Obsessive-Compulsive Disorder:
Etiology, Phenomenology, and Treatment

Caleb W. Lack, Editor
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Chapter Four

Cultural Manifestations of Obsessive-Compulsive Disorder

Monnica T. Williams & Ashleigh Steever

Obsessive-compulsive disorder (OCD) is a severe anxiety disorder involving distressing obsessions and repetitive compulsions. Obsessions are intrusive, unwanted thoughts, images, or impulses that increase anxiety, whereas compulsions are repetitive behaviors or mental acts used to decrease anxiety. OCD is highly disabling, with nearly two-thirds of those afflicted reporting severe role impairment (Ruscio, Stein, Chiu, & Kessler, 2010).

In the United States, the National Comorbidity Survey Replication (NCS-R) showed that approximately 1.6% of the population met criteria for OCD at some point in their lives (Kessler, Berglund, et al., 2005), with 1% of the sample meeting criteria within the last year (Kessler, Chiu, Demler, Merikangas, & Walters, 2005). The prevalence of OCD appears to be roughly consistent across ethnic groups in the US. For example, a recent epidemiological study of African and Caribbean Americans showed an OCD lifetime prevalence of 1.6% (Himle, et al., 2008). Epidemiologic studies conducted in other countries find similar rates cross-nationally (Weismann et al., 1994), as presented in Figure 1. The rates range from 0.3% in Brazil to 2.7% in Hungary. Based on the current world population (US Census Bureau, 2011), it can be estimated that 112 million people worldwide are afflicted with OCD during their lifetime.

Although many with OCD worry about cleanliness, symmetry, arranging, and perfectionism, OCD is a complex disorder that can manifest itself in a variety of symptom dimensions, including unacceptable thoughts, ruminations about morality, and hoarding (e.g., Bloch et al, 2008; Williams et al., 2011). It is important that cultural differences be taken into account when conducting psychopathology research, as culture can have profound effects on the manifestation of psychopathology, particularly in a disorder as multi-faceted as OCD. Culture can be defined as a set of attitudes, behaviors, and symbols shared...
by a large group of people that is usually communicated generationally (Shiraev & Levy, 2010).

The aim of the current study is to present a survey of the cross-cultural manifestation of OCD worldwide, based on a systematic review of the psychological literature. Critical summaries and analyses were taken of featured texts and compiled to illustrate differences and similarities in symptom presentation cross-culturally. We include an examination of differences found based on factors such as ethnicity, nationality, and religion. In the United States, OCD tends to be regarded by laypeople as a quirky disorder that results in excessive cleaning, checking, and arranging. Preconceived notions about this disorder may affect the symptom profiles of treatment-seeking samples (Sussman, 2003). Therefore, we present findings from epidemiological studies whenever possible, followed by findings from large national multi-site studies and meta-analyses. When such studies are not available for a given population, findings are presented from single site studies.

**OCD in European Americans & Western Cultures**

An investigation of OCD in the US by the National Comorbidity Survey Replication (NCS-R; Ruscio et al., 2010), found a wide range of symptoms, illustrated in Table 1. This was an epidemiological sample that was assessed for psychopathology using a computer-guided structured interview. It should be noted, however, that the symptom categories used in the NCS-R were not empirically derived; rather, they represent symptoms commonly reported by individuals diagnosed with OCD. These findings are subject to a number of study limitations, including a small sample size (N=73), problems with the computerized data collection procedures, and the lack of a clear categorical distinction between obsessive and compulsive symptoms.

Additional information about symptom profiles can be garnered from clinical samples. Symptom distributions obtained from the DSM-IV Field Trial of OCD, a large treatment-seeking sample (N=431; Foa, Kozak, Goodman, Hollander, Jenike, & Rasmussen, 1995) differed from NCS-R findings. For example, the data from the NCS-R shows that 62.3% reported Hoarding as a symptom while in the DSM-IV Field Trial sample this symptom was only reported by 4.8% of the participants. This same trend is seen again with the symptom of Checking, with only 28.2% of the sample reporting it versus 79.3% in the NCS-R sample. Moreover, the symptom of Ordering was only reported by 5.7% of the DSM-IV Field Trial participants, while in the NCS-R data set it was ten times as prevalent at 57%.
Table 1

<table>
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<tr>
<th>Distribution of OCD Symptoms in the NCS-R</th>
<th>% of OCD Cases Reporting each Symptom</th>
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<tbody>
<tr>
<td>Checking</td>
<td>79.3</td>
</tr>
<tr>
<td>Hoarding</td>
<td>62.3</td>
</tr>
<tr>
<td>Ordering</td>
<td>57.0</td>
</tr>
<tr>
<td>Moral</td>
<td>43.0</td>
</tr>
<tr>
<td>Sexual/religious</td>
<td>30.2</td>
</tr>
<tr>
<td>Contamination</td>
<td>25.7</td>
</tr>
<tr>
<td>Harming</td>
<td>24.2</td>
</tr>
<tr>
<td>Illness</td>
<td>14.3</td>
</tr>
<tr>
<td>Other</td>
<td>19.0</td>
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Note. Totals exceed 100% given that each participant was allowed to choose multiple obsessions and compulsions.

