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Correlates of Obsessive-Compulsive Symptoms Among Black Caribbean Americans

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Abstract

Despite the rapid growth of the Black Caribbean population in the United States, we know little about the presentation and prevalence of obsessive-compulsive disorder (OCD) among these groups. This study examines the demographic correlates and the effect of racial discrimination on OCD symptoms among a nationally-representative sample of Black Caribbean and African American adults (n = 5,191). Drawing on the Composite International Diagnostic Interview Short Form (CIDI-SF) for OCD, we examine two types of obsessions (harm and contamination) and four types of compulsions (repeating, washing, ordering, and counting). There we no significant differences between Black Caribbeans and African Americans in obsessions and compulsions. Analysis among Black Caribbeans found that compared with Jamaican and Trinidadian Americans, Haitian American individuals reported the fewest number of obsessions and compulsions. We show that Black Caribbean Americans with lower income, lower self-rated physical and mental health, and more experiences with racial discrimination report higher levels of OCD. More specifically, racial discrimination was associated with contamination and harm obsessions, as well as washing and repeating compulsions. Our findings highlight the need to consider specific domains of OCD relative to Black Caribbeans, and the relationship between social and demographic variables on symptomology.

Keywords

Obsessive-compulsive disorder; discrimination; West Indian; Caribbean Americans; Black Americans; symptom dimensions

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Background

The United States is currently home to approximately 4.4 million Caribbean international migrants, totaling about 10% of the nation's immigrant population (Zong & Batalova, 2019), and half of all Black immigrants in the U.S. were born in the Caribbean (Kent 2007; Anderson, 2015). Given the large and growing proportion of the U.S. population that identifies as Black Caribbean, it has become increasingly important to understand the mental health characteristics of this group. Research has shown that Black Caribbeans have an obsessive-compulsive disorder (OCD) lifetime prevalence of 2.0%, which is similar to other US ethnic groups (Himle, et al, 2008), but many more have subclinical symptoms which may still be a source of distress. The rates and correlates of specific OCD symptoms among Black Caribbean individuals are unknown. Identification of the primary correlates of OCD symptomology is necessary for optimal understanding and treatment of this life-altering mental disorder.

OCD is characterized by the presence of obsessions and compulsions, where obsessions are unwanted and distressing thoughts, images, or impulses, and compulsions are repetitive behaviors intended to reduce distress associated with obsessions (Williams, Mugno, Franklin, & Faber, 2013). A person with OCD may suffer from a variety of symptoms; however primary dimensions of OCD symptoms include contamination and cleaning, symmetry and ordering or arranging, doubts about harm and checking, and unacceptable thoughts and mental rituals (Abramowitz et al., 2010; Williams et al., 2013).

People with OCD have heightened rates of other mental health disorders such as major depression, bipolar disorder, schizophrenia, and other anxiety disorders (Pallanti et al., 2011) as well as poor physical health (Witthauer, Gloster, Hans Meyer, & Lieb, 2014). As such, they experience a lower quality of life across important functional domains such as health, leisure, relationships, work, and educational activities (Eisen et al., 2006; Subramaniam, Soh, Vaingankar, Picco, & Chong, 2013). Although OCD is found across race, ethnic group, and nationality, few studies have examined how OCD symptomatology varies within and between ethnic groups (Wetterneck et al., 2012; Williams, Chapman, Simms, & Tellawi, 2017).

Several studies have found differences in the symptomology of OCD between African Americans and European Americans, suggesting that some aspects of OCD may be influenced by sociocultural factors that vary across populations (Nota et al., 2014; Williams & Turkheimer, 2007). For example, Williams, Elstein, Buckner, Abelson and Himle (2012) examined OCD symptoms in two samples of African American individuals. The authors concluded that compared to European Americans, their samples experienced more symptoms related to contamination (especially those from lower-income backgrounds). They posited that the contamination concerns could be a reaction to cultural stereotypes surrounding European American individuals being "contaminated" by African Americans, or that people with lower incomes were more likely to be exposed to unclean environments and therefore had more concerns related to contamination. Interestingly, when a principal components analysis was performed on the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) checklist, the symptom dimensions were similar to studies examining the symptoms

of European American individuals (Williams et al., 2012). Further, a recent study of African Americans identified that material hardship was associated with contamination and unacceptable thought obsessions and washing/checking, arranging, and repeating compulsions in this group (Williams et al., 2017a). Overall, OCD in African Americans has been studied to some extent, but to date there has been no focused examination of OCD, its symptom dimensions, and risk factors in Black Caribbeans in the U.S. Given the influence of sociocultural factors in symptom presentation, it is important to understand the role of various social demographic correlates in OCD symptomology across different Black populations to inform research, identification, and treatment of the disorder.

Mental Health and Racial Discrimination Among Black Caribbeans

When considering OCD symptoms in Black Caribbeans, it is important to understand that mental health outcomes vary among Black populations (e.g., Cohen. Berment, & Magai, 1997). Yet, studies that investigate the mental health of Black Caribbeans are relatively sparse and none provide information about OCD symptoms in these groups. Therefore, more nuanced investigations into the mental health of this group are required to facilitate improved prevention, identification, and intervention efforts.

Racial discrimination has been defined as the experience of unfair treatment by others in the form of both aversive daily stressors and negative major life events that occur due to one's racial or ethnic identity (Ryan, Gee, & Laflamme, 2006). One of the most prevalent forms of racism is termed, "everyday discrimination" which is the common and regular experience of seemingly minor bouts of unfair treatment in everyday life (Essed 1991; Williams et. al., 1997), such as increased surveillance of Black individuals entering particular establishments. This is similar to microaggressions, defined as "brief, everyday exchanges that send denigrating messages to people of color because they belong to a racial minority group" (Sue et al., 2007, p. 273).

