



## Latinos with obsessive-compulsive disorder: Mental healthcare utilization and inclusion in clinical trials

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### ARTICLE INFO

#### Article history:

Received 23 August 2011

Received in revised form

8 December 2011

Accepted 12 December 2011

Available online 8 January 2012

#### Keywords:

Obsessive-compulsive disorder

Latino

Hispanic

Recruitment

Help-seeking

Clinical trials

### ABSTRACT

Previous research has documented that ethnic minorities, particularly Latinos, obtain fewer mental health services than Caucasians (Kearney, Draper, & Baron 2005; Sue, Fujino, Hu, Takeuchi, & Zane, 1991). Conceivably, this may be due to a wide array of cultural issues (e.g., negative stigma attached to mental health, and language, socio-economic, and acculturation barriers), symptom disparities across Caucasian and Latino groups, or lack of effective outreach methods by clinicians and researchers. However, research is limited. As a result, Latinos may be insufficiently represented in clinical studies for OCD, making it unclear whether evidence-based treatments demonstrate the same efficacy and effectiveness for Latinos as has been demonstrated for Caucasians. The current study takes an in-depth analysis of 98 efficacy and effectiveness studies for OCD from across the Western hemisphere and reports the rates of Latino inclusion from each sample. Ninety clinical studies in the US and Canada, as well as eight clinical studies in Mexico and Central America were reviewed. Findings showed that only 11 (24%) US and Canadian studies included Latino participants, illustrating an overwhelming underrepresentation of Latinos in clinical studies for OCD. Further explanation of the results and their implications are discussed, along with suggestions for effectively improving access to mental health research and appropriate treatments.

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### 1. Introduction

Obsessive-compulsive disorder (OCD) affects people of all races, nationalities, and ethnicities. According to the National

Comorbidity Survey Replication (NCS-R), approximately 1.6% of the United States population meets criteria for OCD at some point in their lives (Kessler et al., 2005). OCD is characterized by obsessive thoughts or compulsive behavioral rituals to alleviate subsequent anxiety, often resulting in impairment throughout various aspects of social, academic, and occupational functioning (American Psychiatric Association [APA], 2000).

Previously considered a refractory disorder, researchers have progressively shown great success in eliminating or reducing symptoms of OCD through cognitive-behavioral therapy (CBT),

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particularly Exposure and Response Prevention (ERP), and pharmacological methods (Abramowitz, 2006; NICE, 2006). The combination of psychotherapy and pharmacotherapy has also shown good success across multiple meta-analyses, reviews, and comparisons of efficacy versus effectiveness studies (Franklin, Abramowitz, Kozak, Levitt, & Foa, 2000; Lam & Steketee, 2001).

Although there are efficacious treatments available for OCD, only 29% of patients suffering with the disorder receive treatment specifically for OCD (Ruscio, Stein, Chiu, & Kessler, 2010). One factor that may contribute to the misapplication or lack of access to OCD treatment is ethnic minority status (Goodwin, Koenen, Hellman, Guardino, & Struening, 2002). Many studies emphasize the importance of studying racial/ethnic factors related to obtaining treatment, as racial or ethnic minorities tend to underutilize mental health services compared to European-Americans (Kearny et al., 2005; Snowden & Cheung, 1990). Across minority groups, Latinos<sup>3</sup> have shown to be a group that is most likely to underutilize mental health services (Kearney et al., 2005; Sue, Fujino, Hu, Takeuchi, & Zane, 1991).

According to the US Census Bureau (2010), the Latino population in the US increased by 43% between 2000 and 2010 (Ennis et al., 2010). In fact, the high increase in Latinos accounted for over half of the total population increase in the US. However, despite the rapidly increasing rates of Latinos in the US, less than one in 20 Latinos with mental health issues obtains services from a mental health specialist (U.S. Department of Health and Human Services 2008). In a small pilot study of OCD in Mexican border towns, Olsen, Vera and Perez (2003) found that few Latinos completed or obtained effective treatment. In an epidemiological study of OCD in Mexico City, Caraveo-Anduaga and Bermudez (2004) found that more than 1200 participants diagnosed only with OCD did not seek treatment, and only 8% of OCD individuals with comorbid disorders obtained treatment. To date, Brazil is the only Latino country that has consistently demonstrated the effectiveness of OCD interventions within its population. Both CBT and pharmacological interventions have proven effective, with CBT showing greater success in long-term outcomes (Asbahr et al., 2005; Cordioli et al., 2003). However, the Brazilian subpopulation differs substantially from other Latino subpopulations in culture and language. Therefore, it is important that more Latino subpopulations (e.g. Mexican, Dominican, etc.) are examined before generalizing the results of one group to all.

In addition to treatment outcome studies, research on the prevalence of OCD and the presentation of obsessive-compulsive symptoms in Latino populations is scarce. Studies of OCD in Latin America have yielded 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 et al., 2006). However, the minimal number of studies that have compared prevalence rates of OCD across Latino and Caucasian populations have yielded inconsistent findings. For instance, one study demonstrated no significant differences in OCD prevalence rates between Caucasians and Mexican Americans (Karno et al., 1989) while another found significant differences between Caucasians and Puerto Ricans (Weissman et al., 1994). This suggests that symptom presentation may vary by Latino subgroup. However, given the dearth of research comparing prevalence rates across ethnic groups and subgroups, substantial conclusions cannot be drawn without further investigation.

Regarding the content of OCD symptoms across Latino regions, overall findings appear to suggest a predominance of contamination, symmetry, and sexual obsessions, as well as washing, checking, cleaning, and repeating compulsions (Chavira et al., 2008; Fontenelle, Mendlowicz, Marques, & Versiani, 2004; Nicolini et al., 1997; Petribu & Bastos, 1997). However, findings from cross-national epidemiological research indicate differences in OCD symptomology across Latino and Caucasian populations, particularly in the content of obsessions, which may be due to socio-cultural influences (Chavira et al., 2008; Fontenelle et al., 2004). For example, when compared to Caucasian samples, Costa Ricans rate higher on somatic and contamination obsessions while Brazilians rate higher on religious and aggressive obsessions (Chavira et al., 2008; Fontenelle et al., 2004). Disparities in symptom presentation may be a potential barrier to effective treatment, because less common symptoms may be missed by clinicians (Sussman, 2003).

