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The prevalence of diagnosed obsessive compulsive disorder and associated comorbidities: A population-based Canadian study

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ABSTRACT

The objective of this study was to provide epidemiological data regarding obsessive compulsive disorder (OCD) in Canada, and examine related conditions, childhood experiences and healthcare utilization. A Statistics Canada population-based health survey was utilized (N = 25,097). The prevalence of diagnosed OCD in Canada was 0.93% (95% CI 0.75–1.11). People with OCD were younger and more likely to have lower incomes. They were more likely to have mood disorders including depression and bipolar disorder (both diagnosed conditions and by screening), and generalized anxiety disorder. The diagnosis of OCD was also associated with alcohol dependence and substance abuse and dependence. Negative childhood experiences were more common in people with OCD, with 72.33%(95% CI 62.25%–82.41%) of people with OCD having experienced some form of childhood maltreatment. Healthcare utilization was more frequent in people with OCD, but they were also more likely to desire help but feel as if they did not receive it. The higher proportion of people with OCD reporting not receiving the care they needed may reveal a crucial gap in treatment and available resources.

1. Introduction

Obsessive-compulsive disorder (OCD) is a mental health disorder, which is characterized by obsessive thoughts (recurrent and persistent unwanted, intrusive thoughts that the individual attempts to ignore or suppress through some other thought or action) and/or compulsive behaviors (repetitive rituals performed in response to an obsession with the behaviors aimed at preventing or reducing anxiety/prevent a dreaded event or situation) (American Psychiatric Association, 2000). Obsessions frequently focus on issues of contamination, aggression, symmetry/exactness, religion and somatic concerns (Tükel et al., 2002). Compulsions often involve checking, cleaning/washing, repeating, counting and ordering/arranging. The pathogenesis OCD has been proposed to include dysfunction of the serotonergic and glutamatergic systems, as well as disruption of the cortico-striato-thalamo-cortical loops (Goodman et al., 2014), and twin and family studies strongly suggest that both genetic and environmental determinants play a causal role. Primary treatment options include cognitive behavioral therapy (CBT), which comprises both exposure and response prevention and cognitive therapy which are demonstrated to be equal or superior to pharmacological options (Katzman et al., 2014). Pharmacological treatment relies on the use of selective serotonin reuptake inhibitors (SSRIs) as the primary method. The estimated prevalence of OCD in the United States is 2.3% for lifetime OCD and 1.2% for 12-month criteria (Ruscio et al., 2010), but the literature examining Canadian prevalence is very limited (Kolada et al., 1994; Preville et al., 2008). Most people with OCD are diagnosed with at least one additional condition. The most common comorbid disorders that occur with OCD include major depressive disorder, obsessive compulsive personality disorder, generalized anxiety disorder, phobias, attention-deficit/hyperactivity disorder and Tourette syndrome/chronic tic disorder, although comorbid diagnoses vary with age and have variable effects on disease course (Brakoulias et al., 2017; de Mathis et al., 2013).

The objective of this study was to determine the prevalence of diagnosed OCD and associated comorbidities using a population-based data source, the Canadian Community Health Survey- Mental Health (CCHS-Mental Health). Sociodemographic factors and health service utilization were also examined. Obtaining a prevalence estimate gives us a better understanding of the proportion of Canadians diagnosed with OCD, while the information on co-morbidities, healthcare utilization and childhood experiences provides a more complete picture of the challenges facing people who are diagnosed globally. This examination allows us to reveal treatment gaps and understand how to meet the health care needs of those diagnosed with OCD.

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Table 1
Criteria used for derived variables of mental health disorders.

Disorder	Criteria used for derived variables
Depression	A diagnosis of depression required a period of 2 weeks or more in which a persistent depressed mood was present and was based on assessment questions from a World Health Organization version of the Composite International Diagnostic Interview which was modified for the CCHS.
Bipolar disorder	A diagnosis of bipolar disorder required that respondents meet the criteria for either bipolar I or bipolar II. Bipolar I included those meeting the criteria for the former definition of bipolar I (MIADEPS - Lifetime Manic Episode 2002 Algorithm), having at least six of the symptoms from the mania module and at least two of the "super"-symptoms (becoming overly friendly, behaving inappropriately, getting involved in foolish schemes, getting into financial trouble, believing they were someone else or connected to a famous person). Bipolar II included those who did not meet the CCHS - Mental Health/WHO-CIDI criteria for bipolar I – lifetime, met the CCHS - Mental Health/WHO-CIDI criteria for major depression episode – lifetime and either met the former definition of bipolar I (MIADEPS - Mania - Lifetime 2002 Algorithm) while also experiencing feelings of euphoria and racing thoughts or did not meet the criteria for the former definition of bipolar I (MIADEPS - Mania - Lifetime 2002 Algorithm) but met the criteria for the HYPDEPS (Hypomania - Lifetime 2002 Algorithm), had a minimum symptom duration of 14 days, and experienced at least two of the "super"-symptoms (becoming overly friendly, behaving inappropriately, getting involved in foolish schemes, getting into financial trouble, believing they were someone else or connected to a famous person).
Alcohol dependence	The diagnosis of alcohol dependence is based on meeting at least three symptoms of alcohol dependence (tolerance, withdrawal, increased consumption, attempts to quit, time lost, reduced activities, continued drinking) which must be experienced within the same 12-month period.
Alcohol abuse	Alcohol abuse criteria were met if respondents had not experienced dependence but had experienced at least one of the four symptoms of alcohol abuse. Alcohol abuse criteria are defined by recurrent use leading to a failure to complete obligations, use in situations when it is physically hazardous, related legal problems and continued use regardless of social and interpersonal problems caused or worsened by use.

