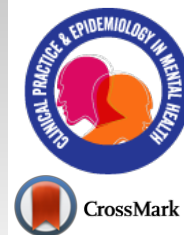


Clinical Practice & Epidemiology in Mental Health

Supplementary Material

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The Perception of Physical Health Status in Obsessive-Compulsive Disorder: A Systematic Review and Meta-Analysis

Andrea Pozza¹, Fabio Ferretti^{1,*} and Anna Coluccia¹

¹Department of Medical Sciences, Surgery and Neurosciences, Santa Maria alle Scotte University Hospital of Siena, viale Bracci 16, 53100 Siena, Italy

Abstract:

Background:

Physical Health Status is a neglected outcome in clinical practice with Obsessive-Compulsive Disorder (OCD) and a systematic review is lacking.

Objective:

The current study presents the first systematic review and meta-analysis summarizing the evidence on (a) perceived Physical Health Status, Bodily Pain and Role Limitations due to Physical Problems in patients with OCD compared with controls, (b) age, gender, severity of OCD symptoms, study publication date, study methodological quality as moderators of perceived Physical Health Status.

Methods:

Case-control studies were included if they (a) compared OCD patients with healthy/general population participants as controls, and (b) used validated self-report instruments. Two reviewers searched electronic databases, contacted corresponding authors, and examined reference lists/conference proceedings/theses.

Results:

Fourteen studies were included. A large significant negative effect size without publication bias showed that controls reported higher perceived Physical Health Status than patients with OCD. Medium and small effect sizes favouring controls emerged for Role Limitations due to Physical Problems and Bodily Pain, respectively. Higher age, females percentage, and publication date were associated with larger effect sizes; higher OCD severity and methodological quality were associated with smaller effect sizes.

Conclusion:

Perceived Physical Health should be evaluated and addressed by clinicians during treatment, particularly with older, female and less severe patients. Lifestyle interventions might be implemented.

Keywords: Obsessive-Compulsive Disorder, Functioning, Physical Health, Systematic Review, Well-being, Pain, Lifestyle, Meta-analysis.

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Table 1. Supplementary file. Information extracted from the studies included (n= 14).

First author of the study	Publication date	Country	Cohort	Inclusion/exclusion criteria of OCD patients	Recruitment strategies of OCD patients	Recruitment strategies of controls	Types of controls	n OCD group Controls	Diagnostic system (instrument) to diagnose OCD	Self-report measures of Physical Health Status	Percentage of patients on concurrent psychotropic medication	Percentage of patients with comorbid personality disorders	Measures to assess depression symptoms	Percentage of patients with comorbid general medical disorders
Albert	2010	Italy	Adults	Inclusion criteria were a principal diagnosis of OCD and a Y-BOCS total score of 16 or higher	Consecutive patients with a principal diagnosis of OCD referring to the Mood and Anxiety Disorders Unit of the University of Turin, Italy	The normative sample included 2031 Italian individuals drawn from the general population and who participated in the validation study of the Italian translation of the SF-36	General population	OCD group (n=151) Controls (n= 2031)	DSM-IV (SCID-I)	SF-36 Physical Health Status scale	Not reported	51	HAM-D	Not reported