These differences are partially accounted for by differences in study methodology and category classification. The DSM-IV Field Trial reported percentages based on the total number of primary symptoms reported by participants. Additionally, Ruscio et al. drew from a community-derived sample whereas Foa et al. utilized clinical samples. Thus, caution must be taken when generalizing from one study to the other, given that the treatment-seeking individuals in the Foa et al. study may not be representative of the OCD population as a whole. Secondly, methodology differed with regard to diagnostic procedures. Ruscio and colleagues utilized the World Health Organization’s Composite International Diagnostic Interview (CIDI 3.0; Kessler & Üsütun, 2004), intended to be administered by lay-persons, whereas Foa and colleagues used the OCD section of the Structured Clinical Interview for DSM-III-R (SCID; First, Spitzer, Gibbon, & Williams, 1997) and an expanded version of the Yale-Brown Obsessive Compulsive Symptom Checklist (YBOCS-SC; Goodman et al., 1989), which is administered by clinicians experienced with OCD.

Most studies of symptom dimensions in US samples utilize the YBOCS-SC, as it includes a comprehensive list of obsessions and compulsions that represent the majority of OC symptoms observed clinically in Western samples (Goodman et al., 1989). Since its development, there have been several attempts to establish an empirically-based classification system that corresponds to the symptoms listed within it. Baer (1994) was the first to conduct a principal components analysis
(PCA) of the 13 major Y-BOCS-SC symptom categories. Three factors were identified: Symmetry/Hoarding, Contamination/Cleaning, and Pure Obsessions. Pure Obsessions corresponded to individuals with religious, aggressive, and/or sexual obsessions, for whom no compulsions were identified. In a meta-analysis of 21 clinical studies involving 5,124 participants, Bloch, Landeros-Weisenberger, Rosario, Pittenge, and Leckman (2008) found few differences with respect to symptom dimensions cross-culturally, especially among the three quarters of the studies (76%) from Western nations. Still, while most of those studies found a four-factor model, more recent studies that have included other types of compulsions, such as mental compulsions and reassurance, tend to find five specific dimensions: Contamination/Cleaning, Hoarding, Symmetry/Ordering, Taboo Thoughts/Mental Compulsions, and Doubt/Checking (e.g., Abramowitz et al., 2003; Pinto et al., 2007; Williams et al., 2011).

In Western cultures, it is widely believed that OCD is a mental disorder caused by biological factors (Coles & Coleman, 2010). Washing, checking, and symmetry related dimensions are more quickly recognized as OCD symptoms than aggressive, religious or sexual symptoms. It also appears that the taboo obsessions are less well-accepted, which could lead to delays in treatment seeking or hiding symptoms due to increased fears of stigma and shame (Simonds & Thorpe, 2003). Thus it is possible that this symptom presentation is underrepresented in the treatment-seeking population. Alternately, it could be that people with these symptoms may be more motivated to seek treatment due to the high-levels of distress caused by such thoughts (e.g., Williams, Wetterneck, Tellawi, & Duque, in press). More work is needed to determine the impact of these issues on help-seeking.

**OCD in African Americans**

Until recently, not much was known about African Americans with OCD, as US ethnic minorities have been underrepresented in many types of OCD studies, including the factor analytic studies included in meta-analyses such as those described above (Williams, Powers, Yun, & Foa, 2010). Hatch, Friedman, and Paradis (1996) were among the first to report their observations about OCD in African Americans in a naturalistic study of treatment-seeking adults in an urban clinic. The authors noted differences in treatment-seeking patterns, as only 2% of Black patients out of their entire clientele were diagnosed with OCD. This could be attributed to a lack of treatment-seeking in African Americans, who instead tended to obtain help from informal social networks such as members of the clergy. It is also possible that OCD may be misdiagnosed in African Americans, especially in cases where the obsessional content is unusual. African Americans tend to be over diagnosed with psychotic disorders compared to European Americans and are more likely to hospitalized, even after controlling for severity.
of illness and SES (Snowden, Hastings, & Alvidrez, 2009; Whaley & Hall, 2009). Thus, unusual symptoms may be considered symptoms of psychosis rather than OCD (i.e., Ninan & Shelton, 1993).

