Assessment of Obsessive Compulsive Disorder with African Americans

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Overview of OCD

Obsessive-compulsive disorder (OCD) is a highly disabling and distressing disorder, which has made it one of the leading causes of disability worldwide (Lopez and Murray 1998). Obsessions are intrusive, unwanted thoughts, images, or impulses that increase anxiety, whereas compulsions are repetitive behaviors or mental acts used to decrease anxiety (APA 2000). The disorder is equally common among men and women, causing significant and pervasive impairment in multiple domains, including home life, work, and relationships (Karno et al. 1988; Kessler et al. 2005; Ruscio et al. 2010). OCD-related costs have previously been estimated at US$ 8 billion annually in the USA (DuPont et al. 1995), and this figure would likely be higher today. OCD affects an estimated 1.6% of the American population (Ruscio et al. 2010), and Black Americans experience OCD at rates equivalent to the general population (Himle et al. 2008; Ruscio et al. 2010; Zhang and Snowden 1999).

Quality of Life

A recent investigation of quality of life among African Americans found that those with OCD had the overall lowest life satisfaction when compared with individuals afflicted with other anxiety disorders and those with no disorder. Individuals with OCD also completed the fewest number of years in school, and this was significantly different from African Americans or European Americans with no disorder. There is also evidence of social impairments in African Americans with OCD, as the same study found that African Americans with OCD reported the least amount of closeness with friends when compared to those with other anxiety disorders (Bach et al. 2012).

Cultural Considerations for Diagnosing OCD

Comorbidity OCD is a highly comorbid disorder, with most sufferers also meeting criteria for another mood, anxiety, or substance use disorder (Ruscio et al. 2010). The National Survey of American Life (NSAL) found that a majority of Black Americans with OCD also met the criteria for at least one other psychiatric disorder, at 93.2 and 95.6% in African Americans and Caribbean
Blacks, respectively (Himle et al. 2008). A recent clinical study of African Americans with OCD found that 89.2% had at least one other comorbid condition. Of these, the most prevalent were mood disorders (69.9%), anxiety disorders (56.2%), and substance abuse disorders (38.9%). There was very low comorbidity with eating disorders; 5.5% had a binge eating disorder and none met criteria for anorexia nervosa or bulimia nervosa (Williams et al. to appear). This is in stark contrast to findings with European Americans that tend to find high comorbidity rates between OCD and all eating disorders (e.g., Sallet et al. 2010).

Participants with hoarding compulsions as a primary symptom (43%) were more likely to have a comorbid mood disorder than those without, were more likely to have a psychotic disorder and/or a substance abuse disorder, and were less likely to be diagnosed with another anxiety disorder (Williams, Davis, Thibodeau, and Bach, to appear).

Treatment Seeking and Barriers to Treatment Although 40% of African Americans with OCD report their obsessional concerns to a doctor, very few receive treatment (Simmons et al. 2012), and African Americans are consistently underrepresented in OCD treatment clinics and research studies (Steever et al. 2012; Williams et al. 2008). Among all Americans, for those with severe OCD, 93% receive some type of treatment (NCS-R; Ruscio et al. 2010); however, this is true for only 60% for African Americans with severe OCD (NSAL; Himle et al. 2008), indicating a substantial health disparity. Even among those who are able to access mental health care, few African Americans with OCD receive specialized treatment, and only 20% use a serotonin reuptake inhibitor medication (Himle et al. 2008). Both African American and European Americans report concerns about the cost of treatment, shame, stigma, and wanting to handle the problem on their own; however, certain barriers disproportionately affect African Americans, including not knowing where to find help and concerns about discrimination (Williams et al. 2012b).

Symptoms Dimensions It has been suggested one barrier to treatment could be a failure to identify OCD because of its heterogeneous presentation and possible cultural differences in symptom expression (Friedman et al. 2003; Sussman 2003). Variables related to OCD often differ cross-culturally (Williams et al. in press). In a clinical sample, Williams et al. (2012c) found that African Americans endorse obsessive-compulsive concerns in six major areas, comprising: Contamination and Washing, Hoarding, Sexual Obsessions and Reassurance, Aggression and Mental Compulsions, Symmetry and Perfectionism, and Doubt and Checking. These dimensions are similar to findings of studies in primarily White samples (i.e., Bloch et al. 2008; Williams et al. 2010). However, African Americans with OCD reported more contamination symptoms and are twice as likely to report excessive concerns with animals compared to European Americans with OCD. This indicates notable cultural differences, which is consistent with findings among nonclinical samples (Thomas et al. 2000; Williams and Turkheimer 2007).

Williams et al. (2012a) suggested that low socioeconomic status (SES) may be correlated to greater exposure and thereby concern about contaminants, and subsequently Williams et al. (2012c) found that lower income African Americans with OCD were significantly more concerned about contamination, lending support to that hypothesis. However, further investigation of possible cultural and historical factors that may impact symptom expression is needed, especially in light of the legacy of segregation, based on the notion that European Americans could become contaminated through close contact or sharing items with African Americans (e.g., Williams and Turkheimer 2007). Additionally, it has been hypothesized that European Americans may have developed stronger immune systems compared to African Americans through natural selection, as many of their ancestors survived the bubonic plague, possibly making them biologically less concerned about contaminants (Moalem et al. 2002).

