Examination of racial differences in assessment of OCD symptoms and obsessive beliefs

Kevin D. Wu *, Sara V. Wyman

Northern Illinois University, United States

ABSTRACT

The study of diversity issues within psychopathology is challenging, yet essential. Regarding Obsessive-Compulsive Disorder (OCD), research has demonstrated elevations in symptom endorsement across specific racial and ethnic groups. However, these differences do not consistently reflect increased distress or impairment. A limitation is that the majority of research in this area compares only Black and White participants; the present study sought to extend this literature by examining a large, broadly diverse student sample consisting of 205 Asian, 669 Black, 318 Hispanic, and 1247 White participants. We targeted three OCD symptom questionnaires and a measure of OC beliefs; we also examined the associations among OCD symptoms, OC beliefs, and general distress. Results were that both Asian and Black participants scored significantly higher than White participants on most OCD-relevant measures; however, Asian participants scored significantly higher than Black participants on several measures. In contrast with some prior research, OCD symptoms correlated moderately positively with general distress across all groups studied. These findings highlight the limitation of comparing only Black and White individuals, and underscore the importance of broad inclusion in such research.

1. Introduction

Attention to diversity issues within psychopathology research has increased in recent years, but remains understudied (Williams, Powers, Yun, & Foa, 2010). This is understandable, given many persistent challenges to overcome when deciding whether and how to undertake research with minority groups (Okazaki & Sue, 1995). Included are: (a) inconsistent definitions of race and ethnicity; (b) masked within-group heterogeneity when grouping by race; (c) recruitment obstacles; and (d) non-equivalency of instruments. Nevertheless, such research is ever more important as the U.S. population diversifies. Regarding Obsessive-Compulsive Disorder (OCD), U.S. prevalence rates are similar to international figures (1.2% vs. 1.1–1.8%; American Psychiatric Association (2013)), with similar symptom dimensions, sex distribution, and age of onset emerging across cultures. Conversely, we will review research that suggests OCD measures may not perform equivalently across racial groups. Consistent with (d) above, the current study was undertaken primarily to examine for potential group differences on measures of OC symptoms and beliefs, particularly with respect to Asian and Hispanic populations, which are notably understudied.[1] By addressing

mean-level scores and basic psychometric performance, we hope to provide a context for interpreting the current literature and inform research designs—and eventually clinical efforts—with understudied populations.

1.1. Examination of black-white differences

The past decade has seen efforts to address measure adequacy across cultures (Garnaat & Norton, 2010; Williams, Davis, Thibodeau, & Bach, 2013; Williams, Wetterneck, Thibodeau, & Duque, 2013), with a focus on comparing Black and White individuals.

Williams and colleagues examined the Yale-Brown Obsessive Compulsive Scale Symptom Checklist (YBOCS SC) and the YBOCS severity scale (YBOCS SS) in a group of 75 Black individuals with a lifetime diagnosis of OCD. Williams, Elstein, Buckner, Abelson, and Himle (2012) examined the YBOCS SC structure, identifying six components similar to those found in predominantly White samples (Doubt/Checking, Contamination/Washing, Symmetry/Perfectionism, Sexuality/Reassurance, Aggression/Mental Compulsions, Hoarding). However, Black individuals with OCD reported more prevalent contamination symptoms (76% compared to 26–59%), and were more than twice as likely as White OCD-diagnosed participants in other samples to endorse concerns about animals and the fear of being misunderstood (31.1% versus 13.4%). Williams, Wetterneck et al. (2013) examined the YBOCS SS, and found adequate reliability ($\alpha=.83$), convergent validity (e.g., $r=.56$ with a measure of general impairment), and discriminant validity (e.g., $r=.09$ with the Beck Depression Inventory-II [BDI-II]). The authors

* Correspondence to: Department of Psychology, Northern Illinois University, 311 Psychology-Computer Science Bldg., DeKalb, IL 60115-2828, United States.
E-mail address: kevinwu@niu.edu (K.D. Wu).

[1] The terms Asian, Black, Hispanic, and White reflect the nonspecific manner in which race typically is assessed. For example, Black Americans of African or Caribbean descent often are not distinguished, nor are Asian Americans or Asian nationals.

concluded that the YBOCS SS is valid for use in Black samples.

In general, other symptom measures have fared similarly well. For instance, Williams, Davis et al. (2013) administered the Obsessive-Compulsive Inventory-Revised (OCI-R) to Black individuals from both student ($n=78$) and clinical ($n=83$) populations. They concluded that the OCI-R scales were reliable ($\alpha s=.71-.92$) and showed adequate convergent and discriminant validity ($r=.48$ with the YBOCS SS, versus $r=-.02$ with the BDI-II). Conversely, compared to the mostly White, OCD-diagnosed validation sample, Black individuals with OCD scored significantly higher on the OCI-R total score and on 5 of 6 subscales ($ds=.56-1.04$), and Black students scored significantly higher than the mostly White, student validation sample on Washing ($d=.28$). In fact, compared to the clinical cut-off of 21 recommended by Foa et al. (2002) for the OCI-R total score, a value of 36 was recommended for Black participants.