New insights into African American health have been uncovered through a series of investigations sponsored by the Program for Research on Black Americans. The National Survey of American Life (NSAL; Heeringa et al., 2004) is the most in-depth study of mental health disorders in African Americans and other U.S. racial and ethnic minorities ever completed. The study primarily drew from three nationally representative adult samples, including African Americans (N=3,570), Blacks of Caribbean descent (N=1,623), and Non-Hispanic Whites (N=1,006). In examining OCD specifically in this group, Himle et al. (2008) found that 1.6% met diagnostic criteria for the disorder. OCD is highly associated with overall mental health impairment, and the majority of the participants also met the criteria for at least one other lifetime psychiatric disorder, with 93.2% of African Americans and 95.6% of Caribbean Blacks also experiencing symptoms for major depressive disorder, social phobia, and generalized anxiety disorder, among others. This is not unexpected given that diagnoses of OCD have often been found to overlap with other psychological disorders (Ruscio et al., 2010; Saleem & Mahmood, 2009).

Williams, Proetto, Casiano, and Franklin (2012) conducted the largest study of clinically diagnosed African Americans with OCD to date (N=75). In studying the characteristics of the sample, six discrete symptom dimensions were identified, which included Contamination/Washing, Hoarding, Sexual/Reassurance, Aggression/Mental Compulsions, Symmetry/Perfectionism, and Doubt/Checking. Factors identified were similar to those of previous studies in primarily White samples, however African Americans with OCD reported contamination symptoms at double the rate of European Americans, and were twice as likely to report excessive concerns about animals. These findings were compared to symptom data from the NSAL study, which also noted increased contamination concerns (Williams, Elstein, Buckner, Abelson, & Himle, 2012). The study found cultural differences with respect to cleanliness and animal concerns, which is consistent with findings among non-clinical samples (Williams, Abramowitz, & Olatuni, 2012; Williams & Turkheimer, 2007). A higher level of obsessions and compulsions linked to cleanliness may be culturally relevant as African Americans historically experienced segregation, where it was thought that European Americans would be contaminated through close contact or sharing items (i.e., drinking fountains, swimming pools, etc.) Additionally, Williams et al. found that participants with a lower SES reported greater concern with contamination, which is consistent with the hypothesis that lower incomes could be associated with more exposure to contaminants, resulting in greater
contamination concerns and cleaning behaviors in this cultural group (Williams & Turkheimer, 2007; Williams, Abramowitz, & Olatunji, 2011).

OCD in Western Christian Samples

Abramowitz, Deacon, Woods, and Tolin (2004) conducted a study of undergraduates to better understand the relationship between Protestant religiosity and an assortment of OCD symptoms, such as washing, checking, and the importance of controlling one’s thoughts. The participants were given self-report questionnaires to determine their degree of religiosity and the prevalence of OCD symptoms. The resulting feedback divided the students into three groups of varying religiosity (from atheist/agnostic to highly religious). Students reporting high levels of religiosity reported more obsessional symptoms than the moderately religious and atheist/agnostic subgroups (Abramowitz et al., 2004). The highly religious participants also reported greater levels of certain cognitions like the importance of their thoughts as well as the need to control them relative to the reports of the other participants. The authors referenced the Book of Matthew in the Bible with respect to the Sermon on the Mount, in which Jesus Christ makes the assertion that the thought of committing a sinful act is equal to having already done it. This could help explain the importance placed on thought control for the highly religious participants.

In a similar study by Sica, Novara, and Sanavio (2002), the aim was to understand the role of religion in OCD phenomenology. A community sample of Italian participants ascribing to the Catholic faith was surveyed for degree of religiosity and prevalence of certain OCD cognitions and obsessions. Those participants who reported a high or medium degree of religiosity also reported high levels of obsessions like the importance of thought control compared to those reporting low levels of religiosity. The authors cited Catholic precepts such as the equality of thoughts and behaviors, as well as Catholic teaching about purity and perfectionism as the reason for these findings. In sum, the findings indicate differences with respect to the importance of thought control and the idea that thoughts and actions are interchangeable.

OCD in Jewish Communities

Scrupulosity is a form of OCD in which individual obsessions are focused on moral or religious issues like sin and divine retribution (Huppert, Siev, & Kushner, 2007). As Judaism is a religion oriented around traditions and customarily focuses on rituals and laws that are fundamental to Jewish life, many Jewish OCD sufferers experience scrupulosity and will rely upon rabbinical help with their symptoms. Huppert et al. (2007) found that in treating Jewish patients who suffer from scrupulosity, there may be difficulties in distinguishing between religious
rituals and compulsive behaviors. What is normally a religious ritual, if found in the extreme and outside of the religious context, could be scrupulosity rather than simply increased religious devotion.