Furthermore, some research has suggested that Latinos tend to somaticize psychological symptoms for anxiety and depression (Chavira et al., 2008; Guarnaccia, Martinez, & Arcosta, 2005). This may pose as a barrier to treatment as it may lead to increased misdiagnosis and influence Latinos to seek treatment from a primary care physician, rather than a mental health professional. In addition, standard treatment protocols for obsessions and compulsions in OCD (i.e., ERP) may not be appropriate for Latinos with OCD symptoms that manifest as somatic complaints.

Numerous studies have sought to explain the treatment disparities among Latinos with OCD, as well as factors that may contribute to the lower probability of obtaining effective treatment. In addition to symptom differences, the types of services typically sought by Latinos may be a factor preventing many Latinos from obtaining effective treatment. Research has shown that Latinos are more likely to seek help for mental health problems in a medical care setting rather than a mental health setting (Alegria et al., 2007; Vega et al., 1998). This reduces the likelihood that Latinos with OCD may receive evidence-based psychological treatments, such as ERP or pharmacotherapy.

Level of acculturation and immigration status may affect access to treatment as well as symptom presentation. Research has shown that non-US citizen immigrants are much less likely to obtain mental and medical health care services (Chen & Vargas-Bustamante, 2011; Shattell, Hamilton, Starr, Jenks, & Hinderliter, 2008). When separated by levels of cultural identity, those with a stronger cultural identity demonstrate lower levels of satisfaction and vice-versa (Redmond, Galea, & Delva, 2009). Similarly, foreign-born Latinos are less likely to utilize mental health services compared to their US-born contemporaries (Alegria et al., 2007; Vega, Kolody, & Aguilar-Gaxiola, 2001). The length of time living in the US is also associated with the use of mental health resources. Latinos that have lived in the US less than 5 years are significantly less likely to use mental health services than those living in the US for 6 years or more (Alegria et al., 2007). Such findings underscore the fact that Latinos are not a homogenous group, and that researchers and clinicians aiming to increase Latino participation should be aware of differences across subpopulations, acculturation levels, and immigration status.

In addition, low-income levels may also pose a barrier to treatment for Latinos, as Latinos are disproportionately financially disadvantaged, and, thus, less able to access specialty care compared to Caucasians (Alegria et al., 2002). As only 1% of licensed US psychologists are Hispanic, language continues to be another barrier to treatment, illustrating an urgent need for more Hispanic and Spanish-speaking professionals (Vega et al., 2007). Finally, cultural stigma against mental illness may cause Latinos to be reluctant to seek treatment. For instance, Nadeem et al.

<sup>3</sup> Although the terms "Latino" and "Hispanic" are used interchangeably in the literature (Ennis, Rios-Vargas, & Albert, 2010), the present study opts only to use the term "Latino" to refer to individuals of non-European, Spanish, or Portuguese descent.

(2007) found that immigrant African American women and Latinas were significantly more likely than US-born Caucasians to endorse stigma concerns related to mental health. Although numerous studies have examined factors that limit access to effective mental health treatments in Latinos, research has yet to fully investigate symptom presentation disparities, as well as factors that influence the development, maintenance, and treatment outcome of OCD in Latinos.

Furthermore, basic behavioral principles, which guide the basis and philosophy of most standard, evidence-based interventions, are considered to be consistent across culture and ethnicity. However, the various aforementioned cultural, linguistic, and socio-economic factors may influence how Latinos are impacted by the presentation and delivery of standard treatments, as well as subtle client–therapist interactions (Bernal, Jimenez-Chafey, & Rodriguez, 2009). Thus, it may be prudent for clinicians to assess for such disparities so that the presentation and delivery of standard treatments may be tailored appropriately for each client.

Currently, there is a dearth of research exploring and developing treatments that are effectively adapted for specific ethnic populations, including Latinos (Bernal et al., 2009). However, research has demonstrated disparate reports of symptom presentations across Latinos and Caucasians and across Latino subgroups indicating one of two possibilities; that diagnostic and symptom assessments may not be adequately designed to detect symptomatology in Latinos or that ethnic/cultural factors may interfere with how Latinos perceive or report symptoms.

Research has investigated the psychometric properties of measures for OCD. However, the findings are mixed. For instance, the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) has demonstrated sufficient psychometric properties across various ethnic groups, including Latinos, and has been deemed culturally appropriate (Garnaat & Norton, 2010). However, studies have also indicated significant differences across ethnicities in endorsements of certain items, possibly suggesting a degree of cultural bias in these items (Kim, Dyksen, Pheley, & Hoover, 1994; Washington, Norton, & Temple, 2008). Additionally, analyses of the factor structure of the Padua Inventory (PI) and the shorter Padua Inventory-Washington State University Revision have yielded a notable degree of variation across ethnicities, which may indicate bias in certain items as well (Williams, Turkheimer, Schmidt, & Oltmanns, 2005). This illustrates a need for research to further explore these issues and move toward developing ethnically appropriate assessments.

All in all, there is a growing body of research investigating and increasing awareness of help-seeking barriers, treatment disparities, and areas of need in the Latino population. However, research studies continue to enroll primarily Caucasian samples. More specifically, randomized controlled trials for OCD continue to include low percentages of minorities, with Latinos being among the ethnic groups with the lowest rates of inclusion (Williams, Powers, Yun, & Foa, 2010). This apparent underrepresentation of Latinos in samples for clinical OCD trials poses a serious problem as it consequently remains unknown if evidence-based treatments are generalizable to that population. Furthermore, the low rates of Latino inclusion may also illustrate Latinos' limited access to treatment due to the various aforementioned factors. As a result, many Latinos with OCD may not be receiving effective treatments. Given the rapidly increasing rates of Latinos in the US, it is important that researchers and clinicians aim to understand treatment accessibility and effectiveness for this population. Thus, the current investigation extends the work of Williams et al. (2010) via an in-depth examination of Latino inclusion in existing efficacy and effectiveness studies for OCD both in North and South America. We report the rates of Latino inclusion within each study to shed light over pressing concerns regarding the underrepresentation of Latinos in clinical studies of OCD.