The experience of everyday discrimination is associated with an elevated risk for developing various mental illnesses and poorer mental health outcomes overall (Clark, Salas-Wright, Vaughn, & Whitfield, 2014; Goodwill et al., 2019; Lewis, Cogburn, & Williams, 2015). Levine and colleagues (2014) found that more experiences of race-related everyday discrimination (as opposed to experiences of major racial discrimination) was associated with social anxiety disorder (SAD) among African Americans and Black Caribbeans. In contrast, Soto and colleagues (2012) found that racial discrimination predicted GAD symptoms for African Americans only, whereas non-racial discrimination was predictive of GAD for African Americans, Caribbean Blacks, and European Americans. They posited that this finding related to slavery and racism in the United States, which constitutes a different historical and social context than is present for Caribbean Blacks (Soto et al., 2012). Everyday discrimination, both race-related and non-race-related, has been linked to greater levels of depression and psychological distress, including various psychiatric disorders among older African Americans (Mouzon, Taylor, Keith, Nicklett, & Chatters, 2017). Several studies indicate that, in general, the quality of life among Black Americans is negatively impacted by racial discrimination (Assari, Moazen, Zadeh, Caldwell, & Zimmerman; Goodwill et al., 2019).

OCD Symptoms and Racial Discrimination

Williams and colleagues (2017b) examined OCD in a national African American sample and found that experiences of racial discrimination were associated with each OCD symptom measured, while non-racial discrimination was not related to any of the symptoms. This is the only study that has examined the effect of discrimination on specific OCD symptoms. The authors highlighted other factors related to OCD symptoms in people of color, including material hardship, lower educational attainment, and low self-rated mental health (Williams et al., 2017b). Therefore, it is vital that this research be expanded to understand the manner in which OCD symptoms and discrimination interact in other racial and ethnic groups, such as Black Caribbeans. This information can provide guidance on how to best approach and treat these individuals in a mental health context.

Purpose of the Current Study

The current study aims to map the demographic correlates of OCD symptoms in Black Caribbean individuals, compare these to findings in African Americans, and investigate if discrimination is correlated with OCD symptoms within this population. We expect that lower socio-economic status (SES) (including lower level of education, material hardship, unemployment, and lower levels of income), will be associated with higher levels of OCD symptoms (Kessler et al., 2008; Williams et al., 2017a). We also expect that lower self-rated physical and mental health will be associated with OCD symptoms (Pallanti et al., 2011; Witthauer et al., 2014; Williams et al., 2017b). Like studies of OCD among African Americans, we expect that racial discrimination will be associated with higher levels of both obsessions and compulsions (Williams et al., 2017a), but given the distinct social and historical context of African Americans compared to Black Caribbeans, it is difficult to speculate on more specific links between racial discrimination and obsession and compulsion subtypes among Black Caribbeans. In terms of non-racial discrimination, we predict no contribution to OCD symptoms, based on findings for African Americans.

Method

Sample

The National Survey of American Life: Coping with Stress in the 21st Century (NSAL) includes the first major (and to date, still only) national probability sample of Black Caribbeans in the United States. The NSAL is an epidemiological study implemented by the Program for Research on Black Americans at the Institute for Social Research at the University of Michigan. The NSAL was based on a multi-stage household probability sample. A total of 6,082 interviews were conducted with individuals aged 18 and over, which included African Americans, non-Hispanic Whites, and Blacks of Caribbean descent. This paper utilizes both the Black Caribbean (n=1,621) and African American (n=3,570) sub-samples. Respondents were non-institutionalized and lived in the 48 contiguous states. The interviews were face-to-face and conducted within respondents' homes, and respondents were compensated for their participation. The data collection was conducted from 2001 to 2003. Respondents self-reported their race and national origin, and about two thirds of Black Caribbean respondents were born outside of the US. Table 2 includes detailed demographic

information on the current study's sample. See Jackson and colleagues (2004) for more detailed information on study design. The NSAL study was approved by the Institutional Review Board at the University of Michigan.

Measures

The NSAL included a set of questions from the short-form diagnostic module version of the Composite International Diagnostic Interview (CIDI-SF; Kessler, Andrews, Mroczek, Ustun, & Witchen, 1998), which is used to assess OCD symptoms. Lay persons were trained in the administration of this structured interview (Jackson et al., 2004). Two types of obsessions were assessed: contamination (based on concerns about germs or having dirty hands) and unacceptable thoughts (harming someone or other shameful thoughts). Additionally, four types of compulsive behaviors were assessed: washing and checking (based on behaviors that included washing hands and checking doors), arranging (putting things in a particular order), counting, and repeating certain words (see Table 1 for question wording).

Demographics, Health and Discrimination

The current study included measures of age, sex, marital status (married, unmarried), education, family income, work status, material hardship, self-rated physical health, self-rated oral health, and self-rated mental health. Missing data for family income and education were imputed using an iterative regression-based multiple imputation approach (Allison, 2000) incorporating information about age, sex, region, race, employment status, marital status, home ownership, and nativity of household residents, We measured age in years and then collapsed it into three categories (18–34, 35–54, 55 and older). Our measure of work status has three categories (employed, unemployed and not in labor force). We measured educational attainment first with number of years and then collapsed it into four categories (11 years and less, 12, 13–15, 16 and more years). Our measure of marital status has two categories (married and cohabiting, not married). We assessed four categories of family income (less than $15,000, $15,000-$27,999, $28,000- $46,999 and $47,000 and more).

We assessed material hardship with a summary score that comprised seven items which measure whether or not respondents could meet basic expenses, pay full rent or mortgage, pay full utilities, had utilities disconnected, had telephone disconnected, were evicted for non-payment, or could not afford leisure activities in the past 12 months (e.g., Danziger, Corcoran, Danziger, & Heflin, 2000; Mayer & Jencks, 1989). A higher score on this item indicated higher levels of economic hardship.

We used three subjective self-rated health items that represent physical, oral, and mental health. The measure for self-rated physical health asked: How would you rate your overall physical health at the present time? Self-rated oral health was assessed by: How would you rate the overall condition of your teeth, gums, and mouth at the present time? Finally, self-rated mental health asked: How would you rate your overall mental health at the present time? All three self-rated health measures used response categories ranging from poor (1), fair, good, very good, to excellent (5).

Discrimination was measured using the Everyday Discrimination Scale (Williams et al., 1997), designed to assess interpersonal forms of routine experiences of unfair treatment.

