Socio-cultural Predictors of Parental Help-seeking for Child Psychopathology

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Dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the Department of Psychology and Neuroscience in the Graduate School of Duke University

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ABSTRACT

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Abstract

The primary goal of this study was to test the role of social determinants, including race/ethnicity, household income, and parent education in predicting child mental health services utilization. Given previously established racial/ethnic disparities in utilization of health care, we were also interested in whether parents perceived barriers to using service differed by service type (medical vs. mental health care) and whether there were racial/ethnic differences in parents’ perceived barriers, attitudes about child mental health services. Lastly, we tested whether parents’ perceived barriers, attitudes about child mental health services, and insurance status mediated the relationship between social determinants and child mental health service utilization.

Participants were a community sample 275 parents (34.2% African American, 36.7% Caucasian, and 29.1% Hispanic) of children ages 9 – 13 years old. Parents were given measures assessing their utilization of child mental health services, beliefs about child mental health services, and perceived barriers to obtaining mental health and medical services.

Results indicated that minority parents were not less likely than Caucasian parents to seek child mental health services when controlling for parent education, household income, and child problems. Hispanic parents reported barriers as more inhibiting than did African American parents and parents overall reported greater barriers to obtaining mental health services. We found moderate support for insurance status as a mediator
between being Hispanic and mental health service utilization. Parent education overall seemed to be an important predictor of child mental health services utilization; parent education predicted parents’ reports of stigma and stigma was negatively associated with child mental health service utilization. Potential implications these findings might have for policy and practitioners and directions for future research are discussed. Specifically it may be important to strengthen trust of mental health care providers, increase cultural sensitivity and awareness of parents’ attitudes for practitioners, and educate parents about health insurance options and about mental health and mental health care in general.
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Acknowledgements

I would like to thank Drs. David Rabiner, Melanie Bonner, Gary Bennett, Jennifer Lansford, and John Curry for their guidance and support throughout the course of this research project and my graduate career. I am especially grateful to Dr. Jennifer Lansford, Ann Skinner, and the other members of the Parenting Across Cultures (PAC) team for their invaluable assistance in collecting and entering data for this project. I would also like to thank Dr. Levent Dumenci for his consultation regarding the analyses used in this study.
1. Background

With the population of the United States growing increasingly diverse, the importance of studying cultural and social factors in relation to mental health is also growing. For example, according to the U.S. Census Bureau, in 1990, the U.S. population was 75.64% White or Caucasian, 11.75% Black or African American, 8.99% Hispanic or Latino, and 2.80% Asian. In 2000, the U.S. population was 69.13% White or Caucasian, 12.06% Black or African America, 12.55% Hispanic or Latino, and 3.60% Asian. The minority populations in the United States are growing, while the proportion of White Americans is decreasing. As such, more research is needed on the utilization of mental health services by America’s current racial/ethnic minorities, because these groups are an important part of the U.S. population and are growing in numbers.

Furthermore, research shows that members of racial minorities in the United States are using mental health services less frequently than their Caucasian counterparts (e.g., Garland, Landsverk, & Lau, 2003; Gary, 2005; McMiller & Weisz, 1996). According to the Surgeon General’s report, Caucasians are nearly twice as likely as African Americans or Hispanics to make a mental health visit (U.S. Department of Health and Human Services, 2001) even though mental health disorders are no less prevalent in these populations. It is also fairly well established that minorities are under-using both general health services and mental health services (U.S. Department of Health and Human Services, 2001), suggesting that minorities who could benefit from mental
health services are not receiving them.

Compared to adults, a minority child in need of mental health services may be especially disadvantaged as children tend to be dependent on the adults in their lives to seek and obtain care and are less skilled than adults at communicating their needs. As such, children and adolescents may be primarily dependent on adults to seek and obtain adequate mental health care. Because obtaining treatment in childhood (Harrington, Rutter, & Fombonne, 1996) can reduce the likelihood of having mental health problems later in life, studying disparities in utilization of child mental health services and predictors of utilization becomes even more important and complex.
2. Previous Research

While research looking into disparities in the utilization of mental health services is fairly new, health disparities in general have been a topic of research for several decades. Throughout the history of health disparities research, studies that examine disparities by socio-economic status have been prevalent, while studies of racial/ethnic disparities are less common (Anderson, 2008). However, racial/ethnic disparities in access to mental health care are likely to be different from disparities in access to general medical health care in a few important ways. Health insurance coverage may be different for general visits to a physician - or even to a specialist - than they would be for mental health services. Also, seeking medical services may, in general, be a less stigmatizing experience than going to a mental health professional. While seeking medical care for problems like sexually transmitted diseases or smoking may be stigmatizing (e.g., Balfe, Brugha, O'Connell, McGee, O'Donovan, & Vaughan, 2010; Bell, Salmon, Bowers, Bell, & McCullough, 2010), these problems are less relevant for children. As such, stigma is possibly less likely to come into play for access to medical care for children than it would for mental health care. Similarly, parents may be less likely to feel that a physical problem their child exhibited resulted from a fault in their parenting than they would for mental health concerns, and thus less reluctant to seek care for a physical illness (Mukolo, Heflinger, & Wallston, 2010). For these reasons it is important to study disparities in access to medical care and disparities in access to mental health services.
separately, as it implies the need for policy specifically directed at mental health services.

2.1 Disparities in children’s utilization of mental health services across racial/ethnic groups

Howell and McFeeters (2008) examined differential utilization of mental health services (whether they had a mental health visit in the last 12 months) for African American and Caucasian children in urban and rural settings. Despite not finding significant differences in the prevalence of mental health problems by race for children in either setting, they did find differences in the utilization of mental health services. In urban areas, both Hispanic and African American children were less likely to receive mental health care than were Caucasian children. In rural areas, only Hispanic children were less likely to receive mental health care. These race effects persisted even after controlling for other factors that predict using mental health services, including having a mental health problem, SES, being raised by a single parent, health insurance, and having a parent with mental health problems. Hispanic children might be particularly disadvantaged, as they used mental health services the least in both urban and rural settings (Howell & McFeeters, 2008). Zahner and Daskalakis (1997) also found lower service use for Black and Hispanic children, even after controlling for symptom severity, level of impairment, health problems, maternal distress, and parents’ belief that the child needed services and that mental health services would work. Language and cultural barriers may contribute to reduced access for Hispanic children (Lopez, Bergen, &
Collectively, these findings indicate that racial/ethnic disparities in the utilization of mental health care exist in both urban and rural settings and after controlling for several other factors that could affect utilization.

Zimmerman (2005) used data from the National Longitudinal Survey of Youth (NLSY) to examine social and economic disparities in mental health services utilization. The sample for this study was 7-14 year old children from the year 2000 wave of data collection. The results of these analyses indicated that African American and Latino children were less likely than Caucasian children to have used mental health services. They also found that being female, being a middle child, and having a father present reduce the likelihood of receiving mental health treatment. Data from another nationally representative sample, the National Survey of America’s Families (NSAF), also suggests that, among children with greater than average psychological symptoms, Hispanic children and adolescents are less likely than Caucasian children to use mental health services (Busch & Horwitz, 2004). In Busch and Horwitz’s study (2004), children coming from a single parent family, having no foreign born family members, having lower self-rated health status, and having a parent who had used mental health services were also more likely to have used mental health services. Each of these studies examined race/ethnicity as one of several possible predictors of child mental health service utilization and does not attempt to explain disparities in utilization.
Kodjo and Auinger (2004) examined utilization of mental health care, specifically, psychological counseling, for emotionally distressed adolescents. Emotionally distressed African American adolescents were less likely than both Hispanic and Caucasian adolescents to have received psychological counseling. This effect held even after controlling for family income and parent education. In this study, predictors of utilization varied by race, with receiving psychological counseling being the most strongly associated with suicidality and living in an urban area for Caucasian adolescents, living in an urban area for African American adolescents, and suicidality and fewer perceived barriers to care for Hispanic adolescents (Kodjo & Auinger, 2004).

Snowden and colleagues (2008) examined racial/ethnic disparities in the use of psychiatric emergency services. They found that African American, Asian American/Pacific Islander, and American Indian/Alaska native children were more likely to use psychiatric emergency services than were Caucasian children. Psychiatric emergency services are intended to stabilize children but, unfortunately, do not provide access to all of the different types of treatment a child might need, or provide continued care (Snowden, Masland, Libby, Wallace, & Fawley, 2008). Though this study did not include data on utilization of regular outpatient services, this difference in emergency service utilization may indicate that minority children are not receiving sufficient regular outpatient care that may prevent the need for emergency services (Snowden et al., 2008).

The research summarized above consistently demonstrates that minority youth are
less likely to use mental health services than Caucasians; however, the reasons for these differences are not clear. As discussed below, this may be because parents of minority children perceive more barriers to mental health care (e.g., financial burden, distance needed to travel to a mental health facility), experience more stigma towards child psychopathology, have less access to information about mental health, or lack health insurance coverage for mental health care.

2.2 Racial/ethnic differences in predictors of child mental health service utilization

There are several factors that may be related to help-seeking and obtaining mental health care that may vary by race/ethnicity as well, including attitudes about child psychopathology and help-seeking, preferred methods of handling symptoms of psychopathology (i.e., relying on family support, seeking help from clergy, and seeking help from mental health professionals), and feelings of shame or stigma. These are discussed below.

2.2.1 Racial/ethnic differences in attitudes toward child psychopathology

For a child with a psychological disorder, the family’s attitude towards childhood psychopathology and their willingness to seek mental health services can be an important determinant of whether the child has access to professional help and receives appropriate school accommodations (Bussing, Gary, Mills, & Garvan, 2007). Recognition of a potential mental health problem and attitudes toward mental health services - factors
which are known to vary by race - predict help-seeking behavior (Cauce, et al., 2002; Bussing et al., 2007). As such, examining research on parental attitudes towards child psychopathology may be an important factor to consider when trying to reduce disparities in utilization of child mental health services.

Research has indicated that African Americans perceive more barriers to obtaining mental health services for both themselves and their children than do Caucasian parents and that the more barriers perceived the less likely a parent was to indicate that they would use child mental health services in the future. These perceived barriers include cost, not having enough choices in types of services offered, and having to travel too far (Thurston & Phares, 2008).

Previous research suggests that minority parents may also be less likely to recognize symptoms of a psychiatric disorder as an illness, which might in turn reduce the access to mental health services (Yeh et al., 2004; McLeod et al., 2007); this may partially explain utilization differences by race. In one investigation of the reasons for reduced access for minority children, Bussing, Gary, Mills, and Garvan (2007), compared African American and Caucasian parents’ attitudes about different topics related to a specific mental health problem, Attention-Deficit/ Hyperactivity Disorder (ADHD). The researchers administered an ADHD knowledge and perceptions survey, behavioral questionnaires, and questions about ADHD detection and treatment to parents of kindergarten to fifth grade children identified as having attention problems. African
American parents expected that their child would benefit less from available treatments and reported less ADHD awareness and knowledge of the disorder. They were also less likely to have obtained information about ADHD from teachers or from the media and more likely to attribute attention deficits and hyperactive behavior to sugar intake. The end result may be that African American children are less likely to receive appropriate treatment for ADHD due to their parents’ beliefs about ADHD and mental health care and lack of access to information about ADHD.

Using data from the National Comorbidity Survey, adolescent and adult African Americans (ages 15-54) have been found to view help-seeking more favorably for themselves than do Caucasians prior to making a mental health visit, but are less likely to use them. However, after having used mental health services, African Americans view help-seeking less favorably than do Caucasians (Diala, Muntaner, Walrath, Nickerson, LaVeist, & Leaf, 2000). While this study looked at adolescent and adult attitudes about seeking help for themselves (rather than their children), it is possible that the ethnic/racial difference in attitudes amongst parents who had versus had not obtained care for their children would be similar. This might suggest that mental health services are not meeting parents’ expectations.

2.2.2 Race/ethnic differences in seeking help from alternative sources

Overall, the research implies that minority parents may be less likely to seek help from mental health professionals than Caucasian parents (e.g., Busch & Horwitz, 2004;
Kodjo and Auinger, 2004; Zimmerman, 2005), though parents may seek other sources of support in managing child psychopathology. The National Stigma Study-Child is the first nationally representative study that examines attitudes about child psychopathology. In this study, 1,393 adults were asked to read several vignettes depicting children with various problems including a child with symptoms meeting DSM-IV diagnostic criteria for ADHD, a child with symptoms of major depression, a child with subclinical problems, and a child with asthma. Participants were asked if they would seek advice from family and friends, teachers, a medical doctor, a mental health professional (a counselor or therapist), a psychiatrist, or a hospital if the child depicted in the vignette was their child. Using this data, Pescosolido et al. (2008) found that African Americans were less likely than Caucasians to report being willing to seek advice from teachers, though there were no other race/ethnicity differences in source of advice.

McMiller and Weisz (1996) examined parents’ preferred methods of handling emotional and behavioral difficulties in their children. They surveyed the parents of African American, Latino, and Caucasian patients in a mental health clinic about their pathways to the clinic. African American and Latino parents were less likely than Caucasian parents to report that their preferred initial contact for support with their child’s problems would be a professional or agency (including mental health or medical professionals, child welfare services, school personnel, juvenile justice, or other social service agencies). They were more likely to have sought help from family and
community sources (including friends, family, coworkers, neighbors, church, temple, clergy, and neighborhood organizations such as support groups). Income level, child age, and child gender were not associated with parents’ initial contacts, though race remained a significant predictor even when these other factors were controlled for. Even after controlling for the perceived severity of their children’s symptoms, race remained a significant predictor of parents’ preferred initial contact, and severity was also significantly associated with where parents initially sought help. The more severe parents perceived the child’s problems as being, the more likely they were to seek professional help (McMiller & Weisz, 1996). McMiller and Weisz (1996) conclude that many minority children may not attend clinics for treatment because clinic-based treatment from a professional may not be the preferred option of many minority parents. They suggest that a stronger alliance should be formed between minority parents and mental health care providers and that more efforts should be put into developing community outreach programs (McMiller & Weisz, 1996).

2.2.3 Stigma related to child mental health problems and service utilization

Research examining stigma related to child mental health issues in general has been sparse. Most research on stigma and mental health focuses on adults and has generally shown that stigma predicts mental health service utilization (e.g., Vogel, Wade, & Hackler, 2007), though few studies link stigma to child mental health services utilization (Helfinger & Hinshaw, 2010).
Using data from the National Stigma Study – Children (described above), Pescosolido et al. (2007) looked at adults’ (not exclusive to parents) perceptions of stigma surrounding mental health care for children. Most participants agreed that receiving mental health treatment would make a child an outsider at school and suffer as an adult and most believed that people in the community would know despite confidentiality. Women and more educated participants were less likely to perceive mental health treatment as stigmatizing. Racial/ethnic differences were nonsignificant.

