	.028	4.904*	.940	.889	.993		
Income	-.199	.177	1.274	.819	.580	1.158		
Block 2								
CGR	1.329	.427	9.701**	3.779	1.637	8.723		
Functioning								
Block 3								
CGR Attitudes	-1.107	.509	4.730*	.331	.122	.896	31.41(4)**	.437

*Note:* Values reported are for final model with all blocks/variables entered. PPVT = Peabody Picture Vocabulary Test; Income = family income; CGR = caregiver reported; functioning = composite rating of overall youth functioning; attitudes = attitudes towards seeking treatment for youth. +  $p < .10$ , \*  $p < .05$ , \*\*  $p < .01$ .

Table 11

*Hypothesis 3: Results of Logistic Regressions Predicting Adolescent Treatment from Stigma Predictors*

	B	S.E.	Wald	Exp(B)	C.I. for Exp(B) Lower 5%	Upper 5%	$\chi^2$ (df) for Model	Model R <sup>2</sup>
<b>Self-Stigma about youth treatment</b>								
Block 1								
PPVT	-.039	.021	3.339 <sup>+</sup>	.962	.922	1.003		
Income	-.290	.145	4.029*	.748	.564	.993		
Block 2								
YR Self-Stigma	-.031	.057	.304	.969	.867	1.084		
CGR Self-Stigma	-.267	.445	.361	.766	.320	1.831	10.76(4)*	.168
<b>Social Stigma about youth treatment</b>								
Block 1								
PPVT	-.052	.024	4.941*	.949	.906	.994		
Income	-.270	.147	3.378 <sup>+</sup>	.763	.572	1.018		
Block 2								
YR Soc-Stigma	.190	.500	.144	1.209	.453	3.224		
CGR Soc-Stigma	.127	.070	3.302 <sup>+</sup>	1.135	.990	1.301	13.70(4)**	.210

*Note:* Values reported are for final model with all blocks/variables entered. PPVT = Peabody Picture Vocabulary Test; Income = family income; CGR = caregiver reported; YR = youth reported; self-stigma = self-stigma about youth treatment; soc-stigma = social stigma about youth treatment.

<sup>+</sup>  $p < .10$ , \*  $p < .05$ , \*\*  $p < .01$ .



Table 12

*Hypothesis 3: Results of Logistic Regressions Exploring Stigma as Moderator of Relations between Facilitative Predictors and Youth Treatment*

	B	S.E.	Wald	Exp(B)	C.I. for Exp(B)		$\chi^2$ (df) for Model	Model R <sup>2</sup>
					Lower 5%	Upper 5%		
<b>Caregiver rating of youth functioning – Caregiver Stigma</b>								
Block 1								
PPVT	-.061	.027	4.964*	.941	.892	.993		
Income	-.243	.172	1.997	.784	.559	1.099		
Block 2								
CGR Functioning	1.338	.404	11.819**	4.008	1.816	8.844		
CGR Stigma	2.821	3.159	.797	16.788	.034	8204.109		
Block 3								
Func x Stigma	-1.120	3.823	.086	.326	.000	585.116	26.84(5)**	.383
<b>Youth rating of youth functioning – Youth Stigma</b>								
Block 1								
PPVT	-.042	.023	3.293 <sup>+</sup>	.958	.915	1.003		
Income	-.324	.166	3.800*	.723	.522	1.002		
Block 2								
YR Functioning	.873	.315	7.675**	2.393	1.291	4.437		
YR Stigma	-1.657	2.938	.318	.191	.001	60.485		
Block 3								
Func x Stigma	.086	2.712	.001	1.089	.005	221.426	18.95(5)**	.282

*Note:* Values reported are for final model with all blocks/variables entered. PPVT = Peabody Picture Vocabulary Test; Income = family income; CGR = caregiver reported; YR = youth reported; functioning = composite rating of overall youth functioning; stigma = summary score for overall stigma; func x stigma = interaction between functioning and stigma.

<sup>+</sup> p < .10, \* p < .05, \*\* p < .01.