## 2. Methods

A literature search for clinical efficacy and effectiveness studies for OCD was conducted using the Medline and PsycINFO databases. Keywords used included: obsessive-compulsive disorder, efficacy, effectiveness, Exposure and Response Prevention, Cognitive Behavioral Therapy, open studies, randomized clinical trials, and randomized controlled trials. Only English-language search terms were used, however articles that presented in both Spanish and Portuguese also were collected. Spanish and Portuguese-speaking investigators aided in the translation of these articles for analysis. Articles were also identified by looking through the reference sections of articles found in the initial database search. In order to better focus the analysis on regions with sufficient Latino populations, the search was restricted to studies conducted within the western hemisphere, including North and South America. The literature search began in December of 2009 and ended in December of 2010.

A total of approximately 98 efficacy and effectiveness studies for OCD from the western hemisphere were garnered and reviewed. Of these, 90 studies were based in the US or Canada of which 49 were efficacy studies and 41 were effectiveness trials. The oldest study included in the review was published in 1977. A complete list of information for all of the US and Canadian clinical studies that included demographic information is displayed in Tables 1 and 2. In addition, the current investigation reviewed eight clinical studies for OCD based in Mexico and South America (three efficacy and five effectiveness studies). Of these eight clinical studies, two were based in Mexico and six were based in Brazil. Table 3 displays information for each of the eight Mexican and Brazilian clinical studies reviewed in the current study.

Of the 98 total clinical trials reviewed, 53 investigations did not report ethnic demographic information in their published studies. Therefore, attempts were made to contact the corresponding authors to inquire about the demographic characteristics of the samples. In all, authors from 30 studies responded to multiple email attempts requesting for information, and only nine of these authors had the information available. These studies were included in Tables 1–3; however, the remaining 44 US and Canadian studies that did not publish demographic information were excluded from further analysis (see the Appendix for a listing).

In addition to ethnicity statistics, we report information relevant to several aspects of each study including theoretical treatment employed (e.g., CBT, ERP, Medication, etc.), sample description (e.g., percentage of completers, age, gender, Social Economic Status (SES), education level, employment status), method of recruitment (e.g., self-referred, media advertisement, etc.), and treatment setting (e.g., hospital, clinic, inpatient, etc.). These procedural characteristics were examined in order to better understand how the implications of each study may be applied to Latino populations or how the lack of this information may pose a barrier for doing so.

## 3. Results

Upon the review and analysis of the 90 US and Canadian clinical studies for OCD, we found that reports of ethnic demographic information were lacking from most publications. Further, the inclusion of ethnic minorities in clinical samples was scant. For example, only 46 (51.1%) of the 90 studies published reports of ethnic/racial status of participants, with a total of 20 (22.2%) studies that published reports of races or ethnicities other than Caucasian. Published reports of ethnic/racial demographic information were examined across time as well. From 1977 to 1990, no reports of demographic information were published. Between the years 1990 and 2000, 41.3% of the studies published demographic information. Finally, 67.3% of the studies that were published between the years 2000 and 2010 provided ethnic demographic information. This suggests an increase in published reports of ethnic demographic information in clinical trials for OCD over time.

After contacting authors who did not include ethnic demographic information in published studies, 46 US and Canadian studies were included in the analysis. Of these 46 studies, the mean percentage of inclusion of non-Caucasian participants was only 8.6%, with a range of 0–41.9%. However, the study that included 41.9% of non-Caucasian participants (i.e., Friedman et al., 2003) specifically aimed to examine disparities in treatment outcome across ethnic groups and, therefore, targeted a diverse sample for inclusion. Friedman et al. (2003) was the only western hemisphere study with the deliberate purpose of investigating disparities in treatment effectiveness across