Using the same data, Mukolo and Heflinger (2010), examined respondents desire for social distance from a child with ADHD, depression, asthma, or subclinical daily troubles and from the child’s family. Respondents endorsed a greater preference for social distance from the child and the family for ADHD and depression than daily troubles. African American participants were more likely to report wanting social distance from the child, though there were no racial/ethnic differences in desire for social distance from the family. Higher education was associated with less desire for social distance.

In a study specifically assessing parents’ attitudes about child mental health services, about a quarter of parents reported that negative perception of mental health services (e.g., being afraid of what family/friends would say, having had a negative experience with a mental health professional in the past, not knowing who to trust) was a barrier to obtaining mental health care for their children (Owens et al., 2002). Race/ethnic differences in this study were nonsignificant. Additionally, Norvilitis, Scime, and Lee
(2002) found that mothers of children with ADHD expect that other mothers will have harsh views of children with ADHD or blame the mother for the child’s symptoms. Race/ethnicity was not included as a predictor.

There was only one study in our literature search that examined stigma as a predictor of child mental health services utilization (Turner, 2010). The results of this study indicated that parents with previous use of child mental health services report less stigma than parents who had not previously used services. African American parents tended to report less positive attitudes about mental health services and more stigma compared to Hispanic, Asian, and Caucasian parents. Additionally, stigma predicted help-seeking for Hispanics.

Overall, stigma does seem to be associated with child psychopathology and child mental health services: past research shows stigma to be a perceived barrier to mental health care for parents from different racial/ethnic groups and that it may predict mental health services utilization; however, more research is needed to clarify how parents’ perception of stigma as a barrier relates to service utilization. Unfortunately, the current evidence for racial/ethnic differences in stigma related to child psychopathology is inconsistent. Further research examining how race/ethnicity might relate to parents’ report of how they would feel if their own child were struggling with symptoms of a psychological disorder may yield more clear and consistent results.
2.2.4 Problems in access due to the physical location of mental health facilities

The geographic availability of mental health services (or lack thereof) may be an important predictor of access to services for children. Even if all other socioeconomic factors that influence access were equal (education, age, profession, attitudes about child psychopathology), if the facilities are not there, one certainly cannot use them. Ronzio, Guagliardo, and Persaud (2006) investigated the relationship between the location of mental health services and neighborhood demographic characteristics. They used psychologist, psychiatrist, and counselor addresses and compared them to 2000 Census data from the District of Columbia and nearby communities in Maryland and Virginia. Washington, DC is an interesting area to study disparities in location as it is 60% African American, and 1/6 of the population is living in poverty according to the 2000 U.S. Census (as cited by Ronzio, Guagliardo, & Persaud, 2006). The city is also segregated with the northwest quarters being primarily Caucasian and the northeast and southeast quarters being primarily African American (Ronzio, Guagliardo, & Persaud, 2006).

The results show that the presence of mental health providers had a significant negative relationship to the local poverty and the relative concentration of African Americans. This relationship was stronger for psychologists and psychiatrists than for counselors. The correlation between the number of psychiatrists and the percent of the population that were African American in an area was -.74. For counselors the correlation was -.20. These results indicate that in Washington, D.C., a greater percentage of
minorities is associated with fewer psychiatrists and counselors. These results are particularly striking for psychiatrists. The distance between a family’s home and the nearest mental health care facility may be a significant barrier to obtaining proper care, especially for racial minorities. However, as the investigators note, disparities in location are particularly amendable to policy. The government could invest more money in community-based clinics and school-based mental health services that service the poor and minorities. Another option that Ronzio, Guagliardo, and Persaud (2006) suggest is training more minority professionals and professionals from disadvantaged backgrounds, as they are the most likely to serve minority and disadvantaged populations.

2.3 Summary of racial/ethnic differences in children’s mental health service utilization and predictors of utilization

Minority children and adolescents are less likely than Caucasian children to obtain mental health care, and not having health insurance makes it even less likely for them to obtain needed care. Race/ethnicity significantly and consistently predicts utilization of mental health services, as minority children are less likely than Caucasian children to receive mental health services (Busch & Horwitz, 2005; Zimmerman, 2005; Howell & McFeeters, 2008; Kodjo & Auinger, 2004).

Predictors of mental health service utilization also seem to vary by race/ethnicity. Children are in a unique place when it comes to the need for mental health services, as children are largely dependent on the adults in their lives (parents, teachers, other family
members) to determine whether or not they obtain needed services. As such, parents’ attitudes about child psychopathology and mental health services are extremely important factors in predicting mental health services utilization for children. Parents of minority children are more likely than parents of Caucasian children to perceive barriers to mental health services and to feel that mental health services would not be helpful to their children (Bussing, Gary, Mills, & Garvan, 2007; Bussing, Koro-Ljungberg, & Gary, 2005; Thurston & Phares, 2008). How these barriers relate to perceived barriers to obtaining medical care is important to study, as differences may highlight need for different policy initiatives to address barriers to these different types of care.

African American and Latino parents of children with psychological problems are also less likely than Caucasian parents to report that they would seek professional help as their initial contact for support with their child’s problems. They are also more likely to have sought help from family and community sources (including friends, family, coworkers, neighbors, and clergy) (McMiller & Weisz, 1996). Minorities also view help-seeking less favorably than Caucasians after having used mental health services (Diala et al., 2000). Attitudes as predictors of mental health services utilization thus appear to vary by race with the exception of stigma. Research on racial/ethnic differences in stigma are inconclusive. Further research examining parents’ perceived stigma in relation to child psychopathology would help clarify whether stigma varies by race.

Factors other than parent/child attitudes may also predict access to mental health
care. For instance, there are fewer mental health care facilities where there are larger minority populations (Ronzio, Guagliardo, & Persaud, 2006). Even a parent with positive attitudes toward professional help-seeking for their child simply cannot obtain services that are not physically available.
3. Current study

The current study sought to provide a better understanding of racial/ethnic disparities in child mental health services utilization. Specifically, we aimed to identify specific barriers that may contribute to the disparity. Additionally, as the majority of health disparities research focuses on physical health, it will be important to understand if and how barriers to medical and mental health services utilization differ. We also sought to clarify the associations between race/ethnicity, parents’ attitudes about mental health services, perceived barriers, and utilization of child mental health services. Previous research has shown that race, SES, health insurance status, parental attitudes/beliefs, etc. all contribute to disparities in utilization of mental health services, though little research has been conducted to determine how these factors may be interrelated.

To address these issues, African American, Caucasian, and Hispanic parents were asked a series of questions assessing their utilization of child mental health services; they were also asked about their attitudes towards and beliefs about such services. Parents were asked whether they had made a medical or mental health visit for their child in the last twelve months, how much certain barriers might prevent them from obtaining medical or mental health care for their child, and whether they had felt their child could have benefitted from mental health services in the last twelve months. Parents were also asked about their general attitudes toward mental health services, whether they had consulted with friends and family or clergy about any mental health concerns they have
for their children, and whether or not their children had insurance coverage. Finally, so that we could control for child psychological problems, parents were asked to rate their children’s emotional and behavioral functioning using the *Child Behavior Checklist (CBCL).* The CBCL was used as a measure of the parent’s rating of the child’s internalizing and externalizing problems. This was included because previous research (e.g., Zimmerman, 2005) has shown that symptom ratings are associated with child mental health service utilization.

### 3.1 Hypotheses

1) We hypothesized that African American and Hispanic parents, less educated parents, parents with lower household income, and parents whose children have fewer symptoms will be less likely to obtain mental health care for their children compared to Caucasian parents, more educated parents, parents with higher household income, and parents of children with more symptoms of psychopathology, respectively. We also expect that, consistent with previous research, minority parents will be more likely than Caucasian parents to report that they have used less formal avenues, such as consulting with friends and family or clergy, to address mental health concerns they have about their child.

2) We also predicted that parents would perceive fewer barriers to accessing medical care than mental health services for their children as medical care may be more readily available, more commonly used, and possibly less likely to be stigmatizing
compared to mental health care. We expected that African American and Hispanic parents will overall report more barriers across service types.

3) We predicted that minority parents would be less likely to report believing that mental health services can help improve symptoms of child mental illness compared to Caucasian parents. Due to previous research indicating that African American adolescents and adults might have less favorable views of mental health care after having used mental health care compared to those who had not used mental health care (Diala et al., 2000), we were also interested in whether this effect might exist among parents in our sample. As such, parents’ previous child mental health service utilization was included as a predictor, though we had no specific hypotheses about its effects.

4) We predicted that the relationship between mental health service utilization and race/ethnicity, SES, and symptomatology will be mediated by a) parents’ attitudes and beliefs about mental health (e.g., whether they believe mental health services work for those who need it such that more positive attitudes about help-seeking and beliefs that mental health services are effective would predict mental health service utilization), and b) perceived barriers to obtaining care (such that the fewer barriers perceived, the greater likelihood of child mental health service utilization), and insurance status (such that having health insurance will predict mental health service utilization). All of the above mentioned factors have been shown to individually contribute to disparities in access to child mental health care, though little attention has been given to exploring how they are
interrelated. The hypothesized network of relationships between these constructs is presented in Figure 1.

Figure 1: Hypothesized full mediation model predicting child mental health (MH) service utilization.
3.2 Method

3.2.1 Participants

The data for this study was collected as part of a longitudinal study examining how different parenting styles affect child adjustment; this larger study was in its third year of data collection. To recruit participants in the first year of this larger study, 3rd and 4th graders attending 15 public schools and 2 private schools in central North Carolina were given a letter for their parents describing the study and asking parents to return the letter with their contact information if they were interested in learning more about it.

Because teachers were directly responsible for distributing the letters it is impossible to know the exact number of families receiving these letters. However, if received by all families at the target schools, approximately 2,290 families were contacted in the first year. Of those, 492 families (21%) returned a form providing permission to contact them for participation in the larger study and 311 families (63% of those who returned the form) subsequently participated. Of these 311 families, 32.8% of the target children were African American, 35.4% were Caucasian, and 31.5% were Hispanic. Additionally, <1% of children were Asian, but this family was excluded from the present analyses due to low sample size. In the second year, the same 310 families (minus the 1 excluded Asian family) were contacted to participate in the study again. Approximately 279 families (90% of the original sample) subsequently participated: 32.6% were African American, 36.2% were Caucasian, and 31.2% were Hispanic.
In the third year (the current year of the larger study), all previously participating families were contacted (including those who did not complete the second year of the study but who had not requested to discontinue their participation) to participate in a new wave of data collection. All of the families contacted to participate in the 3rd year of the larger study were asked to complete the measures used in the current study. A total of 275 families (98.5% of the 2nd year sample; 88.4% of the original sample) participated in the current study. Table 1 lists demographic information for study participants. Of these families, 34.2% self-identified as African-American, 36.7% as Caucasian, and 29.1% as Hispanic. Of the Hispanic parents, 58.75% reported their country of origin as Mexico, 12.5% as Honduras, 10% as El Salvador, and the remaining 18.75% as various other Spanish speaking countries. Hispanic parents reported having lived in the United States an average of 12.29 years (SD= 6.06; mode= 12). Most families reported being of lower to middle SES (see Figure 2). The children ranged in age from 9 to 13 years old.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean or %</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race: African American</td>
<td>34.2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>29.1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>36.7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent age (yrs)</td>
<td>39.47</td>
<td>7.80</td>
<td>24 - 72</td>
</tr>
<tr>
<td>Parent education (yrs)</td>
<td>14.46</td>
<td>4.23</td>
<td>2 – 26</td>
</tr>
<tr>
<td>Parent gender: Female*</td>
<td>97.34%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child gender: Female</td>
<td>50%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child age (yrs)</td>
<td>10.64</td>
<td>.70</td>
<td>9 – 13</td>
</tr>
<tr>
<td>Child grade</td>
<td>5.33</td>
<td>.74</td>
<td>4 - 6</td>
</tr>
</tbody>
</table>

*Included in female parents are 1 aunt and 1 grandmother who are caregivers.
As compensation for participating, each parent received $30. One parent from each family completed the measure for the current study. The larger study encompassing the current study was funded by the Eunice Kennedy Shriver National Institute of Child Health and Human Development grant RO1-HD054805.

### 3.2.2 Procedure

Families who participated in the larger longitudinal study during the first and/or second year were contacted to arrange a time and place of their choosing to complete the interview. The interviews were administered by a group of trained interviewers who were supervised regularly by study principal investigators and project managers to insure consistency in administration. Before beginning the interview, families were told that the
questions they would be asked were designed to help researchers better understand cultural differences in parent’s attitudes about parenting and parenting behaviors, as well as how these attitudes influence children. They were reminded that their answers would remain confidential and that their participation was voluntary.

Parents were given the option to have the questions read to them by the interviewer who would record their responses or to read and respond to the questions on their own. Although having the interviewer record the responses may have increased the influence of social desirability on parents’ responses, this option was offered so that parents who were unable to read the measures could still participate. Bilingual interviewers interviewed Hispanic families, who were given the option of completing the interview in Spanish or English. Even when parents opted to complete the interview on their own, the interviewers remained with the participants to ensure that the questionnaires were completed correctly.

3.2.3 Materials

As part of the larger study, each parent completed several measures; however, only those relevant to the current study are discussed here. At the beginning of the interview, demographic information was obtained from each family, including, race and

\[ \text{Interview method (oral or written) was only significantly correlated (}\rho < .05\text{) with one out of 42 dependent variables of interest in the current study, which is no more than would be expected by chance (2.38\% of variables). Interview method was significantly correlated with parents’ report of worry that a visit to a medical doctor would reflect poorly on their parenting as a barrier, } r = -.16, \rho = .02, \text{ indicating that parents who opted to complete the measure by paper and pencil tended to rate this as less of a barrier than parents who completed the measure orally.} \]
country of origin (of both parents, when available), age of parents and child, household income, parents’ occupation, and parents’ years of education. For the purpose of this study, race/ethnicity was considered to be the child’s race/ethnicity, as identified by the parent.

3.2.3.1 Access to Health Care

The Access to Health Care measure was used to assess both children’s health service utilization and access to health services. Items pertaining to utilization and to access are discussed below. For the full measure, please see Appendix A.

Utilization of medical and mental health services\(^1\): To assess utilization of services, parents were asked how many times their children had visited a medical doctor for concerns about the child’s physical health in the last twelve months. They were also asked how many times they had talked to a health care professional about their child’s mental health in the last twelve months. This was used as a measure of parents’ child mental health service utilization (0= no previous service utilization, 1= consulted with a health care profession at least 1 time).