African Americans express concerns about contamination from animals at twice the rate as...
European Americans (Williams et al. 2012c). Williams and Turkheimer (2007) studied racial differences in OCD symptoms and found that a nonclinical sample of African Americans scored significantly higher on an animal attitude factor than European Americans (meaning they had greater concerns about animals), implicating cultural factors for this difference. It was hypothesized that perhaps the Western perspective of animals as pets is more socially acceptable among European Americans than other cultures that are more likely to regard animals as a source of food or vehicle for labor. Other cultural differences may relate to the historic practices such as the use of dogs as a means to hunt slaves or attack protesters during the Civil Rights era. This is consistent with recent work that suggests African Americans may experience greater phobias of animals (Chapman et al. 2008). As such, cultural differences are plausible contributing factors for increased animal sensitivity among those with OCD.

Fear of being misunderstood also seems to be more frequently endorsed by African Americans with OCD (Williams et al. 2012). An obsessive need to be perfectly understood could be a unique finding for African Americans related to fears of appearing unintelligent, resulting in stereotype compensation—an intentional effort to present one’s self in a counter-stereotypical manner (Williams et al. 2008).

**OCD Assessment Measures**

Assessment of OCD is usually accomplished through a series clinical interviews and self-report measures. Here we discuss the most common assessment tools, their psychometric properties, and findings relevant specifically to African Americans.

**Yale-Brown Obsessive-Compulsive Scale (Y-BOCS)** The most widely used OCD outcome measure is the Y-BOCS (Goodman et al. 1989a, b). The Y-BOCS is a semi-structured clinical interview that takes 45–60 min to complete, consisting of a comprehensive checklist of obsessions and compulsions and a 10-item severity scale. The checklist is most often administered before treatment and aids in treatment planning. The obsessions are listed in several categories including: aggressive (fear of harming others), contamination, sexual, hoarding/saving, religious, symmetry or exactness, somatic, and miscellaneous. The compulsions list is organized into categories including: cleaning/washing, checking, repeating, counting, ordering/arranging, hoarding/collecting, and miscellaneous. The factor structure of the checklist in African Americans is similar to findings in other ethnorracial groups (Bloch et al. 2008; Williams et al. 2012c).

The Y-BOCS severity scale rates the time occupied by obsessions and compulsions, how much they interfere with functioning, how much distress they cause, attempts to resist, and level of control. Items are rated on a 5-point scale ranging from 0 (no symptoms) to 4 (severe symptoms). The severity scale is usually administered pretreatment and may be administered again periodically throughout treatment and posttreatment. The total score is calculated by adding the ten items, yielding scores from 0–40.

The Y-BOCS severity scale shows good reliability ($\alpha=0.88–0.91$) and validity in European American samples (Goodman et al. 1989a, b; McKay et al. 1995). Scores above 16 may be considered in the clinical range, and the mean for OCD patients is 21.9 (SD = 8). OCD severity can be further broken into severity ranges including: subclinical (0–7), mild (8–15), moderate (16–23), severe (24–31), and extreme (32–40) (Steketee 1999). Scores for healthy people without OCD tend to be very low (M = 0.31, SD = 1.21) (Simpson et al. 2006), although the measure was not intended for unafflicted individuals.

Very few studies have examined the Y-BOCS in African American samples. Two nonclinical studies examined the psychometric properties using the self-report version of the Y-BOCS in undergraduate and community participants (Garnaat and Norton 2010; Washington et al. 2008). Washington et al. (2008) concluded that a one-factor model was better than separating obsessions and compulsions. Garnaat and Norton (2010) compared four different ethnorracial
groups and concluded the Y-BOCS may underestimate obsessions in African Americans compared to European American participants. One recent study examined the Y-BOCS in African Americans with OCD and found the overall scale demonstrated good internal consistency ($\alpha=0.83$) and a significant positive relationship with other measures of psychopathology (Williams et al. 2013b). However, the best factor structure for the scale was a three-factor solution including severity of obsessions, resistance to obsession and compulsions, and severity of compulsions (Williams et al. 2013b). Based on the results of this study, the Y-BOCS appears to be a valid measure for African American populations and is recommended for use at this time.

Alternative forms of the Y-BOCS include a self-report version (Steketee et al. 1996) and a computerized version (Rosenfeld et al. 1992). The Y-BOCS has been translated into over 25 languages (Lam et al. 2005). The psychometric properties of the Y-BOCS self-report version have not yet been assessed in African Americans, so clinicians and researchers are advised against using these in this population as it is possible certain symptom dimensions (e.g., contamination), may result in inflated scores for non-pathological reasons.

There is also a YBOCS-II (Storch et al. 2010), which has been developed and validated in a sample of OCD afflicted individuals ($M=20.48, SD=11.11$). It shows strong reliability ($\alpha=0.91$) and fair convergent validity with the OCI-R ($r=0.69$), but it has not yet been validated in African Americans, and ethnoracial information was not specified in the validation sample of OCD patients. Although it is likely this measure is adequate for African Americans, use of a self-report version is likewise discouraged.

Children’s Yale-Brown Obsessive-Compulsive Scale (CY-BOCS) The CY-BOCS (Scahill et al. 1997) includes symptom checklists and severity scales for both obsessions and compulsions that assess the presence of obsessions and compulsions in children and adolescents aged 8–18. The CY-BOCS 10-item clinician-rated severity scale has obsession ($M=9.6; SD=4.43$) and compulsion subscales ($M=10.3; SD=3.83$; 5 questions each), with items ranging from “0 = none”, to “4 = extreme” and subscale scores ranging from 0 to 20, and total scores 0 to 40. The CY-BOCS yields strong psychometric properties for all 10 items ($\alpha=0.87; M=19.9; SD=7.51$), for children and adolescents with OCD. The intraclass correlations for the CY-BOCS Total, Obsession, and Compulsion scores are 0.84, 0.91, and 0.66, suggesting high interrater agreement between the subscale and total scores. The ethnoracial composition of the validation sample was not reported.