Respondents were asked if they were: treated with less courtesy, treated with less respect, received poor restaurant service, perceived as not smart, perceived as dishonest, perceived as not as good as others, being feared, being insulted, being threatened, and followed in stores. Respondents rated the frequency of these events on a five-point scale: 5 (*almost every day*), 4 (*at least once a week*), 3 (*a few times a month*), 2 (*a few times a year*), 1 (*less than once a year*), and 0 (*never*), with higher summed scores indicating more experiences of discrimination. Then, respondents were asked to identify why they felt the discrimination took place [e.g., due to their race (racial discrimination), or their weight, age, gender (non-racial discrimination)].

Additionally, we assessed the country of origin and nativity status of the Black Caribbean individuals in our sample. Respondents named over 25 different countries of origin. We then recoded country of origin into five categories: Jamaica, Trinidad-Tobago, Other English-speaking country (e.g., Barbados), Spanish-speaking country (e.g., Puerto Rico, Dominican Republic), and Haiti. Nativity status has two categories: 1) born in the United States, 2) born in another country.

Data Analytic Strategy

We used SAS 9.13 to analyze the distribution of basic demographic characteristics and to assess the adjusted multivariate relationships between these demographics, discrimination, health, and OCD symptomology. Our analysis of discrimination investigated whether racial discrimination as well as discrimination due to non-racial attributions (e.g., age, gender, weight) were associated with OCD symptoms. We used logistic regression to analyze six dichotomous symptom variables. We reported odds ratio estimates and 95% confidence intervals.

There are two count variables in our analysis, the number of obsession types and the number of compulsion types, which were similarly examined in the NSAL study of discrimination and OCD symptoms in African Americans (Williams et al., 2017b). Although there is not much research focused on number of symptom types, it is thought that more symptom types are correlated with greater OCD severity (Thibodeau et al., 2015). Our examination of the univariate distribution for these variables showed that they were not normally distributed. In particular, the variance exceeded the mean which is indicative of over-dispersion. Consequently, instead of linear regression we used negative binomial regression (Hilbe, 2011). For the negative binomial regressions, we reported incidence rate ratio estimates and 95% confidence intervals.

For both the logistic regression and negative binomial regression analysis, we determined statistical significance using the design-corrected F-statistic. To obtain population estimates that generalize to the Black Caribbean population, all statistical analyses accounted for the complex, multistage, clustered design of the NSAL sample, including unequal probabilities of selection, nonresponse, and post-stratification (Heeringa, Torres, Sweetman, & Baser 2006).

Results

Roughly one out of ten Black Caribbeans reported experiencing obsessions (10.8%) and one in six (17.5%) reported experiencing compulsions. As shown in Table 2, among Black Caribbeans 6.6% experienced obsessions surrounding contamination, and 7.3% reported having shameful unacceptable thoughts. Washing/checking was the largest category of compulsions (12.1%), followed by repeating words (8.6%), arranging/symmetry (6.4%), and counting (3.0%). The percentages of African Americans who experienced obsessions or compulsions was very similar to those reported by Black Caribbeans.

Ethnicity (Black Caribbean/ African American) Differences

Table 3 presents the multivariate analysis of ethnicity (Black Caribbean/African American) differences in obsessions and compulsions. There were no significant differences between Black Caribbeans and African Americans in any of the 8 indicators of obsessions and compulsions (i.e., obsession and compulsion types, and number of obsession and compulsion symptom types endorsed). The remaining analyses will focus on within group analysis among Black Caribbeans. Within group research on OCD and the symptoms of OCD have been previously reported (Himle et al., 2008; Williams et al., 2017a).

Obsessions

Table 4 presents the logistic regression analysis of the two obsession symptom variables. Work status, education, income, material hardship, self-rated oral health, self-rated mental health and discrimination were all significantly correlated with *contamination obsessions*. In comparison to their higher socio-economic status counterparts, contamination obsessions were significantly more likely among those not in the labor force, having low income (less than $15,000 per year), and experiencing material hardship, but less likely among those without a high school degree. Contamination obsessions were also significantly associated with lower self-rated mental health and higher self-rated oral health. Racial discrimination was associated with higher odds of having a contamination obsession.

Sex, material hardship, racial discrimination and country of origin were significantly associated with *unacceptable thoughts obsessions*. Unacceptable thought obsessions were more likely with male sex, material hardship, and higher levels of everyday racial discrimination, but were less likely among those identifying as Haitian American or from an English-speaking Caribbean country in comparison to those identifying as Jamaican American.

Compulsions

Table 5 presents the logistic regression analysis of the four compulsion symptoms. Age, education, income, material hardship, self-rated oral health, self-rated physical health, everyday racial discrimination, and country of origin were significantly associated with compulsions of *washing and checking*. Washing and checking compulsions were more likely with younger age (18–34), making less than $15,000 per year, higher self-rated oral health, lower self-rated physical health, and more experiences of everyday racial discrimination. These compulsions were less likely among those with 13–15 years of education (compared

to 16+ years), and those who originated from English-speaking Caribbean countries and Haiti (compared to those who originated from Jamaica).

Sex, labor force participation, and self-rated oral health were associated with *arranging compulsions.* Arranging compulsions were more likely among those identifying as male, not being in the labor force, and having higher rated oral health. In addition, those with arranging compulsions were less likely to be unemployed.

Age, labor force participation, marital status, material hardship and country of origin were significantly associated with *counting compulsions*. The likelihood of having counting compulsions was lower among Black Caribbeans who were aged 35–54, but more likely among Black Caribbeans that were not in the labor force, unmarried, or experiencing material hardships. Counting compulsions were also less likely among Black Caribbeans from Trinidad-Tobago than Jamaica.

Sex, labor force participation, education, income, material hardship, self-rated oral health, self-rated mental health, racial discrimination, and country of origin were all significantly associated with the likelihood of *repeating words compulsions*. Repeating words compulsions were more likely among those identifying as male, not in the labor force, and earning less than $15,000 per year. Further, those with material hardship, higher self-rated oral health, lower self-rated mental health, and higher rates of everyday discrimination were more likely to report repeating words compulsions. Respondents of Haitian origin (as compared to Jamaican origin) and those who had 12 years or less of education (as compared to 16+ years) were significantly less likely to report repeating words compulsions.