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First author of the study	Publication date	Country	Cohort	Inclusion/exclusion criteria of OCD patients	Recruitment strategies of OCD patients	Recruitment strategies of controls	Types of controls	n OCD group Controls	Diagnostic system (instrument) to diagnose OCD	Self-report measures of Physical Health Status	Percentage of patients on concurrent psychotropic medication	Percentage of patients with comorbid personality disorders	Measures to assess depression symptoms	Percentage of patients with comorbid general medical disorders	
Eisen	2006	USA	Adults	Inclusion criteria were 18 years or older, primary OCD (defined as the disorder that participants considered their biggest problem overall), and treatment seeking. Exclusion criterion was having an organic mental disorder so that the person was unable to understand the nature of the study.	Patients consecutively recruited from a large OCD clinic, group psychiatric practices, psychologists' offices, and mental health clinics in Rhode Island and Massachusetts, to be part of a 5-year prospective naturalistic study of course of illness in OCD	Published community norms	General population	OCD group (n= 197) Controls (n= 2474)	DSM-IV (Interview)	SF-36 Physical Health Status scale WHOQOL-BREF Physical Health Status scale	Not reported	Not reported	HAM-D	0% (having an organic disorder so that the person was not able to understand the nature of the study was an exclusion criterion)	
Fontenelle	2010	Brazil	Adults	The inclusion criteria were: (1) the diagnosis of OCD, with or without psychiatric comorbidity confirmed by means of the Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorders, fourth Edition, (DSM-IV) Axis I disorders (SCID-IV), (2) age between 18 and 80 years, and (3) the absence of any other neurological, endocrinological or systemic disorder that could interfere with the interpretation of the results. In the presence of any psychiatric co-morbidity, only patients who developed OCD as a primary disorder, either in terms of chronology or in terms of severity of symptoms, were included.	Volunteers for this study were consecutively recruited among patients undergoing treatment in the (1) Anxiety and Depression Research Program at the Institute of Psychiatry of the Universidade Federal do Rio de Janeiro (IPUB/UFRJ), the (2) Division of Applied Psychology at the Institute of Psychology of the same university (DPA/UFRJ) and (3) the first author's private practice.	The control group consisted of community members recruited through local advertisements and included medical and administrative staff of the Universidade Federal do Rio de Janeiro. Inclusion criteria for the control group were (1) age between 18 and 80 years, and (2) the absence of any other neurological, endocrinological, or systemic disorder that could interfere with the interpretation of our results. Controls were not screened beforehand for the presence of psychiatric disorders, since we intended to avoid the selection of a 'supernormal' sample, which would be not representative of the general population.	General population	OCD group (n= 53) Controls (n= 70)	DSM-IV (SCID-I)	SF-36 Physical Health Status scale	Not reported	Not reported	BDI	0% (any other neurological, endocrinological or systemic disorder that could interfere with the interpretation of the results was an exclusion criterion)	
Gros	2013	USA	Adults	Eligible patients were those who had been primary care attenders at any of the four target hospitals in fiscal year 1999. Stratifying on hospital, each patient was assigned a random number and the patient list ordered. According to this ordered list, blocks of 200 patients were sent to each hospital (new blocks were sent when these lists were exhausted). Appointment lists were checked by a research assistant, so that when one of the randomly selected patients was scheduled for a primary care visit, a letter of invitation was mailed in advance explaining the study. Patients with known dementia, octogenarians and nonagenarians were excluded due to concern over ability to recall information critical to the study.	Veterans attending primary care clinics at four Veterans Affairs Medical Centers (Charleston and Columbia, SC; Tuscaloosa and Birmingham, AL) followed by a diagnostic telephone interview and 12-month retrospective chart review. These medical centers are part of a Veterans Integrated Service Network (VISN7), which covers all of South Carolina, Georgia and parts of Alabama. Stratifying on hospital, each patient was assigned a random number and the patient list ordered. According to this ordered list, blocks of 200 patients were sent to each hospital (new blocks were sent when these lists were exhausted).		Screened controls	OCD group (n= 16) Controls (n= 838)	DSM-IV (MINI)	SF-36 Physical Health Status scale	Not reported	Not reported	Not reported	Not reported	Not reported
Hou	2010	Taiwan	Adolescents and adults	Not reported	Patients were recruited from the outpatient psychiatric clinics at a medical center and a regional teaching hospital in Southern Taiwan	Subjects were recruited through advertisement in the hospital and in newspapers	Screened controls	OCD group (n= 57) Controls (n= 106)	DSM-IV (MINI)	WHOQOL-BREF Physical Health Status scale	100	Not reported	BDI-II	Not reported	