Based on the study of the Y-BOCS, which found it to be an acceptable measure for African American adults (Williams et al. 2013b), the CY-BOCS is likely acceptable for African American youth. However, this remains to be established empirically.

Obcessive-Compulsive Inventory-Revised (OCI-R) The OCI-R is an 18-item self-report measure of distress from obsessions and compulsions (Foa et al. 2002). The total score ranges between 0 and 72. The questionnaire includes six subscales including: washing, checking, ordering, obsessing, hoarding, and neutralizing. The subscale scores range between 0 and 12. The OCI-R has shown good internal consistency ($\alpha=0.81–0.93$), test-retest reliability ($r=0.82–0.84$), and discriminant validity in the original validation sample of primarily European American patients (Foa et al. 1998, 2002). A clinical cutoff score of 21 differentiates OCD patients from nonpatients (Foa et al. 2002). The OCI-R has been translated into many languages, including Spanish (Fullana et al. 2005), Italian (Sica et al. 2009), Korean (Lim et al. 2008), German (Gönner et al. 2007, 2008), Icelandic (Smári et al. 2007), and French (Zermatten et al. 2006).

A recent study examined the psychometric properties of the OCI-R in a clinical and non-clinical sample of African Americans (Williams et al. 2013b). The originally proposed OCI-R six-factor structure exhibited good to excellent fit in the sample. Receiver operator characteristic (ROC) analyses indicated that a cut-off score of 36 exhibited the optimal balance of sensitivity and specificity—a score that is substantially
greater than the cut-off score of 21 proposed in the original validation study (Foa et al. 2002). The higher score is consistent with previous studies of nonclinical samples of African Americans, which have produced greater scores on self-report measures for OCD (e.g., Williams et al. 2005, 2008). The OCI-R is suitable for use with African Americans provided that the higher cut-off score is employed.

The Obsessive Compulsive Inventory-Child Version (OCI-CV) The OCI-CV (Foa et al. 2010) is a 21-item self-report measure used to assess OC symptoms in children and adolescents from 7 to 17 years old. Items are scored on a 3-point Likert scale from “0=never” to “2=always,” including questions such as: “I get upset if my stuff is not in the right order” or “If a bad thought comes into my head, I need to say certain things over and over.”

The OCI-CV contains six subscales: doubting/checking (M=0.80, SD=0.54), obsessions (M=0.92, SD=0.59), hoarding (M=0.76, SD=0.68), washing (M=0.82, SD=0.68), ordering (M=0.82, SD=0.58), and neutralizing (M=0.69, SD=0.65); subscales can be summed to produce a total score (M=17.02, SD=7.90). Internal consistency was strong for the OCI-CV total and all subscale scores (α=0.81), as was test-retest reliability over a period of one and a half weeks (α=0.68). Additionally, the OCI-CV displays good convergent validity with the CY-BOCS total, obsession, and compulsion subscales (r=0.28). OCI-CV scores appear to be sensitive to changes in symptom severity, similarly to the CY-BOCS. Although no studies have assessed the OCI-CV among nonclinical samples, mean scores among the Foa et al. (2010) clinical sample post-CBT treatment are as follows: doubting/checking (M=0.45, SD=0.50), obsessions (M=0.54, SD=0.53), hoarding (M=0.40, SD=0.50), washing (M=0.51, SD=0.63), ordering (M=0.54, SD=0.49), and neutralizing (M=0.37, SD=0.50), total score (M=10.16, SD=7.58).

The psychometric properties of the OCI-CV have not yet been examined in African American children and adolescents. Of the 109 children and adolescents in the validation study, only, 3.7% were African American. Due to the scoring issues with the OCI-R (Williams et al. 2013a) and validity issues in similar self-report measures of OCD, the OCI-CV is not recommended for use in African Americans at this time.

Dimensional OCD Scale (DOCS) The DOCS (Abramowitz et al. 2010) is a self-report instrument consisting of 20 items. There are five items for each of the four symptom dimensions which include: (a) contamination, (b) responsibility for harm, injury, or bad luck, (c) unacceptable obsessional thoughts, and (d) symmetry, completeness, and exactness. An additional scale has been developed for the DOCS focused on sexually intrusive thoughts (DOCS-SI; Wetterneck et al. 2011). Within each symptom dimension, five items assess the following parameters of severity over the past month: (a) time occupied by obsessions and compulsions, (b) avoidance behavior, (c) associated distress, (d) functional interference, and (e) difficulty disregarding the obsessions and refraining from the compulsions. Each item is rated on a scale ranging from 0 (no symptoms) to 4 (extreme symptoms).

To accommodate the wide variety of OCD symptoms, the instructions for each set of five items include a brief description and several broad examples of the types of obsessions and compulsions observed in that dimension. Thus, the DOCS assess the severity of the patient’s own symptoms rather than a predefined list of symptoms. The measure is designed for use in clinical and nonclinical populations and can be used by people aged 13 to adult.

The DOCS was validated within a primarily White adult sample of OCD patients (M=30.06; SD=15.49; 93% European American), other anxiety disorder affected controls (M=16.75; SD=13.14; 92% European American), and college undergraduates (M=11.93; SD=9.87; 77% European American). The DOCS showed excellent reliability among all three populations (α’s>0.90), and good convergent validity when comparing subjects’ total scores to OCI-R scores in all three samples (r’s>0.65). Additionally, the DOCS displayed sensitivity to treatment...
(exposure and ritual prevention), in similar ways to that of the Y-BOCS and OCI-R.