**Table 1**  
Efficacy studies within the United States and Canada.

Reference	Treatment condition	Subjects	Race/ethnicity	SES, education, employment	Method of recruitment	Setting
t Bergeron et al. (2002)	Meds	n = 150 (85.3% Comp), 54% F	<ul style="list-style-type: none"> <li>● 99.0% C</li> <li>● 1.0% AA</li> </ul>	NR	NR	OP (Site NR)
DeVeough-Geiss et al. (1992)	Meds	n = 60 (90% Comp), 64.7% M	<ul style="list-style-type: none"> <li>● Med. = 100.0% C</li> <li>● Placebo = 96.6% C</li> </ul>	NR	NR	Multi-Site NR
*Fals-Stewart, Marks, and Schafer (1993) Foa et al. (2005)	BT, CBT ERP, Meds, Placebo	n = 93 (100% Comp), 55% F n = 122 (71.3% Comp), 52.5% M	NR <ul style="list-style-type: none"> <li>● 84.4% C</li> <li>● 4.1% A/PI</li> <li>● 4.1% L</li> <li>● 3.3% AA</li> <li>● 4.1% Ukn</li> </ul>	Mean Edu: 12.5 ± 2.4 years NR	NR 1, 2, 3	CI (OP) Hos, CI (OP)
Freeman et al. (2008)	CBT & RT (Family-Based)	n = 42 (74% Comp), 57% F	<ul style="list-style-type: none"> <li>● 80.0% C</li> <li>● 2% H</li> <li>● 2.0% A/PI</li> <li>● 2.0% MR</li> <li>● 12.0% Ukn</li> </ul>	<ul style="list-style-type: none"> <li>● 92% MC</li> <li>● 8% LC</li> </ul>	1, 2, 4	CI (OP)
Freeston et al. (1997)	CBT	n = 29 (75.9% Comp), 55.2% M	<ul style="list-style-type: none"> <li>● 100.0% C</li> </ul>	Mean Edu = 14.4 years	1, 2	NR
Geller et al. (2004)	Meds, Placebo	n = 203 (71.4% Comp), 57.6% M	<ul style="list-style-type: none"> <li>● 88.2% C</li> <li>● 11.8% Other-NR</li> </ul>	NR	NR	NR
Geller et al. (2001)	Meds, Placebo	n = 103 (66.9% Comp), 52.4% F	<ul style="list-style-type: none"> <li>● 86.4% C</li> <li>● 6.8% H</li> <li>● 1.9% AA</li> <li>● 0.9% A/PI</li> <li>● 3.9% Other</li> </ul>	NR	NR	NR
Greist et al. (2002)	BT on Computer, RT	n = 218 (80.7% Comp), 58% M	93.0% C	<ul style="list-style-type: none"> <li>● 57% Col</li> <li>● 21% Some Col</li> <li>● 14% HS</li> <li>● 6% &lt; HS</li> </ul>	2, 3	Multi-Site NR
Greist et al. (1995)	Meds	n = 325 (72.6% Comp), 52.2% F	97.5% C	66.7% MC & Upper MC	NR	OP (Site NR)
*Hoehn-Saric et al. (2000)	Meds	n = 166 (98.8% Comp), 59.8% F	93.9% C	63.4% Emp	NR	NR
Koran et al. (1996)	Meds	n = 79 (70.9% Comp), 54.4% M	<ul style="list-style-type: none"> <li>● 96.2% C</li> <li>● 2.5% AA</li> <li>● 1.2% A/PI</li> </ul>	NR	NR	OP (Site NR)
Kronig et al. (1999)	Meds	n = 167 (70.1% Comp), 55.1% M	96.0% C	NR	NR	OP (Site NR)
*Liebowitz et al. (2002)	Meds	n = 43 (41.9% Comp), 61.1% M	<ul style="list-style-type: none"> <li>● 83.3% C</li> <li>● 5.6% AA</li> <li>● 5.6% H</li> <li>● 5.6% Ind</li> </ul>	NR	NR	NR
*McLean et al. (2001)	ERP, CBT	n = 93 (67.7% Comp), 52.4% M	<ul style="list-style-type: none"> <li>● 78.0% Euro-Canadian</li> <li>● 17.0% A/PI</li> <li>● 2.0% 1st Nations</li> <li>● 3.0% Other-NR</li> </ul>	<ul style="list-style-type: none"> <li>● 5% Some HS</li> <li>● 22% HS</li> <li>● 30% Some PSE</li> <li>● 14% 2 yrs of PSE</li> <li>● 29% 4 yrs of PSE</li> </ul>	2, 3	NR
Rector, Cassin, and Richter (2009)	ERP, CBT	n = 29 (41.4% Comp), 31.2% M	<ul style="list-style-type: none"> <li>● 79.3% C</li> <li>● 17.4% A/PI</li> <li>● 6.7% AA</li> </ul>	<ul style="list-style-type: none"> <li>● 34.5% Emp</li> <li>● 34.5% Un</li> <li>● 27.7% Stu</li> <li>● 6.7% Dis</li> </ul>	4	Hos
Riddle et al. (2001)	Meds	n = 120 (61.7% Comp) <ul style="list-style-type: none"> <li>● Med. = 50.9% M;</li> <li>● Placb. = 55.6% M</li> </ul>	95.8% C	NR	NR	NR

Table 1 (continued)

Reference	Treatment condition	Subjects	Race/ethnicity	SES, education, employment	Method of recruitment	Setting
Riddle et al. (1992)	Meds	n=14 (78.6% Comp), 57.1% F	<ul style="list-style-type: none"> <li>● 92.9% C</li> <li>● 7.1% BR-Not Specified</li> </ul>	<ul style="list-style-type: none"> <li>● 42.9% UC</li> <li>● 21.4% Upper MC</li> <li>● 28.6% MC</li> <li>● 7.1% in Lower MC</li> </ul>	2	CI
Romano, Goodman, Tamura, Gonzales, and The Collaborative Research Group (2001)	Meds	n=71 (43.7% Comp), 57.1% F	94.3% C	NR	NR	OP (Site NR)
Simpson et al. (2008)	ERP, CBT, Meds	n=108 (87% Comp), 57% M	87.0% C	<ul style="list-style-type: none"> <li>● 53% at least PTEmp</li> <li>● MeanEdu=5.2 yrs</li> </ul>	2, 3	CI (OP)
*Storch, Geffken, et al. (2007)	CBT	n=40 (77.5% Comp), 55% F	<ul style="list-style-type: none"> <li>● 92.5% C</li> <li>● 7.5% H</li> </ul>	Mean Family Income=\$96,055	1, 2	CI
Storch, Merlo, et al. (2007)	ERP, Meds	n=34 (70.6% Comp), 50% M	<ul style="list-style-type: none"> <li>● 91.7% C</li> <li>● 4.2% AA</li> <li>● 4.2% A/PI</li> </ul>	NR	1, 2	NR
Storch et al. (2010)	Meds, CBT	N=32 (100% Comp), 63% M	<ul style="list-style-type: none"> <li>● 97.0% C</li> <li>● 3.0% H</li> </ul>	NR	2	CI (OP)
† Tolin, Maltby, Diefenbach, Hannan, and Worhunsky (2004)	ERP, CBT	n=20 (75% Comp), 50% F	<ul style="list-style-type: none"> <li>● 90.0% C</li> <li>● 5.0% A/PI</li> <li>● 5.0% other</li> </ul>	<ul style="list-style-type: none"> <li>● 50% Col Grad</li> <li>● 50% FT Emp</li> </ul>	2	Hos (OP)
*Whittal, Thordarson, and McLean (2005)	ERP, CBT	n=83 (71.1% Comp), 62.7% F	<ul style="list-style-type: none"> <li>● 85.0% Euro-Canadian</li> <li>● 12.0% Asian-Canadian</li> <li>● 3.0% Other-NR</li> </ul>	Edu= <ul style="list-style-type: none"> <li>● 44% Col</li> <li>● 27% PSE</li> <li>● 20% HS</li> <li>● 8% Some HS</li> </ul> EMP= <ul style="list-style-type: none"> <li>● 49% FT</li> <li>● 15% PT</li> <li>● 10% Stu</li> <li>● 8% Un</li> <li>● 8% Dis</li> <li>● 7% HM</li> </ul>	1, 2	Hos, CI
Whittal, Woody, McLean, Rachman, and Robichaud (2010)	CBT, Stress-Management	n=73, (98.6% Comp), 53.4% M	<ul style="list-style-type: none"> <li>● 84.9% Euro</li> <li>● 10.9% A/PI and Other</li> </ul>	<ul style="list-style-type: none"> <li>● 52% FT</li> <li>● 31.5% Un</li> </ul>	3, 4	Hos (IP)

Note. Treatment: BT=Behavior Therapy, CBT=Cognitive Behavior Therapy, ERP=Exposure & Response Prevention, Meds=Medication, RT=Relaxation Therapy.