Number of Obsession and Compulsion Types

We present the regression analysis of the number of obsession types (0–2) and number of compulsion types (0–4) in Table 6. Men, those making less than $15,000 per year, those experiencing material hardship, poor mental health, good oral-health, and those that report more experiences with everyday discrimination endorsed more types of obsessions. Higher number of compulsion types was more likely with younger age (18–34), not being in the labor force, making less than $15,000 per year, low self-reported physical health, higher self-rated oral health, and more experience with everyday discrimination. Lastly, Haitian Americans had significantly fewer obsession and compulsion types than Jamaican Americans.

Racial Discrimination vs. Non-Racial Discrimination

We also conducted regression analysis of whether discrimination due to non-racial attributions (e.g., age, gender, weight) was associated with our dependent variables. This analysis revealed that non-racial discrimination was not significantly associated with any of the symptoms of OCD (all of the p values were greater than .05, analysis available upon request).

Discussion

Correlates of OCD Symptoms

Although only one in fifty Black Caribbean adults in this study have diagnosable OCD, many more report unwanted obsessions and compulsions. Black Caribbeans are often not included in research in general and this is particularly the case in research on OCD. When they are included, they are typically grouped together with African Americans and their ethnicity is not ascertained. Our study is one of the first to investigate the role of demographic correlates and racial discrimination in OCD symptomology among a national sample of Black Caribbeans.

Analyses revealed no significant differences between Black Caribbeans and African Americans in prevalence of symptom types. Although Black Caribbeans and African Americans are distinct ethnic groups, it could be that elements of their shared cultural heritage contribute to symptom similarities. Our findings suggest that, similar to African Americans, Black Caribbeans in the U.S. experience elevated contamination concerns, compared to non-Hispanic Whites (George, Pittenger, Kelmendi, Lohr, & Adams, 2018; Williams, Elstein, Buckner, Abelson, & Himle, 2012).

This study also demonstrated that those from a Haitian background were less likely than their Jamaican American counterparts to report obsessions and compulsions, namely unacceptable thought obsessions along with washing/checking and repeating compulsions. One potential explanation for this discrepancy is that in Haitian culture, “thoughts, feelings and agency may be ascribed to invisible spirits or to the magical action of others” (World Health Organization, 2010, p.14). Therefore, they may be less likely to endorse having unacceptable thoughts, as they do not attribute the thoughts to themselves. Other explanations for this finding will be important to explore in future research.

When compared to their female counterparts, Black Caribbean males experienced more obsessions overall, specifically unacceptable thoughts, and were also more likely to suffer from compulsions that included arranging and repeating words. Mathis and colleagues (2011) detailed in their review of sex differences in OCD that previous studies demonstrate that men are likely to have an earlier onset, higher severity, more chronic course, and higher negative impact of OCD symptoms. However, there was no sex difference in washing and checking compulsions. This finding is inconsistent with cross cultural studies that show women are more likely to have washing and cleaning symptoms (Labad et al., 2008; Mathis et al, 2011), due perhaps to gender roles and social expectations about women and domestic work (Zambaldi et al, 2009).

Rates of OCD symptoms tended to be higher in younger people. Those 18–34-years-old reported more compulsive symptoms (washing/checking). The age of onset of OCD is typically in early adulthood with late adulthood onset being rare, but the disorder tends to persist without treatment. Lower rates of OCD in older adults point to either successful treatment or higher mortality among those affected. Black Caribbeans with OCD tend to seek treatment for mental health problems at higher rates than African Americans, which

may help account for this change over time (Himle et. al., 2008). Clinicians should be aware that young adults may be more likely to have washing and checking symptoms.

There are several significant relationships between socio-economic status and OCD symptoms. Black Caribbeans with lower incomes, higher rates of being out of the labor force and higher levels of material hardship had a higher likelihood of having an obsession and compulsion and had a higher number of obsession and compulsion types. Collectively, these findings are consistent with recent research which has found that mental health problems have a major impact on labor force participation and earnings. Consistent with our finding that Black Caribbeans who experienced more obsessions (contamination) and more compulsions (counting, arranging, and repeating words) are more likely to not be working, research has found that having a psychiatric disorder significant reduces employment rates by at least 11% (Ettner, Frank & Kessler, 1997). Individuals with psychiatric disorders are more likely to have difficulty finding a job, retaining a job and have reduced earnings while employed (Ettner et al., 1997; Kessler et al., 2008). For instance, Whooley and colleagues (2002) found that depressive symptoms were associated with subsequent unemployment and loss of family income. Collectively these findings suggest that those struggling with OCD symptoms are at risk for downward social mobility. However, it is important to acknowledge that OCD is highly co-morbid with depressive and anxiety disorders and therefore, lower levels of socio-economic status may also be due to comorbidity. Finally, it is possible that the stress associated with unemployment and material hardship could increase the risk for the development of OCD among those so predisposed.

The findings are mixed with regard to the relationship between education and OCD symptoms. However, it is notable that repeating words was significantly correlated to the two lowest tiers of education (HS or less). Black Americans are subject to stereotypes about being unintelligent, and those with less education even more so; as such, repeating words may be a compulsive attempt to remember certain facts in order to feel more adept or from a desire to be perfectly understood (Williams et al., 2012), which would also explain the significant relationship between this symptom and racial (but not non-racial) discrimination Future research should continue to examine these relationships to help inform intervention and prevention efforts.

Material hardship was positively associated with both of the obsession variables and two of the four compulsion variables (i.e., counting and repeating words). These findings are consistent with earlier research on African Americans which also found that material hardship was positively related to OCD symptoms (Williams et al., 2017a). This is important in terms of both seeking and staying in treatment. The definition of material hardship is being unable to pay bills for basic necessities (rent, food). The inability to pay bills among this population contributes to the difficulty of seeking treatment for symptoms and is consistent with findings of the low levels of professional help-seeking among those suffering from OCD. The material hardship findings are also consistent with the generally lower levels of income and labor force participation among people who have obsessive-compulsive symptoms.

There was a positive relationship between higher self-rated oral health and more obsessions (contamination) and compulsions (washing/checking, arranging and repeating words). It is possible that study participants have better self-reported oral health as a result of contamination-related symptoms requiring excessive attention to their dental hygiene. Lower self-rated mental health was associated with a higher number of obsession types and specifically with obsessions regarding contamination. In addition, lower self-rated mental health was associated with increased repeating words compulsions. This is similar to previous studies that have linked OCD symptoms with lower quality of life (Eisen et al., 2006; Subramaniam et al., 2013). Endorsing more compulsion types (washing/checking) was associated with lower self-rated physical health, which is also consistent with existing research that demonstrated that poor physical health was associated with OCD symptoms (Witthauer et al., 2014). It is possible that those who perform washing compulsions experience physical issues such as pain due to cracked hands and those who check repeatedly feel physically fatigued from their compulsions, which may help explain these findings (e.g., Friedman et al., 1993).