Barriers to and beliefs about child medical and mental health services\(^2\): The majority of the measure focused on parents’ attitudes about and perceived barriers to

\(^2\) This measure is partly based on the National Center for Health Statistics 2005 version of the National Health Interview Survey (NHIS), though has been greatly modified to answer the questions of the current research study. To review the original NHIS questionnaire, please go to: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Survey_Questionnaires/NHIS/2005/English/QCHILD.pdf
obtaining health services for their children. The measure explains that there are many reasons people may delay getting care they need and then asks how likely the parents would be to delay obtaining care for the child for each of several reasons. Parents were first asked about the extent to which they delayed medical care in the last 12 months for the reasons described below. Later, parents were asked if, during the past 12 months, they have ever felt that their child could benefit from mental health care/counseling by a mental health care provider. Parents who answered ‘yes’ to this question were then asked whether they had attempted to make an appointment for mental health care, as well as the extent to which various factors prevented or delayed them from seeking mental health care/counseling in the last 12 months. Parents who answered ‘no’ to the first question about feeling that their child could benefit from mental health care were then asked to what extent they think various factors would have prevented or delayed them from obtaining mental health care if they were to feel that their child could benefit from it.

The measure asks about barriers in three broad domains: logistical/institutional, socioeconomic, and stigma-related barriers. Parents were asked to rate the likelihood of each presented item being a barrier to obtaining care for their children on a 5 point Likert scale where 1 is ‘Not at All’, 3 is ‘Somewhat’, and 5 is ‘Very Much’. The logistical/institutional barriers assessed include not being able to get through on the telephone, not being able to get an appointment soon enough, having to wait too long to see the doctor once at the office, the doctor’s office/clinic not being open when the parent
could get there, and the clinic/doctor’s office being too far away. Socioeconomic factors included not having transportation, not being able to afford the services, not having health insurance, not being able to find care for other children in the family, and having health insurance that limits access to mental health/counseling services. Stigma included worrying about friends and family finding out, worrying about the child’s teacher or school finding out, being concerned that it would reflect poorly on his/her abilities as a parent, being worried that the child would be teased or made fun of by his/her peers, and the parent being worried that he/she would feel too embarrassed to talk about his/her concerns. Additionally, there was an item asking parents how likely they would be to delay care because their child refused to go to the doctor’s office/clinic. An exploratory factor analyses (EFA) was run on the 16 barrier variables to identify underlying factors.

All parents, regardless of whether they had consulted with a mental health professional, were then asked a series of questions about their beliefs and attitudes regarding the potential benefits of child mental health services. They were asked if they believed that treatment with a psychologist, therapist, or counselor could help children manage their difficulties with a) emotions, b) concentration, behavior, or not being able to get along with others. Parents were asked the same questions about treatment with a psychiatrist or medical doctor. Responses on these items were yes (1) or no (0). These items were summed to create a scale measuring parents help-seeking attitudes with Cronbach’s alpha = .87, indicating good scale reliability.
To assess what other avenues parents might take to help their children with psychological problems, parents were also asked if anyone in the home has ever consulted with other family members about the child’s difficulties with a) emotions, b) concentration, behavior, or not being able to get along with others. Parents were asked the same questions about consulting a religious leader/clergy. Responses on these items were yes (1) or no (0). They were used as individual items.

Lastly, parents were asked whether their child has health insurance coverage and what kind it is (i.e., HMO vs. Medicaid/Medicare). For the purpose of this study, insurance status was a dichotomous variable, where 0= no insurance and 1= public or private insurance.

3.2.3.2 Child Behavior Checklist (CBCL)

Parents also completed the CBCL, a psychometrically sound measure (Achenbach & Rescorla, 2001) that assesses internalizing and externalizing symptoms. This measure lists various symptoms of child psychopathology and asks parents to rate the extent to which their child displays these symptoms on a 3-point Likert scale. Raw scores were summed to create scales for internalizing problems and externalizing problems, to be used to control for symptom severity.
4. Data analytic plan

For the purpose of data reduction, an exploratory factor analysis (EFA) was conducted on the 16 items addressing barriers to mental health care using SPSS version 20. As it was expected that these factors would be correlated, oblique rotation was used. Factor scores derived from the EFA were used in subsequent analyses predicting perceived barriers.

4.1 Question 1: Are there racial/ethnic differences in utilization of child mental health services and alternative sources of help for child psychopathology?

A series of logistic regression analyses were used to test hypotheses that minority parents would be more likely than Caucasian parents to seek help from family members/friends or religious leaders/clergy and less likely to have sought help from mental health care providers. Parents were considered to have sought help from a given source if they answered ‘yes’ to either of the two questions asking about consulting that source (e.g., ‘Have you or anyone in your household ever consulted other family members or friends about difficulties your child may have with his/her emotions?’/ ‘Have you or anyone in your household ever consulted other family members or friends about difficulties your child may have with concentration, behavior, or not being able to get along with others?’).

In each logistic regression model, the predictors were race/ethnicity, SES (parent education and household income), and parents’ report of children’s internalizing and
externalizing symptoms (from the CBCL). Race/ethnicity was dummy-coded into two variables (African American and Hispanic) with Caucasians as the reference category.

4.2 Question 2: Do parents perceive more barriers to accessing mental health services than medical services and does this vary by race/ethnicity?

To test the hypotheses that parents would perceive more barriers to accessing mental health services than medical services and to explore whether this varies by race, a 3 (race/ethnicity) x 2 (type of care being sought, i.e., medical vs. mental health) mixed model MANCOVA was conducted with parent education, family income, and internalizing and externalizing child problems (from the CBCL) as covariates and the extent to which parents view each of the 16 potential barriers as inhibiting as dependent variables. Individual item scores were used rather than factor scores for barriers because the underlying factor structure for barriers to medical care differs from that of mental health care and the factor scores would, therefore, not be comparable.

4.3 Question 3: Are there racial/ethnic differences in parents’ attitudes about help seeking?

To explore racial/ethnic differences in help seeking attitudes we ran four hierarchical logistic regression analyses predicting the probability that parents believed a therapist/counselor can help with problems with emotions (1=yes, 0=no), a therapist/counselor can help with problems with behavior, concentration, or getting along with others, a psychiatrist/medical doctor can help with problems with emotions, and a
psychiatrist/medical doctor can help with problems with behavior, concentration or
getting along with others. Predictors entered in Block 1 included race/ethnicity (dummy
coded with Caucasians as the reference variable), whether parents had sought help from a
mental health professional (because we had a secondary interest in whether parents’
attitudes might be different after using child mental health services), parent education,
household income, and internalizing and externalizing problems. Hierarchical regression
was used to assess whether any potential effect of previous mental health service
utilization was moderated by race/ethnicity (Jaccard, 2001). In Block 2, we added the
interaction between race/ethnicity and previous mental health services. Per Jaccard
(2001), if the difference in model fit from Block 1 to Block 2 was nonsignificant ($p>.05$),
we concluded that the interaction is not necessary in predicting the outcome variable and
excluded it from the model.

Additionally, to explore possible predictors of perceived barriers including race
and previous mental health service utilization, a 2 (previous child mental health service
utilization vs. no previous child mental health service utilization) X 3 (race/ethnicity)
MANCOVA was conducted with parent education, family income, and internalizing and
externalizing child problems as covariates and the extent to which parents view various
potential barriers as inhibiting. A parent was considered to have used child mental health
services if the parent indicated that they had seen a mental health care provider for
problems with emotions or for behavior, concentration, and getting along with others.
This was a dichotomous variable (0=no service utilization, 1= previous child mental health service utilization).

4.4 Question 4: Do parental help seeking attitudes/beliefs, perceived barriers, and health insurance status mediate the relationship between a) race/ethnicity, SES (parent education and family income), and child internalizing and externalizing problems and b) mental health service utilization?

To answer this question, we estimated two structural equation models of hypothesized associations between race/ethnicity, parent education, family income, parents’ report of internalizing and externalizing problems, parental help seeking attitudes/beliefs (using the help seeking attitudes scale), barriers, insurance status (0= no insurance and 1= public or private insurance) and mental health service utilization (whether or not a parent has spoken to a mental health care professional about his/her child’s mental health in the last 12 months). Race/ethnicity was recoded into two dummy coded variables.

Barriers were modeled as latent variables. First, we assessed the fit of the measurement model, with the two factors derived from the EFA described earlier as latent variables. In the measurement model, indicators for each latent variable were the observed barrier variables that had a component loading $> \pm 0.40$.

After assessing the measurement model, we tested the fit of two structural models. One model (depicted in Figure 1) proposed full mediation of race/ethnicity, parent education, family income, and symptomatology’s effects on mental health service
utilization by attitudes/beliefs and barriers. An alternative model allowed us to examine whether partial mediation (where race and SES still have a direct effect on service utilization, even with the mediators included in the model) fit the data better. We first separately tested each model for overall fit. We then utilized the chi-square difference test in the Mplus statistical program to determine whether the removal of the direct effects significantly reduces model fit. A nonsignificant chi-square difference test would support the full mediation model. The hypothesized models were evaluated via Mplus 6 (Muthen & Muthen, 2011). We examined each path coefficient in the model that seemed to provide the best fit based on the results of the chi-square difference test. Finally, we tested total and specific direct effects to assess the statistical significance and magnitude of mediated relationships.

Because the model includes categorical variables, and is therefore nonnormal, weighted least squares means and variances (WLSMV) estimation was used to assess the model. WLSMV is the recommended estimation method when the outcome is categorical (Muthen, Du Toit, & Spisic, 1997).

The $\chi^2$ statistic, the comparative fit index (CFI), and RMSEA are reported as measures of goodness of fit of the model. We used CFI $\geq .90$, RMSEA $\leq .05$, PCLOSE $>$, 05, and SRMR $<$ .06 (where applicable) as cutoffs for a good fit. As the $\chi^2$ statistic is sensitive to sample size, it is presented but not used to drive decisions about model fit.
5. Results

5.1 Preliminary analyses

To determine whether controlling for child gender was necessary, we correlated child gender with all other predictor and outcome variables of interest. Child gender was not significantly correlated with any of these variables ($p > .05$), and, therefore was not included in the subsequent analyses. Additionally, because 97.34% of respondents were female, respondent gender was not included in the analyses either. To establish that race/ethnicity did predict child mental health service utilization without controlling for any confounding variables, we correlated race/ethnicity with the dichotomous outcome variable (0 = has not consulted with a health care provider regarding the child’s mental health, 1 = has consulted with a health care provider regarding the child’s mental health). This correlation was significant ($p < .05$).

Parents who answered ‘yes’ when asked if their children could have benefitted from mental health services in the last 12 months were asked to what extent barriers prevented or delayed them from obtaining mental health care while parents who answered ‘no’ were asked how much they thought barriers would have delayed or prevented them from obtaining mental health care. To determine whether the way in which parents questions were phrased about perceived barriers affected parents’ report of perceived barriers, we correlated parents’ belief that their child could have benefitted from child mental health services in the last 12 months with their ratings of perceived
barriers. Because these correlations were all nonsignificant (all \( ps > .05 \)), we did not control for parents’ belief that their children could have benefitted from mental health services in the last 12 months in the subsequent analyses.

5.2 Exploratory Factor Analysis of barriers to obtaining care

For the purpose of data reduction, an exploratory factor analysis using principal axis extraction method and oblimax rotation of 16 of the barrier variables was conducted. However, one item (child refused to go) was removed from the analyses due to having a communality < .3. Two additional variables (having to wait too long to see the doctor and the office being too far away) were also removed from the analyses because they did not conceptually fit with the factors on which they loaded. Among the remaining 13 variables analyzed, the Kaiser-Meyer-Olkin measure of sampling adequacy was .78, indicating that the present data were suitable for principal axis analysis. Similarly, Bartlett’s test of sphericity was significant (\( p < .001 \)), indicating sufficient correlation between the variables to proceed with the analysis.

Using the remaining 13 items, a two-factor solution provided the clearest extraction. These two factors accounted for 58.98\% of the total variance. Table 2 presents the 13 items, the item name, their factor correlations, communality estimates, and item-total correlations. Communalities were fairly high for each of the 13 items, with a range of .39 to .78.

Factor 1: Logistical/Socioeconomic Barriers (eigenvalue = 5.40) accounted for
41.53% of the variance and had eight items with loadings > .40. Factor 2: Stigma (eigenvalue = 2.27) accounted for 17.46% of the variance and had five items. Corrected item-total correlations ranged from .45 to .77, and Cronbach’s coefficient alphas were .85 and .86 for Factors 1 and 2, respectfully, indicating good subscale reliability. Factor scores were generated in SPSS version 20 using the regression method.

The present two-factor model was deemed the best solution because of its conceptual clarity and ease of interpretability. These factor scores were used in any analysis involving barriers to mental health care alone (individual item scores were used in analyses examining barriers to medical care).
Table 2: Summary of items and factor loadings from Principal Axis Analysis of perceived barriers

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>Communality</th>
<th>Corrected Item-Total Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>You couldn’t get through on the phone.</td>
<td>.72</td>
<td>.02</td>
<td>.75</td>
<td>.65</td>
</tr>
<tr>
<td>You couldn’t get an appointment for your child soon enough.</td>
<td>.81</td>
<td>.05</td>
<td>.78</td>
<td>.72</td>
</tr>
<tr>
<td>The clinic/doctor’s office wasn’t open when you could get there.</td>
<td>.79</td>
<td>.02</td>
<td>.68</td>
<td>.70</td>
</tr>
<tr>
<td>You didn’t have transportation.</td>
<td>.60</td>
<td>.02</td>
<td>.44</td>
<td>.57</td>
</tr>
<tr>
<td>You couldn’t afford it.</td>
<td>.73</td>
<td>.05</td>
<td>.56</td>
<td>.65</td>
</tr>
<tr>
<td>You couldn’t find care for your other children.</td>
<td>.69</td>
<td>-.01</td>
<td>.55</td>
<td>.62</td>
</tr>
<tr>
<td>Your child did not have health insurance.</td>
<td>.66</td>
<td>-.07</td>
<td>.52</td>
<td>.63</td>
</tr>
<tr>
<td>Your child’s health insurance limits access to mental health and counseling services.</td>
<td>.45</td>
<td>-.02</td>
<td>.39</td>
<td>.45</td>
</tr>
<tr>
<td>Variable</td>
<td>1</td>
<td>2</td>
<td>Communality</td>
<td>Corrected Item-Total Correlation</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>-----</td>
<td>-----</td>
<td>-------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>You were worried about friends and/or family finding out.</td>
<td>-.09</td>
<td>.81</td>
<td>.77</td>
<td>.64</td>
</tr>
<tr>
<td>You were worried about your child’s teacher and/or school finding out.</td>
<td>-.03</td>
<td>.74</td>
<td>.74</td>
<td>.62</td>
</tr>
<tr>
<td>You were concerned that it would reflect poorly on your abilities as a parent.</td>
<td>.01</td>
<td>.83</td>
<td>.65</td>
<td>.77</td>
</tr>
<tr>
<td>You were worried that your child would be teased or made fun of by his/her peers.</td>
<td>.08</td>
<td>.72</td>
<td>.71</td>
<td>.75</td>
</tr>
<tr>
<td>You were worried that you would feel too embarrassed to talk about your concerns.</td>
<td>.07</td>
<td>.66</td>
<td>.63</td>
<td>.70</td>
</tr>
</tbody>
</table>
5.3 Question 1: Are there racial/ethnic differences in utilization of child mental health services and alternative sources of help for child psychopathology?