Such discrepancies are not universal. Nota et al. (2014) reported that nonclinical Black and White participants ($ns=40$ and 54, respectively) reported similar experiences on both the International Intrusive Thoughts Interview Schedule and OCI-R. There was a trend toward Black participants scoring higher on OCI-R Washing ($d=.36$; $p=.06$); it appears that the small sample sizes offered relatively modest power. Williams, Abramowitz, and Olatunji (2012) examined the Contamination Cognitions Scale and found that Black participants ($n=43$) scored significantly higher on the total score ($d=.50$) and Contamination Severity ($d=.52$) than White participants ($n=202$). However, no significant differences emerged on the OCI-R or Dimensional Obsessive Compulsive Scale (DOCS), nor on measures of anxiety or disgust sensitivity.

Thomas, Turkheimer, and Oltmanns (2000) examined the Maudsley Obsessional Compulsive Inventory (MOCI) in samples of Black ($n=314$) and White ($n=1633$) students. Black students scored significantly higher than White students on the MOCI total score ($d=.64$) and on the Checking and Cleaning subscales ($ds=.36$ and.83, respectively). Most notably, MOCI scores were differentially predictive: They better predicted OCD diagnoses via the revised Anxiety Disorders Interview Schedule for White versus Black participants. Overall, some data suggest that OCD symptom measures generally show basic psychometric adequacy, but Black participants tend to endorse more contamination concerns than White participants. Since it is not clear that these scores consistently reflect increased impairment, the question of validity in Black participants remains.

Two studies targeted this issue. Williams, and Turkheimer (2007) administered 10 Contamination/Washing symptoms from the OCI-R and Padua Inventory-Washington State University Revision (PI-WSUR) and 12 items reflecting non-pathological attitudes toward cleanliness and animals (e.g., *I do not care to spend a great deal of time with animals*) to Black ($n=339$) and White ($n=1140$) participants. Black participants scored significantly higher than White participants on both types of items (.77 and 1.05–1.14 SD higher, respectively); however, when attitudes were controlled statistically, symptom differences were eliminated. Conversely, when symptoms were controlled, the differences in cleanliness attitudes remained (.81-.86 SD). Williams, Turkheimer, Magee, and Guterbock (2008) administered the same 10 symptoms to a national sample. Black participants scored significantly higher than White participants ($d=.73$). Additionally, all participants were randomly assigned to complete the Multigroup Ethnic Identity Measure, either before ("ethnicity-salient") or after ("ethnicity non-salient") the contamination items. Black participants in the salient condition scored significantly higher than Black participants in the non-salient condition ($d=.29$). The authors speculated that increased endorsement of contamination symptoms among Black participants may reflect historical factors such as segregation of Black and White citizens—for example, out of fear that Black individuals would "contaminate" White individuals. They hypothesized that increased contamination concerns among Black participants may reflect what they termed *stereotype compensation*.

1.2. Examination in other/broader samples

The literature on OCD symptomatology in other groups within Western society is more limited, but suggests that Black individuals are not the only group who scores differently from White individuals. Williams, Turkheimer, Schmidt, and Oltmanns (2005) administered the Padua Inventory (PI) to non-clinical individuals self-identified as White ($n=587$), Black ($n=105$), or Hispanic ($n=67$), and to (primarily White) individuals reporting possible ($n=175$) or prior ($n=136$) OCD diagnosis. On PI Contamination, non-clinical Black and Hispanic participants scored significantly higher than non-clinical White participants ($ds=.42-.45$)—and of particular note–non-significantly differently from individuals who reported an OCD diagnosis ($ds=.09-.12$).

Washington, Norton, and Temple (2008) examined the PI-WSUR in Black ($n=150$), White ($n=230$), Hispanic ($n=180$), Southeast Asian ($n=163$), and South Asian/East Indian ($n=81$) samples. The two Asian groups scored significantly higher than all other groups on the PI-WSUR total score ($ds=.43-.77$); the other groups did not score significantly differently from one another. In contrast to previous findings, Black and White participants did not differ on PI-WSUR washing ($d=.26$) or any other subscale ($ds=.00-.10$). Conversely, the Hispanic and both Asian groups scored significantly higher than White participants on Contamination/Washing ($ds=.19-.77$); the Southeast Asian participants scored significantly higher than any other group save the South Asian/East Indian participants on this scale. Of note, elevated scores for Southeast Asians did not correspond with increased OCD symptom severity on the self-report YBOCS. Compared to White, Black, and South Asian/East Indian participants, Southeast Asians obtained weaker correlations between the PI-WSUR Total and YBOCS ($r=.40$ vs. $rs=.57-.65$) and, compared to South Asian/East Indian participants, weaker correlations between Contamination/Washing and YBOCS ($r=.25$ vs. $r=.50$).

Extending this research to include obsessive beliefs, Wheaton, Berman, Fabricant, and Abramowitz (2013) administered the DOCS and the Obsessive Beliefs Questionnaire (OBQ) to Asian ($n=116$), Black ($n=215$), Hispanic ($n=72$), and White ($n=1199$) students. Asian and Black participants reported more contamination symptoms than did White participants ($ds=.31-.33$). Asian participants scored significantly higher than all other groups on the OBQ total score ($ds=.30-.38$), and significantly higher than White participants on all three OBQ subscales ($ds=.26-.38$). Group membership interacted with OBQ in predicting OCD symptoms. For example, Perfectionism/Certainty was a stronger predictor of Contamination for Asian participants than for White participants, and a stronger predictor of Unacceptable Thoughts for Asian participants than for Black or Hispanic participants. Perfectionism/Certainty was a weaker predictor of Contamination for Black participants than for all other groups. Our view of these data is that such basic analyses are needed to better understand how different groups may perform on key domains and to establish the knowledge base in multiple samples, using multiple instruments.