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First author of the study	Publication date	Country	Cohort	Inclusion/exclusion criteria of OCD patients	Recruitment strategies of OCD patients	Recruitment strategies of controls	Types of controls	n OCD group Controls	Diagnostic system (instrument) to diagnose OCD	Self-report measures of Physical Health Status	Percentage of patients on concurrent psychotropic medication	Percentage of patients with comorbid personality disorders	Measures to assess depression symptoms	Percentage of patients with comorbid general medical disorders
Jahangard	2018	Iran	Adults	Inclusion criteria were as follows: (1) diagnosis by a psychiatrist of current OCD according to the DSM 5 (American Psychiatric Association, 2013); (2) Yale–Brown Obsessive Compulsive Scale (Y-BOCS; Goodman et al., 1989) score of 15 points or higher (see below); (3) no comorbid psychiatric disorders, except for diagnosis of a mild to moderate major depressive disorder, and no substance use disorder (SUD) of tobacco or cannabis or benzodiazepines; (4) no neurological, or other somatic disorders, as ascertained from patients' reports and their medical records; (5) age between 18 and 65 years; (6) willing and able to participating in the study, and (6) written informed consent. Exclusion criteria were: (1) acute psychosis and (2) acute suicidality (3) severe MDD and severe SUD of opioids, amphetamines/methamphetamines. The nature of the current treatment regimen (psychopharmacological treatment, psychotherapy, neuromodulation; combinations of such treatments) was not an exclusion criterion.	Outpatients diagnosed with OCD from the Farschian Psychiatric Hospital in Hamadan (Iran) and healthy controls drawn from the hospital and university staff were approached to participate in the present cross-sectional and questionnaire-based study.	Healthy controls were recruited by advertisements on the homepage of the hospital and the University of Hamadan, and by word-of-mouth; during weekly staff meetings, staff members from different wards and departments of the university were encouraged to participate in the study and to ask and encourage other staff members to take part.	Screened controls	OCD group (n= 100) Controls (n= 100)	DSM-5 (MINI)	SF-36 Physical Health Status scale	54	Not reported	HAM-D	0%
Name of the first author of the study	Publication date	Country	Cohort	Inclusion/exclusion criteria of OCD patients	Recruitment strategies of OCD patients	Recruitment strategies of controls	Types of controls	n OCD group Controls	Diagnostic system (instrument) used to diagnose OCD	Self-report measures of Physical Health Status	Percentage of patients on concurrent psychotropic medication	Percentage of patients with comorbid personality disorders	Measures to assess depression symptoms	Percentage of patients with comorbid general medical disorders
Kivircik Akdede	2005	Turkey	Adults	Subjects who were in follow up at out-patient clinic with the diagnosis of Obsessive Compulsive Disorder according to DSM-IV diagnostic criteria. Inclusion criteria were determined as absence of known physical or neurological disorder, Hamilton Depression Rating Scale less than 16 points and negative history of electro-convulsive therapy within last 6 months.	Subjects who were in follow up at out-patient clinic with the diagnosis of Obsessive Compulsive Disorder.	Healthy individuals without self or family history of psychiatric diseases constituted the control group.	Screened controls	OCD group (n= 23) Controls (n= 22)	DSM-IV	WHOQOL-BREF Physical Health Status scale	Not reported	Not reported	HAM-D	0%
Koran	1996	USA	Adults	Inclusion criteria were: (1) principal diagnosis of OCD of at least one year duration, (2) absence of serious medical condition.	Patients participating in pharmacological treatment trials	General U.S. population and patient who participated in the Medical Outcome Study (1986-1987)	General population	OCD group (n= 60) Controls (n= 2474)	DSM-III-R (SCID-I)	SF-36 Physical Health Status scale	100	Not reported	HAM-D	61.66%
Kumar	2012	India	Adults	Inclusion criteria were age between 18 and 55 years, ability to read and write in English language, a primary diagnosis of OCD according to DMS-IV and a score of 16 on the Y-BOCS. Patients who had severe comorbid psychiatric, physical and neurological disorders (i.e., psychosis, bipolar affective disorder, current psychoactive substance abuse or dependence, mental retardation, cancer, chronic pain, arthritis, asthma, head injury, and/or epilepsy), and those who had received exposure/response prevention or cognitive behavior therapy in the preceding year were excluded.	Consecutive patients recruited from the Behavioral Medicine Unit of the NIMHANS	Subjects recruited from the local community	General population	OCD group (n= 31) Controls (n= 30)	DSM-IV (MINI)	WHOQOL-BREF Physical Health Status scale	Not reported	Not reported	DASS-21	0% (Patients who had severe comorbid physical and disorders, such as cancer, chronic pain, arthritis, asthma were excluded),
Rodriguez-Salgado	2006	Spain	Adults	Not reported	Patients with OCD diagnosis referred to the psychiatric outpatient clinic at Ramon y Cajal General Hospital	Spanish general population	General population	OCD group (n= 64) Controls (n= 9151)	DSM-IV (MINI)	SF-36 Physical Health Status scale	Not reported	Not reported	HAM-D	73.40% acute medical diseases, 39% chronic medical diseases
Name of the first author of the study	Publication date	Country	Cohort	Inclusion/exclusion criteria of OCD patients	Recruitment strategies of OCD patients	Recruitment strategies of controls	Types of controls	n OCD group Controls	Diagnostic system (instrument) used to diagnose OCD	Self-report measures of Physical Health Status	Percentage of patients on concurrent psychotropic medication	Percentage of patients with comorbid personality disorders	Measures to assess depression symptoms	Percentage of patients with comorbid general medical disorders
Souza Vivan	2013	Brazil	Adolescents	Subjects with OCD should meet the diagnostic criteria for the disorder according to DSM-IV 1 and score a 16 on the YBOCS.	Participants were recruited from an epidemiological study conducted at high schools in the city of Porto Alegre, southern Brazil.		Screened controls	OCD group (n= 75) Controls (n= 150)	DSM-IV (K-SADS)	WHOQOL-BREF Physical Health Status scale	Not reported	Not reported	BDI-II	Not reported