2. Methods

This study was approved by the Social Sciences and Humanities Research Council of Canada.

2.1. Subjects

Data used was obtained from the Canadian Community Health Survey – Mental Health (CCHS-Mental Health) 2012 (released September 18, 2013). The CCHS-Mental Health is a cross-sectional survey designed to collect information on health status, health care utilization and health determinants for the Canadian population. The survey covers the population ages 15 and over, living in the ten provinces. Persons living on reserves and other Aboriginal settlements, full-time members of the Canadian Forces and the institutionalized population, were excluded from the survey. These exclusions account for approximately 3% of the Canadian population who are of age 15 and older. A three-stage design was used to select the sample of respondents for the 2012 CCHS - Mental Health. First, geographical areas called clusters were selected. Households were then selected within each sampled cluster and, finally, one respondent per household was randomly selected. In total, 36,443 of the selected units in the CCHS - Mental Health were in-scope for the survey. Out of these, 29,088 households agreed to participate in the survey, resulting in an overall household-level response rate of 79.8%. Among these responding households, 29,088 individuals (one per household) were selected to participate in the survey, out of which a response was obtained for 25,113 individuals, resulting in an overall person-level response rate of 86.3%. At the Canada level, this yields a combined (household and person) response rate of 68.9% for the CCHS - Mental Health.

2.2. Survey design

The CCHS-Mental Health was developed by Statistics Canada in association with stakeholders from Health Canada, the Public Health Agency of Canada, the Provincial Health Ministries, and an advisory committee consisting of specialists and academic experts. The CCHS has a common content section collected from all respondents, an optional content component specific to the data needs of the individual provinces and territories, and a rapid response content component which is offered to organizations interested in national estimates based on emerging or specific issues related to population health. Eight-seven percent of interviews were completed in person by field interviewers in the sampled dwelling. Our current study utilizes this survey for data specific to the lifetime diagnosis of OCD, comorbid disorder diagnosis, health care utilization, substance use, and childhood experiences.

2.3. Lifetime diagnosis of OCD

Survey participants were asked, “Do you have an anxiety disorder such as a phobia, obsessive-compulsive disorder or a panic disorder?”. If they answered yes, they were then asked “What kind of anxiety disorder do you have?” with the possible answers of phobia, obsessive-compulsive disorder, panic disorder or other. It was stated during the interview process that only conditions diagnosed by a health professional were of interest that were expected to last or have already lasted 6 months or more.

2.4. Variables studied

The prevalence of OCD for the entire sample, as well as for males and females separately, was calculated based on self-report of clinician lifetime diagnosis of OCD. The control population consisted of all survey participants who answered “no” to the question about a lifetime diagnosis of OCD. Demographic variables including age and sex, as well as socioeconomic variables including income, education and employment, were examined. Prevalence of various mood disorders (including depression and bipolar disorder), attention deficit disorder and generalized anxiety disorders were determined for both the OCD and control population. With respect to mood disorders, we examined both self-reported conditions and the CCHS derived variables (see Table 1) through which survey participants were screened for the presence of mood disorders. Alcohol abuse and dependence, and substance abuse and dependence were examined using the CCHS derived variables (see Table 1) for both lifetime and past 12-month criteria. Twelve-month criteria require that respondents meet the criteria for lifetime abuse or dependence and present with at least one symptom in the 12 months prior to the interview. The criteria for substance (including sedatives, stimulants, analgesics, marijuana, cocaine, club drugs, hallucinogens, heroin and inhalants) abuse and dependence are the same as for alcohol abuse and dependence. Examination of the utilization of healthcare service included mean number of times hospitalized, likelihood of hospitalization and odds of speaking to various professionals (family practitioners, psychologists, psychiatrists, nurses and social workers). We also examined individual's perception of if they were receiving the help that they required. Finally, we examined various traumatic childhood experiences including physical and sexual abuse. For each variable, respondents were asked if they had never experienced the abuse, or if they had experienced the abuse 1 or 2 times, 3 to 5 times, 6 to 10 times, or more than 10 times. For our analysis, we compared never experiencing abuse to experiencing abuse any number of times (i.e. 1 or more times).