Subjects: Comp=Completed Treatment, M=Male, F=Female.

Race/ethnicity: AA=African American, A/PI=Asian/Pacific Islander, BR=Biracial, C=Caucasian, Euro=European, H=Hispanic, L=Latino, Ind=Indian, MR=Multiracial, Unkn=Unknown.

SES/Employment/Education: Edu=Education, LC=Lower Class, MC=Middle Class, UC=Upper Class, Dis=Disability, Emp=Employed, FT=Full Time, HM=Homemaker, PT=Part Time, Stu=Student, HS=high school, Col=College, PSE=Post Secondary Education, Unv=University.

Recruitment Method: NR=Not Reported, 1=Self-Referral, 2=Referred by Professional, 3=Media Referral, 4=Other Sources of Referral.

Reasons for Drop Out: Ineff=Inefficient Response to Meds, Lost F/U=Lost to Follow-Up, NCmpl=Non Compliant with Treatment/Meds, SE=Side Effects, WD=Withdraw.

Method: Hos=Hospital, CI=Clinic, IP=Inpatient, OP=Outpatient.

\*Indicates that only sample characteristics of completers were reported.

† Indicates that sample information was provided by corresponding authors.

ethnicities. Excluding this study from the analysis, the range of non-Caucasian inclusion reduces to 0–24.1%.

Likewise, the findings demonstrated a lack of Latino inclusion in US and Canadian clinical studies. Eleven (23.9%) of the 46 US and Canadian studies that reported demographic information included Latino participants within clinical samples. Across these 11 studies, inclusion rates ranged between 2% and 20%, with a mean of 7% of Latino inclusion. In addition, none of the studies reported or specified the breakdown of Latino subgroups within clinical samples. Additionally, no information regarding the Latino participants was provided in any of the 11 studies. A

comparison of the sampling and procedural characteristics between studies that included Latinos and those that did not reveal no relevant differences.

Finally, the current investigation compared the rates of Latino inclusion within efficacy and effectiveness studies across Mexico and South American countries. Only eight clinical studies were found. Interestingly, none of these studies published reports of the ethnic/racial breakdown of the participants included in the samples. After attempts to contact corresponding authors for this information, one study reported including 100% Mestizo Mexican participants (Ulloa, Nicolini, Avila, & Fernandez-Guasti, 2007). Furthermore, an

examination of treatment outcomes showed that all clinical trials demonstrated positive outcomes for Latinos receiving CBT, CBT with Motivational Interviewing, and pharmacotherapy.

An analysis of the procedural and sampling characteristics of the 98 total North, Central, and South American studies was also conducted. Treatment conditions used in the studies were mostly compromised of psychopharmacology only (19.4%), CBT/ERP only (19.4%), a mixture of both psychopharmacology and CBT/ERP (10.2%), or another combination of treatments (11.2%). When analyzing subject descriptions, gender distribution was relatively equal across all studies, and only 13.3% of studies did not include

the percent of participants who completed the study. SES, education level, and employment status were also reviewed, revealing that over half (28.6%) of the studies did not include subject information related to these topics. An examination of recruitment methods illustrated that 25.5% of studies did not report recruitment procedures, 21.4% recruited subjects through referral by a mental health professional (e.g. therapist, psychologist, social worker, etc.) or physician, 13.3% included referral by media advertisements (e.g. television commercials, newspaper advertisements, etc.), 7.1% included self-referrals, and 4.1% were referred by some other means. Finally, analyses of the settings