Rosmarin, Pirutinsky, and Siev (2010) conducted a community study that examined attitudes towards OCD symptoms in Orthodox and non-Orthodox Jews in the US. Participants were given descriptions of either religious (scrupulosity) or non-religious OCD symptoms. When confronted with the religious themes in the descriptions (such as excessive prayer, repeated crossings, and sky-gazing toward God) the Orthodox participants more often recognized the scrupulosity as OCD and recommend psychological treatment than did the non-Orthodox participants. This was in direct opposition to the hypothesis set forth in the study, which was that Orthodox Jews, because of the value they place on careful adherence to religious laws, would be less likely to recognize scrupulosity than the Non-Orthodox Jews and less likely to recommend some form of treatment. One reason could have been that the Orthodox participants had a more stringent awareness of normal religious practices due to a more “strict adherence to religious law” and were thereby able to identify scrupulosity more easily. Conversely, the non-Orthodox participants may have been less likely to identify scrupulosity as OCD or recommend psychological evaluation due to not wanting to offend other religious individuals or “disrespecting bona fide religious standards” (Rosmarin et al., 2010).

OCD in Middle Eastern Islamic Cultures

Several studies about the cultural components of OCD and its symptom expression have been conducted in Middle Eastern countries where there is a high Islamic population. In the first study of its kind to originate in Saudi Arabia, Mahghoub and Abdel-Hafeiz (1991) found strong religious themes in the OCD symptomatology of a conservative Muslim clinical sample. The most often reported symptoms were obsessions with prayers and washing (50%), contamination (41%), and faith (34%). Obsessions with prayers and washings could have stemmed from religious practices that included praying and washing oneself systematically in a practice called Al-woodo, as the body must be clean before prayers can be made. The authors cite the frequency of these actions, and the need for their proper execution as being possibly causative of repeating, washing, and checking compulsions that were noted at 50%, 37%, and 31%, respectively in the sample.

A study by Okasha, Saad, Khalil, and Dawla (1994) reported the content of obsessions in a clinical Egyptian sample to be most often religious in nature, with 60% reporting obsessions with religious themes. To explain this, the researchers cited the tendency of the participants to feel the need to ward off evil spirits
through various religious rituals and repeated sayings. This could account for the high frequency of religious obsessions as well as repeating compulsions, which were reported by 67.7% of the participants. The majority of participants in this study were rated on the Y-BOCS as having moderate to severe symptom presentation, which is said to indicate an especially high tolerance in Egyptian patients for psychiatric morbidity. The study also found that in most cases the mental health professional is a last resort for help, with the participants instead seeking help in an informal social network of native healers, friends, elderly family members, and religious people and then a general practitioner (Okasha et al., 1994). These same types of help-seeking attitudes have been observed in the African American treatment-seeking community (Hatch et al., 1996) and suggest a preference for culturally and religiously relevant assistance with issues concerning psychological disorders including OCD.

In a similar non-clinical study by Yorulmaz and İşık (2011), the results were much the same. The majority of the participants, who were of Turkish descent, reported high levels of obsessions related to fear of contamination and cleanliness. The dominant religion in Turkey is Islam, which the researchers described as “ritualistic and rule-based,” and as such the participants were subject to certain rigid beliefs about purity and cleanliness. The authors in particular described an aspect of Islam known as “waswas,” which is religious doubt, and how this concept could affect the content of the obsessions reported.

Participants in the study also experienced what is known as Thought-Action Fusion (TAF). Also noted in Western cultures (Abramowitz et al., 2004), this symptom highlights the importance of thoughts and the need to control them. This could be explained by the prevalence of “superficial similarities” between certain beliefs in Islam and characteristics of OCD. In Yorulmaz and İşık (2011), although all of the participants reported an Islamic affiliation, the differences found in symptom presentation here are culturally significant because they exist between participants of reportedly equivalent ethnic descent. The participants who had lived in Turkey since birth reported higher levels of symptom expression, particularly with respect to contamination/cleaning, when compared to Bulgarian-born Turkish participants, and Turkish remigrants. The authors cite the possibility of the rigorous Islamic institution in Turkey as being explanatory of the higher levels of symptomatology for those participants who were born and raised there.

Ghassenzadeh, Mojtabai, Khamseh, Ebrahimkhani, Issazadegan and Saif-Nobakht (2002), found the most commonly reported symptoms in their Iranian sample to be obsessive doubts and indecisiveness, as well as a washing compulsion. There were also marked differences in reported symptoms between males and females, with males reporting blasphemous thoughts and compulsions concerning orderliness and females reporting greater concerns with impurity and
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contamination as well as obsessive thoughts centered on personal impurity and washing compulsions. The authors noted that 70% of the female participants were housewives. This could possibly influence the content of obsessions as cleaning would be a part of daily chores associated with housework. The authors also note the strong cultural affiliation to religion in Iran and the spiritual symbolism of cleanliness and cleaning behaviors as a way to prepare oneself for daily prayers.

