



An overview of obsessive compulsive disorder and suicidal behaviour

Abstract

Suicide is a major cause of mortality among patients with psychiatric illnesses. Most common cause of suicidal behaviour is affective and psychotic disorders. Very few studies had looked into the suicidal behaviour among patients with anxiety and related obsessive compulsive disorders (OCD). Patients with OCD are susceptible for suicidal behaviour if they have underlying comorbid depression, anxiety, substance use disorders, or personality traits. Current paper highlights the prevalence and clinical correlates of suicidal behaviour among patients with OCD. Future studies are required to look into the role of various other associated contributing factors for suicidal behaviour such as gender, family and past history of suicidal behaviour, duration of untreated OCD, various symptom dimensions of OCD, personality traits, and the presence of other comorbid disorders among patients with OCD. Hence, a comprehensive management plan is required for OCD patients while assessing for suicidal behaviour.

Keywords: Psychotic Disorders. Anxiety. Depression.

Hemendra Singh¹, Santhoshi Kashyap², Archadhaa Sivakanthan³

¹MD, Assistant Professor, Department of Psychiatry, MS Ramaiah Medical College, Bangalore, Karnataka, India, ²MSc, Intern Psychologist, Department of Psychiatry, MS Ramaiah Medical College, Bangalore, Karnataka, India, ³MBBS, Intern, Department of Psychiatry, MS Ramaiah Medical College, Bangalore, Karnataka, India

Correspondence: Dr. Hemendra Singh, MD, Department of Psychiatry, MS Ramaiah Medical College, MSR Nagar, MSRIT Post, Bangalore-560054, Karnataka, India. hemendradoc2010@gmail.com

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INTRODUCTION

Mental disorders have a strong association with suicide.[1] In fact, suicides and attempted suicides are very rare in the absence of current major mental disorders.[2-6] Hence, it is not surprising that the biggest risk for suicide is poorly diagnosed and treated mental disease.[7]

Research suggests that more than 90% of suicide victims and attempters had at least one current Axis I (mainly untreated) major mental disorder, most frequently major depressive episode (MDE) (56–87%), substance use disorders (26–55%), and schizophrenia (6–13%). Comorbid anxiety and personality disorders and concomitant serious medical disorders are also frequently found, although they are rarely the principal or the only diagnoses.[2,4-6,8]

While unipolar major depression and schizophrenia are the most common psychiatric illnesses leading to suicide, other minor mental disorders, such as dysthymia, panic attacks, generalized anxiety disorders (GAD), and anxiety disorders, too increase the risk of suicide, although to a lesser extent.[7] In DSM-III, DSM-III-R, and DSM-IV, obsessive compulsive disorder (OCD) was classified as an anxiety disorder. However research regarding suicide in patients of anxiety disorders is unable to give exact prevalence of suicidal behaviour among patients with OCD.

Research shows that major depression is a comorbid condition such as minor mental disorders in most cases of suicide.[2,4,9,10] Like other minor mental disorders, OCD is a psychological disability that is associated with severe distress and suffering. It affects nearly one to two per cent population. Though suicide is a major cause of mortality among mentally ill patients, studies have looked into phenomenological, pharmacological, and genetic aspects of OCD; however, very little efforts are made regarding pattern of suicidal behaviour among OCD patients. We aimed to review the existing research regarding the prevalence of suicidal behaviour among OCD patients and the Indian scenario of research among the OCD patients with suicidal behaviour.

METHODOLOGY

The studies used here were found with the key words of obsessive compulsive disorders, anxiety disorders, suicidality, suicide ideation, suicidal behaviour, and self-harm or self-mutilation in PubMed and Google Scholar. Studies with comorbid depression and anxiety with OCD were also included. Studies which did not include any mention of anxiety disorders, OCD, and suicidality were not included in the current review. Hence, we reviewed 20 articles and a case study (Table 1).

PREVALENCE AND DEMOGRAPHIC VARIABLES OF SUICIDAL BEHAVIOUR IN OCD PATIENTS

People with OCD may have difficulties in their relations or with their occupational life. Living with OCD can also be overwhelming, and these people may lose hope for treatment, and can suffer from depression, which can lead to suicide attempts.[32] OCD is seen in all age groups and there have been gender differences in terms of age of onset and the dimensions of symptoms. Though suicidal behaviour is also seen across the lifespan, however majority of studies regarding suicidal behaviour among OCD patients have looked adolescents and adult population. A study by Valleni-Basile *et al.*[33] looked at 3283 adolescents, using self-report questionnaires. Results showed that three per cent of the sample reported to have OCD and 19% reported to have subclinical OCD. Most common compulsions seen were arranging, counting, and washing in both male and female adolescents.