**Table 2**  
Effectiveness studies within the United States and Canada.

Reference and year	Treatment condition	Subjects	Race/ethnicity	SES, education, employment status	Method of recruitment	Setting
Aboujaoude, Barry, and Gamel (2009)	Meds	<i>n</i> = 15 (73.3% Comp), 64% M	100.0% C	NR	2, 3	CI
† Abramowitz et al. (2003)	ERP	<i>n</i> = 40 (80% Comp), 57.5% M	<ul style="list-style-type: none"> <li>● 88.0% C</li> <li>● 2.0% L</li> <li>● 10.0% AA</li> </ul>	Mean Edu = 17.3 years	NR	CI (IP & OP)
*Benazon, Ager, and Rosenberg (2002)	CBT, ERP	<i>n</i> = 16 (100% Comp), 50% M	100.0% C	NR	NR	CI (OP)
*Bjorgvinsson et al. (2008)	CBT, ERP, Meds	<i>n</i> = 23, 52.2% M	95.9% C	NR	2	Hos, CI (IP)
Brown et al. (2007)	BT, CBT, Meds, Aerobic Exercise	<i>n</i> = 15 (93.3% Comp), 53.3% M	100.0% C	NR	2	Hos, CI
*Diefenbach, Abramowitz, Norberg, and Tolin (2007)	CBT, ERP	<i>n</i> = 70, 52.9% M	97.1% C	Emp = 27.2% Un or Dis	NR	CI (OP)
Franklin et al. (1998)	CBT, ERP, Meds	<i>n</i> = 14 (100% Comp), 71.4% M	100.0% C	NR	NR	CI (OP)
Franklin et al. (2000)	CBT, ERP	<i>n</i> = 110 (90.9% Comp), 52.7% M	<ul style="list-style-type: none"> <li>● 98.0% C</li> <li>● 1.0% AA</li> <li>● 1.0% A/PI</li> </ul>	<ul style="list-style-type: none"> <li>● 39% PT</li> <li>● 32% Un</li> <li>● 23% Stu</li> <li>● 5% HM</li> <li>● 46% Col</li> </ul>	3	CI (OP)
Freidman et al. (2003)	ERP	<ul style="list-style-type: none"> <li>● <i>n</i> = 62 (66% Comp), 92% F, AA; 50% F, C</li> </ul>	<ul style="list-style-type: none"> <li>● 58.1% C</li> <li>● 24.2% AA</li> <li>● 17.7% Caribbean-Am</li> </ul>	Edu: <ul style="list-style-type: none"> <li>● Mean = 13.7 years, AA</li> <li>● Mean = 13.8 years for C</li> </ul> Emp: <ul style="list-style-type: none"> <li>● 50% AA</li> <li>● 51% C</li> </ul>	2	CI (OP)
† *Grant, Lougee, Hirschtritt, and Swedo 2007	Meds	<i>n</i> = 6, 83.3% M	100.0% C	NR	NR	CI
† Himle, Fischer, Van Etten, Janeck, and Hanna (2003)	CBT, ERP	<i>n</i> = 19 (94.7% Comp), 57.9% M	<ul style="list-style-type: none"> <li>● 95.0% C</li> <li>● 5.0% Middle Eastern</li> </ul>	NR	NR	Hos (OP)
† *Horcajadas et al. (2006)	Meds	<i>n</i> = 40 (87.5% Comp), 52.9% M	100.0% C	52.9% Emp	NR	NR
*March, Mulle, and Herbel (1994)	CBT, Meds	<i>n</i> = 15, 66.7% F	<ul style="list-style-type: none"> <li>● 86.7% C</li> <li>● 13.3% AA</li> </ul>	NR	2	CI
† *Murphy et al. (2009)	Meds	<i>n</i> = 16 (100% Comp), 93.8% M	<ul style="list-style-type: none"> <li>● 88.0% C</li> <li>● 6.0% L</li> <li>● 6.0% A/PI</li> </ul>	NR	NR	CI (OP)
† Rosenberg, Stewart, Fitzgerald, Tawile, and Carroll (1999)	Meds	<i>n</i> = 20 (95% Comp), 55% F	100.0% C	NR	NR	CI (OP)
Simpson et al. (2008)	ERP	<i>n</i> = 6 (66.7% Comp), 66.7% F	100.0% C	Emp: <ul style="list-style-type: none"> <li>● 66.7% FT,</li> <li>● 16.7% Retired,</li> <li>● 16.7% Un</li> </ul>	NR	CI (OP)
Storch et al. (2006)	CBT	<i>n</i> = 7 (100% Comp), 57.1% M	<ul style="list-style-type: none"> <li>● 85.7% C</li> <li>● 14.3% L</li> </ul>	Family income range: \$94,571-\$42,480	NR	CI (OP)

Table 2 (continued)

Reference and year	Treatment condition	Subjects	Race/ethnicity	SES, education, employment status	Method of recruitment	Setting
*Storch et al. (2007)	CBT	n=5 (100% Comp), 80% M	● 80.0% C ● 20.0% L	NR	2	CI (OP)
Taylor et al. (2003)	CBT, ERP	n=33 (78.8% Comp), 76% F	91.0% C	● 70% Emp ● 94.6% HS	1, 2, 3	Telephone-based (home)
Twohig et al. (2010)	ACT, PRT	n=79 (87.3% Comp), 61% F	● 88.6% C ● 5.0% L ● 1.0% AA ● 2.5% A/PI ● 2.5% NtAm	● Mean Edu=14.9yrs	2, 3	NR

Note. Treatment: BT=Behavior Therapy, CBT=Cognitive Behavior Therapy, CT=Cognitive Therapy, ERP=Exposure & Response Prevention, Meds=Medication, PRT, Progressive Relaxation Training, RT=Relaxation Therapy.

Subjects: Comp=Completed Treatment, M=Male, F=Female.

Race/ethnicity: AA=African American, A/PI=Asian/Pacific Islander, C=Caucasian, Euro=European, Ind=Indian, H=Hispanic, L=Latino, MR=Multiracial, NtAm=Native American, Ukn=Unknown.

SES/employment/education: Edu=Education, LC=Lower Class, (U/L), MC=(Upper/Lower) Middle Class, UC=Upper Class, Dpndnt=Dependent, Dis=Disability, Emp=Employed, FT=Full Time, HM=Homemaker, PT=Part Time, Sal=Salary, Un=Unemployed, HS=high school, Col=College, PSE=Post Secondary Education, Grad=Graduate, Unv=University.

Recruitment Method: NR=Not Reported, 1=Self-Referral, 2=Referred by Professional, 3=Media Referral, 4=Other Sources of Referral.

Reasons for drop out: Ineff=Inefficient response to Meds, Lost F/U=Lost to Follow-Up, NCmpl=Non Compliant with Treatment/Meds, SE=Side Effects, WD=Withdraw.

\*Indicates that only sample characteristics of completers were reported.

† Indicates that sample information was provided by corresponding authors.

Table 3

Efficacy and effectiveness studies from Mexico and South America.

Reference and Year, Country	Treatment condition	Subjects	Race/ethnicity	SES, education, employment status	Method of recruitment	Setting	Treatment outcome
Asbahr et al. (2005) (Effectiveness), Brazil	CBT, Meds	n=40 (97.5% Comp), 65% M	NR	NR	4	CI (OP)	Both showed significant YBOCS reductions, with Meds showing greater improvement
Braga, Cordioli, Niederauer, and Manfro (2005) (Effectiveness), Brazil	CBT	n=44, 61.9% F	NR	NR	NR	Hos	Mean YBOCS reduction=48.4%; FR=21%; PR=52%; NR=26%
Cordioli et al. (2003) (Efficacy), Brazil	CBT	n=47 (95.7% Comp), 51.1% F	NR	NR	3	NR	69.6% improved in treatment group; 4.2% improved in control group
Meyer et al. (2010) (Effectiveness), Brazil	CBT, MI, & Thought-Mapping	n=40 (95% Comp), 70% F	NR	Mean Edu=14.8 yrs	3	Hos (OP)	Mean YBOCS reduction=75%
Orozco, de la Fluente, and Nicolini (1995) (Efficacy), Mexico	Meds	n=70, 57% F	NR	1–25 yrs Edu	2	Hos, Telephone	42.9% improved on SSRIs
Raffin, Fachel, Ferrão, de Souza, and Cordioli (2008) (Effectiveness), Brazil	CBT	n=181, 72.4% F	NR	● 48.6% Emp Edu: ● 15.5% < HS ● 50.3% HS ● 34.3% > HS	3	Hos	Mean YBOCS reduction=53.7%; FR=27.1%; PR=46.4%; NR=26.5%
Sousa, Isolan, Oliveira, Manfro, and Cordioli (2006) (Efficacy), Brazil	CBT, Meds	n=56 (89.3% Comp), 76.8% F	NR	NR	3	Hos (OP)	Both effective with CBT showing greater YBOCS reductions than Meds (44% vs. 28%)
† Ulloa et al. (2007) (Effectiveness), Mexico	Meds	n=28, 53.6% M	100% Mestizo Mexican	NR	NR	Hos, CI (OP)	Showed significant YBOCS reductions for 73% children and 69% adults