There was a positive relationship between everyday discrimination and both categories of obsessions examined and two types of compulsions. This is consistent with a large and emerging body of literature on the toxic effects of racial discrimination on mental health and OCD specifically (Williams et al., 2017b). In particular, numerous studies have shown that among African Americans, Latinx and other minority populations, racial discrimination is a risk factor for poorer mental and physical health (Mouzon et al., 2017). One way that racial discrimination can lead to poor health is through ongoing social stress, whereby chronically elevated cortisol levels and a dysregulated hypothalamic-pituitary-adrenal (HPA) axis causes wear that worsens existing conditions and increases susceptibility to mental disorders (Jackson, Knight, & Rafferty, 2010). Stress due to discrimination may trigger dysfunctional coping behaviors, such as smoking or overeating, and cause difficulties, such as poor sleep, that directly contribute to health problems (Lewis et al., 2015; Mezuk et al., 2010).

Discrimination also impacts the use of mental health services. Research indicates that Black Americans have lower rates of service utilization (Williams et al., 2012). Research by Woodward (2011), however, found that Black-White disparities in service use was non-existent when they accounted for discrimination, indicating that discrimination contributes to lower service use rates among Blacks. Discrimination can cause also direct barriers to treatment, such as when therapists are less willing to take on Black clients or when clients are wary of therapists due to prior negative experiences with the medical system (Kuglemass, 2016; Williams, Domanico, Marques, Leblanc, & Turkheimer, 2012). Seeking treatment may evoke feelings of shame, fear, or stigma for having mental health problems, and OCD symptoms may be aligned with negative racial stereotypes. When stereotypes and prejudices are salient, affected group members tend to decrease any outward signs that might confirm the stereotypes. For example, research has found that contamination avoidance and aversion by African Americans was greater when stereotype cues were made salient (Olatunji, Tomarken, & Zhao, 2014). This suggests that greater concerns about the importance of cleanliness among Black Americans may function to compensate for negative stereotypes, which may in turn pose a barrier to disclosure of contamination symptoms to mental health professionals. Black Americans may also be hesitant to disclose unacceptable

thoughts for fear of validating false racial stereotypes of being sexually deviant or violent, and unacceptable thoughts may include religious concerns as well (Williams, Sawyer, Ellsworth, Singh, & Tellawi, 2017).

Research has found harmful mental health effects for varied types of discrimination (Mouzon et al., 2017). However, in both the current study of Black Caribbeans and previous research on African Americans (Williams et al. 2017b) racial discrimination was associated with OCD symptoms and non-racial discrimination was not predictive of OCD symptoms. This is consistent with findings of Goodwill and colleagues (2019), who found that everyday racial discrimination was the only type of discrimination that was significantly associated with both increased depression and suicidal ideation. This could indicate that age and gender-related discrimination are less salient for Black Americans than racial discrimination, perhaps because racial discrimination is more frequent, more severe, or more difficult to navigate (e.g., Williams, Printz, & DeLapp, 2018). Therapists treating OCD in Black Caribbean clients should invest extra effort into building rapport and normalizing the presence of unacceptable thoughts, and they should discuss with clients how they are appraising and managing experiences of racism (Williams, Rouleau, La Torre, & Sharif, in press).

Lastly, it is important to note that the current findings show some important similarities to previous research on the correlates of OCD symptoms among African Americans. For both populations, material hardship and everyday racial discrimination were significantly associated with OCD symptoms. Unlike the current findings, however, among African Americans there were no significant income, labor force participation, or self-rated oral health differences (Williams et al., 2017a). This indicates that with regards to OCD symptoms, Black Caribbeans are a distinct group from African Americans, and findings from one population cannot be automatically generalized to the other. For a discussion on cross-cultural differences in symptom presentation more broadly, readers are directed to Williams, Chapman, Simms, and Tellawi (2017).

Limitations

Given the potential clinical implications for the present study, it is important to highlight its limitations. The analyses were conducted on data collected in 2001–2003, which may limit the generalizability of the findings to contemporary Black Caribbeans. Nevertheless, the NSAL dataset remains the only national survey of Black Caribbeans in the United States. Further, the data are cross-sectional, so we cannot make causal inferences. One of the inclusion criteria for the NSAL was the ability to complete the interview in English; consequently, the study findings are not generalizable to Black Caribbeans who do not speak English (e.g., Haitian Creole). In addition, these analyses do not account for psychiatric co-morbidities and their role in the overall symptom and demographic presentation. Despite these limitations, this study provides an important initial exploration of the demographic and social correlates of OCD symptoms among Black Caribbean Americans.

Conclusions

There are several practical implications based upon the findings of this study for clinicians working with Black Caribbean individuals. Material hardship is associated with most of the OCD symptoms measured in this study, which highlights that Black Caribbeans with OCD symptoms likely struggle to meet their basic needs. Clinicians working with this population should consider linking their clients with resources in the community to help address difficult life circumstances, and clinicians should attend to this significant source of distress during OCD treatment. Additionally, because mental health difficulties like OCD have been shown to cause unemployment and reduced incomes, socioeconomic status indicators should be considered when treating for Black Caribbeans (Kessler et al., 2008; Whooley et al., 2002). Racial discrimination was associated with most OCD symptoms examined. Because the relationship between discrimination and OCD symptoms is being bolstered by current literature, it is vital that clinicians attend to the discrimination experiences of their Black Caribbean clients. These experiences, that are related to poorer mental health outcomes, may necessitate different types of intervention (e.g. advocacy, helping the patient understand the role of racism and discrimination) than when working with a European American patient with OCD. This type of understanding is vital in order to provide appropriate cross-cultural intervention and to recognize and acknowledge the effects of racism and discrimination on the mental health of Black Caribbean individuals. There is a need for American society to change its relationship to people of color, as the racism that permeates the culture contributes to serious psychological distress and should be considered a public health concern.

