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Prevalence and risk factors of suicidal ideations among patients with obsessive-compulsive disorder in Egypt

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Abstract

Background: Suicidal ideations were reported in many studies among patient with obsessive-compulsive disorder (OCD); this study aimed to evaluate the prevalence and factors associated with current suicidal ideations among Egyptian patients with obsessive-compulsive disorder (OCD). A consecutive sample of 120 Egyptian OCD patients was included in the study. OCD was diagnosed using the structured clinical interview for DSM-V axis I disorders, clinical version (SCID-I-CV). Yale-Brown Obsessive Compulsive Scale (Y-BOCS) was also applied to the patients. Presence of current suicidal ideations was assessed using Scale for Suicidal Ideation (SSI).

Results: Twenty eight (23.3%) of the OCD patients reported presence of current suicidal ideations, religious obsessions OR = 3.53, $P = 0.009$, and presence of comorbid major depressive disorder OR = 1.77, $P = 0.04$.

Conclusion: Religious obsessions and comorbid major depressive disorder were found to be significant predictors for the current suicidal ideations in patients with OCD; however, religious obsessions were the strongest predictor. Religious obsessions should be evaluated and treated to decrease the risk of suicidal thoughts in Egyptian OCD patients.

Keywords: Risk factors, Suicidal ideations, Obsessive-compulsive disorder

Background

Suicidal behavior is a continuum process that ranges from suicidal ideation to attempting and eventually completing the suicide [1, 2]. Suicidal ideation was defined as any self-reported thoughts of engaging in suicide-related behavior [3]. Suicidal behavior among patients with anxiety disorders is much higher than in the general population [4]. OCD is ranked among the 10 most disabling medical conditions worldwide [5]. Obsessions and compulsions cause functional impairment, interfering with leisure activities and affecting family, marital, and social relationships [6–8].

Studies reported significantly higher rates of suicidal behavior among patients with OCD. Kamath et al. [9] reported that OCD is associated with a high risk of

suicidal behavior. Torres et al. [10] found that 63% of OCD patients reported lifetime suicidal thoughts, and 25% reported at least one previous suicide attempt. Little is known about the risk factors of suicidal behavior among patients with OCD in Arab countries. Comorbidity with depression [9] and substance abuse [11] have been suggested as risk factors of suicidal behavior among patients with OCD in previous studies.

One of the most important aspects of psychiatric practice is to prevent deaths by suicide [12]. Suicidal ideations are considered as a precursor for suicidal attempts and completed suicide among psychiatric patients [13]. Recognition and treatment of the risk factors of suicidal ideations among patients with OCD are crucial in preventing fatal consequences. The aims of this study were to assess the prevalence of suicidal ideations and the factors associated with suicidal ideations in patients with obsessive compulsive disorder in Egypt.

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Methods

Participants

A sample of 120 consecutive patients with obsessive-compulsive disorder (OCD) was included in this cross-sectional study. The patients were recruited from the outpatient clinic of the Psychiatry Department, Zagazig University Hospital, Zagazig, Egypt, between January 2019 and October 2019. Both male and female patients aged 18 to 60 years old were included in the study. Exclusion criteria are any medical or psychiatric comorbidity. The sample was categorized into 2 groups, those with current suicidal ideations (group I) and those without current suicidal ideations (group II), by using the Scale for Suicidal Ideation (SSI).

Measures

Sociodemographic form is composed of questions related to personal characteristics of patients (age, gender, education, marital status, employment status family history of OCD, and disorder duration).

The Structured Clinical Interview for the DSM axis I disorders, clinical version (SCID-I-CV) was used to confirm the diagnosis OCD and to diagnose other Axis I comorbid disorders [14].

Yale-Brown Obsessive Compulsive Scale (Y-BOCS) was used to measure the presence and severity of obsessions and compulsions. The Y-BOCS is considered the “gold standard” for assessing symptom severity [15]. The Y-BOCS is divided into two sections; the first section is a checklist of obsessions and compulsions. The second section contains 12 questions about the severity of obsession-compulsive symptoms. Responses are made on a Likert scale from 0 (no symptoms) to 4 (extreme symptoms) with higher scores indicating greater severity. The first ten items assess the time spent, the degree of distress and interference, and the perceived resistance to and control over obsessions and compulsions. The sum of the 10 severity items yields three scores: an obsession severity score (range = 0–20), a compulsion severity score (range = 0–20), and a total score (range = 0–40). The Y-BOCS also contains two additional items that measure important features of OCD; item 11 measures the degree to which the respondents recognized that their obsessions and compulsions are unreasonable or senseless, and item 12 measures the extent to which respondents avoid doing things, going places, or being with people because of their obsessions and compulsions. Psychometric estimates of the Y-BOCS suggest excellent reliability and validity [16, 17].