A study in Warangal region in India showed that 46% of OCD patients were from ages 21 to 30 years, 98% were literate, 61% were married while 38% of them were single. The most common obsession was fear of harming, which was 81% and the most common compulsion was repetition of behaviour, which was 76%.[34] In a study in Kerala, the prevalence of OCD was 3.3%, and taboo thoughts and mental rituals were most prevalent in the OCD subjects in the study.[35] A study by Huz *et al.*[15] looked at 474 college students, using multiple self-report questionnaires. Results found that presence of obsessive compulsive (OC) symptoms was associated with increased likelihood of suicide risk. A study in Sweden by Fernández de la Cruz *et al.*[16] looked at 36788 OCD patients, using matched case-cohort design. Results showed that having OCD increased the risk of dying by suicide or attempting suicide.

CLINICAL VARIABLES OF SUICIDAL BEHAVIOUR AMONG OCD PATIENTS

Studies on suicidality among OCD patients looking at the presence of underlying co-morbid depression and anxiety disorders are able to conclude that presence of co-morbid depression and anxiety can increase risk of suicidal behaviour among OCD patients. OCD was considered under anxiety disorder and a study by Sareen *et al.*[36] looked at 7076 people with anxiety disorders in a longitudinal study for over a three-year period. The results showed that pre-existing anxiety disorder was a risk factor for suicide ideation and suicide attempts, also known as suicidal behaviour. Anxiety disorders with co-morbidity of mood disorders also can increase the risk of suicide attempts. A study by Cho *et al.*[19] looked at 6510 adults and performed multivariate logistic regression analysis to examine whether anxiety disorders were associated with suicidal ideation and suicide attempts. Results showed that anxiety disorders, in which OCD falls under, can be associated with suicidal ideation and suicide attempts.

A study by Balci and Sevincok[26] looked at 44 patients with OCD and used Yale-Brown Obsessive Compulsive Scale

(Y-BOCS) and Scale for Suicidal Ideation (SSI) to see if there was an association between suicidal ideation and OCD. The results showed that some symptoms in patients can predict ideation in OCD. These symptoms can be depressive and aggressive obsessions, hopelessness, and severity of symptoms in the disorder. Another study in 2010 by Alonso *et al.*[27] of a sample 218 outpatients with OCD saw the presence of suicidal behaviour. This was measured by the Hamilton Rating Scale for Depression (HAM-D) and Beck Suicide Intent Scale. The results showed that suicidal behaviour is not common in OCD patients, but it should not be disregarded in patients with co-morbid depression or affective disorders. A study by Diaconu and Turecki[28] looked at 311 subjects to see if there was an association between OCD, suicide, and depression. Subjects were evaluated with interviews, and depressed subjects and those with personality disorders were compared. Results showed that obsessive compulsive personality disorder (OCPD), can increase the risk of suicidal behaviour and attempts, without the presence of depressive disorders. Another study by Apter *et al.*[30] consists of 348 adolescent psychiatric patients, assessed the underlying depression and suicidal behaviour by using depression and suicide questionnaires. Results showed that while adolescents with OCD suffered from depression and suicidal ideation, there were rarely any suicide attempts.

A study by Kim *et al.*,[18] used 81 patients with OCD and looked at them using SSI, Y-BOCS, Toronto Alexithymia Scale-20, Measure of Constructs Underlying Perfectionism, and history taking. The results showed that certain traits like perfectionism may be a factor in the presence of high suicidal behaviour in OCD patients. A study by Ching *et al.*[14] used 146 patients with OC symptoms, who completed online questionnaires, showed that violent obsessions had a large role in suicidality in OCD.

Recently, nearly nine studies we found regarding suicidal behaviour and OCD published during 2016 and 2017 (See Table 1). A study by Velloso *et al.*[17] used a cross-sectional method to look at 548 OCD patients, by using standardized scales to measure OCD, depression, anxiety, and quality of life. The results showed that patients should be carefully monitored for suicide. A case study by Lai *et al.*[20] found the co-existence of bipolar disorder and OCD with suicide attempt. Another study by Storch *et al.*[11] looked at 101 adults with OCD; they also used similar scales. Results showed that suicidal ideation and history were associated with OCD severity and depression.