Al-Salaim and Loewenthal (2011) also found religious themes in the symptoms of a sample of 15 young women suffering with OCD in Saudi Arabia. There were trends in help-seeking behavior, with all of the participants reporting first seeking assistance from a religious leader in the community. This was described as either a man with a long beard or a woman who covers her face, and was accompanied with the use of religious rhetoric (e.g., quoting the Qur’a’n or teachings of the prophet Muhammad). This was preferable, as a religious professional was considered less likely to manipulate or harm a patient. One of the causes of OCD as reported by some of the participants was an “evil eye,” which is described as being caused by a person admiring one of his or her own possessions. The authors also found that religious symptoms were reported in the sample as being more disturbing than other OCD symptoms, and in some instances were the reason for seeking help with the disorder.

In Bahrain, where the state religion is Islam, Shooka, Al-Haddad, and Raees (1998) found religious themes in both obsessions and compulsions in a clinical sample, with religious content in 40% of the symptoms. Obsessional thoughts, the most commonly reported form of obsession (68%), were followed by an obsession with images (26%) and doubt (12%). Content of obsessions also reflected obsessions with dirt/contamination and sexual themes, at 38% and 32%, respectively. Shook et al. also found a disproportionate male to female ratio in the sample with women making up 74% of participants as well as higher levels of reported severity of symptoms in females. The authors believed this could have influenced the help-seeking behaviors of the women in the study as women would have sought help for more severe symptoms. There were also higher levels of the obsession with cleaning and washing in the women, a trend we have seen in other cultures (Labad et al., 2008; Jaisoorya, et al., 2009); it is also worth noting that 81% of the female sample worked in the home, similar to Ghassenzadeh et al. (2002).

Saleem and Mahmood (2009) found the most frequently reported compulsion in a clinical sample of participants from Pakistan, a country where the dominant religion is also Islam, to be hand-washing. This compulsion was reported by 97% of participants, and 82% experienced a fear of germs. This is, again, a compulsion related to cleanliness and purity. The researchers discussed an aspect of Islamic culture called “Napak,” which is a feeling of contamination that includes religious connotations of being unclean or unholy. Two-thirds (67%) of the participants in
this study added Napak to the questionnaire as an item within the broader category of Contamination. When a Muslim is in the state of Napak, he is unable to take part in religious rituals until he has cleaned himself systematically in an action is called ablution.

An emphasis on cleanliness, purity, and religion appears to be normative in cultures with Islamic religious backgrounds. It is important to note, however, that when the actions surrounding such beliefs are committed in excess, and the beliefs become obsessions, they can then become culturally significant aspects of OCD symptomatology.

**OCD in India**

Studies in India have reported typical OCD obsessions to include contamination, aggression, symmetry, sexual, religious, and pathological doubt. Girishchandra and Khanna (2001) found that the most commonly reported symptoms in a clinical sample of 202 Indian participants were doubts about having performed daily activities (64.9%) and contamination concerns about dirt and germs (50%). In a comprehensive review of the Indian literature, Reddy, Jaideep, Khanna, and Srinath (2005) also observed that contamination concerns and pathological doubt were highly prevalent. Reddy et al. found the lifetime prevalence rate of OCD to be approximately 0.6% in India. This is relatively low compared to the lifetime prevalence rate in other countries (Figure 1). Girishchandra and Sumant (2001) also noted a disproportionate number of males in the study compared to females at a ratio of over two to one.

Jaisoorya, Reddy, Srinath, and Thennarasu (2009) found differences in in their clinical study with regard to symptom presentation between men and women of an Indian sample. Male participants had a tendency to report sexual and symmetry obsessions coupled with checking and bizarre compulsions, while symptoms surrounding dirt, contamination, and cleaning were reported more often by females, a finding similar to Western samples (e.g., Labad et al., 2008). The authors commented that women were more often subjected to unclean conditions and as such could be more concerned with contamination than males. In Western samples, it has been suggested that biological make-up and brain chemistry, specifically greater numbers of steroid hormone receptors the female brain may be causing a sexual dimorphism (physical difference), which could possibly explain the higher level of cleaning and contamination concerns (Labad et al., 2008). The authors also mentioned that environmental differences could mediate the differences found, such as females being socialized to do a greater share of the domestic work such as housecleaning.
The majority of participants in the study by Jaisoorya et al. were men, a phenomenon also noted in Girishchandra and Sumant (2001). Historically, in Western samples, there has been no difference in help-seeking between men and women with OCD (Goodwin et al., 2002; Torres et al., 2007). In the Indian sample, the authors commented that this was possibly due to differences in male versus female societal status, and greater access to medical care as a result.