The DOCS has not yet been validated in a clinical sample of African Americans. However, there has been some attempt at validating the measure in a multicultural sample of college students. Wheaton and colleagues found that the DOCS overall and individual subscales demonstrated good to excellent internal consistency in African Americans ($\alpha=0.84–0.89$) (Wheaton et al. 2013). In addition, African Americans scored slightly higher, albeit not significantly, than Whites for contamination symptoms, but had no noticeable differences for harming, symmetry, or unacceptable thought symptom dimensions (Wheaton et al. 2013). The DOCS is not recommended for use in clinical samples of African Americans at this time. However, it may be useful among nonclinical populations.

**Maudsley Obsessional Compulsive Inventory (MOC or MOCI)**

MOC or MOCI contains 30 dichotomously scored (true/false) items that assess obsessive-compulsive symptoms in the areas of contamination fears and washing behaviors, checking, and worries (Hodgson and Rachman 1977). The MOCI takes 5-min to complete and scores can range from 0 to 30. The means for OCD patients (Richter et al. 1994) and student samples (Dent and Salkovskis 1986) are 13.67 ($SD=6.01$) and 6.32 ($SD=3.92$), respectively. The reliability (Richter et al. 1994) and validity (Hodgson and Rachman 1977) are acceptable among European Americans and European Americans.

Thomas et al. (2000) found the MOCI lacked predictive validity in an African American undergraduate sample. African American students scored almost one standard deviation higher than European American students in total MOCI scores and African Americans scored significantly higher on the cleaning and checking subscales. Another study found similar differences in a combined student-community sample (N = 545; Williams and Turkheimer 2008). Although these studies did not use clinical samples, the findings raise serious concerns about the validity of the MOCI in assessing African Americans with OCD. African Americans without OCD may appear to have clinically relevant symptoms.

**Vancouver Obsessional Compulsive Inventory (VOCI)**

The VOCI (Thordarson et al. 2004) is a self-report, 55-item revision of the MOCI, which assesses obsessions, compulsions, avoidance behavior, and personality characteristics that often perpetuate symptoms of OCD. Participants are instructed to rate how true each statement reflects their thoughts and behaviors, with items ranging from 0 (not at all) to 4 (very much). Subscales include contamination, checking, obsessions, hoarding, just right, and indecisiveness. Total scores and subscales are calculated by summing the items. The VOCI was developed at the University of British Columbia, and distributed among four groups: OCD patients ($M=86.26; SD=37.47$), anxiety and depression controls ($M=49.61; SD=43.28$), community adults ($M=11.45; SD=10.85$), and students ($M=36.37; SD=26.56$). The ethnoracial composition of the sample was not described.

The VOCI displays strong evidence of validity and reliability for the total and subscale scores among European Americans; however, test-retest reliability is relatively low for scores in student samples, suggesting this measure may not screen low levels of OCD, and should be used primarily in clinical populations. Additionally, the VOCI’s sensitivity to treatment has not yet been evaluated, and its psychometric properties have not yet been validated in African Americans.

**Padua Inventories**

The original Padua Inventory contained 60 items about obsessions and compulsions on a 5-point rating scale in four main areas: contamination fears, checking, impaired control over mental activities, and worries about losing control over one’s behaviors (Sanavio 1988). Two revised versions of the scale have been published including the 41-item Padua Inventory Revised (PI-R; Van Oppen et al. 1995) and the 39-item Washington State University Revision (PI-WSUR; Burns et al. 1996). The mean total score for individuals with OCD is 54.93 ($SD=16.72$). The scale takes approximately 10-min to complete. Reliability and validity for the scale are good to excellent (Burns et al. 1996). The Padua Inventory is available in a variety of languages, including: English, Spanish (Mataix-Cols et al. 2002), Dutch (Van...
Oppen 1992), Iranian (Goodarzi and Firoozabadi 2005), Japanese (Wakabayashi and Aobayashi 2007), and Korean (Min and Won 1999).

Studies of the Padua Inventory in African Americans found racial differences in mean item scores suggesting that the instrument does not measure the same traits in European American and African Americans (Williams et al. 2005). African Americans over reported cleaning and grooming behaviors compared to European Americans, which was attributed to different cultural backgrounds or beliefs regarding normal behaviors (grooming, washing, being cautious).

Another study examined the psychometric properties of the 10 contamination items, appearing both on the Padua Inventory and the PI-WSUR version in a large sample of community residents and undergraduate students (Williams and Turkheimer 2007). They found large racial differences on all items, and African Americans communicated more concern regarding contamination, cleanliness, and personal appearance. Williams et al. (2008) replicated the findings in a nationally representative sample, with African Americans scoring significantly higher than European Americans on the Padua contamination scale. The Padua Inventories have never been assessed in a clinical sample of African Americans, but based on findings with nonclinical samples, it seems this measure would be problematic for the assessment of African Americans.

**Obsessive Belief Questionnaire (OBQ)** The OBQ—Brief Version (OBQ-44; Steketee, 2005) is a 44-item self-report measure that assesses cognitive beliefs in OCD. The measure was revised using 44 items taken from the OBQ-87 to establish a smaller measure with three subscales (OCCWG 2001, 2003, 2005). Items are scored from 1–7 and calculated for a total score. The OBQ-44 consists of the following subscales: (1) Responsibility and threat estimation, (2) Perfectionism and intolerance for uncertainty, and (3) Importance and control of thoughts. In the initial study, Steketee (2005) administered the OBQ-44 to adult samples comprised of OCD patients ($M=174.3$; $SD=50.2$), anxious controls ($M=159.3$; $SD=53$), students ($M=131.3$; $SD=44.3$), and community dwellers ($M=96.0$; $SD=35.1$), finding strong reliability ($\alpha=0.95$) and validity when comparing PI-R subscales.