A study by Storch *et al.*[24] with 54 youth patients of OCD by having them and their parents answer multiple questionnaires. The results showed that suicidal ideation was related to age, depressive symptoms, and anxiety; but suicidal ideation may not be associated with OCD. Another study with 54 patients with OCD used interventions for anxiety sensitivity cognitive concerns. Results showed that changes in the cognitive concerns after treatment had an effect on suicidal behaviour in OCD.[21]

A study by Szmulewicz *et al.*[22] looked at 65 schizophrenic and schizoaffective patients with OC symptoms, using Y-BOCS. Results showed that there were positive associations between scores on the scale and suicidal

Table 1: Articles included in the review

Authors	Characteristics of study	Findings (brief)
Storch <i>et al.</i> [11]	Examined the frequency and relation of death and/or suicidal ideation to treatment response in 101 adults with OCD by YBOCS-Self Report, Quick Inventory of Depressive Symptomatology-Self Report, Intolerance of Uncertainty Scale, OCI-R, Penn State Worry Questionnaire, QoL Enjoyment and Satisfaction Questionnaire-Short Form, and Columbia Suicide Scale.	Suicidal ideation (12%) and life time history of death wishes (62.4%) were prevalent among patients being treated intensively and were associated with OCD severity and depression, but they did not predict intensive multimodal treatment response.
Brakoulias <i>et al.</i> [12]	Examined the relation to OCD comorbidity, age of onset of OCD and comorbid disorders, and suicidality in a large cross-continental, clinical, and ethnically diverse sample of 3711 adult patients with primary OCD from Brazil, India, Italy, South Africa, Japan, Australia, and Spain.	Rate of suicidal ideation within the last month was 6.4% of patients with OCD while 9.0% reported a life history of suicide attempts. There were high rates of comorbid major depression and anxiety disorders among OCD patients. Although there did not appear to be significant cultural variations in rates or patterns of comorbidity and suicidality.
Dell'Osso <i>et al.</i> [13]	Examined the prevalence of suicide attempts and associated sociodemographic and clinical features in 425 CD outpatients, recruited through ICOCS network.	History of suicide attempts' prevalence of 15% in OCD patients, with higher rates of psychiatric and medical comorbidities and previous hospitalisations in patients with a previous suicide attempts.
Ching <i>et al.</i> [14]	Examined the associations between OC symptom dimensions and suicidality, beyond the contribution of depressive symptoms in an OCD analogue sample of 146 (103 females, 43 males) college students, a group traditionally at risk for suicide, who exceeded the clinical cut-off for OC symptoms on OCI-R by using an online questionnaire containing measures that assessed suicidality and OC and depressive symptom severity.	Findings support the hypothesis that violent obsessions have a specific role in suicidality beyond the influence of depressive symptoms.
Huz <i>et al.</i> [15]	Examined the association of OCS with suicide risk among 474 college students in U.S. by using multiple self-report questionnaires.	Violent obsessions found to be an independent risk factor for suicidality than depression.
Fernández de la Cruz <i>et al.</i> [16]	Assessed the risk of suicide in OCD and identify the risk and protective factors associated with suicidal behaviour among 36,788 CD patients in the Swedish National Patient Register between 1969 and 2013 who were compared with matched general population controls (1:10) by matched case-cohort design.	Past history of suicide attempts and presence of comorbid personality or substance use disorders were the important risk factors for suicidality among patients with OCD.
Velloso <i>et al.</i> [17]	Examined the suicidality severity continuum and its association with OC symptom dimensions and QoL in a cross-sectional study of 548 CD patients from the Brazilian C-TOC sites by using YBOCS; Dimensional YBOCS (DYBOCS); BDAI; SCID; and the SF-36 QoL Health Survey.	Lower QoL scores, higher scores on the sexual dimension, and a family history of suicide attempts should be considered as risk factors for suicidality among OCD patients.
Kim <i>et al.</i> [18]	Examined the association of alexithymia and perfectionism traits with suicidal risk among 81 patients with OCD by using SSI, TAS-20, MCUP, YBOCS, Dimensional OC Scale, and MADRS.	Alexithymia and perfectionism may contribute to high suicidality in patients with OCD.
Cho <i>et al.</i> [19]	Examined whether anxiety disorders are related to suicidal ideation and suicide attempts in a nationally representative sample of 6,510 South Korean adults.	Individual anxiety disorders including OCD are independently associated with suicidal ideation and/or suicide attempts.
Lai <i>et al.</i> [20]	A case report examined the role of aripiprazole augmentation in managing comorbid OCD and bipolar disorder (BD-OCD); the patient repetitively attempted suicide and reported dangerous driving because of intolerable mental sufferings.	A small dose of aripiprazole augmentation can be used for treating BD-OCD comorbidity with suicidality.
Raines <i>et al.</i> [21]	Assessed the effect of brief anxiety sensitivity cognitive concerns intervention on suicidality among 54 individuals with OC symptoms by using randomised clinical trial.	The active intervention produced significantly greater reductions in anxiety sensitive cognitive concerns, and changes in anxiety sensitive cognitive concerns following the intervention mediated changes in suicidality at one-month follow-up.