Scale for Suicidal Ideation (SSI) was used to assess the suicidal ideations in patients with OCD; the SSI is a clinician rating scale with a semi-structured interview format [18], with established reliability and validity [19]. This 19-item scale evaluates intensity of the patient's

active suicide desire, specific plans for suicide, passive suicide desire, and previous suicide attempts. Each item consists of three choices graded according to the intensity of the suicidality and rated on a 3-point scale ranging from 0 to 2. Higher scores are related to severe suicidal ideation. A total SSI score equivalent to 6 or more was considered as a cutoff point for clinically significant suicidal ideations as suggested in a previous study on adult suicidality [20]. We used this cutoff point to evaluate the presence of suicidal ideations.

Previous history of suicide attempts, defined as an act of deliberate self-destructive behavior with the intension of ending one's life, was assessed retrospectively by asking the patients directly “Have you ever attempted suicide?”

Statistical analysis

The data were analyzed using the Statistical Package for the Social Sciences (SPSS Inc., Chicago, IL, USA), version 20. Descriptive data were analyzed using means, standard deviation, and percentages. *T* test was used to compare quantitative parameters. Regression methods were used to develop predictive models. A *P* value < .05 was considered to indicate statistical significance.

Results

Demographic and clinical characteristics of study participants

Of the 120 OCD patients, 28 (23.3%) were found to have current suicidal ideations. There were no statistically significant differences between the OCD patients with current suicidal ideations (group I) and those without current suicidal ideations (group II) in terms of age, gender, years of education, duration of OCD, employment status, marital status, family history of OCD, and total Y-BOCS mean score. There was a significant increase in the number of previous hospitalizations, the number of patients diagnosed with major depressive disorder, and patients with past suicidal attempts in group I compared with group II ($P = < 0.001$, 0.01, and 0.02 respectively). Also, there was a significant increase in the number of patients with religious obsessions in group I compared with group II ($P = 0.03$) (Tables 1 and 2).

Results of regression analysis

Using logistic regression for the whole sample, we found that presence of religious obsessions was the strongest predictor for current suicidal ideations, with 3 times increased risk for suicidal ideations (OR = 3.53, CI = 1.96–5.11, $P = 0.009$), and presence of comorbid major depressive disorder was also a significant predictor for current suicidal ideations, with 1.5 times increased risk for suicidal ideations (OR = 1.77, CI = 1.21–3.86, $P = 0.04$) (Table 3).

Table 1 Demographic and clinical characteristics of OCD patients with and without current suicidal ideations ($n = 120$)

Variable	With suicidal ideations (N = 28)		Without suicidal ideations (N = 92)		Significance		CI (95%)
	M	SD	M	SD	t	p	
Age	34.78	5.99	36.69	7.52	- 0.92	0.3	- 6.06–2.24
Education (in years)	12.94	4.72	12.01	5.13	0.64	0.5	- 2.01–3.90
Duration of OCD (in years)	7.94	2.79	6.59	3.21	1.49	0.1	- 0.46–3.17
Number of previous hospitalizations	5.22	2.13	3.03	1.76	3.90	< 0.001	1.06–3.31
	N	%	N	%	χ^2	p	
Gender							
Female	13	46.40	47	51	0.19	0.6	
Male	15	53.60	45	49			
Employment status							
Employed	20	71.42	64	69.56	0.04	0.8	
Unemployed	8	28.58	28	30.44			
Marital status							
Married	20	71.42	74	80.43	0.49	0.4	
Single	5	17.85	11	11.95			
Divorced	2	7.15	3	3.27			
Widowed	1	3.58	4	4.35			
Family history of OCD	7/28	25	22/92	23.91	0.01	0.9	
Axis-I co morbidity							
Major depressive disorder	14/28	50	23/92	25	6.29	0.01	
Generalized anxiety disorder	6/28	21.42	16/92	17.39	0.23	0.6	
Panic disorder	1/28	3.58	2/92	2.17	0.17	0.6	
Past suicidal attempts	4/28	14.28	3/92	3.26	4.75	0.02	

Discussion

In the current study, 28/120 (23.3%) were found to have current suicidal ideations. This in line with other studies that reported 27% [19] increased likelihood of current suicidal ideations in patients with OCD. Chaudhary et al. and Breet et al. reported 52% and 51.8% of suicidal ideations respectively among OCD patient; they used different tools for suicide estimations such as Columbia suicide severity rating scale (CSSRS) [21, 22].

In agreement with the literature, many studies reported that major depression is strongly associated with suicidal ideations among patients with OCD [9, 21, 23–27]. In contrast, Apter et al. reported inverse relationship between depression and suicidal behavior in a group of adolescents suffering from OCD, but the OCD patients that were included in our study were adults. So treatment of comorbid depression is important to decrease the risk of suicide among patients with OCD [28].

The most important finding in the present study was that the presence of religious obsessions was the strongest predictor for the current suicidal ideations among Egyptian Muslim patients with OCD. In Egypt, where this study was carried out, a predominantly Islamic society is governed by traditional cultural and Islamic values

[29], so religious obsessions are extremely painful and stressful than other subtype obsessions in this society; this is on line with a recent Egyptian study that reported similar results [30].