One study has examined the OBQ-44 in a clinical sample of African Americans with and without OCD. Williams et al. (2013b) found the total and three subscale scores of the OBQ-44 to have good to excellent internal consistency in African Americans with OCD ($\alpha=0.86–0.94$) and without ($\alpha=0.79–0.96$). In addition, the OBQ-44 demonstrated positive significant correlations to other measures of OCD severity including the Y-BOCS ($r=0.43$) and OCI-R ($r=0.64$). Thus, the OBQ-44 appears to be acceptable for use with African Americans, but more work needs to be done to validate the measure in this population.

**Brown Assessment of Beliefs Scale (BABS)** The BABS (Eisen et al. 1998) is a seven-item, semi-structured interview that assesses the degree of conviction and insight patients have concerning the beliefs underlying their obsessional thinking. Subscales include conviction ($M=2.5$; $SD=1.4$), perception of others’ views of beliefs ($M=1.2$; $SD=1.5$), explanation of differing views ($M=1.9$; $SD=1.6$), fixity of ideas ($M=2.2$; $SD=1.4$), attempt to disprove beliefs ($M=2.1$; $SD=1.4$), insight ($M=1.3$; $SD=1.5$), and ideas/delusions of reference ($M=0.9$; $SD=1.5$). In the initial validation study, which included patients with OCD ($N=20$), body dysmorphic disorder ($N=20$), and mood disorders with psychotic features ($N=10$), overall intrarater and test-retest reliability was excellent, as was internal consistency. One factor was found to account for 56% of the variance. Scores on the BABS also correlated with alternate measures of insight and were sensitive to changes in insight and treatment; however for symptom severity, scores were not related or identical to improvement.

Additionally, OCD patients may believe negative events will definitely occur if they do not perform specific compulsions. Considering this symptomatology, interviewers must be sure to phrase items that will properly assess these beliefs about these OCD-related compulsions, and their direct relationship to negative future events. This must be done by phrasing questions about future events with certainty, e.g., “How certain are you that you WILL (not might) contract HIV
if you do not wash your hands repeatedly after touching a door knob?” (Eisen et al. 1998).

A recent study by Williams et al. (to appear) assessed the psychometric properties of the BABS in African Americans and found good internal consistency (α = 0.84), convergent validity with the Y-BOCS (r = 0.47), but a weak correlation with the OCI-R (r = 0.17) and OBQ-44 (r = 0.24). It is not yet clear if the BABS is a good measure for use with African Americans.

**Clark-Beck Obsessive-Compulsive Inventory (CBOCI)** The CBOCI (Clark et al. 2005) consists of 25-items that assess the frequency and severity of obsessive and compulsive symptoms. The measure has good internal consistency (α > 0.86) in clinical and nonclinical samples. In OCD patients (M = 42.14; SD = 16.07), it is correlated to other measures of OCD, such as the Y-BOCS (r = 0.60) and the PI-WSUR (r = 0.65), but it is also correlated to the BDI-II (r = 0.57), indicating questionable divergent validity. Furthermore, the measure was less reliable when administered to a student sample (M = 16.30; SD = 8.34), thus the authors note that caution must be exercised when using the CBOCI with a nonclinical sample.

As a symptom screener, the CBOCI is more similar to the OCI-R than other OC questionnaires, such as the PI-WSUR. Although it is difficult to assess the relative performance of these two measures without a direct comparison, the item content of the CBOCI differs, with 17% of OCI-R items assessing obsessions compared with 56% of the CBOCI items. The relatively equal attention given to both obsessions and compulsions leads the authors to conclude that the CBOCI is a more balanced measure of OCD symptoms.

The original validation sample was recruited from sites in the USA and Canada. The ethnorracial information provided by the authors separates participants into White and non-White groups, thus it is unclear how many, if any, African Americans were included. Additionally, the percentage of non-Whites is relatively small (6%, n = 29), and no separate analyses were conducted for this group. Thus it is unknown whether the CBOCI is suitable for use with African Americans. Based on findings with other self-report symptom checklists, it is likely that African Americans will score higher and require a different cut-off score, as was seen with the OCI-R (Williams et al. to appear).

**Florida Obsessive-Compulsive Inventory (FOCI)** The FOCI (Storch et al. 2007) is a self-report measure that utilizes 25 items on two subscales: a Symptom Severity Scale and a symptom checklist. The Symptom Severity Scale (M = 12.76; SD = 3.52) uses items ranging from 0 (none) to 5 (extreme) to assess five aspects of severity (e.g., time spent on obsessive–compulsive symptoms), while the symptom checklist (M = 7.39; SD = 4.09) assesses the existence or lack thereof obsessions (10 items) and compulsions (10 items).

Within a sample comprised of only OCD affected individuals, the FOCI demonstrates strong convergent validity for the severity scale when compared to the Y-BOCS severity scale (r = 0.61), and the OCI-R (r = 0.76). In addition this scale shows good discriminant validity, strong internal consistency, and is sensitive to symptom decreases following CBT (Aldea et al. 2009a). In a nonclinical college student population (European American, 63.2%; African American, 9.9%), strong psychometrics were shown when comparing the FOCI severity scale with the OCI-R (r = 0.58; M = 3.9; SD = 3.3; Aldea et al. 2009b). However a similar measure of symptom severity (e.g., the Y-BOCS) was not measured in this study, so the validity of the symptom severity scale has not been fully assessed in nonclinical samples.