(Contd...)

Table 1: (Continued)

Authors	Characteristics of study	Findings (brief)
Szmulewicz <i>et al.</i> [22]	Examined the association of comorbid OCD or OC symptoms with suicidality in a population of clozapine-medicated schizophrenic and schizoaffective patients (N=65).	Significant positive correlations between suicidality and total Y-BOCS score, and between Y-BOCS score and depressive symptoms were found. A Y-BOCS score greater or equal to eight was an independent predictor of suicide attempt during clozapine treatment.
Angelakis <i>et al.</i> [23]	Systematic review and meta-analysis aimed at examining the association between suicidality and OCD by using five electronic bibliographic databases were searched up to April 2014: Medline, PsycINFO, Embase, Web of Science, and CINAHL.	A high, significant association between OCD and suicidality was established. Comorbid depression worsened the severity of suicidality in OCD.
Storch <i>et al.</i> [24]	Examined the frequency and sociodemographic and clinical correlates of suicidal ideation in 54 youths with OCD and their parent (s) by using SIQ-JR and other various scales for clinical correlates.	Suicidal ideation was significantly related to depressive symptoms, age, child-rated impairment and anxiety symptoms, and symmetry, sexuality/religiosity, and miscellaneous symptom dimensions.
Dhyani <i>et al.</i> [25]	Cross-sectional, clinical study examined the suicidal behaviour in patients of OCD attending the adult psychiatry in India by using OCD SCID Axis-I disorders, YBOCS, SSI, BHS.	One fifth of patients had a history of past suicidal attempt. Hopelessness was a predictor of future suicidal risk. 26.9% of patients had a significantly high degree of suicidal ideation.
Balci and Sevincok[26]	Examined the demographic and clinical correlates of current suicidal ideation in 44 patients with OCD assessed by SSI.	The presence of major depression and aggressive obsessions, the level of hopelessness, and the severity of OC symptomatology were significant predictors of current suicidal ideation in patients with OCD.
Alonso <i>et al.</i> [27]	Examined the occurrence of persistent suicidal ideation and suicide attempts in 218 outpatients with OCD which were followed-up prospectively during one to six years in Barcelona, Spain between February 1998 and December 2007 by using HAM-D and BSIS.	Suicide behaviour is seen among patients with OCD. Being unmarried, comorbid depression or affective disorder, and symmetry/ordering obsessions were independently associated with suicidal behaviour.
Diaconu and Turecki[28]	Examined the association between OCPD and suicidal behaviour among 311 subjects by using a three-group design, controlling for the presence of depression at Verdun Community Psychiatric Clinic, Douglas Hospital, McGill University in Montreal, Quebec, Canada during 2003 until 2005.	OCPD is a factor increasing risk for nonfatal suicidal behaviour.
Kamath <i>et al.</i> [29]	Examined the suicidal behaviour in 100°CD patients attending the specialty OCD clinic in India by using SSI, HAM-D, and BHS.	The rates of suicidal ideation, worst ever and current, were 59% and 28% respectively. History of suicide attempt was reported in 27% of the subjects. Depression and hopelessness are the major correlates of suicidal behaviour.
Apter <i>et al.</i> [30]	Examined the prevalence and correlations of suicidal behaviour in OCD among 348 adolescent psychiatric inpatients by CSPS, BDI, ICS, STAI, and the Yudowsky OAS.	Although suicidal ideation and depressive symptoms are common in OCD adolescent inpatients, they seem to be protected against suicide attempts.
Jose <i>et al.</i> [31]	Examined self-mutilation, anorexia, and dysmenorrhoea among 19 female patients diagnosed with OCD, who exhibited additional symptoms of self-mutilation, dysmenorrhoea, and dysorexia.	Medications and therapy saw decrease in self-harm and OCD symptoms.