A series of logistic regression analyses were used to test hypotheses that minority parents will be more likely than Caucasian parents to seek help from family members/friends or religious leaders/clergy and less likely to have sought help from mental health care providers.

5.3.1 Seeking help from a health care provider

Results pertaining to parents’ report of seeking help from health care providers for their children’s emotional problems are shown in Table 3. The overall model, including race/ethnicity, parent education, household income, and internalizing and externalizing problems provided a statistically significant improvement over the constant-only model, \( \chi^2 (6, N = 252) = 43.55, p < .001 \). The Nagelkerke pseudo \( R^2 \) indicated that the model accounted for 23.1% of the total variance. Prediction success for the cases used in this model was relatively high, with an overall prediction success rate of 77.8%, meaning that the model correctly predicted whether or not parents had sought help from health care providers in 77.8% of cases. The Wald test indicated that there was a significant internalizing problems effect such that the more internalizing problems a parent reported, the more likely they were to report having sought help from a health care provider for problems with emotions (\( p = .003 \)).
Table 3: Logistic regression results for predicting whether parents seek help from a health care provider.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Predictor</th>
<th>B</th>
<th>Wald</th>
<th>p-value</th>
<th>Exp (B)</th>
<th>95% CI for Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotions</td>
<td>African American*</td>
<td>.014</td>
<td>.001</td>
<td>.977</td>
<td>1.014</td>
<td>.396 - 2.594</td>
</tr>
<tr>
<td></td>
<td>Hispanic*</td>
<td>-.322</td>
<td>.345</td>
<td>.557</td>
<td>.725</td>
<td>.248 - 2.120</td>
</tr>
<tr>
<td></td>
<td>Household Income</td>
<td>-.014</td>
<td>.027</td>
<td>.870</td>
<td>.986</td>
<td>.831 - 1.170</td>
</tr>
<tr>
<td></td>
<td>Parent Education</td>
<td>.075</td>
<td>1.782</td>
<td>.182</td>
<td>1.078</td>
<td>.965 - 1.203</td>
</tr>
<tr>
<td>Internalizing Problems</td>
<td></td>
<td>.108</td>
<td>9.100</td>
<td>.003</td>
<td>1.115</td>
<td>1.039 – 1.196</td>
</tr>
<tr>
<td></td>
<td>Externalizing Problems</td>
<td>.038</td>
<td>2.079</td>
<td>.149</td>
<td>1.039</td>
<td>.986 – 1.095</td>
</tr>
<tr>
<td>Concentration, behavior, or getting</td>
<td>African American*</td>
<td>.102</td>
<td>.030</td>
<td>.861</td>
<td>1.108</td>
<td>.351 – 3.497</td>
</tr>
<tr>
<td>along with others</td>
<td>Hispanic*</td>
<td>-.248</td>
<td>.144</td>
<td>.705</td>
<td>.780</td>
<td>.217 – 2.812</td>
</tr>
<tr>
<td></td>
<td>Household Income</td>
<td>-.213</td>
<td>4.074</td>
<td>.044</td>
<td>.808</td>
<td>.657 – .994</td>
</tr>
<tr>
<td></td>
<td>Parent Education</td>
<td>.124</td>
<td>3.287</td>
<td>.070</td>
<td>1.132</td>
<td>.990 – 1.293</td>
</tr>
<tr>
<td></td>
<td>Internalizing Problems</td>
<td>.026</td>
<td>.440</td>
<td>.507</td>
<td>1.026</td>
<td>.951 – 1.108</td>
</tr>
<tr>
<td></td>
<td>Externalizing Problems</td>
<td>.094</td>
<td>9.525</td>
<td>.002</td>
<td>1.098</td>
<td>1.035 – 1.166</td>
</tr>
</tbody>
</table>

Note: Effects significant at \( p < .05 \) have been bolded. *Race/ethnicity referent: Caucasian
The results were similar when modeling parents’ report of seeking help from health care providers for children’s problems with concentration, behavior, or being able to get along with others. The five-predictor model was a statistically significant improvement over the constant-only model, $\chi^2 (6, N = 255) = 40.83, p < .001$. The Nagelkerke pseudo $R^2$ indicated that the model accounted for 24.4% of the total variance with an overall prediction success rate of 86.7%. As noted in Table 3, the Wald test indicated that there was a significant effect of externalizing problems such that the more externalizing problems a parent reported, the more likely they were to report having sought help from a health care provider for problems with concentration, behavior, or being able to get along with others ($p = .002$). There was a trend ($p = .070$) such that the more educated a parent was the more likely they were to have sought help from a health care provider. Lastly, there was also a significant effect of household income, such that the higher a parent’s reported household income, the less likely they were to report having sought help from a health care provider ($p = .044$). There were no significant or marginal race/ethnicity effects.

5.3.2 Seeking help from school staff/personnel

The five-predictor model was a statistically significant improvement over the constant-only model when modeling parents’ report of consulting with a child’s school regarding difficulties with emotions, $\chi^2 (6, N = 252) = 54.04, p < .001$; results are presented in Table 4. The Nagelkerke pseudo $R^2$ indicated that the model accounted for
Table 4: Logistic regression results for predicting whether parents seek help from their child’s school.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Predictor</th>
<th>B</th>
<th>Wald</th>
<th>p-value</th>
<th>Exp (B)</th>
<th>95% CI for Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotions</td>
<td>African American*</td>
<td>-.007</td>
<td>.000</td>
<td>.988</td>
<td>.993</td>
<td>.401 – 2.457</td>
</tr>
<tr>
<td></td>
<td>Hispanic*</td>
<td>-.256</td>
<td>.233</td>
<td>.629</td>
<td>.774</td>
<td>.274 – 2.190</td>
</tr>
<tr>
<td></td>
<td>Household Income</td>
<td>-.033</td>
<td>.156</td>
<td>.693</td>
<td>.967</td>
<td>.820 – 1.141</td>
</tr>
<tr>
<td></td>
<td>Parent Education</td>
<td>.119</td>
<td>4.485</td>
<td>.034</td>
<td>1.126</td>
<td>1.009 – 1.257</td>
</tr>
<tr>
<td></td>
<td>Internalizing Problems</td>
<td>.133</td>
<td>12.906</td>
<td>&lt;.001</td>
<td>1.142</td>
<td>1.062 – 1.228</td>
</tr>
<tr>
<td></td>
<td>Externalizing Problems</td>
<td>.030</td>
<td>1.212</td>
<td>.271</td>
<td>1.030</td>
<td>.977 – 1.086</td>
</tr>
<tr>
<td>Concentration, behavior, or getting along with others</td>
<td>African American*</td>
<td>-.068</td>
<td>.020</td>
<td>.888</td>
<td>.935</td>
<td>.365 – 2.393</td>
</tr>
<tr>
<td></td>
<td>Hispanic*</td>
<td>.263</td>
<td>.255</td>
<td>.614</td>
<td>1.300</td>
<td>.469 – 3.602</td>
</tr>
<tr>
<td></td>
<td>Household Income</td>
<td>-.087</td>
<td>1.074</td>
<td>.300</td>
<td>.916</td>
<td>.776 – 1.081</td>
</tr>
<tr>
<td></td>
<td>Parent Education</td>
<td>.073</td>
<td>1.844</td>
<td>.175</td>
<td>1.076</td>
<td>.968 – 1.195</td>
</tr>
<tr>
<td></td>
<td>Internalizing Problems</td>
<td>.026</td>
<td>.440</td>
<td>.507</td>
<td>1.026</td>
<td>.951 – 1.195</td>
</tr>
<tr>
<td></td>
<td>Externalizing Problems</td>
<td>.115</td>
<td>15.765</td>
<td>&lt;.001</td>
<td>1.122</td>
<td>1.060 – 1.187</td>
</tr>
</tbody>
</table>

Note: Effects significant at $p < .05$ have been bolded. *Race/ethnicity referent: Caucasian
27.3% of the total variance, with a prediction success rate of 75.8%. There was a significant effect of internalizing problems, such that parents who reported more child internalizing problems were more likely to report having consulted with the child’s school regarding problems with emotions ($p < .001$). Parents who reported higher educational attainment were also more likely to report having consulted with the child’s school regarding problems with emotions ($p = .034$).

As seen in Table 4, the five-predictor model was also significantly better than the constant-only model in predicting parents’ report of consulting school staff for children’s problems with concentration, behavior, or being able to get along with others, $\chi^2 (6, N = 255) = 42.36, p < .001$. The Nagelkerke pseudo $R^2$ indicated that the model accounted for 21.9% of the total variance, with a prediction success rate of 74.9%. There was a significant effect of externalizing problems, such that the more externalizing problems reported, the more likely parents were to have consulted with the child’s school regarding problems with concentration, behavior, or being able to get along with others ($p < .001$). There were no significant effects of race/ethnicity.

### 5.3.3 Seeking help from family and friends

When modeling parents’ report of seeking help from family and/or friends for their children’s difficulties with emotions, the five-predictor model provided a statistically significant improvement over the constant-only model, $\chi^2 (6, N = 253) = 36.61, p < .001$; see Table 5. The Nagelkerke pseudo $R^2$ indicated that the model
Table 5: Logistic regression results for predicting whether parents seek help from their friends and family.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Predictor</th>
<th>B</th>
<th>Wald</th>
<th>p-value</th>
<th>Exp (B)</th>
<th>95% CI for Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Emotions</strong></td>
<td>African American*</td>
<td>-.863</td>
<td>3.798</td>
<td>.051</td>
<td>.422</td>
<td>.177 – 1.005</td>
</tr>
<tr>
<td></td>
<td>Hispanic*</td>
<td>-.445</td>
<td>.834</td>
<td>.361</td>
<td>.641</td>
<td>.247 – 1.665</td>
</tr>
<tr>
<td></td>
<td>Household Income</td>
<td>-.013</td>
<td>.026</td>
<td>.872</td>
<td>.987</td>
<td>.843 – 1.155</td>
</tr>
<tr>
<td></td>
<td>Parent Education</td>
<td>.093</td>
<td>3.246</td>
<td>.072</td>
<td>1.097</td>
<td>.992 – 1.214</td>
</tr>
<tr>
<td></td>
<td>Internalizing Problems</td>
<td>.033</td>
<td>1.121</td>
<td>.290</td>
<td>1.036</td>
<td>.971 – 1.105</td>
</tr>
<tr>
<td></td>
<td><strong>Externalizing Problems</strong></td>
<td><strong>.050</strong></td>
<td><strong>3.869</strong></td>
<td><strong>.049</strong></td>
<td><strong>1.052</strong></td>
<td><strong>1.000 – 1.106</strong></td>
</tr>
<tr>
<td><strong>Concentration, behavior, or getting along with others</strong></td>
<td>African American*</td>
<td>-.682</td>
<td>2.039</td>
<td>.153</td>
<td>.505</td>
<td>.198 – 1.289</td>
</tr>
<tr>
<td></td>
<td>Hispanic*</td>
<td>-.299</td>
<td>.333</td>
<td>.564</td>
<td>.742</td>
<td>.269 – 2.045</td>
</tr>
<tr>
<td></td>
<td>Household Income</td>
<td>-.079</td>
<td>.854</td>
<td>.355</td>
<td>.924</td>
<td>.781 – 1.093</td>
</tr>
<tr>
<td></td>
<td>Parent Education</td>
<td>.125</td>
<td>5.174</td>
<td>.023</td>
<td>1.133</td>
<td>1.017 – 1.262</td>
</tr>
<tr>
<td></td>
<td>Internalizing Problems</td>
<td>.014</td>
<td>.172</td>
<td>.679</td>
<td>1.014</td>
<td>.949 – 1.084</td>
</tr>
<tr>
<td></td>
<td><strong>Externalizing Problems</strong></td>
<td><strong>.068</strong></td>
<td><strong>6.537</strong></td>
<td><strong>.011</strong></td>
<td><strong>1.070</strong></td>
<td><strong>1.016 – 1.127</strong></td>
</tr>
</tbody>
</table>

Note: Effects significant at \( p < .05 \) have been bolded. *Race/ethnicity referent: Caucasian
accounted for 18.8% of the total variance, with a prediction success rate of 71.5%. There was a marginally significant effect of race/ethnicity \( (p = .051) \), such that Caucasian parents were more likely to report consulting friends or family for children’s difficulties with emotions than were African America parents. There was also a significant effect of externalizing problems, such that parents who reported more child externalizing problems were more likely to report having consulted with friends and family regarding problems with emotions \( (p = .049) \).

As seen in Table 5, when predicting parents’ consultation with friends and family for children’s problems with concentration, behavior, or getting along with others, the five-predictor model was a significant improvement over the constant-only model, \( \chi^2 (6, N = 255) = 31.86, p <.001 \). The Nagelkerke pseudo \( R^2 \) indicated that the model accounted for 17.2% of the total variance, with a prediction success rate of 75.7%. There was a significant effect of parent education, such that parents with higher educational attainment were more likely to have consulted with friends \( (p = .023) \). There was also a significant effect of externalizing problems, such that parents who reported more child externalizing problems were more likely to report having consulted with friends and family regarding problems with concentration, behavior, or getting along with others \( (p = .011) \).
5.3.4 Seeking help from religious leaders/clergy

As shown in Table 6, the five-predictor model provided a statistically significant improvement over the constant-only model when predicting parents consultation of religious leaders or clergy regarding children’s difficulties with emotions, $\chi^2 (6, N = 255) = 13.10, p < .042$. The Nagelkerke pseudo $R^2$ indicated that the model accounted for 10.0% of the total variance, with a prediction success rate of 89.4%. There was a marginally significant effect of externalizing problems, such that parents who reported more child externalizing problems were more likely to report having consulted with religious leaders/clergy regarding problems with emotions ($p = .052$). There was also a marginally significant effect of household income such that parents with higher income were less likely to consult with clergy ($p = .078$).