In a study by Chowdhury, Mukherjee, Ghosh, and Chowdhury (2003) the authors found an association between a culture bound disorder termed “puppy pregnancy” and OCD. Cases uncovered in rural West Bengal India describe fears of being pregnant with a canine embryo after having been bitten, and symptoms are comparable to those found in OCD, unusual content notwithstanding. Puppy pregnancy includes a fear of internal contamination (from the puppy fetus), disability (impotence due to damage to internal sexual organs), and death. One case reported a symptom reminiscent of checking after having observed a dog licking milk cans and being bitten by the same dog. Thereafter, the subject was fearful that he was being chased by a dog, and would check all milk cans, sure that they had been licked by a dog. The authors also noted obsessive thoughts involving fear of dog bites and avoidance.

*Figure presents the lifetime prevalence rates of OCD as reported cross-culturally (Fontenelle et al., 2006; Himle et al., 2008; Ruscio et al., 2010; Reddy et al., 2005).*
In general, however, research to date has found few differences in symptom dimensions in India from those found in studies conducted in Western societies. One notable exception is Bloch et al. (2008), who noted some differences in symptom presentation for Indian participants when compared to studies of White and Non-White clinical samples. In Indian studies, the five-factor model of symptoms included one described as a need to touch, tap, and rub, which could possibly be associated with cultural traditions involving touching (i.e., touching the feet of elders as a sign of respect).

**OCD in Indonesia**

In Bali, which is primarily Hindu, Lemelson (2003) conducted a study of 19 patients suffering from OCD to understand the degree to which Balinese culture affected the illness experience. The most common obsession was a need-to-know obsession, which was literally the necessity of knowing the identities of passers-by. Lemelson also found obsessions surrounding themes of magic, witchcraft, and spirits, which are all religious themes entwined in the Balinese culture. These findings are different from those seen in Western studies where typical symptoms include concerns about contamination, hoarding, and checking (e.g., Foa et al., 1995).

As a caveat, it is important to note that other than in Bali, where the practiced religion is Hindu with emphases on magic, witchcraft, and ancestor worship, the main religious affiliation of Indonesia is Islam. Therefore the phenomenology of OCD in other parts of Indonesia may be more similar to findings in Islamic cultures.

**OCD in Hispanic and South American Samples**

To date there have been few studies conducted that address OCD with respect to Hispanic and South American populations. Studies that have compared prevalence rates of OCD between Latino and European American populations in the US have yielded inconsistent findings. For instance, one study demonstrated no significant differences in prevalence rates between European Americans and Mexicans (Karno et al., 1989), while another found significant differences between European Americans and Puerto Ricans (Weissman et al., 1994). Studies of OCD in Latin America note a lifetime prevalence rate of 1.4% in Mexico City, 1.2% in Chile and 3.2% in Puerto Rico (Canino et al., 1987; Caraveo-Anduaga & Bermudez, 2004; Vicente, 2006).

Although there have been few studies of symptom dimensions in Hispanic Americans, one study did note greater contamination concerns in a non-clinical sample (Williams et al., 2005). In a clinical study conducted in Costa Rica,
participants reported lower levels of symptom severity, including lower levels of functional impairment and lesser amounts of perceived distress, when compared to their US counterparts in the same study (Chavira, Garrido, Bagnarello, Azzam, Reus, & Mathews, 2008). The study cited a number of culturally relevant reasons for the differences, including a possible lack of psychosocial stressors in the Costa Rican sample, as the participants were from a primarily agrarian region of the country. In addition, the lower levels of perceived stress were found to possibly reflect the ability of the participants to “accommodate” their symptoms. For example, one participant reported avoiding driving due to the fear of harming others and this was easily avoided due to the ease of access in Costa Rican society (Chavira, et al., 2008).

A study conducted on a clinical sample in Rio de Janeiro outlined differences with respect to content of obsessions, as the most commonly reported obsessions included the theme of aggression, (69.7%), followed by contamination (53.5%) (Fontenelle, Mendlowicz, Marques, & Versiani, 2004). This is important because in many other cultures issues of contamination seem to overshadow others in the spectrum with respect to the OCD symptom manifestation (i.e. Matsunaga et al., 2008). The authors discussed possible reasons for the findings of their study, and cited the climbing rates of mortality and morbidity resulting from violent causes, and that the population has likely prioritized avoiding violence. It is important to note, however, that this study is from a single site and reflects the surrounding and, in the case of Brazil, the metropolitan culture of the participants.