Table 13

*Hypothesis 3: Results of Logistic Regressions Exploring Stigma as Moderator of Relations between Prohibitive Predictors and Youth Treatment*

	B	S.E.	Wald	Exp(B)	C.I. for Exp(B)		$\chi^2$ (df) for Model	Model R <sup>2</sup>
					Lower 5%	Upper 5%		
<b>Caregiver rating of prohibitive factors – Caregiver Stigma</b>								
Block 1								
PPVT	-.058	.026	4.979*	.943	.896	.993		
Income	-.188	.152	1.524	.829	.615	1.117		
Block 2								
CGR Attitudes	-1.795	.617	8.471**	.166	.050	.556		
CGR Barriers	-85.526	85.770	.994	.000	.000	7.306		
CGR Stigma	5.011	3.571	1.969	150.044	.137	>164,000		
Block 3								
Att x Stigma	-1.593	5.485	.084	.203	.000	9487.217		
Barr x Stigma	791.715	818.895	.935	.	.000	.		
		5					24.91(7)**	.359
<b>Youth rating of prohibitive factors – Youth Stigma</b>								
Block 1								
PPVT	-.021	.024	.788	.979	.934	1.026		
Income	-.246	.144	2.933 <sup>+</sup>	.782	.589	1.036		
Block 2								
YR Attitudes	.959	.678	2.004	2.609	.692	9.846		
YR Barriers	-1.412	.639	4.888*	.244	.070	.852		
YR Stigma	.674	2.900	.054	1.963	.007	576.700		
Block 3								
Att x Stigma	4.882	6.534	.558	131.833	.000	>48,000,000		
Barr x Stigma	-10.506	6.437	2.664	.000	.000	8.246		
							17.84(7)*	.267

*Note:* Values reported are for final model with all blocks/variables entered. PPVT = Peabody Picture Vocabulary Test; Income = family income; CGR = caregiver reported; YR = youth reported; functioning = composite rating of overall youth functioning; stigma = summary score for overall stigma; attitudes = attitudes towards seeking treatment for youth; barriers= barriers to treatment; att x stigma = interaction between attitudes and stigma; barr x stigma = interaction between barriers and stigma.

<sup>+</sup> p < .10, \* p < .05, \*\* p < .01.

## APPENDIX B

## Recruitment Flier

# We need teens ^ like you! & Parents

- \* Would you like your opinions heard?
- \* Are you a teen between 13 and 18 years old?
- \* Would one \$20 gift card each interest you and your parent/guardian?

If you answered YES to all of these questions, then this study is for **YOU!!!**

---

We are doing research at the Adolescent Medicine Clinic in order to better understand what Detroit area teenagers and parents think about mental and physical health care behaviors.

Your participation will help us better understand the decisions that teenagers make about mental health treatment and the physical health behaviors of eating, sleeping, and exercise.

In order to participate, teenagers must have a parent/guardian who is also willing to participate. The study will only take 2 hours of your time and can be scheduled at your convenience.

**You and your parent/guardian will each receive one \$20 gift card for your time.**

If you have any questions about the study, you can contact the study coordinators, Brittany Kohlberger or Marilyn Franklin, at 313-577-8688.

## APPENDIX C

### Youth Demographic Questionnaire

1. What is your relationship to the adult that is participating in this project? (*Circle response*)

Biological Mother	Biological Father	Grandmother	Grandfather
Aunt	Uncle	Foster Mother	Foster Father
Other _____			

2. Is this person your primary caregiver? **YES** **NO**

2a. Who do you consider to be your primary female caregiver? \_\_\_\_\_

2b. Who do you consider to be your primary male caregiver? \_\_\_\_\_

3. How old are you? \_\_\_\_\_

4. What is your gender? **BOY** **GIRL**

5. What grade are you in? \_\_\_\_\_

6. Please tell me which of the following best describes your ethnic background:  
(*Circle Response*)

African-American/Black	Caucasian/White	Latino-American
Indian/Alaska Native	Asian/Pacific Islander	
Other _____		

### Caregiver Demographic Questionnaire

1. What is your relationship to the child that is participating in this project? (*Circle response*)

Biological Mother	Biological Father	Grandmother	Grandfather
Aunt	Uncle	Foster Mother	Foster Father
Other _____			

2. Are you this child's primary caregiver? **YES** **NO**

2a. Who do you consider to be this child's primary female caregiver? \_\_\_\_\_

2b. Who do you consider to be this child's primary male caregiver? \_\_\_\_\_

3. How old are you? \_\_\_\_\_

4. Please tell me which of the following best describes your ethnic background:  
(*Circle Response*)

African-American/Black	Caucasian/White	Latino-American
Indian/Alaska Native	Asian/Pacific Islander	
Other _____		