Also shown in Table 6, when predicting parents’ consultation with religious leaders/clergy for children’s problems with concentration, behavior, or getting along with others, the five-predictor model was a significant improvement over the constant-only model, $\chi^2 (6, N = 254) = 13.83, p = .032$. The Nagelkerke pseudo $R^2$ indicated that the model accounted for 11.9% of the total variance, with a prediction success rate of 91.7%. There was a significant effect of externalizing problems, such that parents who reported more child externalizing problems were more likely to report having consulted with religious leaders/clergy regarding problems with concentration, behavior, or getting along.
Table 6: Logistic regression results for predicting whether parents seek help from religious leaders/clergy.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Predictor</th>
<th>$B$</th>
<th>Wald</th>
<th>$p$-value</th>
<th>Exp (B)</th>
<th>95% CI for Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Emotions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>African American*</td>
<td>.056</td>
<td>.007</td>
<td>.932</td>
<td>1.057</td>
<td>.297 – 3.758</td>
</tr>
<tr>
<td></td>
<td>Hispanic*</td>
<td>-.239</td>
<td>.105</td>
<td>.746</td>
<td>.788</td>
<td>.186 – 3.343</td>
</tr>
<tr>
<td></td>
<td>Household Income</td>
<td>-.207</td>
<td>3.106</td>
<td>.078</td>
<td>.813</td>
<td>.646 – 1.023</td>
</tr>
<tr>
<td></td>
<td>Parent Education</td>
<td>.116</td>
<td>2.126</td>
<td>.145</td>
<td>1.123</td>
<td>.961 – 1.314</td>
</tr>
<tr>
<td></td>
<td>Internalizing Problems</td>
<td>-.012</td>
<td>.066</td>
<td>.797</td>
<td>.988</td>
<td>.900 – 1.084</td>
</tr>
<tr>
<td></td>
<td>Externalizing Problems</td>
<td>.060</td>
<td>3.782</td>
<td>.052</td>
<td>1.062</td>
<td>1.000 – 1.128</td>
</tr>
<tr>
<td><strong>Concentration, behavior, or getting along with others</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>African American*</td>
<td>.265</td>
<td>.131</td>
<td>.717</td>
<td>1.303</td>
<td>.311 – 5.471</td>
</tr>
<tr>
<td></td>
<td>Hispanic*</td>
<td>.234</td>
<td>.084</td>
<td>.772</td>
<td>1.263</td>
<td>.261 – 6.119</td>
</tr>
<tr>
<td></td>
<td>Household Income</td>
<td>-.246</td>
<td>3.380</td>
<td>.066</td>
<td>.782</td>
<td>.601 – 1.016</td>
</tr>
<tr>
<td></td>
<td>Parent Education</td>
<td>.172</td>
<td>3.510</td>
<td>.061</td>
<td>1.187</td>
<td>.992 – 1.420</td>
</tr>
<tr>
<td></td>
<td>Internalizing Problems</td>
<td>-.050</td>
<td>.791</td>
<td>.374</td>
<td>.951</td>
<td>.851 – 1.062</td>
</tr>
<tr>
<td></td>
<td><strong>Externalizing Problems</strong></td>
<td>.078</td>
<td>5.077</td>
<td><strong>.024</strong></td>
<td><strong>1.081</strong></td>
<td><strong>1.010 – 1.157</strong></td>
</tr>
</tbody>
</table>

*Note: Effects significant at $p$< .05 have been bolded. *Race/ethnicity referent: Caucasian*
with others \((p = .024)\). There were also marginally significant effects of household income and parent education such that parents with lower income and more education were more likely to consult religious leaders/clergy \((p = .066 \text{ and } .061, \text{ respectively})\). There were no significant race/ethnicity effects.

There were no other significant effects across these analyses.

5.4 Question 2: Do parents perceive more barriers to accessing mental health services than medical services and does this vary by race/ethnicity?

To answer this question, a 3 (race/ethnicity) x 2 (type of care being sought, i.e., medical vs. mental health) mixed model MANCOVA was conducted with parent education, family income, and internalizing and externalizing child problems as covariates and the extent to which parents view each of the 16 potential barriers as inhibiting as dependent variables.

The results of the mixed model MANCOVA examining differences in perceived barriers to obtaining mental health versus medical services yielded a significant multivariate effect of race/ethnicity, Wilk’s lambda = .79, \(F(32, 418)= 1.62, p= .019\)
partial \(\eta^2=.11\), and treatment type, Wilk’s lambda = .89, \(F(16, 209)= 1.74, p= .031\)
partial \(\eta^2=.12\). The multivariate race/ethnicity X treatment type interaction was nonsignificant \((p > .05)\). Univariate analysis indicated significant effects of race/ethnicity and treatment type in predicting several perceived barriers. These effects and results of race/ethnicity contrasts can be found in Table 7. Univariate effects and results of
treatment type contrasts can be found in Table 8.

There were significant ($p < .05$) race/ethnicity effects for barriers in the logistical/socioeconomic domain including: child had to wait too long to see the doctor, couldn’t afford it, child’s health insurance limits access to mental health and counseling services, and the clinic/doctor’s office was too far away. Hispanic parents consistently rated these barriers as more inhibiting than did African American parents ($p < .05$). Hispanic parents rated the child having to wait too long as more inhibiting than Caucasian parents as well ($p < .05$). Caucasian parents rated the children refusing to go as a greater barrier than did African American parents ($p < .05$).

There were also significant race/ethnicity effects for several stigma-related barriers including: worried about child’s teacher and/or school finding out, concerned that it would reflect poorly on parent, worried that child would be teased or made fun of by peers, and worried that the parent would feel too embarrassed. Hispanic parents rated each of these barriers as more likely to prevent or delay them from getting services (mental health or medical) for their child than did African American, and rated worries that the child would be teased as well as worries that the parent would feel too embarrassed as more inhibiting than Caucasian parents ($p < .05$).
Table 7: Summary of analyses following significant multivariate effect of race/ethnicity in the prediction of perceived barriers.

<table>
<thead>
<tr>
<th>Perceived Barrier</th>
<th>F-statistic (df: 2, 224)</th>
<th>p-value (F-test)</th>
<th>Partial $\eta^2$</th>
<th>Race/ethnicity (M, SE)</th>
<th>Contrast (M difference, SE)</th>
<th>p-value (contrast)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Once there, child had to wait too long to see the doctor.</strong></td>
<td>7.40</td>
<td>.001</td>
<td>.06</td>
<td>African American (AA)  (M= 1.15, SE=.08)</td>
<td>H – AA (M=.46, SE=.12)</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Hispanic (H) (M= 1.41, SE=.10)</td>
<td>H – C (M=.39, SE=.15)</td>
<td>.025</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Caucasian (C) (M= 1.32, SE=.09)</td>
<td>C – AA (M=.08, SE=.12)</td>
<td>1.000</td>
</tr>
<tr>
<td><strong>Child’s health insurance limits access to mental health and counseling services.</strong></td>
<td>2.98</td>
<td>.053</td>
<td>.03</td>
<td>African American (AA)  (M= 1.10, SE=.07)</td>
<td>H – AA (M=.27, SE=.11)</td>
<td>.047</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Hispanic (H) (M= 1.37, SE=.09)</td>
<td>H – C (M=.17, SE=.13)</td>
<td>.579</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Caucasian (C) (M= 1.20, SE=.08)</td>
<td>C – AA (M=.10, SE=.11)</td>
<td>1.000</td>
</tr>
<tr>
<td><strong>Child refused to go.</strong></td>
<td>3.65</td>
<td>.028</td>
<td>.03</td>
<td>African American (AA)  (M= 1.04, SE=.04)</td>
<td>H – AA (M=.06, SE=.06)</td>
<td>.873</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Hispanic (H) (M= 1.10, SE=.05)</td>
<td>H – C (M=.10, SE=.07)</td>
<td>.503</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Caucasian (C) (M= 1.20, SE=.04)</td>
<td>C – AA (M=.16, SE=.06)</td>
<td>.023</td>
</tr>
<tr>
<td><strong>Worried about child’s teacher and/or school</strong></td>
<td>3.56</td>
<td>.030</td>
<td>.03</td>
<td>African American (AA)  (M= 1.02, SE=.03)</td>
<td>H – AA (M=.14, SE=.05)</td>
<td>.025</td>
</tr>
<tr>
<td>Perceived Barrier</td>
<td>$F$-statistic</td>
<td>$p$-value</td>
<td>Partial $\eta^2$</td>
<td>Race/ethnicity $(M, SE)$</td>
<td>Contrast $(M \text{ difference, } SE)$</td>
<td>$p$-value (contrast)</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------</td>
<td>---------------</td>
<td>-----------</td>
<td>------------------</td>
<td>------------------------</td>
<td>----------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>finding out.</td>
<td></td>
<td></td>
<td>.05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concerned that it would reflect poorly on your abilities as a parent.</td>
<td>5.81</td>
<td>.003</td>
<td></td>
<td>Hispanic (H) $(M = 1.16, SE = .04)$</td>
<td>$H - C$ $(M = .09, SE = .06)$</td>
<td>.518</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Caucasian (C) $(M = 1.07, SE = .04)$</td>
<td>$C - AA$ $(M = .05, SE = .05)$</td>
<td>.953</td>
</tr>
<tr>
<td>Worried that child would be teased or made fun of by his/her peers.</td>
<td>12.70</td>
<td>&lt;.001</td>
<td>.10</td>
<td>African American (AA) $(M = 1.03, SE = .05)$</td>
<td>$H - AA$ $(M = .27, SE = .08)$</td>
<td>.002</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Hispanic (H) $(M = 1.31, SE = .07)$</td>
<td>$H - C$ $(M = .20, SE = .10)$</td>
<td>.131</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Caucasian (C) $(M = 1.11, SE = .06)$</td>
<td>$C - AA$ $(M = .08, SE = .08)$</td>
<td>1.000</td>
</tr>
<tr>
<td>Worried that you would feel too embarrassed.</td>
<td>9.17</td>
<td>&lt;.001</td>
<td>.08</td>
<td>African American (AA) $(M = 1.04, SE = .05)$</td>
<td>$H - AA$ $(M = .32, SE = .08)$</td>
<td>&lt;.001</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Hispanic (H) $(M = 1.36, SE = .06)$</td>
<td>$H - C$ $(M = .28, SE = .09)$</td>
<td>.007</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Caucasian (C) $(M = 1.08, SE = .05)$</td>
<td>$C - AA$ $(M = .04, SE = .08)$</td>
<td>1.000</td>
</tr>
<tr>
<td>Perceived Barrier</td>
<td>F-statistic (df: 2, 224)</td>
<td>p-value (F-test)</td>
<td>Partial η²</td>
<td>Race/ethnicity (M, SE)</td>
<td>Contrast (M difference, SE)</td>
<td>p-value (contrast)</td>
</tr>
<tr>
<td>-------------------------------------------------------</td>
<td>--------------------------</td>
<td>------------------</td>
<td>-------------</td>
<td>------------------------</td>
<td>----------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>The clinic/doctor's office was too far away.</td>
<td>4.77</td>
<td>.009</td>
<td>.041</td>
<td>African American (AA)</td>
<td>H – AA</td>
<td>.010</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(M= 1.00, SE=.04)</td>
<td>(M=.19, SE=.06)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Hispanic (H)</td>
<td>H – C</td>
<td>.809</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(M= 1.19, SE=.05)</td>
<td>(M=.09, SE=.08)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Caucasian (C)</td>
<td>C – AA</td>
<td>.313</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(M= 1.10, SE=.04)</td>
<td>(M=.11, SE=.07)</td>
<td></td>
</tr>
</tbody>
</table>

*Note:* Contrasts significant at \( p < .05 \) have been bolded.
Table 8: Summary of analyses following significant multivariate effect of treatment type in the prediction of perceived barriers.

<table>
<thead>
<tr>
<th>Perceived Barrier</th>
<th>F-statistic (df: 2, 164)</th>
<th>p-value (F-test)</th>
<th>Partial $\eta^2$</th>
<th>Treatment type (M, SE)</th>
<th>Contrast (M difference, SE)</th>
<th>p-value (contrast)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Couldn’t afford it.</td>
<td>4.73</td>
<td>.031</td>
<td>.02</td>
<td>Mental health (MH) (M= 1.32, SE=.06)</td>
<td>MH – MD (M=.12, SE=.05)</td>
<td>.012</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Medical (MD) (M= 1.20, SE=.04)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worried about friends or family finding out.</td>
<td>4.21</td>
<td>.041</td>
<td>.02</td>
<td>Mental health (MH) (M= 1.11, SE=.03)</td>
<td>MH – MD (M=.05, SE=.02)</td>
<td>.026</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Medical (MD) (M= 1.05, SE=.02)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concerned that it would reflect poorly on your abilities as a parent.</td>
<td>9.40</td>
<td>.002</td>
<td>.04</td>
<td>Mental health (MH) (M= 1.23, SE=.05)</td>
<td>MH – MD (M=.16, SE=.04)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Medical (MD) (M= 1.07, SE=.02)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worried that child would be teased or made fun of by his/her peers.</td>
<td>5.54</td>
<td>.019</td>
<td>.02</td>
<td>Mental health (MH) (M= 1.30, SE=.05)</td>
<td>MH – MD (M=.18, SE=.05)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Medical (MD) (M= 1.12, SE=.03)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worried that you would feel too embarrassed.</td>
<td>6.52</td>
<td>.011</td>
<td>.03</td>
<td>Mental health (MH) (M= 1.24, SE=.04)</td>
<td>MH – MD (M=.15, SE=.04)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Medical (MD) (M= 1.09, SE=.02)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: All effects shown are significant at $p<.05$. 
5.5 Question 3: Are there racial/ethnic differences in parents’ attitudes about help seeking?

To assess predictors of parents’ beliefs about mental health care, four hierarchical logistic regression analyses were performed predicting parents’ belief that treatment by a therapist/counselor or an medical doctor/psychiatrist would be helpful in treating children’s problems with emotions or behavior, concentration, and getting along with others. Race/ethnicity, previous mental health services utilization, SES (household income, parent education), and child problems were entered in the first Block and the race/ethnicity by previous mental health service utilization interaction was entered in the second Block. The change in $\chi^2$ from Block 1 to Block 2 was nonsignificant ($p > .05$) across all four analyses, indicating that the interaction did not significantly contribute to predicting the likelihood of believing that mental health services can help. As such, the interaction was excluded from the model.