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Table 1.

Question Wording for the Indicators of Obsessions and Compulsions

Obsessions	
Contamination	I want to ask you next about whether you have ever been bothered by having certain unpleasant thoughts that kept entering your mind against your wishes. An example would be the persistent idea that your hands are dirty or have germs on them. Have you ever had any unpleasant thoughts like that?
Unacceptable Thoughts	Another example of an unpleasant thought would be the persistent idea that you might harm someone, even though you really didn't want to. Or you might have had thoughts you were ashamed of, but couldn't keep them out of your mind. Have you ever had any unpleasant and persistent thought like that?
Compulsions	
Washing & Checking	Some people have the unpleasant feeling that they have to do something over and over again even though they know it is really foolish, but they can't resist doing it – things like washing their hands again and again or going back several times to be sure they've locked a door or turned off the stove. Have you ever had to do something like that over and over?
Arranging	Was there ever a time when you felt you had to do something in a certain order, like putting your clothes on in a certain way, and had to start all over again if you did it in the wrong order?
Counting	Has there ever been a period of time of several weeks when you felt you had to count something, like the squares in a tile floor, and couldn't resist doing it even when you tried to?
Repeating Words	Did you ever have a period of time when you had to say certain words over and over, either aloud or to yourself?

Table 2.

Demographic Characteristics of the Sample and Distribution of Study Variables

	Black Caribbeans			African Americans		
	% (S.E.)	Mean (SD)	N	% (S.E.)	Mean (SD)	N
Obsessions						
Contamination	6.60 (1.08)	0.07 (0.09)	1577	7.90 (0.82)	0.08 (0.24)	3406
Unacceptable Thoughts	7.34 (1.78)	0.07 (0.09)	1578	8.29 (0.62)	0.08 (0.25)	3407
# of Obsession Symptom Types		0.14 (0.15)	1578		0.16 (0.40)	3409
Compulsions						
Washing & Checking	12.09 (2.25)	0.12 (0.12)	1577	10.63 (0.70)	0.11 (0.28)	3407
Arranging	6.44 (1.29)	0.06 (0.09)	1578	5.19 (0.52)	0.05 (0.20)	3408
Counting	3.00 (0.80)	0.03 (0.06)	1578	3.53 (0.39)	0.04 (0.16)	3409
Repeating Words	8.56 (1.68)	0.09 (0.10)	1578	6.85 (0.45)	0.07 (0.23)	3408
# of Compulsion Symptom Types		0.30 (0.27)	1578		0.26 (0.62)	3408
Age						
18–34	41.87 (1.90)		624	35.73 (1.40)		1232
35–54	38.75 (1.63)		693	42.65 (0.87)		1501
55 and older	19.38 (2.43)		304	21.62 (1.06)		837
Gender						
Male	50.87 (3.56)		643	44.03 (0.83)		1271
Female	49.13 (3.56)		978	55.97 (0.83)		2299
Work Status						
Employed	75.22 (1.70)		1183	66.83 (1.05)		2334
Unemployed	8.83 (1.01)		158	10.07 (0.71)		366
Not in Labor Force	15.95 (1.77)		279	23.10 (0.96)		861
Education						
11 years and less	21.23 (2.37)		306	24.19 (1.20)		920
12 years	29.65 (1.54)		481	37.86 (1.09)		1362
13–15 years	26.06 (3.07)		443	23.83 (0.97)		809
16 and more years	23.07 (2.25)		391	14.12 (1.13)		479
Marital and Romantic Status						
Married and Cohabitating	50.14 (3.40)		690	41.65 (1.03)		1220
Not Married	49.86 (3.40)		926	58.35 (1.03)		2333
Household Income						
Less than $15,000	15.53 (2.52)		273	24.70 (1.28)		1054
$15,000- $27,999	21.17 (2.91)		384	23.76 (0.97)		925
$28,000- $46,999	25.48 (1.97)		442	25.50 (1.04)		866
$47,000 and more	37.81 (2.89)		522	26.05 (1.67)		725
Material Hardship		0.81 (0.53)	1607		0.89 (1.31)	3528
Self-Rated Physical Health		3.63 (0.41)	1585		3.42 (0.95)	3437
Self-Rated Oral Health		3.34 (0.40)	1585		3.11 (0.99)	3435
Self-Rated Mental Health		3.95 (0.39)	1586		3.84 (0.91)	3436

	Black Caribbeans			African Americans		
	% (S.E.)	Mean (SD)	N	% (S.E.)	Mean (SD)	N
Everyday Racial Discrimination		8.61 (3.75)	1550		8.45 (8.85)	3412
Country of Origin						
Spanish-Speaking	14.08 (2.71)		180	--		--
Haiti	12.64 (2.01)		298	--		--
Jamaica	31.72 (3.90)		510	--		--
Trinidad-Tobago	9.99 (1.94)		170	--		--
Other English	31.58 (2.37)		440	--		--
Years in the US						
US born	34.90 (4.12)		440	--		--
Foreign Born	65.11 (4.12)		1166	--		--

Note: Frequencies are unweighted; Percents and means are weighted to be nationally representative of the given population and subpopulations in the U.S.

Table 3.

Multivariate Analysis of Ethnicity (Black Caribbean/ African American) Difference in OCD Symptom Types

	Contamination	**Unacceptable Thoughts**	**Washing & Checking**	**Arranging**
	OR (95% C.I.)	**OR (95% C.I.)**	**OR (95% C.I.)**	**OR (95% C.I.)**
Ethnicity				
African American	1.00	1.00	1.00	1.00
Black Caribbean	0.86 (0.58–1.26)	0.86 (0.49–1.49)	1.26 (0.80–1.99)	1.47 (0.92–2.33)
F	10.27***	16.78***	13.22***	12.43***
N	4783	4785	4785	4786
	Counting	**Repeating Words**	**Number of Symptoms of Obsessions**	**Number of Symptoms of Compulsions**
	OR (95% C.I.)	**OR (95% C.I.)**	**IRR (95% C.I.)**	**IRR (95% C.I.)**
Ethnicity				
African American	1.00	1.00	1.00	1.00
Black Caribbean	0.89 (0.44–1.79)	1.43 (0.86–2.36)	0.86 (0.62–1.19)	1.28 (0.89–1.82)
F	9.24***	12.30***	26.19***	26.30***
N	4788	4787	4787	4786

Note: OR= Odds Ratio, IRR= Incidence Rate Ratio, C.I.=Confidence Intervals

African Americans are the Comparison Group

All analyses control for age, gender, work status, education, marital status, household income, material hardship, self-rated physical health, self-rated oral health, self-rated mental health and everyday racial discrimination.