In a clinical study in Mexico by Nicolini, Orozco, Giuffra, Páez, Mejía, Sánchez de Carmona, Sidenberg, and de la Fuente (1997), contamination obsessions were reported by 58% of the clinical sample, making it the most common. Sexual and aggressive obsessions followed, at 31% and 13%, respectively. The proportion of men to women in the study was uneven with only approximately 37% of the sample being men. The authors, citing an earlier study, considered a cultural phenomenon in which Mexican men have the tendency to deny having a mental illness. An interesting, but marginally reported obsession, was one concerned with “treasuring,” reported by 3% of the sample. Treasuring is described as keeping things (i.e., the hair from a hairbrush), and can be understood to be similar to hoarding. For an excellent review of OCD in Hispanic populations, see Wetterneck et al. (2012).

OCD in East Asia

Matsunaga et al. (2008) noted the most common obsessions in a clinical Japanese sample as fear of contamination (48%) followed by obsessions with symmetry or exactness (42%) and aggression (36%). The most common compulsive symptoms reported were checking and washing at 47%, followed by repeating rituals at 31%.
The authors’ focus was more psychobiological than cultural, and the authors described “transcultural stability” in the symptom presentation of OCD. However, the researchers only compared their results with Western studies rather than results from other cultures.

The lifetime prevalence rate for OCD in Taiwan is 0.7% (Figure 1). In the first study of its kind from Taiwan, Juang and Liu (2001) found in a group of 200 outpatient Taiwanese participants the most commonly reported obsessions to be fears of contamination, pathological doubt, and a need for symmetry, at 37%, 34%, and 19%, respectively. The most commonly reported compulsions consisted of checking, washing, and orderliness/precision.

Kim, Lee, and Kim (2005) determined symptom dimensions, based on a factor analysis of the Y-BOCS-SC checklist in a clinical genetic study of Koreans with OCD. The study outlined the factors as hoarding/repeating, contamination/cleaning, aggressive/sexual, and religious/somatic. The latter two dimensions were described as “pure obsessional” due to a lack of identified corresponding compulsions. Most Western studies group these two into a single component termed unacceptable/taboo thoughts (Bloch et al, 2008). The study also grouped the hoarding obsession together with repeating and counting compulsions, a combination not seen in a majority of Western samples. Moreover, unlike the Western samples in Bloch et al. (2008), the Korean sample did not include in any dimension an obsession with symmetry, which is also at odds with other studies originating in Asia that have shown symmetry obsessions to be among those most highly reported (Matsunaga et al., 2008; Li, Marques, Hinton, Wang, & Xiao 2009).

In the first such study to originate in mainland China, Li et al. (2009) assessed 139 patients with OCD. The study sought to determine if the five symptom dimensions documented in other studies (unacceptable/taboo thoughts, symmetry/ordering, contamination/cleaning, and hoarding) were applicable in this particular culture. The most common symptoms reported were obsessions with symmetry and contamination at 67.6% and 43.2%, respectively, followed by aggression at 31.7%. Li et al. cited a cultural propensity towards harmonious interpersonal relationships due to the presence of Confucianism and its precepts in China as a possible explanation for fewer reports of aggression when compared to other cultures. The authors also noted a disproportionate ratio of males to females in the demographics of the study (almost 2:1). It was unclear whether this could have possibly been mediated by cultural norms regarding help-seeking behavior in women as the authors noted that the males of the sample seemed more willing to participate than their female counterparts. This same trend has been observed in a number of Indian samples as well (Jaisoorya et al., 2009; Girishchandra & Sumant, 2001).
In Eastern cultures such as China and Japan there is a cultural emphasis on conformity, collectivism, and harmony (Li et al., 2009). An emphasis on symmetry may reflect these tenets to some degree, and cultural norms involving conformity are instilled from an early age in some Asian cultures. Nonetheless, there are some important differences in symptoms between Chinese and Japanese with OCD, as reported by Liu, Cui, and Fang (2008). After studying two groups of patients hospitalized with OCD, the authors concluded that aggressive and contamination obsessions were more common in Japanese than Chinese OCD sufferers, while religious and symmetry/exactness obsessions are more common among Chinese patients. Likewise, Japanese OCD patients were more likely to have cleaning/washing and ordering/arranging compulsions, while Chinese counterparts were more likely to have checking compulsions. Perhaps these differences are reflective of the greater emphasis on symmetry in Chinese culture than Japanese culture (Li et al., 2009; Kim et al., 2005).

Discussion

Through this review we have described differences in OCD symptomatology that appear to be associated with culture. Obsessional content often stems from that which is culturally relevant, resulting in a profound effect on symptomatology that cannot be ignored.