5.5.1 Belief that therapists/counselors can help

When predicting parents’ belief that therapists/counselors can help with children’s emotional problems, the overall model including only main effects was significant, $\chi^2 (7, N = 244) = 45.84, p < .001$. See Table 9 for the results of this analysis. The Nagelkerke pseudo $R^2$ indicated that the model accounted for 30.3% of the total variance, with a prediction success rate of 86.1%. There was a marginal effect of previous child mental health service utilization, such that parents who had endorsed having sought help from a
professional were more likely to endorse the belief that treatment by a therapist/counselor can help with children’s emotional problems, \( p = .065 \). There was a marginal effect of race/ethnicity, such that African American parents were less likely than Caucasian parents to believe that treatment by a therapist/counselor can help with children’s emotional problems, \( p = .059 \). Lastly, there was a marginally significant effect of household income, such that parents reporting higher income were more likely to believe that treatment by a therapist/counselor can help with emotional problems, \( p = .063 \).

The results of the logistic regression predicting parents’ belief that therapists/counselors can help with children’s externalizing problems (problems with behavior, concentration, and getting along with others) can be found in Table 9. The overall model was significant, \( \chi^2 (7, N = 244) = 31.56, p < .001 \). The model accounted for 23.8% of the total variance, with a prediction success rate of 88.5%. The effect of parents’ report of having sought help from a mental health professional was nonsignificant. There was a significant effect of race, such that African American parents were less likely than Caucasian parents to report that treatment by a therapist/counselor can help with children’s externalizing problems, \( p = .008 \).

No other effects significantly predicted parents’ beliefs that treatment by a therapist/counselor can help with symptoms of child psychopathology.
Table 9: Logistic regression results for predicting parents’ belief that treatment by a therapist/counselor can help.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Predictor</th>
<th>B</th>
<th>Wald</th>
<th>p-value</th>
<th>Exp (B)</th>
<th>95% CI for Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Emotions</strong></td>
<td>African American*</td>
<td>-1.26</td>
<td>3.58</td>
<td>.059</td>
<td>.28</td>
<td>.08 – 1.05</td>
</tr>
<tr>
<td></td>
<td>Hispanic*</td>
<td>-0.25</td>
<td>0.09</td>
<td>.768</td>
<td>.78</td>
<td>.154 – 4.00</td>
</tr>
<tr>
<td></td>
<td>Household Income</td>
<td>0.20</td>
<td>3.45</td>
<td>.063</td>
<td>1.22</td>
<td>1.00 – 1.50</td>
</tr>
<tr>
<td></td>
<td>Parent Education</td>
<td>-0.00</td>
<td>0.002</td>
<td>.967</td>
<td>1.00</td>
<td>.84 – 1.18</td>
</tr>
<tr>
<td></td>
<td>Internalizing Problems</td>
<td>0.09</td>
<td>1.63</td>
<td>.202</td>
<td>1.10</td>
<td>.95 – 1.27</td>
</tr>
<tr>
<td></td>
<td>Externalizing Problems</td>
<td>0.06</td>
<td>1.56</td>
<td>.212</td>
<td>1.06</td>
<td>.95 – 1.18</td>
</tr>
<tr>
<td></td>
<td>Mental health contact</td>
<td>1.25</td>
<td>3.42</td>
<td>.065</td>
<td>3.49</td>
<td>.93 – 13.14</td>
</tr>
<tr>
<td><strong>Concentration, behavior, or getting along with others</strong></td>
<td>African American*</td>
<td>-2.26</td>
<td>6.97</td>
<td>.008</td>
<td>.11</td>
<td>.02 – .56</td>
</tr>
<tr>
<td></td>
<td>Hispanic*</td>
<td>-1.02</td>
<td>1.02</td>
<td>.313</td>
<td>.36</td>
<td>.05 – 2.61</td>
</tr>
<tr>
<td></td>
<td>Household Income</td>
<td>0.17</td>
<td>2.28</td>
<td>.131</td>
<td>1.19</td>
<td>.95 – 1.49</td>
</tr>
<tr>
<td></td>
<td>Parent Education</td>
<td>-0.09</td>
<td>0.76</td>
<td>.383</td>
<td>.92</td>
<td>.76 – 1.11</td>
</tr>
<tr>
<td></td>
<td>Internalizing Problems</td>
<td>0.02</td>
<td>0.12</td>
<td>.735</td>
<td>1.02</td>
<td>.89 – 1.18</td>
</tr>
<tr>
<td></td>
<td>Externalizing Problems</td>
<td>0.04</td>
<td>0.75</td>
<td>.386</td>
<td>1.04</td>
<td>.95 – 1.14</td>
</tr>
<tr>
<td></td>
<td>Mental health contact</td>
<td>0.81</td>
<td>1.65</td>
<td>.200</td>
<td>2.24</td>
<td>.65 – 7.70</td>
</tr>
</tbody>
</table>

*Note: Effects significant at p<.05 have been bolded. *Race/ethnicity referent: Caucasian
5.5.2 Belief that psychiatrists/medical doctors can help

Results of the logistic regression analysis predicting parents’ belief that treatment by a psychiatrist/medical doctor can help with children’s emotional problems can be found in Table 10. The overall predictive model was significant, $\chi^2 (7, N = 243) = 23.49$, $p = .001$. The Nagelkerke pseudo $R^2$ indicated that the model accounted for 15.7% of the total variance, with a prediction success rate of 84.0%. Previous child mental health service utilization did not significantly predict their beliefs in this analysis. There was a significant race/ethnicity effect such that African American parents were less likely than Caucasian parents to report believing that treatment by a psychiatrist/medical doctor can help with children’s emotional problems, $p = .021$. There was also a marginal effect of child externalizing problems, such that parents reporting more externalizing problems were more likely to believe that treatment by a psychiatrist/medical doctor can help with children’s emotional problems, $p = .059$.

Results of the logistic regression model predicting parents’ belief that treatment by a psychiatrist/medical doctor can help with children’s externalizing problems can also be found in Table 10. The overall predictive model was significant, $\chi^2 (7, N = 242) = 19.78$, $p = .006$. The model accounted for 13.0% of the total variance, with a prediction success rate of 82.6%. In this analysis, parents’ report of previous child mental health service utilization did not significantly predict their beliefs. There was a significant effect of race/ethnicity such that African American parents were less likely to report belief that
Table 10: Logistic regression results for predicting parents’ belief that treatment by a psychiatrist/medical doctor can help.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Predictor</th>
<th>B</th>
<th>Wald</th>
<th>p-value</th>
<th>Exp (B)</th>
<th>95% CI for Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Emotions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>African American*</td>
<td>-1.43</td>
<td>5.30</td>
<td>.021</td>
<td>.24</td>
<td>.07 - .81</td>
</tr>
<tr>
<td></td>
<td>Hispanic*</td>
<td>-.82</td>
<td>1.29</td>
<td>.257</td>
<td>.44</td>
<td>.11 - 1.82</td>
</tr>
<tr>
<td></td>
<td>Household Income</td>
<td>.07</td>
<td>.56</td>
<td>.668</td>
<td>1.21</td>
<td>.48 - 3.09</td>
</tr>
<tr>
<td></td>
<td>Parent Education</td>
<td>.04</td>
<td>.33</td>
<td>.565</td>
<td>1.04</td>
<td>.90 - 1.20</td>
</tr>
<tr>
<td></td>
<td>Internalizing Problems</td>
<td>-.02</td>
<td>.21</td>
<td>.643</td>
<td>.98</td>
<td>.88 - 1.08</td>
</tr>
<tr>
<td></td>
<td>Externalizing Problems</td>
<td>.08</td>
<td>3.56</td>
<td>.059</td>
<td>1.08</td>
<td>1.00 - 1.18</td>
</tr>
<tr>
<td></td>
<td>Mental health contact</td>
<td>.19</td>
<td>.16</td>
<td>.688</td>
<td>1.21</td>
<td>.48 - 3.09</td>
</tr>
<tr>
<td><strong>Concentration, behavior, or getting along with others</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>African American*</td>
<td>-1.39</td>
<td>5.00</td>
<td>.025</td>
<td>.25</td>
<td>.07 - .84</td>
</tr>
<tr>
<td></td>
<td>Hispanic*</td>
<td>-1.26</td>
<td>3.38</td>
<td>.066</td>
<td>.29</td>
<td>.08 - 1.09</td>
</tr>
<tr>
<td></td>
<td>Household Income</td>
<td>.09</td>
<td>.93</td>
<td>.334</td>
<td>1.09</td>
<td>.91 - 1.31</td>
</tr>
<tr>
<td></td>
<td>Parent Education</td>
<td>.00</td>
<td>.00</td>
<td>.995</td>
<td>1.00</td>
<td>.88 - 1.14</td>
</tr>
<tr>
<td></td>
<td>Internalizing Problems</td>
<td>.02</td>
<td>.15</td>
<td>.703</td>
<td>1.02</td>
<td>.93 - 1.12</td>
</tr>
<tr>
<td></td>
<td>Externalizing Problems</td>
<td>.03</td>
<td>.74</td>
<td>.389</td>
<td>1.03</td>
<td>.96 - 1.10</td>
</tr>
<tr>
<td></td>
<td>Mental health contact</td>
<td>-.12</td>
<td>.07</td>
<td>.787</td>
<td>.89</td>
<td>.38 - 2.10</td>
</tr>
</tbody>
</table>

*Note: Effects significant at p< .05 have been bolded. *Race/ethnicity referent: Caucasian
treatment by a psychiatrist/medical doctor can help with children’s externalizing problems compared to Caucasian parents, $p = .025$. There was also a marginally significant effect indicating that Hispanic parents were also less likely to report belief that treatment by a psychiatrist/medical doctor can help with children’s externalizing problems, $p = .066$.

No other variables significantly predicted parents’ belief that treatment by a psychiatrist/medical doctor can help with children’s symptoms of psychopathology. Across analyses, race/ethnicity was the most consistent predictor: African American parents were less likely to report belief that child mental health services can help with internalizing or externalizing problems.

5.5.3 Racial/ethnic differences in perceived barriers/stigma

To assess for race/ethnicity effects and potential effects of previous mental health service utilization on parents perceived barriers to child mental health services, a 2 (previous child mental health services utilization vs. no previous child mental health services utilization) X 3 (race/ethnicity) MANCOVA was conducted on the two perceived barriers factors (logistical/socioeconomic barriers and stigma) with household income, parent education, and child internalizing and externalizing problems as covariates. This analysis did not yield any significant multivariate effects of race/ethnicity or previous child mental health service utilization; however, there was a marginally significant multivariate race/ethnicity X mental health contact interaction,
Wilk’s lambda = .96,  \( F(4, 452)= 2.22, p= .066, \) partial \( \eta^2 = .02. \) Univariate analyses revealed a significant race/ethnicity X previous child mental health service utilization effect for Logistical/socioeconomic barriers,  \( F(2, 227) = 4.27, p= .015, \) partial \( \eta^2 = .04. \) Pairwise comparisons indicated that African American parents who had sought help from a mental health professional regarding their child’s mental health concerns (\( M = .17, SE = .19 \)) rated logistical/socioeconomic barriers as more inhibiting than did African American parents who had not sought help from a mental health professional (\( M = -.36, SE = .11 \)),  \( F(1, 227) = 6.24, p= .013, \) partial \( \eta^2 = .03. \)

5.6 Question 4: Do parental help seeking attitudes/beliefs, perceived barriers, and health insurance status mediate the relationship between a) race/ethnicity, SES (parent education and family income), and child internalizing and externalizing problems and b) mental health service utilization?

5.6.1 Measurement model

The measurement model included the two factors derived in the EFA described above (logistical/institutional barriers and stigma), with items with component loadings \( \pm .40 \) on a given factor as indicators for that factor. The two factor model successfully converged and overall model fit was improved when error terms between indicators of a given factor were allowed to covary. Fit indices provide moderate support the measurement model (see Table 11 for a summary of the fit statistics); RMSEA was .07, above the .05 cutoff, though PCLOSE, CFI and SRMR suggest good model fit. As seen
in Figure 3, close examination of factor loadings provided more support for the model, as all factor loadings were significant at $p < .01$.

### 5.6.2 Structural model

The full and partial mediation models were first assessed for overall fit. As seen in Table 11, the chi-square test for the full-mediation model was significant indicating poor model fit; however, RMSEA, PCLOSE, and the CFI indicate acceptable fit of the full mediation model.

A partial mediation model, where direct effects between race/ethnicity, parent education, household income, and child internalizing and externalizing problems and the dependent variable, mental health service utilization, were estimated also yielded a significant chi-square test, but RMSEA, PCLOSE, and CFI indicated acceptable model fit, as shown in Table 11.

### 5.6.3 Model comparison

To determine whether the full or partial mediation model yielded a better fit, we employed the chi-square difference test. The difference test was nonsignificant, $\chi^2 (6, N = 258) = 7.72, p = .259$, indicating that removing the direct effects from the predictor variables to the outcome variable did not significantly change model fit, and hence, the full mediation model, which is the more parsimonious model (where fewer paths were estimated), is preferable.
### Table 11: Summary of goodness of fit statistics for the structural equation models

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>p</th>
<th>RMSEA</th>
<th>RMSEA 90% CI</th>
<th>PCLOSE</th>
<th>CFI</th>
<th>SRMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement</td>
<td>114.36</td>
<td>54</td>
<td>&lt;.001</td>
<td>.07</td>
<td>.05 - .08</td>
<td>.065</td>
<td>.97</td>
<td>.05</td>
</tr>
<tr>
<td>Full Mediation</td>
<td>219.91</td>
<td>164</td>
<td>.002</td>
<td>.04</td>
<td>.02 - .05</td>
<td>.971</td>
<td>.93</td>
<td></td>
</tr>
<tr>
<td>Partial Mediation</td>
<td>212.78</td>
<td>158</td>
<td>.002</td>
<td>.04</td>
<td>.02 - .05</td>
<td>.966</td>
<td>.93</td>
<td></td>
</tr>
<tr>
<td>Difference Test</td>
<td>7.72</td>
<td>6</td>
<td>.259</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure 3: Two factor measurement model.

Note: Standardized coefficients are given for all path estimates. All other loadings are significant at p<.01.

Key:
X1 Couldn’t get through on the phone.
X2 Couldn’t get an appointment for your child soon enough.
X3 The clinic/doctor’s office wasn’t open when you could get there.
X4 Didn’t have transportation.
X5 Couldn’t afford it.
X6 Couldn’t find care for your other children.
X7 Your child did not have health insurance.
X8 Child’s health insurance limits access to mental health/counseling.
X9 Worried about friends of family finding out.
X10 Worried about your child’s teacher/school finding out.
X11 Concerned that it would reflect poorly on your abilities as a parent.
X12 Worried that your child would be teased by peers.
X13 Worried that you would feel too embarrassed to talk about concerns.
5.6.4 Path coefficients

Closer examination revealed several significant path coefficients in the full mediation model, as shown in Figure 4.