Note. Treatment: BT=Behavior therapy, CBT=Cognitive behavior therapy, CT=Cognitive therapy, ERP=Exposure & response prevention, Meds=Medication, MI=Motivational Interviewing, PRT=Progressive relaxation training, RT=Relaxation therapy.

Subjects: Comp=Completed treatment, M=Male, F=Female.

SES/employment/education: Edu=Education, LC=Lower class, (U/L)MC=(Upper/Lower) Middle Class, UC=Upper Class, Dpndnt=Dependent, Dis=Disability, Emp=Employed, FT=Full Time, HM=Homemaker, PT=Part Time, Sal=Salary, Un=Unemployed, HS=high school, Col=College, PSE=Post Secondary Education, Unv=University.

Recruitment method: NR=Not reported, 1=Self-referral, 2=Referred by professional, 3=Media referral, 4=Other sources of referral.

Reasons for drop out: Ineff=Inefficient response to meds, Lost F/U=Lost to follow-up, NCmpl=Non-compliant with treatment/Meds, SE=side effects, WD=withdrew.

Treatment outcome: FR=full remission, PR=partial remission, NR=no response

\*Indicates that only sample characteristics of completers were reported.

† Indicates that sample information was provided by corresponding authors.

in which studies were conducted showed that 34.7% were held in a clinic setting, hospital, or both, 2% were multi-site studies, 1% was telephone-based at participants' homes, and 17.3% did not report treatment location. In addition, 15.3% of studies were outpatient treatments only, while only 1% was exclusively inpatient, 1% both inpatient and outpatient, and 11.2% did not report the type of setting. Reasons for participant drop out were also considered in the review, but were not included in the table due to sporadic reporting and inconsistent descriptions; however, the majority of studies that did report reasons for drop out (58.6%) included reasons such as inefficient response to medications, non-compliance to study requirements, side effects of medication, medical illness, unable to contact for follow-up, and improved or worsening condition.

#### 4. Discussion

The current investigation reviewed mental healthcare utilization by Latinos with OCD analyzed the inclusion of Latinos in both efficacy and effectiveness studies for various OCD treatments. Our analysis revealed that Latinos were included in only 11 (12.2%) of the 90 US and Canadian clinical studies examined, with a mean of 7% inclusion, vastly underrepresenting the estimated 50.5 million Latinos (16%) in the US as of 2010 (Humes, Jones, & Ramirez, 2011). Furthermore, only 20 (22.2%) of all the US and Canadian studies reported including races or ethnicities other than Caucasian. Even after contacting the authors of studies that did not publish demographic information, over half of the studies did not provide the racial/ethnic status of the participants at all. Thus, findings indicate a significant lack of inclusion in US and Canadian clinical studies.

Notably, no Mexican or South American studies published ethnic/racial demographic information of the samples. This may be due to less perceived variability in race/ethnicity or socio-cultural differences, placing less emphasis on ethnic/racial disparities in these regions when compared to US and Canadian regions. However, many Central and South American countries contain diverse ethnic populations, which may be an important mediator in treatment outcomes. For example, Brazilian census data in 2000 revealed that 53.7% of the population considers themselves "white," 38.5% "mulatto" (mixed white and black), 6.2% "black", 0.9% other (includes Japanese, Arab, Amerindian), and 0.7% unspecified. Yet, no studies from Brazil reported the racial demographics of their sample subjects. Future research studies should include effectiveness/efficacy data for their ethnic samples so that these critical issues can be examined. Nonetheless, we can safely assume that the majority of participants in these studies were Latino.

In focusing on results from studies conducted in the US and Canada, the findings demonstrate that, despite federally mandated policies that minorities be included in research (USDHHS, 2002), Latinos continue to be underrepresented in clinical trials for OCD. This poses a crucial issue, as it remains unclear whether or not evidence-based treatments are effective and acceptable for Latinos.

Furthermore, these findings may highlight poor recruitment methods or a reluctance of Latinos to participate in research and seek help from mental health professionals. Previous research has documented that Latinos tend to underutilize mental health services (Kearney et al., 2005; Sue et al., 1991; US Department of Health and Human Services, 2008), which may result from a variety of factors including: negative cultural stigma, different ideas about the best approach to treatment of mental illness, socio-economic status, language barriers, fears of reinforcing negative stereotypes about one's ethnicity, or the inability of clinicians to build a therapeutic alliance with Latino clients by

relating to them on their socio-cultural level (Malgady & Costantino, 1998; Nadeem et al., 2007; Organista & Munoz, 1996; Sue et al., 1991; Vega & Lopez, 2001). However, one study by Katz et al. (2006) found no reported differences in the willingness to participate in biomedical research between Latinos and other racial groups, possibly suggesting that inadequate recruitment methods may be a factor interfering with Latinos' access to treatment services and research participation.

Given the various reasons Latinos may not obtain mental health services and participate in psychiatric research, it is important that mental health professionals and researchers explore the various ways in which they may effectively encourage Latinos to participate. For instance, improving the education of mental illness in Latino communities may be crucial to alleviating negative stigma attached to mental illness and increasing help seeking. Furthermore, because this population may tend to describe their disturbances as somatic complaints (Chavira et al., 2008), education on OCD symptomology may help clarify the symptoms many Latinos may be attributing to physical disease.