5. What is your highest grade completed in school? \_\_\_\_\_

5a. *If less than college:* Did you receive: **High School Diploma** **GED**

6. Are you currently working? **YES** **NO**

6a. *If YES,* what is your current occupation? \_\_\_\_\_

7. What is your current marital status?

Single Married Divorced Separated Living with Partner Widowed

8. What was your family's approximate income last year?

Less than 9,999	10,000-19,999	20,000-29,999	30,000-39,999
40,000-49,999	50,000-59,999	60,000-69,999	70,000-79,999
80,000-89,999	90,000-99,999	over 100,000	

## APPENDIX D

## Pediatric Symptom Checklist – Youth Report (Y-PSC)

Using this rating scale, indicate how well each statement describes you. The 0 means the item never applies to you, while the 1 means the items sometimes applies, and 2 means the item often applies to you.

		Never	Sometimes	Often
1. Complain of aches or pains	1	_____	_____	_____
2. Spend more time alone	2	_____	_____	_____
3. Tire easily, little energy	3	_____	_____	_____
4. Fidgety, unable to sit still	4	_____	_____	_____
5. Have trouble with teacher	5	_____	_____	_____
6. Less interested in school	6	_____	_____	_____
7. Act as if driven by motor	7	_____	_____	_____
8. Daydream too much	8	_____	_____	_____
9. Distract easily	9	_____	_____	_____
10. Are afraid of new situations	10	_____	_____	_____
11. Feel sad, unhappy	11	_____	_____	_____
12. Are irritable, angry	12	_____	_____	_____
13. Feel hopeless	13	_____	_____	_____
14. Have trouble concentrating	14	_____	_____	_____
15. Less interested in friends	15	_____	_____	_____
16. Fight with other children	16	_____	_____	_____
17. Absent from school	17	_____	_____	_____
18. School grades dropping	18	_____	_____	_____
19. Down on yourself	19	_____	_____	_____
20. Visit doctor with doctor finding nothing wrong	20	_____	_____	_____
21. Have trouble sleeping	21	_____	_____	_____
22. Worry a lot	22	_____	_____	_____
23. Want to be with parent more than before	23	_____	_____	_____
24. Feel that you are bad	24	_____	_____	_____
25. Take unnecessary risks	25	_____	_____	_____
26. Get hurt frequently	26	_____	_____	_____
27. Seem to be having less fun	27	_____	_____	_____
28. Act younger than children your age	28	_____	_____	_____
29. Do not listen to rules	29	_____	_____	_____
30. Do not show feelings	30	_____	_____	_____
31. Do not understand other people's feelings	31	_____	_____	_____
32. Tease others	32	_____	_____	_____
33. Blame others for your troubles	33	_____	_____	_____
34. Take things that do not belong to you	34	_____	_____	_____
35. Refuse to share	35	_____	_____	_____



28	Breaks rules at home, school, or elsewhere.
29	Fears certain animals, situations, or places, other than school.
30	Fears going to school.
31	Fears he/she might think or do something bad.
32	Feels he/she wants to be perfect.
33	Feels or complains that no one loves him/her.
34	Feels others are out to get him/her.
35	Feels worthless or inferior.
36	Gets hurt a lot, accident-prone.
37	Gets in many fights.
38	Gets teased a lot.
39	Hangs around others who get in trouble.
40	Hears sounds or voices that aren't there.
41	Impulsive or acts without thinking.
42	Would rather be alone than with others.
43	Lying or cheating.
44	Bites fingernails.
45	Nervous, high-strung, or tense.
46	Nervous movements or twitching.
47	Nightmares.
48	Not liked by other kids,
49	Constipated, doesn't move bowels.
50	Too fearful or anxious.
51	Feels dizzy or lightheaded.
52	Feels too guilty.
53	Overeating.
54	Overtired without good reason.
55	Overweight.
56	Physical problems (without known medical cause):
	a. aches or pains
	b. headaches
	c. Nausea, feels sick
	d. Problems with eyes (Not if corrected by glasses)
	e. rashes or other skin problems
	f. Stomachaches
	g. Vomiting, throwing up
	h. Other
57	Physically attacks people.
58	Picks nose, skin, or other parts of body.
59	Plays with own sex parts in public.
60	Plays with own sex parts too much.