5.6.4.1 Paths between predictor variables and proposed mediators

Parent education significantly predicted stigma: the more educated a parent was, the less likely they were to endorse stigma as a barrier ($p = .025$). Race/ethnicity also significantly predicted parents’ belief that mental health services can help with child mental health problems, such that African American parents were less likely than Caucasian parents to report that mental health services can help ($p = .023$). Hispanic parents were less likely compared to Caucasian parents to have reported that their child had health insurance (public or private) ($p = .003$). There was a marginal association between household income and insurance status, such that more wealthy families were more likely to have health insurance for their children ($p = .078$). Lastly, externalizing problems were moderately associated with insurance status such that parents reporting more child externalizing problems were also more likely to report that their child had health insurance ($p = .054$). There were no significant path coefficients between the predictor variables and logistical/socioeconomic barriers.

5.6.4.2 Paths between the proposed mediators and the outcome variable

Stigma was marginally associated with the outcome variable, child mental health service utilization, such that parents who reported less stigma tended to report that their
Figure 4: Full mediation model predicting child mental health (MH) service utilization.

Note: The indicators of Stigma and Logistic/Socioeconomic (Log./SES) Barriers have been intentionally left out in favor of legibility. Please see Figure 3 for factor loadings. Standardized coefficients are given for only for statistically significant ($p < .05$) and marginally significant ($p < .10$) path estimates. $+p < .10$, $* p < .05$, $** p < .01$
child had received mental health care ($p = .095$). Parents who reported that their child had health insurance were also marginally more likely to report that their child had received mental health care ($p = .056$). Neither logistical/socioeconomic barriers nor belief that child mental health services can help were significantly associated with child mental health service utilization.

### 5.6.5 Indirect effects

The indirect effects of each of the exogenous predictor variables via the total set of proposed mediator variables (total indirect effects) and via each individual mediator (specific indirect effects) were assessed. There was a marginally significant total indirect effect of being Hispanic via the set of mediator variables (insurance status, stigma, logistical/socioeconomic barriers, belief that child mental health services can help, and belief that parent’s child could have benefitted from mental health services; $\beta = -.13$, $p = .084$), indicating that the total set of mediators mediated the relationship between being Hispanic and child mental health service utilization. There was a marginally significant specific direct effect (testing whether each proposed mediator variable independently mediates the relationship between being Hispanic and child mental health service utilization) via insurance status ($\beta = -.12$, $p = .093$).

There were no other significant total or specific indirect effects.
6. Discussion

This study was intended to clarify and expand upon the previous research on predictors of child mental health services utilization. We specifically sought to clarify the relationships between race/ethnicity, parents’ attitudes about mental health services, perceived barriers, and utilization of child mental health services. Though research in the area of disparities in access to child mental health services is relatively limited, there have been some consistent findings in the literature, including that minorities are less likely to use child mental health services (e.g., Busch & Horwitz, 2005; Zimmerman, 2005; Howell & McFeeters, 2008; Kodjo & Auinger, 2004), tend to have less positive views about mental health care (e.g., Diala et al., 2000; Bussing et al., 2007), and report more barriers to accessing mental health care for their children (e.g., Bussing et al., 2007; Bussing, Koro-Ljungberg, & Gary, 2005; Thurston & Phares, 2008). Although researchers have proposed that attitudes, barriers, and various socio-demographic variables (income, insurance status, parent education, etc.) contribute to disparities in access to child mental health services, little research has tested this hypothesis. We sought to clarify the relationships among these variables.

6.1 Does race/ethnicity predict parents’ use of child mental health care and alternative sources of help (friends, family, clergy/religious leaders, and teachers)?

In the current study, we hypothesized that African American and Hispanic parents, less educated parents, parents with lower household income, and parents whose
children have fewer symptoms would be less likely to obtain mental health care for their children compared to Caucasian parents, more educated parents, parents with higher household income, and parents of children with more symptoms of psychopathology, respectively. We also predicted that minority parents would be more likely to have consulted with friends and family or clergy regarding their children’s mental health concerns. Results provided mixed support for our hypotheses.

Race/ethnicity was not a significant predictor of child mental health service utilization. One consistent finding was that parent report of child internalizing and externalizing problems on the CBCL predicted help-seeking. It seems logical that parents who reported more child emotional and behavioral problems would be more likely to seek help from a mental health professional. Contrary to our hypotheses, parents who reported a higher household income were less likely to have sought professional help for externalizing problems. This is inconsistent with previous research and it is unclear what could be driving this unusual finding. It could be that children from lower income families might be at risk for greater stress and prejudice which could result in clinical symptoms as suggested by our results, the more symptoms of psychopathology noted by a parent, the greater the likelihood that the parent would have consulted with a mental health care professional regarding the child’s symptoms. It is also possible that given the stress or prejudice that may be related to coming from a lower income family, these children may be more likely to be singled out by school staff or the juvenile justice
system for externalizing problems and ordered or encouraged to seek services. More in line with our hypotheses, there was a trend such that more educated parents were more likely to have sought professional help for externalizing problems.

Similar to the results for seeking help from a mental health care provider, parents who reported more internalizing or externalizing problems were more likely to have consulted with the child’s school about those problems. More educated parents were also more likely to have consulted with school staff for internalizing problems.

Parents who reported more externalizing problems were also more likely to have talked to friends or family about their child’s internalizing problems. Though this finding was unexpected, it may be that the more psychological problems a child has overall, the more likely a parent is to seek consultation for any psychological problem. Both parent education and externalizing problems were predictors of parents consulting with friends and family about externalizing problems such that more educated parents and parents reporting more externalizing problems were more likely to have sought help from friends. Similar to seeking help from friends and family, parents reporting more externalizing problems were more likely to seek help from religious leaders for both internalizing and externalizing problems.

6.1.1 Summary

Parents’ report of child psychological problems was the most consistent predictor of help-seeking across sources. This is not surprising as it makes sense that parents might
be more likely to notice psychological problems and be more concerned about them the more problems there are.

Parent education also seems to be important in predicting help-seeking. More educated parents may be more likely to be aware of the options for seeking help for their children or more readily recognize a potential psychological problem. It is also likely that parents who are more educated may have more time and/or opportunity to consult various sources regarding their children’s mental health concerns.

Contrary to our expectation, Caucasian parents tended to be more likely than African American parents to report having consulted with friends and family for internalizing problems. Also contrary to our hypotheses and previous research, there were no significant racial/ethnic differences in seeking help from mental health professionals, the school, or clergy. It may be that the other predictors account for any relationship between race/ethnicity and seeking professional help in our sample. In these analyses, we ran separate analyses for seeking help for internalizing problems and for externalizing problems and included parents’ rating of their child’s internalizing and externalizing problems as predictors. It could be that, when analyzed in this way, parents’ ratings of their child’s behaviors account for much of the variability in help seeking in this sample.
6.2 Do parents perceive more barriers to accessing mental health services than medical services and does this vary by race/ethnicity?

As past research in health disparities has primarily focused on medical health, we thought it would be important to assess whether parents’ report of barriers to medical care and mental health care might be different. We predicted that parents would perceive fewer barriers to accessing medical care than mental health services for their children as medical care may be more readily available, more commonly used, and possibly less likely to be stigmatizing compared to mental health care. Whether this difference varies by race had not been previously explored, though we expected that minority parents would overall endorse more barriers across service type. The results provide good support for our hypotheses.

There were significant effects of both race/ethnicity and service type. Hispanic parents fairly consistently rated more logistical/institutional and socioeconomic barriers of the clinic/doctor’s office being too far away to see the doctor and their health insurance limitations as more likely to prevent or delay them from obtaining services for their children compared to African American parents. Hispanic parents were also more likely to endorse having to wait too long as inhibiting compared to both African American and Caucasian parents. Hispanic parents were also more likely to endorse stigma related barriers, including worries that the child’s teacher and/or school would find out and concern that seeking treatment would reflect poorly on the parent as greater
barriers than did African American parents across service types. Hispanic parents were more likely to endorse worries that the child would be teased by peers and worries that the parent would feel too embarrassed to talk about concerns as greater barriers to care than did both Caucasian and African American parents across service types.

Parents (across race/ethnicity) also rated affordability, worry about friends and family finding out, concern that seeking treatment would reflect poorly on the parent, worry that the child would be teased, and worry that the parent would feel too embarrassed to talk about their concerns as more likely to prevent or delay them from seeking treatment for mental health care than medical care. This is consistent with our hypotheses.

6.2.1 Summary

Overall, parents’ perceived barriers did seem to vary by service type, where parents reported stigma-related barriers as more likely to affect help seeking for mental health than medical care. It is likely that parents feel less stigma regarding medical care because it is more common and routine. A visit to a medical doctor may not necessarily mean there is a problem with a child’s health, whereas parents may be more likely to seek mental health care only when there is a problem.

Hispanic parents seemed to consistently report barriers in several areas as more likely to prevent them from obtaining services (across service type) if they felt their children needed them. With about 80% of Hispanic parents in this study having reported
living in the United States for 15 years or less, most of the Hispanic parents in the study would have been first generation immigrants. It seems likely that immigrants, who must adjust to a new culture and may have less experience with and information about how to navigate the health system in the United States, would be more likely to perceive barriers to accessing services across services types. Hence, more efforts should be made to integrate new immigrants in the community so that they can quickly establish supports.

6.3 Do parents’ beliefs that mental health services can help treat child psychopathology vary by race/ethnicity?

We hypothesized that minority parents would be less likely to report believing that mental health services can help improve child problems. Due to previous research indicating that African American adolescents and adults might have less favorable views of mental health care after having used mental health care compared to those who had not used mental health care (Diala et al., 2000), we were also interested in whether this effect might exist among parents in our sample, though we did not make any specific hypotheses about the effect of previous mental health service utilization on parents’ beliefs.

Race/ethnicity did not moderate the effect of previous mental health service utilization on parents’ belief that mental health services can help with symptoms of child psychopathology. Parents with previous child mental health service utilization were more likely to report that treatment with a therapist/counselor can help with children’s
internalizing problems compared to parents with no previous child mental health service utilization; previous child mental health service utilization did not predict parents’ attitudes about treatment of externalizing disorders or treatment by a psychiatrist/medical doctor. Race/ethnicity was a consistently significant predictor, with African American parents being less likely than Caucasian parents to believe that treatment by therapists/counselors or psychiatrists/medical doctors can help with children’s internalizing or externalizing problems. Hispanic parents were also less likely to believe that treatment by psychiatrists/medical doctors can help with externalizing problems. These results are consistent with our hypotheses and somewhat consistent with previous research indicating that African Americans may be less likely than Caucasian parents to believe that their children with ADHD would benefit from treatment (Bussing et al., 2007).

The effect of previous child mental health service utilization on parents’ ratings of how likely barriers would be to prevent or delay them from seeking mental health care for their children did vary by race. Specifically, among African Americans, parents who had previously sought help from a mental health professional rated logistical/socioeconomic barriers as more likely to prevent or delay treatment than did parents with no previous mental health service experience. This is somewhat consistent with Diala and colleagues’ (2000) results. It is possible that parents who have actually
sought mental health services for their children are more aware of potential barriers such as health insurance coverage, treatment waitlists, affordability, etc.

6.3.1 Summary

Previous child mental health services utilization is associated with some beliefs about mental health services. However, race/ethnicity as a main effect seemed to be the most consistent predictor of attitudes about help seeking. Interestingly, despite African American parents’ consistently being less likely to report that treatment with a mental health care professional can help with child psychopathology, African American parents were not less likely to have reported previous child mental health services utilization (see results from Question 1). Parents’ attitudes about child mental health services may not always match their behavior; however, it would be important for practitioners working with minority parents to be aware that parents might not trust that treatment will work.

6.4 Do parental attitudes/beliefs, perceived barriers, and health insurance status mediate the relationship between a) race/ethnicity, SES, and child internalizing and externalizing problems and b) mental health service utilization?

We hypothesized that the effect of race, SES, and internalizing and externalizing problems on mental health service utilization would be fully mediated by perceived barriers to care, parents’ help-seeking attitudes, and insurance status. The results of the SEM provide moderate support for our hypotheses. The full mediation model yielded good fit and was preferable to the partial mediation model, consistent with our
hypotheses. Closer examination of specific paths indicated several significant
associations among variables in the model. African American parents were less likely to
report that mental health services can help improve symptoms of child psychopathology
compared to Caucasian parents. This is consistent with the results of previous analyses
(see results of Question 3). Hispanic parents were less likely to report that their children
have health insurance compared to Caucasian parents. Not surprisingly, wealthier parents
were more likely to report that their children had health insurance. Also, more educated
parents were less likely to endorse stigma.

The associations between race/ethnicity and logistical/socioeconomic and stigma
barriers were not significant in these analyses. In previous analyses in the current study,
Hispanic parents were more likely to endorse stigma and logistical/socioeconomic
barriers as inhibiting across service types compared to Caucasian parents (results for
Question 2). However, these results are not necessarily inconsistent as the previous
race/ethnicity effects were not on barriers to mental health care alone, but were main
effects across service types. When considering main effects predicting barriers to mental
health care, race/ethnicity does not appear to be a significant predictor. Of the proposed
mediators, stigma and insurance status were moderately significant predictors of mental
health service utilization.

There was a significant total indirect effect of race/ethnicity via the set of
mediators, supporting our mediation hypothesis. Specifically, being Hispanic (compared
to being Caucasian) moderately predicted child mental health service utilization through the set of mediator variables. There was a moderate specific effect of being Hispanic via insurance status.

6.4.1 Summary

The results provide moderate overall support for the full mediation model. This suggests that previously documented racial/ethnic and socioeconomic differences in child mental health service utilization may be accounted for by differences in perceived barriers and parents’ attitudes about mental health care. There was support for our full mediation model, though we acknowledge that there may be other models that would fit the data as well.

Although there were few specific indirect effects, the mediator variables as a set seem to be important. Collectively, they account for the relationship between being Hispanic and mental health service utilization. Insurance status, a variable rarely included in previous research, may be an important mediator. Howell and McFeeters (2008) and Zimmerman (2005) controlled for insurance status when assessing for race/ethnicity effects on mental health service utilization, though there were no mediation analyses that might help explain the relationship between sociodemographic variables and child mental health service utilization. While we have no way of knowing whether uninsured children in our sample were eligible for public insurance, educating parents about Medicaid eligibility might increase insurance coverage among currently uninsured children and,
thereby, have the potential to decrease disparities in mental health service utilization. Educating parents about potential options for health insurance coverage for their children might be especially important in the wake of the Patient Protection and Affordable Care Act 2010, designed to increase access to health insurance and, thereby, access to health care.