OCD=Obsessive Compulsive Disorder; YBOCS=Yale-Brown Obsessive Compulsive Scale; OCI-R=Obsessive-Compulsive Inventory-Revised; QoL=Quality of Life; ICOCS=International College of Obsessive-Compulsive Spectrum Disorders; OC=Obsessive Compulsive; OCS=Obsessive Compulsive Symptoms; C-TOC=OCD Consortium; Beck Depression and Anxiety Inventories=BDAI; SCID=Structured Clinical Interview for DSM-IV; SSI=Scale for Suicidal Ideation; Toronto Alexithymia Scale-20=TAS-20; Measure of Constructs Underlying Perfectionism=MCUP; Montgomery-Asberg Depression Rating Scale=MADRS; SIQ-JR=Suicidal Ideation Questionnaire-Junior; BHS=Beck's Hopelessness Scale; Beck Suicide Intent Scale=BSIS; HAM-D=Hamilton Rating Scale for Depression; OCPD=Obsessive Compulsive Personality Disorder; CSPS=Childhood Suicide Potential Scale; Beck Depression Inventory=BDI; ICS=Impulse Control Scale; State-Trait Anxiety Inventory=STAI; Overt Aggression Scale=OAS.

behaviour and depressive symptoms, and that high scores on the scale could predict suicide attempts.

A recent meta-analysis was published by Angelakis *et al.*[23] regarding suicidality and OCD. They used 48 studies for the review and found that there was a high association between OCD and suicidality. Along with OCD, they found

that co-morbid depression worsened the severity of suicidal behaviour in people with OCD.

Among OCD patients, prevalence of co-morbid mood and other anxiety disorders is quite common. Treatment of anxiety without directly treating major depression may place patients at greater risk of suicidal behaviour.[37]

Suicidal patients with OCD and co-morbid depression also need comprehensive management of the underlying anxiety and depressive symptoms to reduce the risk of suicide. We have come across a study regarding the comprehensive management of self-harm among OCD patients. Self-harm in 19 females with OCD was studied by Jose *et al.*[31] using clinical observations, self-reports, and behaviour therapy and clomipramine medication. This study showed that medications and therapy helped in decreasing OCD symptoms and self-harm. Further longitudinal studies are required to look into management of suicidal behaviour among OCD patients.

OCD AND SUICIDAL BEHAVIOUR IN THE INDIAN CONTEXT

There are various studies which took place in India or used people with OCD from India.[38] However, only very few studies have looked into suicidal behaviour among patients with OCD in the Indian context. A study by Kamath *et al.*[29] used 100 subjects with OCD, using structured interviews and rating scales like SSI, the Beck's Hopelessness Scale (BHS), and HAM-D. The rate of suicidal ideation, worst ever and current, were 59% and 28 % respectively. History of suicide attempt was noted in 27% of the patients. The results showed that OCD is associated with a higher risk of suicidal behaviour, with depression and hopelessness as major correlates of suicidal behaviour. Another study by Dhyani *et al.*[25] looked at patients with OCD, and used scales like Y-BOCS and BHS. The results showed that many patients had histories of suicide attempts and many suffered from suicidal ideation.

A multinational collaborative study by Brakoulias *et al.*[12] used 3711 OCD patients from India, Brazil, Italy and other countries and their histories and information for the article. They found that comorbidity in OCD is common- mainly depression and anxiety disorders- and that suicidality may be a common factor in OCD. Hence, comprehensive management of suicidality among OCD patients also needs to treat underlying depression and anxiety disorders.

LIMITATIONS

This is a selective review so the size of the review does not truly show the association between OCD and suicide. Articles for this review were taken from PubMed and Google Scholar, with specific key words like OCD and suicide and were limited to English articles and this may have resulted in the omission of many other relevant articles from the other electronic bibliographic databases such as PsycINFO, Embase, Web of Science and CINAHL or Cochrane review. Since most of the studies did not use uniform tools and designs, hence it is difficult to group the studies in the table as per the tools and methodology used.

CONCLUSIONS

This review shows that there can be a high association between OCD and suicidal behaviour, especially with comorbid disorders like depression and mood disorders. Majority of studies are from the west and studies are lacking from India. Since suicidal behaviour is prevalent among OCD patients,

hence systematic risk assessment is required to access all OCD patients for the presence of suicidal behaviour. Our review also highlights that presence of co-morbidities such as anxiety disorders and depression, substance use disorders, certain personality traits; past suicide attempts; violent obsessions also increase the risk of suicidal behaviour among OCD patients. Many patients with OCD also have obsession regarding fear of harming self or others. However, studies in this regard are very few in the literature.

Future studies are required to look into the role of other risk factors for suicide such as gender, family history of suicidal behaviour, and duration of untreated OCD, age of onset, personality traits, and presence of co-morbid disorders among OCD.

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