* p<.05

** p< .01

*** p<.001

Table 4.

Weighted Logistic Regression Analysis of Demographic, Discrimination and Self-Rated Health Variables on Obsessions among Black Caribbeans in the United States

	Contamination OR (95% C.I.)	Unacceptable Thoughts OR (95% C.I.)
Age		
18–34	1.39 (0.51,3.78)	2.18 (0.60,7.97)
35–54	1.56 (0.90,2.71)	1.52 (0.57,4.06)
55 and older	1.00	1.00
Sex		
Female	1.00	1.00
Male	1.66 (0.80,3.43)	2.78 (1.60,4.84) ***
Work Status		
Employed	1.00	1.00
Not in Labor Force	2.21 (1.19,4.13) *	1.78 (0.69,4.65)
Unemployed	0.91 (0.39,2.12)	1.17 (0.49,2.82)
Education		
11 years and less	0.29 (0.11,0.79) *	0.63 (0.25,1.56)
12 years	1.05 (0.39,2.84)	1.09 (0.41,2.86)
13–15 years	0.59 (0.14,2.48)	0.46 (0.14,1.52)
16 and more years	1.00	1.00
Marital and Romantic Status		
Married and Cohabitating	1.00	1.00
Not Married	1.06 (0.68,1.67)	1.03 (0.56,1.90)
Household Income		
Less than $15,000	6.25 (1.93,20.24) **	2.55 (0.90,7.23)
$15,000- $27,999	2.28 (0.82,6.35)	0.43 (0.12,1.55)
$28,000- $46,999	1.70 (0.52,5.51)	0.47 (0.15,1.47)
$47,000 and more	1.00	1.00
Material Hardship	1.19 (1.03,1.37) *	1.26 (1.08,1.46) **
Self-Rated Physical Health	0.80 (0.61,1.03)	1.03 (0.69,1.56)
Self-Rated Oral Health	1.34 (1.00,1.80) *	1.32 (0.96,1.83)
Self-Rated Mental Health	0.69 (0.53,0.91) *	0.74 (0.54,1.00)
Everyday Racial Discrimination	1.04 (1.01,1.08) *	1.06 (1.01,1.11) *
Country of Origin		
Spanish-Speaking	0.58 (0.16,2.10)	1.36 (0.32,5.69)
Haiti	0.40 (0.14,1.17)	0.25 (0.09,0.69) **
Jamaica	1.00	1.00
Trinidad-Tobago	0.56 (0.18,1.74)	0.79 (0.24,2.65)
Other English	0.53 (0.23,1.19)	0.37 (0.15,0.91) *

	Contamination OR (95% C.I.)	Unacceptable Thoughts OR (95% C.I.)
Nativity Status		
US born	1.41 (0.64,3.07)	1.90 (0.99,3.65)
Foreign Born	1.00	
F	6.08***	8.40***
N	1501	1502

Note: OR= Odds Ratio, C.I.=Confidence Intervals

Several independent variables are represented by dummy variables. Age, 55 and older is the comparison category; Sex, Female is the comparison category; Work Status, Employed is the comparison category; Education, 16 and more years is the comparison category; Marital and Romantic Status, Married and Cohabitating is the comparison category; Household Income, $47,000 and more is the comparison category; Country of Origin, Jamaica is the comparison category; Nativity Status, Foreign born is the comparison category.

* p < .05

** p < .01

*** p < .001

Table 5.

Weighted Logistic Regression Analysis of Demographic, Discrimination and Self-Rated Health Variables and Compulsions among Black Caribbeans in the United States

	Washing & Checking OR (95% C.I.)	Arranging OR (95% C.I.)	Counting OR (95% C.I.)	Repeating Words OR (95% C.I.)
Age				
18–34	1.82 (1.02,3.23) *	1.49 (0.42,5.31)	2.01 (0.65,6.22)	1.45 (0.59,3.54)
35–54	1.90 (0.93,3.89)	0.70 (0.30,1.65)	0.25 (0.09,0.75) *	0.97 (0.35,2.71)
55 and older	1.00	1.00	1.00	1.00
Sex				
Female	1.00	1.00	1.00	1.00
Male	0.81 (0.45,1.47)	2.17 (1.05,4.49) *	2.64 (0.88,7.90)	2.35 (1.25,4.43) *
Work Status				
Employed	1.00	1.00	1.00	1.00
Not in Labor Force	1.85 (0.89,3.83)	2.18 (1.17,4.05) *	3.59 (1.28,10.09) *	3.29 (1.44,7.50) **
Unemployed	0.57 (0.28,1.17)	0.31 (0.10,0.96) *	2.81 (0.88,8.95)	1.22 (0.39,3.75)
Education				
11 years and less	0.62 (0.20,1.89)	1.70 (0.49,5.87)	0.47 (0.08,2.80)	0.35 (0.13,0.98) *
12 years	0.97 (0.32,2.92)	2.93 (0.36,23.74)	0.62 (0.12,3.18)	0.23 (0.10,0.52) **
13–15 years	0.32 (0.15,0.71) **	1.12 (0.19,6.55)	0.84 (0.23,3.13)	0.37 (0.13,1.06)
16 and more years	1.00	1.00	1.00	1.00
Marital & Romantic Status				
Married and Cohabitating	1.00	1.00	1.00	1.00
Not Married	0.73 (0.35,1.52)	0.86 (0.37,1.98)	2.73 (1.23,6.04) *	0.68 (0.25,1.81)
Household Income				
Less than $15,000	2.79 (1.17,6.66) *	3.24 (0.52,19.97)	0.27 (0.06,1.26)	2.52 (1.14,5.55) *
$15,000- $27,999	1.83 (0.70,4.80)	1.51 (0.20,11.33)	0.74 (0.22,2.48)	1.54 (0.48,4.91)
$28,000- $46,999	0.82 (0.34,2.01)	1.03 (0.18,5.98)	0.45 (0.18,1.11)	0.74 (0.22,2.54)
$47,000 and more	1.00	1.00	1.00	1.00
Material Hardship	1.06 (0.94,1.19)	1.18 (0.93,1.49)	1.42 (1.17,1.72) ***	1.18 (1.01,1.36) *
Self-Rated Physical Health	0.66 (0.48,0.91) *	0.81 (0.61,1.08)	0.70 (0.47,1.03)	0.73 (0.52,1.03)
Self-Rated Oral Health	1.37 (1.01,1.84) *	1.39 (1.08,1.80) *	0.97 (0.67,1.40)	1.64 (1.16,2.32) **
Self-Rated Mental Health	1.03 (0.80,1.34)	0.84 (0.66,1.06)	1.18 (0.74,1.91)	0.63 (0.53,0.77) ***
Everyday Racial Discrimination	1.06 (1.03,1.09) **	1.04 (0.99,1.09)	1.02 (0.98,1.06)	1.04 (1.01,1.07) *
Country of Origin				
Spanish-Speaking	1.06 (0.26,4.43)	0.62 (0.14,2.70)	1.02 (0.34,3.01)	1.06 (0.26,4.25)
Haiti	0.32 (0.15,0.69) **	0.45 (0.15,1.36)	0.19 (0.03,1.12)	0.23 (0.07,0.74) *
Jamaica	1.00	1.00	1.00	1.00
Trinidad-Tobago	0.38 (0.13,1.16)	0.42 (0.13,1.37)	0.12 (0.05,0.28) ***	0.68 (0.29,1.59)