In addition, researchers and clinicians should attempt to better inform Latino communities of the treatment services and research opportunities available for individuals with OCD. This can be done by reaching out to community agencies/organizations, clinics, churches, and schools with the use of various forms of advertising (e.g., fliers in the Spanish language, commercials on Spanish-language media sources, etc.). In order to spark national awareness, organizations such as the International Obsessive Compulsive Foundation (IOCDF), a well-known organization highly dedicated to the research and treatment of OCD, could attempt to create a Spanish-language version of their website to increase accessibility for Spanish-speaking populations. Establishing policies and programs that tackle socio-economic-related obstacles to seeking treatment and participation in research may also be beneficial for low-income Latinos with OCD or other mental health issues. For instance, providing financial compensation to low-income Latinos participating in research may be helpful. In addition, many low-income Latinos may find it difficult to make time for appointments, as they may be facing time constraints from working multiple jobs and providing for their families. Researchers and therapists may assist these clients by offering more flexible schedules and appointment reminders. Furthermore, providing child daycare services or transportation expense assistance for low-income Latinos attending therapy appointments may be beneficial in ensuring these patients consistently attend therapy sessions.

Another factor interfering with Latinos' participation in treatment and research may involve the clinicians' inability to relate to patients at their socio-cultural level (Bernal, Bonilla, Padilla-Cotto, & Perez-Prado, 1998). Mental health professionals who have difficulty with this may, consequently, have trouble building and solidifying a therapeutic alliance with Latino patients. As establishing a therapeutic alliance is crucial to the treatment process, it would be prudent to educate mental health professionals on culturally competent approaches to treatment and how individual needs may vary in ethnic minority patients. For instance, as religion may often play a role in Latino cultures, it may be beneficial for clinicians to incorporate the religious, as well as socio-cultural, values of the Latino patients into the therapy.

Mental health professionals should also be mindful of the level of acculturation and cultural biases of Latino patients, which may affect therapy preferences. For instance, research has demonstrated group CBT to be efficacious for Brazilian OCD patients (Cordioli et al., 2003). In addition, social support, especially from family members, may be particularly valuable to Latinos as a culture (Cabassa, 2007). Therefore, group therapy or group family therapy may be beneficial for Latino patients. Such a model has



shown to be successful among East Indian clients, who are also part of a culture that places great emphasis on family relationships (Mehta, 1990). Furthermore, being mindful of issues related to cultural stigma and clearly explaining confidentiality standards to Latinos may help facilitate more openness to disclosure in therapy.

Given that research has shown that Latinos prefer more directive therapeutic methods (Anger-Diaz, Schlanger, Ricon, & Mendoza, 2004; Santisteban et al., 2003), it might be advantageous to explain that ERP is directive and often a short-term process. In addition, research has shown that Latinos feel most comfortable with therapists of similar cultural/ethnic backgrounds, and that the odds of dropping out of therapy significantly reduce when clients are able to communicate with therapists in their preferred language (Paris, Anez, Bedregal, Andres-Hyman, & Davidson, 2005; Sue et al., 1991). This suggests that having multi-linguistic therapists and researchers available may be more beneficial for Spanish-speaking or bilingual patients.

Furthermore, mental health professionals and researchers should be aware of individual variations in culture, national origin, and socioeconomic status across Latino subpopulations, as each is unique and may vary in need. For instance, research has shown evidenced-based treatments to be efficacious in Brazilian populations (Asbahr et al., 2005; Cordioli et al., 2003) who have their own unique customs, history, and language (i.e., Portuguese) distinguishable from other Latino subpopulations. Moreover, research has shown that Brazilians differ from other Latino subpopulations in OCD symptomology, as they rate higher on religious and aggressive obsessions (Chavira et al., 2008; Fontenelle et al., 2004). Given that treatment outcome can be affected by symptom presentation (Abramowitz, Foa, & Franklin, 2003; Abramowitz, Franklin, Schwartz, & Furr, 2003), Brazilians' treatment needs may differ from other Latino subpopulations, thus validating the importance that research further investigate disparities in symptomology and treatment effectiveness across Latino subpopulations.

Given the wide array of cultural factors that could affect the course and outcome of treatment for Latinos, it is important that research further explore cultural influences on treatment outcome. However, while clinicians should consider approaches that may be more aligned with the patient's socio-cultural values, clinicians should not necessarily assume that the traditional goals and behavioral foundations of therapy differ by culture. Rather, it may be prudent to instead adapt the delivery and presentation of evidence-based treatment principles in a culturally appropriate manner.

Finally, it is important to note a few limitations of the current study. First, a number of non-randomized studies were included in the analysis, many without control samples. Even though these studies may have had limited external validity, they were not excluded from the analyses, as a primary purpose of the current investigation was to review a number of clinical studies representative of all western hemisphere studies and their general sampling patterns. In addition, all-inclusive terms, "Latino" and "Hispanic", seen throughout the studies may be limiting, as there is no way to differentiate between subgroups or levels of acculturation. Thus, subpopulation specificity could not be achieved in the investigation. Another limitation underscores the scant number of clinical studies for OCD in Latino countries, posing an incongruent comparison of sampling characteristics across North, Central, and South America. Moreover, most of the Central and South American clinical studies were conducted in Brazil and, therefore, may not be generalizable to other Latino countries, given the substantial differences in culture and language. Despite these limitations, the current study successfully consolidated a sufficient representation of Latino inclusion

ineffectiveness and efficacy studies for OCD across the western hemisphere.

Overall, the present investigation illustrates that Latinos are underrepresented in clinical studies for OCD in North America, and that there is a need for research to further investigate treatment-seeking behaviors, barriers to treatment, OCD phenomenology, and treatment effectiveness in Latino populations. The aim of the present study was to take an initial step in this direction by uncovering and promoting awareness of these understudied issues in clinical research. It is important that research begin to move forward in addressing such concerns so that Hispanic individuals suffering with OCD and other mental health issues may be identified and treated adequately and effectively.

## Acknowledgments

This study was supported by National Institute of Health/NIMH Grant "Research Supplement to Promote Diversity in Health-Related Research for Maximizing Treatment Outcome in OCD" (3R01 MH045404-17S1) PI: E. Foa for M. Williams. We thank Carolina Santillan, for her assistance with the literature search.

## Appendix A. Reference list of North American studies that did not report ethnic/racial demographics

### A.1. Efficacy studies

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