61	Poor school work.
62	Poorly coordinated or clumsy.
63	Prefers being with older kids.
64	Prefers being with younger kids.
65	Refuses to talk.
66	Repeats certain acts over and over.
67	Runs away from home.
68	Screams a lot.
69	Secretive, keeps things to self.
70	Sees things that aren't there.
71	Self-conscious or easily embarrassed.
72	Sets fires.
73	Sexual problems.
74	Showing off or clowning.
75	Too shy or timid.
76	Sleeps less than most kids.
77	Sleeps more than most kids during day and/or night.
78	Inattentive or easily distracted.
79	Speech problem.
80	Stares blankly.
81	Steals at home.
82	Steals outside the home.
83	Stores up too many things he/she doesn't need.
84	Strange behavior.
85	Strange ideas.
86	Stubborn, sullen, or irritable.
87	Sudden changes in mood or feelings.
88	Sulks a lot.
89	Suspicious.
90	Swearing or obscene language.
91	Talks about killing self.
92	Talks or walks in sleep.
93	Talks too much.
94	Teases a lot.
95	Temper tantrums or hot temper.
96	Thinks about sex too much.
97	Threatens people.
98	Thumb-sucking.
99	Smokes, chews, or sniffs tobacco.
100	Trouble sleeping.
101	Truancy, skips school.

102	Underactive, slow moving, or lacks energy.
103	Unhappy, sad, or depressed.
104	Unusually loud.
105	Uses drugs for nonmedical purposes (don't include alcohol or tobacco)
106	Vandalism.
107	Wets self during day.
108	Wets the bed.
109	Whining.
110	Wishes to be opposite sex.
111	Withdrawn, doesn't get involved with others.
112	Worries.
113	Other problems.

## APPENDIX F

## Columbia Functional Impairment Scale- Youth Version

I will be asking you about different behaviors that may or may not be a problem for you. Please tell me the number that you think best describes your situation. This rating scale goes from 0 to 4. 0 means that you do not think the behavior described is a problem for you. 2 means that you think that the behavior described is some problem for you. 4 means that you think the behavior described is a very bad problem for you. Please indicate if the question is not applicable or you don't know.

0	1	2	3	4	N/A
No problem		Some problem		Very bad problem	Not applicable/Don't know

In general, how much of a problem do you think you have with:						
1. ...getting into trouble?	0	1	2	3	4	N/A
2. ...getting along with your (primary female caregiver)?	0	1	2	3	4	N/A
3. ...getting along with your (primary male caregiver)?	0	1	2	3	4	N/A
4. ...feeling unhappy or sad?	0	1	2	3	4	N/A

How much of a problem would you say you have:						
5. ...with your behavior at school? (or at your job)	0	1	2	3	4	N/A
6. ...with having fun?	0	1	2	3	4	N/A
7. ...getting along with adults other than your primary caregivers?	0	1	2	3	4	N/A

How much of a problem do you have:						
8. ...with feeling nervous or afraid?	0	1	2	3	4	N/A
9. ...getting along with your sister(s) and/or brother(s)?	0	1	2	3	4	N/A
10. ...getting along with other kids your age?	0	1	2	3	4	N/A

How much of a problem would you say you have:						
11. ...getting involved in activities like sports or hobbies	0	1	2	3	4	N/A
12. ...with your school work (doing your job)?	0	1	2	3	4	N/A
13. ...with your behavior at home?	0	1	2	3	4	N/A

### Columbia Functional Impairment Scale- Parent Version

I will be asking you about different behaviors that may or may not be a problem for your child. Please tell me the number that you think best describes your child's situation. This rating scale is from 0 to 4. 0 means that you do not think the behavior described is a problem for your child. 2 means that you think that the behavior described is some problem for your child. 4 means that you think the behavior described is a very bad problem for your child. Please indicate if the question is not applicable or you don't know.