The FOCI would function well as a screener, as it is not only quick to administer, but displays the same strong psychometric properties across both OCD patient and nonclinical samples, correlating significantly with the Y–BOCS in each population. An advantage of the FOCI is its utilization of a subscale for measuring symptom severity. However, the FOCI may not be useful when collecting comprehensive information about individual OCD symptoms, as limited psychometric data are available, and has not yet been validated for African Americans. Because it may suffer from the same issues as similar measures, such
related OCD assessment measures

There are several additional measures that do not directly assess for OCD, but are useful for collecting data about OCD-related issues (e.g., barriers to treatment, family accommodation of symptoms, parental beliefs about childhood OCD). The most popular research and clinical instruments in this domain are described below.

Barriers to Treatment Questionnaire (BTQ) The BTQ (Goodwin et al. 2002; Marques et al. 2010) measures participants’ perceived barriers to seeking OCD treatment, based on similar questionnaires from the broader literature. The BTQ assesses barriers to treatment in the following domains: logistic and financial, stigma, shame and discrimination barriers, and treatment perception and satisfaction barriers. OCD patients are asked if any of these possible barriers influenced them to not seek treatment. The BTQ has been used in diverse samples to identify OCD sufferers’ barriers to treatment. Internal consistency for the BTQ was good for African Americans (α=0.82) and for a European American internet sample (α=0.71) (Marques et al. 2010; Williams et al. 2012b). Therefore, the BTQ is likely a good measure for use in African Americans.

Family Accommodation Scale (FAS) The FAS (Calvocoressi et al. 1995, 1999) is a 12-item semi-structured interview to assess the degree to which family members assist people with OCD in their rituals or avoidance behaviors. Family members’ accommodation efforts are generally well-intentioned, however they often equate to more overall impairment and symptom severity (Storch et al. 2007). The FAS shows good internal consistency (α=0.82), as well as strong discriminant and convergent validity. Good validity has also been demonstrated when measuring family accommodation for pediatric OCD (Storch et al. 2007). In the adult validation studies conducted by Calvocoressi et al. (1995, 1999), no ethnora-

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Family Accommodation Scale (FAS) The FAS (Calvocoressi et al. 1995, 1999) is a 12-item semi-structured interview to assess the degree to which family members assist people with OCD in their rituals or avoidance behaviors. Family members’ accommodation efforts are generally well-intentioned, however they often equate to more overall impairment and symptom severity (Storch et al. 2007). The FAS shows good internal consistency (α=0.82), as well as strong discriminant and convergent validity. Good validity has also been demonstrated when measuring family accommodation for pediatric OCD (Storch et al. 2007). In the adult validation studies conducted by Calvocoressi et al. (1995, 1999), no ethnora-

Parental Attitudes and Behaviors Scale (PABS) The PABS (Peris et al. 2008) is a 42-item parent-report scale designed to measure parent or caregiver responses to childhood OCD. It consists of three subscales: Accommodation, Hostility and Blame, And Empowerment. Parental attitudes and behaviors are measured utilizing a Likert-scale from Items 1 (not at all) to 5 (very often). In a sample of primarily European American families, the PABS demonstrates strong internal consistency for all three subscales, and good concurrent and predictive validity. The mean scores for the Accommodation, Hostility/Blame, and Empowerment subscales were 19.11 (SD=7.65), 13.17 (SD=5.24), and 15.86 (SD=4.28), respectively. Although strong psychometric properties are evident, this scale has not been validated within African American populations, thus the PABS is not recommended for use among African Americans at this time.

Comprehensive Structured Interviews

Structured Clinical Interview for DSM-IV Axis I Disorders (SCID) The SCID-I (First and Gibbon, 2004) is a semi-structured interview that diagnoses Axis I disorders in accordance with the DSM-IV. Questions assess past and present
symptomatology, demographic, and other essential information (e.g., treatment history). When administering the SCID-I, a screening form consisting of 24 items may be given before the interview to assess symptomology for various Axis I disorders, if not, the interview in its entirety is administered, asking every question for all Axis I disorders. However with the screener, if patients select “yes” to either questions 8 (obsessions) and/or 9 (compulsions), the interviewer will go directly to that section to assess obsessive-compulsive symptom presence. During the interview, raters ask more about the obsessions (3 items) and compulsions (2 items), with responses ranging from 1 (absent or false) to 3 (threshold or true). If scoring a 3 for any item assessing symptom presence, the patient would then be prompted to describe the nature of their obsessions/compulsions. These follow-up questions include age of onset, how much stress the obsessions/compulsions are causing, whether or not the patient was on medication, etc. Then, clear directions to diagnose (and indicate severity) are presented on the assessment to the interviewer.

Diagnoses are determined by a varying set of criterion for each disorder, in which one would need a certain number of criteria to be diagnosed. The SCID-I also includes “leave out” instructions, enabling interviewers to omit questions about diagnoses if it is clear that a particular set of diagnostic criterion are not met. A shortened SCID-I is available, which assesses disorders which are more commonly seen in practice. However, the shortened version excludes certain disorders such as social phobia, eating disorders, and some specifiers such as ‘with poor insight’ for OCD (First and Gibbon, 2004). Studies find that the SCID-I displays fair reliability when assessing OCD (Zanarini and Frankenburg 2010; Lobbestael et al. 2010), but its psychometric properties have not been examined in African Americans.

The SCID is problematic for diagnosing OCD. One major issue is that it does not give enough examples of the different types of symptoms people with OCD might have, and thus participants may fail to recognize themselves in the descriptions provided. For example, the SCID says, “Now I would like to ask you if you have ever been bothered by thoughts that didn’t make any sense and kept coming back to you even when you tried not to have them?” This statement could refer to just about anything, and it is critically dependent upon the interviewer to recognize what constitutes an “OCD thought” versus a worry related to generalized anxiety disorder, rumination associated with depression, a traumatic memory associated with posttraumatic stress disorder, or a normal intrusive thought to make an accurate diagnosis. Also, if the patient perceives that his/her OCD thoughts “make sense,” they might not endorse the statement at all.