While it did not appear to mediate the effect of any one particular predictor variable on child mental health service utilization, stigma may also be important to consider as it was associated with child mental health service utilization.

6.5 Limitations

There are several limitations to this study that are important to note. This data is cross-sectional; therefore, we cannot draw confident conclusions about the direction of effects. For instance, there was a moderate association between stigma and child mental health service utilization, though it is not possible to know whether more stigma leads to decreased likelihood of using child mental health services or if using child mental health services might reduce perceived stigma. Additionally, data were collected primarily from parents within a few adjoining counties and the age range of the children was fairly limited (9 – 13 years). The sample was also highly dependent on whether teachers sent letters home to parents of the children in their classes; as such, parents in this sample may not be representative of parents even within this geographical area.
Additionally, this study did not examine language barriers which likely influence child mental health utilization among non-English speaking populations in the United States. It would be important to include language barriers as a predictor of child mental health services utilization in future studies. Though our sample size did not allow us to further divide the racial/ethnic categories, it is important to keep in mind that persons identified as “Hispanic” come from a variety of ethnic backgrounds. There may be important racial/ethnic differences within this group that this study did not examine.

6.6 Implications and future directions

The results of this study have implications for policy and for mental health service providers. Insurance status may be important as a mediator between being Hispanic and child mental health service utilization. Because this effect was marginal, it should be replicated though it is consistent with previous research indicating that children without health insurance are less likely to receive child mental health services. Policy initiatives should be put in place to educate parents about eligibility for public insurance and to provide insurance for currently uninsured children. Logistical/socioeconomic barriers did not significantly predict child mental health service utilization; though it may be that insurance status better accounts for variability in child mental health service utilization than do logistical/socioeconomic barriers as a scale.

One goal of this study was to try to clarify the relationship between stigma and mental health services utilization. As noted above, previous research on stigma has been
somewhat inconsistent and inconclusive. In the present study, stigma was marginally associated with child mental health service utilization; given the marginal nature of this effect, it needs to be replicated. Even if stigma does not strongly predict child mental health service utilization, it is important for providers to be aware of because it could possibly affect treatment compliance, retention, and parents’ overall trust of the provider. Given that Hispanic parents were more likely to endorse stigma-related barriers to both medical and mental health care, both physicians and mental health care providers should be aware of stigma associated with seeking treatment.

Similarly, African Americans were consistently less likely to report the belief that child mental health services can help with symptoms of child psychopathology. Race/ethnicity seemed to be an important predictor of perceived barriers and parents’ beliefs that mental health services can help with child problems. Parent education and parents’ rating of their child’s internalizing problems also seemed to be important in predicting mental health service utilization for internalizing problems and parents’ rating of their child’s externalizing problems seemed important in predicting mental health service utilization for externalizing problems. In fact, when controlling for these confounding factors, the effect of race/ethnicity on mental health service utilization was nonsignificant, though race/ethnicity differences in attitudes about mental health services remain significant despite controlling for potentially confounding variables. As noted above, parents’ attitudes may not always match up with their actions, though attitudes
may still be important to consider. Although parents’ belief that mental health services can help did not predict mental health service utilization, these beliefs might be associated with how engaged a parent is in their child’s treatment, their satisfaction with the treatment their child is receiving, and treatment retention and compliance. These are all important outcome variables that could potentially affect the quality and effectiveness of the treatment a child is receiving. Future research should examine how race/ethnicity and other sociodemographic variables might be associated with these more complex outcome variables.

Providers should also carefully assess for parents attitudes and concerns about child mental health services and address these concerns in a culturally sensitive way. As suggested by Miller and Weisz (1996) a stronger alliance should be formed between minority parents and mental health care providers and more efforts should be put into developing community outreach programs to improve parents’ attitudes about mental health services. Given the association between parents’ report of child problems and help seeking for those problems, community outreach should also focus on educating parents about child psychopathology and the kind of problems that might be alleviated by participation in child mental health services. Additionally, providing incentives for Spanish-speaking or multi-lingual mental health care providers or training multilingual community leaders to provide psychoeducation to non-English speaking parents might help improve parents’ knowledge and attitudes about mental health and mental health
services. Improving knowledge and awareness about mental health services may increase child mental health services utilization among for children who could benefit from them.

Also, it should be noted that mental health services are not the only services that may be helpful for children and adolescents with mental health concerns. As mentioned earlier, for many children support from friends or family, support from clergy, etc. might help alleviate their symptoms. One should not assume that because a child does not have access to mental health services that he/she is lacking resources that can help him/her overcome his/her problems.

6.6.1 Summary

Results from this study contribute to our understanding of racial/ethnic differences in perceived barriers and attitudes about child mental health services and mediators of the relationship between race/ethnicity and child mental health service utilization. African American parents may be more likely to have negative views about the utility of child mental health services. Hispanic may overall be more likely to experience barriers to health care; though, insurance status may be the most important mediator of the relationship between being Hispanic and child mental health service utilization. Greater stigma was also moderately associated with child mental health service utilization. Interventions designed to reduce stigma, strengthen parents’ trust of mental health care providers, increase cultural sensitivity and awareness of parents’ attitudes among practitioners, and educate parents about health insurance options, about
mental health, and mental health care in general may help to improve disparities in child mental health service utilization.
Appendix A

Access to Health Care

1. DURING THE PAST 12 MONTHS, HOW MANY TIMES has [child’s name] seen a doctor or other health care professional about [his/her] health at A DOCTOR’S OFFICE, A CLINIC, OR SOME OTHER PLACE? Do not include times [child’s name] was hospitalized overnight, visits to hospital emergency rooms, home visits, dental visits or telephone calls.

   00 None
   01 1
   02 2-3
   03 4-5
   04 6-7
   05 8-9
   06 10-12
   07 13-15
   08 16 or more
   09 17 or more
   97 Refused
   99 Don’t know

2. There are many reasons people delay getting medical care. To what extent did the following factors prevent or delay you from getting medical care for [child’s name] IN THE PAST 12 MONTHS...

Please use this scale when answering the following questions:

<table>
<thead>
<tr>
<th>Scale</th>
<th>Not at all</th>
<th>Somewhat</th>
<th>Very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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</table>

a. You couldn’t get through on the telephone. 1 2 3 4 5
b. You couldn’t get an appointment for [child’s name] soon enough. 1 2 3 4 5
c. Once you get there, [child’s name] could have to wait too long to see the doctor. 1 2 3 4 5
d. The (clinic/doctor’s office) wasn’t open when you could get there. 1 2 3 4 5
e. You didn’t have transportation. 1 2 3 4 5
f. You couldn’t afford it. 1 2 3 4 5
g. You couldn’t find care for your other children. 1 2 3 4 5
h. Your child did not have health insurance. 1 2 3 4 5
i. Your child’s health insurance limits access to mental health and counseling services. 1 2 3 4 5
j. Your child refused to go. 1 2 3 4 5
k. You were worried about friends and/or family finding out. 1 2 3 4 5
DURING THE PAST 12 MONTHS…

_____ 3. Have you seen or talked to any of the following health care providers about [child’s name]’s health? A mental health professional such as a psychiatrist, psychologist, psychiatric nurse, clinical social worker, counselor, or school guidance counselor or school social worker?

_____ 4. Did you see or talk to a general doctor (pediatrician, family doctor, nurse practitioner) because of an emotional problem (such as feeling sad or anxious) that [child’s name] may have?

_____ 5. Did you see or talk to a general doctor (pediatrician, family doctor, nurse practitioner) because of a behavioral problem that [child’s name] may have?

6. DURING THE PAST 12 MONTHS, HOW MANY TIMES have you talked to any health care professional or school personnel about [child’s name]’s mental health (for example, concerns about [child’s name]’s behavior, not getting along with others, or concerns that (name) was feeling worried, upset, or sad)?

00 None
01 1
02 2-3
03 4-5
04 6-7
05 8-9
06 10-12
07 13-15
08 16 or more
97 Refused
99 Don’t know

7. DURING THE PAST 12 MONTHS, was there a time when you felt like your child could benefit from mental health care or counseling by a psychiatrist, psychologist, counselor, or school psychologist? [If YES, go to question 8; If NO, go to question 10]
1. Yes   2. No
7. Refused   9. Don’t know

8. IF YES to 7: Was there a time in the past twelve months when you attempted to make an appointment for your child with a
psychiatrist, psychologist, counselor, or school psychologist?

1. Yes   2. No
7. Refused   9. Don’t know

9. IF YES to 7: DURING THE PAST 12 MONTHS, to what extent did the following factors prevent or delay you from getting mental health care or counseling for your child when [child’s name] NEEDED Mental health care or counseling?

Please use this scale when answering the following questions:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Scale</th>
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<tbody>
<tr>
<td>a. You couldn’t get through on the telephone.</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>b. You couldn’t get an appointment for [child’s name] soon enough.</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>c. Once you get there, [child’s name] could have to wait too long to see the doctor.</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>d. The (clinic/doctor’s office) wasn’t open when you could get there.</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>e. You didn’t have transportation.</td>
<td>1  2  3  4  5</td>
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<tr>
<td>f. You couldn’t afford it.</td>
<td>1  2  3  4  5</td>
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<tr>
<td>g. You couldn’t find care for your other children.</td>
<td>1  2  3  4  5</td>
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<tr>
<td>h. Your child did not have health insurance.</td>
<td>1  2  3  4  5</td>
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<tr>
<td>i. Your child’s health insurance limits access to mental health and counseling services.</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>j. Your child refused to go.</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>k. You were worried about friends and/or family finding out.</td>
<td>1  2  3  4  5</td>
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<tr>
<td>l. You were worried about [child’s name]’s teacher/school finding out.</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>m. You were concerned that it would reflect poorly on your abilities as a parent.</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>n. You were worried that [child’s name] could be teased or made</td>
<td>1  2  3  4  5</td>
</tr>
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88

fun of by his/her peers.
o. You were worried that you would feel too embarrassed to talk about your concerns.
p. The (clinic/doctor’s office) was too far away.

Please go to question 11.

10. If NO to 7: If you were to seek mental health care or counseling for your child, to what extent do you think the following factors would prevent or delay you from getting mental health care or counseling for your child?

Please use this scale when answering the following questions:

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Somewhat</th>
<th>Very much</th>
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<td>1</td>
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</table>

a. You wouldn’t get through on the telephone.  
b. You wouldn’t get an appointment for [child’s name] soon enough.  
c. Once you get there, [child’s name] would have to wait too long to see the doctor.  
d. The (clinic/doctor’s office) wouldn’t be open when you could get there.  
e. You wouldn’t have transportation.  
f. You wouldn’t be able to afford it.  
g. You wouldn’t be able to find care for your other children.  
h. Your child did not have health insurance.  
i. Your child’s health insurance limits access to mental health and counseling services.  
j. Your child would refuse to go.  
k. You would be worried about friends and/or family finding out.  
l. You would be worried about [child’s name]’s teacher/school finding out.  
m. You would be concerned that it would reflect poorly on your abilities as a parent.  
n. You would be worried that [child’s name] would be teased or made fun of by his/her peers.  
o. You would be worried that you would feel too embarrassed to talk about your concerns.
The (clinic/doctor’s office) was too far away.

Please use this scale when answering the following questions:

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<th>2</th>
<th>8</th>
<th>9</th>
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<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Refused</td>
<td>I don’t know</td>
</tr>
</tbody>
</table>

- **11.** Did you EVER see or talk to any health care provider about difficulties [child’s name] has with **emotions** (such as sadness or fearfulness)?
- **12.** Did you EVER see or talk to any **school staff/personnel** about difficulties [child’s name] has with **emotions** (such as sadness or fearfulness)?
- **13.** Did you EVER see or talk to any **health care provider** about difficulties [child’s name] has with **concentration, behavior or being able to get along with others**?
- **14.** Did you EVER see or talk to any **school staff/personnel** about difficulties [child’s name] has with **concentration, behavior or being able to get along with others**?
- **15.** Was [child’s name] EVER prescribed medication for difficulties with [his/her] **emotions**?
- **16.** Was [child’s name] EVER prescribed medication for difficulties with [his/her] **behavior or being able to get along with others**?
- **17.** Was [child’s name] EVER prescribed medication for difficulties with **concentration, hyperactivity, or impulsivity**?
- **18.** Do you believe that treatment with a **psychologist, therapist, or counselor** can help children manage difficulties with their **emotions**?
- **19.** Do you believe that treatment with a **psychiatrist or medical doctor** can help children manage difficulties with their **emotions**?
- **20.** Do you believe that treatment with a **psychologist, therapist, or counselor** can help children manage difficulties with **concentration, behavior or being able to get along with others**?
- **21.** Do you believe that treatment with a **psychiatrist or medical doctor** can help children manage difficulties with **concentration, behavior or being able to get along with others**?
- **22.** Have you or anyone in your household ever consulted other **family members or friends** about difficulties [child’s name] may have with [his/her] **emotions**?
- **23.** Have you or anyone in your household ever consulted a **religious leader/clergy** about difficulties [child’s name] may have with [his/her] **emotions**?
- **24.** Have you or anyone in your household ever consulted other **family members or friends** about difficulties [child’s name] may have with [his/her] **concentration, behavior or being able to get along with others**?
- **25.** Have you or anyone in your household ever consulted a **religious leader/clergy** about difficulties [child’s name] may have with [his/her] **concentration, behavior or being able to get along with others**?
26. Does [child's name] have health insurance? (circle all that apply)

1 HMO
2 Medicaid/Medicare
3 No insurance
4 Refused
5 Don’t know
References


attitudes and beliefs about treatment and psychiatric medications for children with mental illness. *Psychiatric Services, 58*, 613-618.


Biography

Andrea Young was born in Washington, D. C. She received a Bachelor of Arts degree in Psychology and Spanish from Washington University in St. Louis in 2007 and a Master of Arts degree in Clinical Psychology from Duke University in 2010. Andrea has presented two posters at the Society for Research in Child Development Biennial Meetings (“Parental attributions for symptoms of child psychopathology” in 2011 and “Cultural differences in parental attitudes about child psychopathology” in 2009). She has one publication in a peer-reviewed journal (“Discordance in diagnoses and treatments of psychiatric disorders in children and adolescents with 22q11.2 deletion syndrome”). Andrea has been a Duke Endowed Fellow since enrolling at Duke University in 2007. She was also a Sulzberger Family/Dan Levitan Social Policy Graduate Research Fellow at Duke University 2009-2010, and received an Honorable Mention from the Ford Foundation Diversity Fellowships Program in 2009.