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First author of the study	Publication date	Country	Cohort	Inclusion/exclusion criteria of OCD patients	Recruitment strategies of OCD patients	Recruitment strategies of controls	Types of controls	n OCD group Controls	Diagnostic system (instrument) to diagnose OCD	Self-report measures of Physical Health Status	Percentage of patients on concurrent psychotropic medication	Percentage of patients with comorbid personality disorders	Measures to assess depression symptoms	Percentage of patients with comorbid general medical disorders
Srivastava	2011	India	Adults	Subjects of either gender, aged ≥ 18 years with diagnosis according to the DSM-IV-TR criteria; b) Subjects included only newly diagnosed cases. The study excluded 3) Subjects with past history or current evidence of schizophrenia, bipolar affective disorder, major depressive disorder, organic mental disorders and seizure disorders; b) Subjects having clinically significant and unstable renal, hepatic, cardio-vascular, respiratory or cerebrovascular disease or any other serious and progressive physical disease.	Subjects enrolled consecutively from psychiatry outpatients' service of the University College of Medical Science and G.T.B. Hospital	Patients with MDD attending the same psychiatric services of Clinical sample, and healthy volunteers	Screened controls	OCD group (n= 45) Controls (n= 150)	DSM-IV (MINI)	WHOQOL-BREF Physical Health Status scale	Not reported	0	Not reported	0% (subjects having renal, hepatic, cardio-vascular, respiratory or cerebro-vascular disease or any other serious and progressive physical disease were excluded)
Stengler-Wenzke	2006	Germany	Adults	Patients with OCD showing psychiatric co-morbidity were excluded.	"Clinic for patient with OCD and Anxiety Disorder" at Department of Psychiatry of University of Leipzig, consecutively recruited	General population data were gathered from a representative survey conducted in Germany in 2004	General population	OCD group (n= 75) Controls (n= 315)	ICD-10	WHOQOL-BREF Physical Health Status scale	Not reported	0	Not reported	Not reported
Trettim	2017	Brazil	Adults	Young people that were unable to answer the diagnostic interview due to physical or cognitive problems were excluded.	Young adults aged 18 to 24 years and living in the urban area of Pelotas, state of Rio Grande do Sul, Brazil. The sample selection was performed by clusters, considering a population of 39.667 in the age range of interest according to the current census of 448 sectors in the city. To ensure the necessary sample size, 89 census-based sectors were randomly selected. Household selection in the sectors was performed according to a systematic sampling process, the first house being the one at the corner designated by IBGE (IBGE, 2008; http://ibge.gov.br) as starting the sector; every third house was selected.		General population	OCD group (n= 51) Controls (n= 1509)	MINI (ICD-10 criteria)	SF-36 Physical Health Status scale	Not reported	Not reported	Not reported	Not reported

Note. BDI = Beck Depression Inventory, BDI- II = Beck Depression Inventory-II edition, DASS-21 = Depression and Anxiety Stress Scales-21, DSM-IV = Diagnostic and Statistical Manual of Mental Disorders-IV edition, DSM-IV-TR = Diagnostic and Statistical Manual of Mental Disorders-IV edition-Text Revision, DSM-5 = Diagnostic and Statistical Manual of Mental Disorders – 5th edition, HAM-D= Hamilton Depression Rating Scale, ICD-10 = International Classification of Diseases-10 edition, K-SADS = Kiddie Schedule for Affective Disorders and Schizophrenia, MINI = Mini-Mental Mental State Examination, OCD = Obsessive Compulsive Disorder, SCID-I = Structured Interview for DSM-IV Axis I Disorders, Y-BOCS = Yale-Brown Obsessive Compulsive Scale, WHO-BREF = World Health Organization Quality of Life-Brief Form.