Religious Differences

In Christian samples the most often reported symptoms were obsessions with contamination and thought control. There was also an emphasis on perfectionism in the Catholic subgroup. As discussed earlier, the presence of religious ritual in the symptomatology of OCD is generally a manifestation of that ritual in excess of cultural norms. In the Jewish subgroup, the content of obsessions was also of a religious nature (Huppert et al., 2007), and involved themes of morality and divine retribution. There were differences in symptom recognition and thus help-seeking behaviors between Ultra-Orthodox Jews and their less observant counterparts. In Middle Eastern cultures we see high Islamic affiliation and symptom dimensions that reflect this (e.g., Okasha et al., 1994). The content of obsessions in the Islamic subgroup was centered on purity and religious themes (e.g., Okasha et al., 1994; Abramowitz et al., 2004). The obsession with physical cleanliness in the symptomatology of highly religious cultures could be a manifestation of the emphasis on spiritual purity within the society. OCD in Near Eastern countries tends to also reflect religious beliefs, as well as familial and societal values (e.g., kissing the feet of respected elders) that are an integral part of the culture. Jaisoorya et al. (2009) cited a possible link between Hinduism, the dominant religion in India, and the prevalence of obsessions with cleaning and
contamination found in multiple other studies (Girishchandra & Sumant, 2011; Reddy et al., 2005).

Regional Differences

Western studies have shown symptom dimensions that are generally centered around a four or five factor model, with an emphasis on contamination/cleaning, hoarding, symmetry/ordering, taboo thoughts/mental compulsions, and doubt/checking (Abramowitz et al., 2003; Blotch et al., 2008). There is, however, a dearth of literature concerning differences in symptom dimensions among ethnic minorities, such as African Americans (Williams et al., 2010). In Hispanic and Latin American groups, themes of contamination and aggression were prominent. Indian samples emphasized themes concerning contamination and pathological doubt, as well as differences in the symptom dimensions reported by men and women. In East Asian groups, there were greater concerns with contamination and symmetry. Cultural differences were noted between Japan and China, with China reporting greater needs for symmetry, and Japan reporting greater obsessions with contamination and aggression (Liu et al. 2008). In general, there seem to be thematic elements that cluster in certain regions and religious groups across the world.

Similarities in Symptoms

Most of the studies presented here exhibit some type of cross-cultural similarity in addition to noted differences. Almost all of the presented studies and surrounding cultures include contamination fears as a primary dimension (e.g., Nicolini et al., 1997; Okasha et al., 1994; Reddy et al., 2005). Fear of contamination manifests as hand washing compulsions, prevalent in many cultures (Buckner et al., 2011; Okasha et al., 1994; Kim et al., 2005; Jaisoorya et al., 2009). Each of the 21 studies included in the meta-analysis performed by Bloch et al. (2008) contained a symptom factor that included hoarding compulsions and obsessions, although hoarding was not emphasized in any studies cross-culturally. Each of these symptoms was also found to in the NCS-R, thus it is not surprising that some authors cite a “transcultural stability” in the symptomatology of the disorder (Matsunaga et al., 2008). Matsunaga et al. suggest biology as a determining factor in the expression of specific OCD symptoms, and highlight similarities across cultures. The presence of symptom dimensions such as contamination fears and hoarding that are salient features in multiple cultural contexts supports this hypothesis. Additionally, Kim et al. (2005) found differences between the two genotypic groups with respect to religious/somatic obsessions, which provide additional evidence for a biological basis for symptom dimensions.
Limitations

It should be noted that the findings herein are limited by the available literature. In some cases the studies presented are single-site studies and limited in sample size. Furthermore, many of the studies presented are limited based upon use of the Y-BOCS-SC in determining symptom dimensions. The individual items that comprise the measure were selected based on clinical observations in Western cultures. Furthermore, the a priori structure of the Y-BOCS-SC measure causes it to rely upon fixed categories of symptoms instead of individual symptoms as they are presented. Thus the Y-BOCS-SC could potentially restrict recognition of cross-cultural differences in symptomatology.

Future Directions

The importance of cultural context in the diagnosis and treatment of OCD is undeniable. Limited extant literature has restricted this study to some measure, and more research is needed to determine the extent to which culture and beliefs can magnify, diminish, or change the symptom presentation and experience of OCD for those diagnosed. There is also a dearth of research in certain regions and cultures that should be addressed. For example, there is no literature available from an African sample except the highly Muslim Egyptian region and White South Africa (e.g., Stein et al., 2008), as well as a lack of literature pertaining to differences in the symptom presentation of Hispanic Americans. The implications herein are important for diagnosis and the development of empirically supported treatments for individuals of different cultural backgrounds as well as for determining the applicability of contemporary literature to diverse cultural groups.

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