0	1	2	3	4	N/A
No problem		Some problem		Very bad problem	Not applicable/Don't know

<b>In general, how much of a problem do you think your child has with:</b>						
1. ...getting into trouble?	0	1	2	3	4	N/A
2. ...getting along with his/her mother/mother figure?	0	1	2	3	4	N/A
3. ...getting along with his/her father/father figure?	0	1	2	3	4	N/A
4. ...feeling unhappy or sad?	0	1	2	3	4	N/A

<b>How much of a problem would you say your child has:</b>						
5. ...with his/her behavior at school? (or job)	0	1	2	3	4	N/A
6. ...with having fun?	0	1	2	3	4	N/A
7. ...getting along with adults other than (their mother and/or father)?	0	1	2	3	4	N/A

<b>How much of a problem does your child have:</b>						
8. ...with feeling nervous or afraid?	0	1	2	3	4	N/A
9. ...getting along with sister(s) and/or brother(s)?	0	1	2	3	4	N/A
10. ...getting along with other kids his/her age?	0	1	2	3	4	N/A

<b>How much of a problem would you say your child has:</b>						
11)...getting involved in activities like sports or hobbies	0	1	2	3	4	N/A
12)...with school work (doing his/her job)?	0	1	2	3	4	N/A
13)...with his/her behavior at home?	0	1	2	3	4	N/A



## APPENDIX H

### Attitudes Towards Seeking Professional Psychological Help Scale- Short Form

These items will focus on how you feel about seeking professional psychological help. This rating scale goes from 1 to 4. The 1 means that you disagree with the statement I read, while 2 means you partly disagree, 3 means you partly agree, and 4 means you agree.

1	2	3	4
Disagree	Partly Disagree	Partly Agree	Agree

1. If I believed I was having a mental breakdown, my first inclination would be to get professional attention.

***Adapted Items***

Parent: If I believed my child was having a mental breakdown, my first step would be to get professional help for him/her.

Child: If I thought I was having a mental breakdown, my first step would be to get professional help.

2. The idea of talking about problems with a psychologist strikes me as a poor way to get rid of emotional conflicts.

***Adapted Items***

Parent: Having my child talk about problems with a psychologist is a bad way to get rid of his/her emotional troubles.

Child: Talking about my problems with a psychologist is a bad way to get rid of my emotional troubles.

3. If I were experiencing a serious emotional crisis at this point in my life, I would be confident that I could find relief in psychotherapy.

***Adapted Items***

Parent: If my child were having a serious emotional crisis at this point in his/her life, I would be sure that psychotherapy would help him/her get relief.

Child: If I were having a serious emotional crisis, I would be sure that psychotherapy would help me feel better.

4. There is something admirable in the attitude of a person who is willing to cope with his or her conflicts and fears *without* resorting to professional help.

***Adapted Item***

Parent and Child: A person who is willing to cope with his or her problems and fears without getting professional help is admirable.

5. I would want to get psychological help if I were worried or upset for a long period of time.

6. I might want to have psychological counseling in the future.

7. A person with an emotional problem is not likely to solve it alone; he or she *is* likely to solve it with professional help.

8. Considering the time and expense involved in psychotherapy, it would have doubtful value for a person like me.

***Adapted Items***

Parent: Psychotherapy takes more time and expense than it's worth for a person like my child.

Child: Psychotherapy takes more time and expense than it's worth for a person like me.

9. A person should work out his or her own problems; getting psychological counseling would be a last resort.

10. Personal and emotional troubles, like many things, tend to work out by themselves.

## APPENDIX I

**Barriers to Treatment Participation Scale**

I am going to be asking you questions about things that would or would not prevent your family from coming in for treatment for you/your child, if you/your child needed treatment. The scale goes from 1, which means that this does not apply to your family at all, 2 which means that this applies to your family a little, 4 means that this applies to your family a fair amount, and 5 means that this applies to your family a lot.

**1**                      **2**                      **3**                      **4**                      **5**  
 Not at all              A little                  Neutral                  A fair amount          A lot