Torres et al. reported that symptoms from the sexual/religious dimension were the most consistent with all aspects of suicidal behavior among patients with OCD, and also, Kamath et al. [9] reported that religious symptoms were the only ones significantly associated with suicide among patients with OCD. Chaudhary et al. reported that suicidality was found to be maximum in those with symptoms of cleanliness and contamination (57%) followed by religious obsessions (45%), sexual obsessions (33%), repeated rituals (31%), and other obsessions like need to touch and ask (26%) respectively. This result can be explained by the different culture and suicide religious believes [10, 21, 31, 32].

Balci and Sevincok [27] found that Muslim OCD patients with suicidal ideations tended to have more religious obsessions than patients without suicidal ideations but this difference failed to reach a significance; this may be due to their small sample size.

Similar to the results of the current study, Balci and Sevincok found that the severity of depression differed

Table 2 OCD clinical characteristics comparison between OCD patients with and without current suicidal ideations (*n* = 120)

Variable	With suicidal ideations (N = 28)		Without suicidal ideations (N = 92)		Significance		CI (95%)
	M	SD	M	SD	t	p	
Total Y-BOCS	27.61	3.32	26.69	4.13	0.81	0.4	3.91–8.22
	N	%	N	%	χ^2	p	
Obsessions							
Contamination	9	32.1	31	33.7	0.02	0.8	
Aggressive	3	10.6	11	12	0.03	0.8	
Sexual	4	14.1	15	16.5	0.07	0.7	
Hoarding	2	7.7	7	7.6	0.01	0.9	
Religious	8	28.5	11	12	4.45	0.03	
Symmetry	1	3.5	8	8.6	0.81	0.3	
Somatic	1	3.5	9	9.6	1.08	0.2	
Miscellaneous	0	0	0	0	0	0	
Compulsions							
Cleaning	9	32.1	31	33.7	0.02	0.8	
Checking	6	21.3	15	16.5	0.39	0.5	
Ritualistic	6	21.3	18	19.3	0.05	0.8	
Counting	4	14.1	13	14.3	0.01	0.9	
Arranging/ordering	1	3.5	8	8.6	0.81	0.8	
Hoarding	2	7.7	7	7.6	0.01	0.9	
Miscellaneous	0	0	0	0	0	0	

Total Y-BOCS Yale-Brown Obsessive Compulsive Scale

significantly between patients who have suicide ideations and those who have not, but they found that the aggressive obsessions were the most predictors of suicide among OCD, that result was not in line with the current one, and it can be explained by the small sample size of their study [27].

Another study by Velloso et al. reported correlation between suicide phenomenon and religious dimension of OCD symptoms [33].

So searching for presence of religious obsessions among Arab Muslim patients with suicidal ideations

suffering from OCD is mandatory, and cognitive-behavioral therapy is essential to resolve the marked stress associated with the religious obsessions, and subsequently, this will decrease these obsessions.

The current study has a number of limitations. The study is cross-sectional, and longitudinal studies are required to prove causality. Also, we did not assess other variables that may be associated with suicidal ideations among patients with OCD such as personality traits, past history of childhood trauma, and substance abuse. Despite these limitations, to our knowledge, this study is

Table 3 Logistic regression analysis predicting presence of current suicidal ideations among patients with OCD (*N* = 120).

Dependent variable	Model	Independent variables	B	P	Odds ratio	95% CI
Presence of current suicidal ideations	$R^2 = 0.58$ $\chi^2 = 24.78$ $P = 0.006$	Presence of religious obsessions	0.58	0.009	3.53	1.96–5.11
		Comorbid major depressive disorder	0.28	0.04	1.77	1.21–3.86
		OCD severity (*Total Y-BOCS)	0.09	0.7	0.87	0.71–1.01
		Duration of OCD	0.10	0.8	0.89	0.60–1.01
		Number of previous hospitalizations	0.06	0.6	0.86	0.68–1.00
		Previous suicidal attempts	0.12	0.6	0.91	0.72–1.03

*Total Y-BOCS Yale-Brown Obsessive Compulsive Scale

one of the few studies that has evaluated the relationship of religious obsessions and suicidal ideations among Egyptian Muslim population suffering from OCD.

Conclusion

In the present study, presence of religious obsessions and comorbid major depressive disorder was found to be significant predictors for the current suicidal ideations in Egyptian patients with OCD. Presence of religious obsessions was the strongest predictor for the current suicidal ideations in those patients. These factors should be considered in the treatment regimen and resolving the marked stress associated with the presence of religious obsessions and subsequently increased risk for suicidal behavior is mandatory.

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Authors' contributions

MS: concept and design. MS, UY, and HG: data collection and interpretation of the data, writing of the draft. All authors read and approved the study.

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Availability of data and materials

All data generated or analyzed during this study are included in this published article.

Ethics approval and consent to participate

After complete description of the study to the subjects, informed consent was obtained. The ethical approval was obtained from the research ethics committee of the faculty of medicine, Zagazig University, under number 6486.

Consent for publication

Not applicable

Competing interests

The authors declare no conflict of interest.

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