	Washing & Checking	Arranging	Counting	Repeating Words
	OR (95% C.I.)	**OR (95% C.I.)**	**OR (95% C.I.)**	**OR (95% C.I.)**
Other English	0.42 (0.21,0.87) *	1.01 (0.43,2.39)	0.62 (0.25,1.55)	0.45 (0.15,1.35)
Nativity Status				
US born	1.98 (1.00,3.95)	0.80 (0.37,1.74)	0.56 (0.19,1.61)	1.46 (0.59,3.64)
Foreign Born	1.00	1.00	1.00	1.00
F	9.14 ***	5.16 ***	3.18 ***	7.97 ***
N	1502	1502	1502	1502

Note: OR= Odds Ratio, C.I.=Confidence Intervals.

Several independent variables are represented by dummy variables. Age, 55 and older is the comparison category; Sex, Female is the comparison category; Work Status, Employed is the comparison category; Education, 16 and more years is the comparison category; Marital and Romantic Status, Married and Cohabitating is the comparison category; Household Income, $47,000 and more is the comparison category; Country of Origin, Jamaica is the comparison category; Nativity Status, Foreign born is the comparison category.

* $p < .05$

** $p < .01$

*** $p < .001$

Table 6.

Weighted Analysis of Demographic, Discrimination, and Self-Rated Health Variables on Number of Obsession and Compulsion Types among Black Caribbeans in the United States

	Number of Obsession Types IRR (95% C.I.)	Number of Compulsion Types IRR (95% C.I.)
Age		
18–34	1.67 (0.54,5.10)	1.74 (1.13,2.70) *
35–54	1.37 (0.73,2.57)	1.03 (0.74,1.45)
55 and older	1.00	1.00
Sex		
Female	1.00	1.00
Male	1.92 (1.18,3.12) *	1.37 (0.90,2.10)
Work Status		
Employed	1.00	1.00
Unemployed	1.05 (0.64,1.72)	0.82 (0.47,1.42)
Not in Labor Force	1.71 (0.85,3.45)	1.99 (1.24,3.20) **
Education		
11 years and less	0.46 (0.18,1.15)	0.63 (0.38,1.06)
12 years	0.96 (0.46,2.03)	0.86 (0.53,1.39)
13–15 years	0.54 (0.19,1.50)	0.52 (0.28,0.97) *
16 and more years	1.00	1.00
Marital and Romantic Status		
Married and Cohabitating	1.00	1.00
Not Married	1.06 (0.73,1.53)	0.89 (0.58,1.37)
Household Income		
Less than $15,000	2.85 (1.56,5.20) **	1.82 (1.10,3.01) *
$15,000- $27,999	0.93 (0.43,1.97)	1.39 (0.74,2.60)
$28,000- $46,999	0.86 (0.33,2.25)	0.89 (0.50,1.58)
$47,000 and more	1.00	1.00
Material Hardship	1.18 (1.05,1.33) **	1.10 (0.98,1.23)
Self-Rated Physical Health	0.93 (0.73,1.18)	0.76 (0.63,0.93) **
Self-Rated Oral Health	1.31 (1.07,1.60) *	1.33 (1.15,1.54) **
Self-Rated Mental Health	0.77 (0.60,0.97) *	0.87 (0.75,1.01)
Everyday Racial Discrimination	1.04(1.01,1.07) **	1.03(1.01,1.05) *
Country of Origin		
Spanish-Speaking	1.05(0.37,2.96)	0.96(0.35,2.60)
Haiti	0.36(0.18,0.74) **	0.39(0.19,0.79) *
Jamaica	1.00	1.00
Trinidad-Tobago	0.73(0.30,1.78)	0.54(0.28,1.04)
Other English	0.48(0.23,1.02)	0.63(0.35,1.12)

	Number of Obsession Types IRR (95% C.I.)	Number of Compulsion Types IRR (95% C.I.)
Nativity Status		
US born	1.50(0.88,2.57)	1.10(0.72,1.70)
Foreign Born	1.00	1.00
F	10.68 **	10.87 **
N	1502	1502

Note: IRR= Incidence Rate Ratio, C.I.=Confidence Intervals.

Several independent variables are represented by dummy variables. Age, 55 and older is the comparison category; Sex, Female is the comparison category; Work Status, Employed is the comparison category; Education, 16 and more years is the comparison category; Marital and Romantic Status, Married and Cohabitating is the comparison category; Household Income, $47,000 and more is the comparison category; Country of Origin, Jamaica is the comparison category; Nativity Status, Foreign born is the comparison category.

* p < .05

** p < .01

*** p < .001