<b><u>Stressors and Obstacles subscale</u></b>
1. Your family does not have transportation to get to counseling sessions.
2. Your child is involved in other activities (sports, clubs, music lessons) that would make it hard to come to a session.
3. Scheduling appointment times for counseling would be difficult.
4. Counseling would conflict with other activities in which I am involved.
5. You experience too much stress in your life to participate in counseling.
6. Your personal health problems or illness would stop you from getting counseling for your child.
7. Your child's health problems or illness would stop you from getting counseling for him or her.
8. Crises at home will get in the way.
9. Bad weather will keep your family from coming to sessions.
10. Family health problems or illness in your home will stop you from getting counseling for your child.
11. Getting a baby sitter so you can come to sessions with your child will be a problem.
12. Parking at the treatment agency will stop you from getting treatment for your child, or be problematic.
13. Members of your family would stop you from getting counseling for your child or they would disagree with you about whether your family should come to treatment at all.
14. You are too tired after work to go to sessions.
15. Your job schedule is too hectic.
16. You have trouble with other children at home, which would make it hard to come to counseling.
17. Treatment will just add more stress to your life.
18. Treatment would take time away from spending time with your children.
19. Your time is limited; you will not have time for the assigned work.
20. Your child will never be home long enough to do the homework assigned.



<b><u>Treatment Demands Subscale</u></b>
21. Counseling would cost too much.
22. Your child will refuse to go to the sessions.
23. Treatment takes too long (too many weeks).
24. Information you get from treatment (handouts, referral information) will be confusing for you and your child.
25. Your child will have trouble understanding treatment.
26. Treatment will be more work than you think.
27. You will not have a say in your child's treatment.
28. The work assigned to you as part of this treatment will be difficult.
<b><u>Relationship with Therapist Subscale</u></b>
29. You worry that you won't have a good relationship with the therapist.
30. You will have to give too much personal information to the therapist.
31. The therapist won't be confident that treatments will work.
32. The therapist might question your ability to carry out treatment programs at home.
33. The therapist might not support you or your efforts.
34. The therapist will not call enough.
<b><u>Perceived Relevance of Treatment Subscale</u></b>
35. Treatment won't be what you expect.
36. You will probably lose interest in coming to sessions.
37. Treatment will become less important as it goes on.
38. Treatment will not focus on your child's life and problems.
39. Treatment might "bring out" new or different problems in your child.
40. Your child's behavior will improve on its own; treatment is not needed.
41. Treatment will not work.
42. Treatment is not necessary.

## APPENDIX J

### Self Stigma of Seeking Psychological Help Scale

Now I want you to rate the degree to which each item describes how you might react if you/your child needed psychological help. This scale starts at 1, which means you strongly disagree, and goes to 5, which means you strongly agree.

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Strongly Disagree	Disagree	Agree & Disagree Equally	Agree	Strongly Agree

1. I would feel inadequate if I went to a therapist for psychological help.

***Adapted Items***

Parent: I would feel like I wasn't as good as other parents if my child went to a therapist for psychological help.

Child: I would feel like I wasn't as good as other kids if I went to a therapist for psychological help.

2. My self-confidence would NOT be threatened if I sought professional help.

***Adapted Items***

Parent: My self-confidence would NOT be threatened if I sought professional help for my child.

Child: My self-confidence would NOT be threatened if I went to a therapist for psychological help.

3. Seeking psychological help would make me feel less intelligent.

***Adapted Items***

Parent: Seeking psychological help for my child would make me feel less intelligent.

Child: Seeing a therapist would make me feel less smart.

4. My self-esteem would increase if I talked to a therapist.

***Adapted Items***

Parent: My self-esteem would increase (go up?) if my child talked to a therapist.

Child: My self-esteem would increase (go up?) if I talked to a therapist.

5. My view of myself would not change just because I made the choice to see a therapist.

***Adapted Items***

Parent: My view of myself would not change just because I made the choice for my child to see a therapist.

6. It would make me feel inferior to ask a therapist for help.

***Adapted Items***

Parent: It would make me feel inferior to ask a therapist for help for my child.

7. I would feel okay about myself if I made the choice to seek professional help

***Adapted Items***

Parent: I would feel okay about myself if I made the choice to seek professional help for my child.

Child: I would feel okay about myself if I went to see a therapist.

8. If I went to a therapist, I would be less satisfied with myself.

***Adapted Items***

Parent: If my child went to a therapist, I would be less satisfied with myself as a parent.

Child: If I went to a therapist, I would be less happy with myself.

9. My self-confidence would remain the same if I sought professional help for a problem I could not solve.

***Adapted Items***

Parent: My self-confidence would remain the same if my child went to a therapist for a problem I could not solve.

Child: My self-confidence would stay the same if I went to a therapist for a problem I could not fix.

10. I would feel worse about myself if I could not solve my own problems.

***Adapted Items***

Parent: I would feel worse about myself I could not solve my child's problems.