Even if the subject asks for clarification, there are only two examples given, (Thoughts like hurting someone even though you really didn’t want to or being contaminated by germs or dirt?), but African Americans with OCD worry may worry about many different things (e.g., Williams et al. 2012c). Likewise, similar problems are evident in the question about compulsions. Therefore, the SCID is not recommended for the assessment of OCD in African Americans (Davis et al. 2013).

**Anxiety Disorder Interview Schedule for the DSM-IV (ADIS-IV)** The ADIS (Brown et al. 1994, 2001) is a semi-structured interview based on DSM-IV diagnostic criteria. The ADIS was developed to differentiate anxiety and other disorders that are commonly comorbid with anxiety disorders such as mood or substance abuse disorders (Summerfeldt and Anthony 2002). The ADIS has two versions, one that assesses current symptoms, and another that assesses current and past symptoms. Interviewers ask about personal demographics and specific symptoms for each disorder. Diagnoses are assigned a severity rating from 0–8, based on patient distress and impairment.

The ADIS displays strong internal consistency for both current ($\alpha=0.85$) and lifetime ($\alpha=0.75$) OCD symptom categories. However, threshold issues may arise when assessing key features of OCD, panic disorder, and specific phobia, which may lead to interrater disagreement as to whether there is sufficient evidence to assign principal diagnoses. There are no studies to date that have specifically assessed its validity in African Americans.
Americans with OCD. However, in a study assessing familial transmission of anxiety in African Americans, Chapman et al. (2012) indicated that the ADIS may be satisfactory when assessing anxiety in African American populations.

World Health Organization (WHO) Composite International Diagnostic Interview (CIDI) The CIDI is a structured interview developed for use with trained interviewers to assess mental disorders based on ICD-10 and DSM-IV diagnostic criteria. It can be utilized in epidemiological cross-cultural studies or for clinical and research purposes. The diagnostic portion of the CIDI is based on the World Health Organization’s Composite International Diagnostic Interview (WHO CIDI 1990). In the 74-item OCD section of the CIDI, interviewers first ask yes/no questions to assess symptom presence. The first section assesses obsessions, and then the second assesses compulsions. For each section, if one or more symptom is present, the interviewer will ask a multitude of follow up questions (e.g., age of onset, levels of distress caused, interference with daily activities, levels of control over thoughts/behaviors, whether treatment was sought).

The CIDI shows strong reliability (Andrews and Peters 1998), but considering the methodology of large epidemiological studies, the CIDI-Auto has been developed and utilized in lieu of interviews that would require trained clinicians. This allows a larger amount of data collection, as the CIDI-Auto can be self-administered. Although useful in large studies, the reliability has been poor to fair when comparing CIDI-Auto and clinician rated diagnoses (Komiti et al. 2001).

The WHO version of the CIDI (WMH-CIDI) was used to assess lifetime and current Axis I disorders among African American and Caribbean Americans in the National Survey of American Life (NSAL) epidemiological study (Essau and Wittchen 1993; Jackson et al. 2004). The CIDI short-form version (CIDI-SF; Kessler et al. 1998) was used for the OCD diagnostic module rather than the full WMH-CIDI OCD module (Himle et al. 2008). An OCD diagnosis from the CIDI-SF should be considered a probable diagnosis, since the section does not fully assess DSM-IV criteria. Specifically, persons with a positive CIDI-SF OCD are estimated to have an 84.2% chance of having OCD according to the CIDI-SF OCD scoring guidelines. Thus, the use of the CIDI has not been fully explored in African Americans with OCD. However, the substance use version of the CIDI displayed strong reliability of scores between European and African Americans (Horton et al. 2000).

MINI International Neuropsychiatric Interview (MINI) The MINI (Sheehan et al. 1998) is a semi-structured clinical interview that provides information about the participant’s psychiatric diagnoses (derived from DSM-IV and ICD-10), age of onset and comorbid conditions. Interviewees are presented with a few initial questions for each disorder (yes/no) about symptom presence, and queried with additional questions based on the presence/absence of symptoms assessed in the initial questions. In the OCD module of the MINI, there are two initial questions asked, one assessing obsessions and the other compulsions, within the past month. If either question is answered “yes,” indicating symptom presence, patients are queried with a few follow up questions about the rationality of these behaviors, and a current diagnosis can be made. Unlike more extensive clinical interviews (e.g., CIDI, SCID-I), there are much fewer symptom presence/absence questions, as well as follow up items and current diagnosis criterion.