Child: I would feel worse about myself if I could not solve my own problems.

## APPENDIX K

### Social Stigma for Receiving Psychological Help Scale

Next, I want you to rate the degree to which each item describes how others might react if you/your child needed psychological help. We are going to use the following rating scale.

1	2	3	4
Disagree	Partly Disagree	Partly Agree	Agree

1. Seeing a psychologist for emotional or interpersonal problems carries social stigma.

***Adapted Items***

Parent: Having your child see a psychologist for emotional or interpersonal problems is looked down on in my community.

Child: Seeing a psychologist for emotional or interpersonal problems is considered to be a bad thing in my community.

2. It is a sign of personal weakness or inadequacy to see a psychologist for emotional or interpersonal problems.

***Adapted Items***

Parent: A parent whose child sees a psychologist for emotional or interpersonal problems is seen as weak or not as good as other parents.

Child: A person who sees a psychologist for emotional or interpersonal problems is seen as weak or not as good as other people.

3. People will see a person in a less favorable way if they come to know that he/she has seen a psychologist.

***Adapted Items***

Parent: People will see a parent in a less positive way if they find out that their child has seen a psychologist.

Child: People will see a person in a less positive way if they find out that he/she has seen a psychologist.

4. It is advisable for a person to hide from people that he/she has seen a psychologist.

***Adapted Items***

Parent: A parent should not tell people that their child has seen a psychologist.

Child: A person should not tell people that he/she has seen a psychologist.

5. People tend to like less those who are receiving professional psychological help.

***Adapted Items***

Parent: Parents who have children that see psychologists are not as well liked as other parents.

Child: People that see psychologists are not as well liked as other people.

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**ABSTRACT****MENTAL HEALTH SERVICE UTILIZATION AMONG  
AFRICAN-AMERICAN ADOLESCENTS**

by

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Underutilization of mental health services by ethnic minorities has been identified as a major public health threat by the U.S. Department of Health and Human Services (2001). Research on ethnic disparities has focused on identifying the sociodemographic correlates of between group differences in treatment attendance. The current study adds to the utilization literature by exploring within group differences amongst a sample of African-American families. Based on extant literature related to treatment utilization in other samples, this study examined the associations between multiple modifiable factors and adolescent treatment engagement amongst 90 African-American caregiver-adolescent dyads.

Consistent with previous research, psychological symptoms, functional impairment, and caregiver strain were each associated with increased odds of adolescent treatment. Caregiver ratings were more strongly related to treatment than youth ratings. Caregiver rating of youth functional impairment and caregiver strain each contributed uniquely to the likelihood of adolescent treatment, even when considering the current gold standard of psychological symptoms. With respect to prohibitive factors, more negative caregiver attitudes towards youth

treatment were associated with a decreased likelihood of adolescent treatment. Negative caregiver attitudes towards treatment added unique information to the likelihood of treatment engagement even when controlling for caregiver ratings of youth functioning. Youth report of barriers to treatment and caregiver report of social stigma showed trends towards significance in predicting treatment engagement. Self-stigma did not show any associations with treatment, and stigma did not moderate the associations between the facilitative and prohibitive factors and adolescent treatment.

These findings point to the importance of considering caregiver perspectives on youth functional impairment and caregiver strain in addition to psychological symptoms when engaging families in treatment. Further, it is important to target negative caregiver attitudes, negative caregiver social-stigma, and youth perceptions of barriers to treatment in efforts to increase adolescent treatment utilization. With respect to research, there is a need to develop measures that capture the nuances of stigma that are often reflected in qualitative research studies among African-American populations. Overall, this study highlights the need for increased psychoeducational and outreach efforts to incorporate African-American youth and families in both clinical services and research in order to increase adolescent mental health service utilization.



**AUTOBIOGRAPHICAL STATEMENT**

The author was born in Detroit, Michigan. She attended high school at Cranbrook Kingswood Upper School, Bloomfield Hills, Michigan. She graduated with her Bachelor of Arts in Psychology from New York University, New York City, New York. She graduated with her Masters of Social Work from City University of New York- Hunter College School of Social Work, New York City, New York. She received her Master of Arts in Clinical Psychology from Wayne State University, Detroit, Michigan. She will graduate with her Doctor of Philosophy in Clinical Psychology from Wayne State University in December 2014.