The MINI was intended to serve as a fast diagnostic tool for psychiatric disorders (15–20 min), although it may take up to an hour to administer. Additionally, unlike the CIDI and SCID-I, interviewers do not require extensive training to administer the MINI. The MINI also has other versions that can be used to assess children (MINI-Kid; Sheehan et al. 2010), act as fast screeners (MINI-Screen), or provide additional diagnostic information, similar to more extensive structured interviews (e.g., personality disorders; MINI-Plus). For OCD, the MINI displays good psychometric properties in European Americans, but has yet to be validated in African American samples.
<table>
<thead>
<tr>
<th>Assessment name</th>
<th>Disorder assessed</th>
<th>Recommendation(s) and/or relevant research findings</th>
</tr>
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<tbody>
<tr>
<td>Yale–Brown Obsessive Compulsive Scale—Checklist (Y-BOCS; Goodman et al. 1989a, b)</td>
<td>OCD symptoms in adults</td>
<td>The factor structure of the 60-item checklist was found to be similar in African American adults when compared to European American samples (Williams et al. 2012c).</td>
</tr>
<tr>
<td>Yale–Brown Obsessive Compulsive Scale—Severity Scale (Y-BOCS; Goodman et al. 1989)</td>
<td>OCD severity in adults</td>
<td>No ethnic/racial differences in the psychometric properties of the Y-BOCS severity scale were found in a non-clinical sample of African Americans (Washington et al. 2008). Symptom dimensions in African Americans are similar to other groups (Williams et al. 2012c).</td>
</tr>
<tr>
<td>Children’s Yale–Brown Obsessive Compulsive Scale—checklist (CY-BOCS; Scahill et al. 1997)</td>
<td>OCD symptoms in children</td>
<td>No studies of this measure have been conducted with African American children</td>
</tr>
<tr>
<td>Children’s Yale–Brown Obsessive Compulsive Scale—Severity Scale (CY-BOCS; Scahill et al. 1997)</td>
<td>OCD severity in children</td>
<td>No studies of this measure have been conducted with African American children</td>
</tr>
<tr>
<td>Maudsley Obsessional Compulsive Inventory (MOCI; Hodgson and Rachman 1977)</td>
<td>OCD severity in adults</td>
<td>Poor validity; African Americans reported higher total scores, with greater contamination and checking concerns. (Thomas et al. 2000)</td>
</tr>
<tr>
<td>Vancouver Obsessional Compulsive Inventory (VOCI; Thordarson et al. 2004)</td>
<td>OCD severity in adults</td>
<td>No studies of this measure have been done with African American adults with OCD. Not recommended for African Americans</td>
</tr>
<tr>
<td>Padua Inventory (PI, Sanavio 1988; PI-R Van Oppen et al. 1995; PI-WSUR, Burns et al. 1996)</td>
<td>OCD severity in adults</td>
<td>This measure has some problematic items and sub-scales when used with African Americans (Williams et al. 2005; Williams and Turkheimer 2007). African Americans report greater contamination anxiety and higher total scores. Also see Washington et al. (2008) and Williams et al. (2008).</td>
</tr>
<tr>
<td>Obsessive Compulsive Inventory, Children’s Version (OCI-CV, Foa et al. 2010)</td>
<td>OCD severity in children</td>
<td>This is a 21-item pediatric self-report measure of OCD severity, validated in youth aged 7–17. It includes sub-scales consisting of doubting/checking, obsessing, hoarding, washing, ordering, and neutralizing. Has not been validated in African American children</td>
</tr>
<tr>
<td>Dimensional OCD Scale (DOCS; Abramowitz et al. 2010)</td>
<td>OCD severity in adults</td>
<td>No studies of this measure have been conducted for African American adults with OCD</td>
</tr>
<tr>
<td>Obsessive Belief Questionnaire—Brief Version (OBQ-44; Steketee 2005)</td>
<td>Obsessional beliefs related to OCD severity in adults</td>
<td>The OBQ-44 demonstrates good to excellent internal consistency and significant correlations to other OCD severity measures in African Americans (Williams et al. 2013b).</td>
</tr>
<tr>
<td>Brown Assessment of Beliefs Scale (BABS; Eisen et al. 1998)</td>
<td>Conviction and insight in beliefs underlying obsessional thinking in adults</td>
<td>The BABS appears to have good internal consistency and significant correlations to other OCD severity measures in African Americans (Williams et al. 2013b).</td>
</tr>
<tr>
<td>Clark-Beck Obsessive-Compulsive Inventory (CBOCI; Clark et al. 2005)</td>
<td>OCD severity in adults</td>
<td>No studies of this measure with African American adults with OCD, although the CBOCI is similar to the OCI-R, and African Americans may require higher cutoff scores</td>
</tr>
<tr>
<td>Florida Obsessive-Compulsive Inventory (FOCI; Storch et al. 2007)</td>
<td>OCD severity in adults</td>
<td>No studies of this measure with African American adults with OCD</td>
</tr>
</tbody>
</table>
Assessment of Obsessive Compulsive Disorder with African Americans

Summary

There are many measures to assess OCD, but only a few have been validated in African Americans. Self-report symptom checklists tend to produce inflated scores in African Americans, due to greater endorsement of contamination and/or checking items. Therefore, such measures should not be used with African Americans unless they have been specially validated for use in that group (e.g., the OCI-R; Williams et al. 2013a).

Clinician administered measures, such as the Y-BOCS, appear to be more valid, but further studies are need to conduct to establish this conclusively.

References


At-a-glance summary table

<table>
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<tr>
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<td>Barriers to Treatment Questionnaire (BTQ; Goodwin 2002; Marques et al. 2010)</td>
<td>Barriers to treatment of OCD</td>
<td>The BTQ is a short self-report measure that has been used in diverse samples, including African Americans (Williams et al. 2012b)</td>
</tr>
<tr>
<td>Family Accommodation Scale (FAS; Calvocoressi et al. 1999)</td>
<td>Family involvement in OCD behaviors</td>
<td>No studies of this measure with African American families caring for OCD afflicted individuals</td>
</tr>
<tr>
<td>Parental Attitudes and Behaviors Scale (PABS; Peris et al. 2008)</td>
<td>Parental involvement in OCD behaviors</td>
<td>No studies of this measure with African American parents caring for OCD afflicted children or adolescents</td>
</tr>
</tbody>
</table>


Steever, A. M., Leonard, R. C., Riemann, B. C., & Williams, M. T. (Nov 2012). Minority participation in a residential and intensive outpatient program for OCD. Presented at the association of behavioral and cognitive therapies, National Harbor, MD.


