

Obsessive-compulsive spectrum and suicidality in schizophrenia and mood disorders

Spettro ossessivo-compulsivo e suicidalità in pazienti con schizofrenia e disturbi dell'umore

Summary

Objective

The aims of this paper are to examine the lifetime frequency of obsessive compulsive disorder and of obsessive compulsive spectrum in patients with schizophrenia, psychotic mood disorders and non-psychotic mood disorders and to investigate the association of obsessive compulsive spectrum features with suicidality.

Method

Consecutive outpatients and inpatients with schizophrenia and mood disorders were recruited for a multicenter study aimed to assess the validity of the Structured Clinical Interview for the Psychotic Spectrum. The diagnostic assessment was conducted with the Structured Clinical Interview for DSM-IV Axis I Disorders. Lifetime obsessive compulsive spectrum features were assessed with the Obsessive-Compulsive Spectrum Self-Report questionnaire and suicidality was assessed using 6 items of the Mood Spectrum Self-Report questionnaire. Patients were classified into 6 mutually exclusive groups (no suicidality, only thoughts, ideation, plans, attempts, serious attempts) according to the highest level achieved in their lifetime.

Results

The study sample was composed of 76 patients with schizophrenia or schizoaffective disorder (schizophrenia = 45; schizoaffective disorder = 31), 53 with psychotic mood dis-

orders (psychotic mood disorders: 36 with bipolar I disorder; 17 with unipolar depression) and 92 with non-psychotic mood disorder (non-psychotic mood disorders: 23 with bipolar I disorder, 70 with unipolar depression) (Table I). Suicidality was more common in patients with mood disorders than in schizophrenia (Fig. 1). While 40% of patients with schizophrenia endorsed at least one suicidality item, this was the case in 62% of patients with psychotic mood disorders (of whom 26% committed a serious suicide attempt) and 56% of patients with non-psychotic mood disorders. In an ordinal regression model examining the effect on suicidality of obsessive-compulsive disorder, obsessive-compulsive spectrum self-report domains and study group, the domains 'Doubt' and 'obsessive-compulsive issues' predicted increased levels of suicidality while 'perfectionism' and schizophrenia (compared with non-psychotic mood disorders) predicted decreased levels of suicidality (Table III).

Conclusions

Obsessive compulsive spectrum features are common among patients with schizophrenia, schizoaffective disorders and mood disorders. Our findings highlight the importance of early recognition and treatment of these spectrum features as they are related to a higher suicidal risk. Further studies are warranted to confirm these findings and to better clarify the predictive and prognostic value of obsessive-compulsive spectrum features.

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Key words:

Schizophrenia • Mood disorders
• Obsessive compulsive spectrum
• Suicide

Corrispondenza

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Introduction

In the beginning of the last century different authors observed that patients with schizophrenia report obsessive-compulsive symptoms during the first phases of the disorder^{1,2}. In 1926 Jahrreiss argued that symptoms such as fear of making mistakes, checking behaviour, brooding mania and obsessive doubts should be considered as part of the schizophrenic process or as a defence against psychotic disintegration³. More recently attempts were made to elucidate the relationship between obsessions and psychosis. In particular, different studies have focused on the comorbidity between schizophrenic disorders and obsessive-compulsive symptoms. The high variability in comorbidity rates, ranging from 1.1% to 60.0%⁴⁻⁸ can be ascribed to the different methods to assess schizophrenia, obsessive-compulsive disorder and obsessive-compulsive symptoms⁹⁻¹¹ and to the typical instability, in the long-term course, of obsessive compulsive disorders (OCD)¹². Clinical experience suggests that mood dysregulations have an impact on the course and severity of OC symptoms, while data from the literature are controversial: Perugi et al.¹³ reported that comorbidity with bipolar and unipolar affective disorders has an impact on the clinical characteristics, comorbidity and course of OCD, on the contrary Issler et al.,¹⁴ analysing a small group of patients with comorbid bipolar and OC disorders, failed to find a clear-cut impact of depression and manic episodes on the intensity of obsessive compulsive symptoms.

According to Craig et al.¹², the percentage of comorbidity with OCD is equal among the different Axis I disorders belonging to the so-called schizophrenic spectrum. These authors found rates of 16.2% for OC symptoms and 3.8% for OCD in patients with psychosis, without significant differences between schizophrenia, schizoaffective disorders, mood disorders with psychotic features and no relationships with the clinical functioning at the 24-month follow-up as assessed with the Global Assessment of Functioning Scale, the Brief Psychiatric Rating Scale, the Scales for Assessment of Positive and Negative Symptoms and the Hamilton Depression Rating Scale¹².

Comorbidity rates between mood disorders and OCD vary from 21% to 13.4% for bipolar disorders and 14.3 to 5.3% for unipolar disorder¹⁵⁻¹⁸.

Atypical antipsychotics, widely used in the treatment of both schizophrenia and mood disorders,

have been used as adjunctive treatment in refractory cases with obsessive-compulsive symptoms¹⁹⁻²¹, even if different case reports have emphasized the risk of the emergence or exacerbation of OC symptoms during treatment with these agents²².

Recent studies have found an association between OCD and OC symptoms and a higher suicidal risk in patients with schizophrenia (SCH). Patients with the so-called OCD-Schizophrenia are more likely to have a previous history of suicidal ideation and attempts²³; OC symptoms severity is associated with suicidality in adolescents at ultra-high-risk for psychosis²⁴.

With regard to mood disorders the association between comorbid OCD and suicidality is less clear. A number of studies reported a higher rate of suicide attempts in patients with a mood disorder plus OCD^{15,18,25} but these data were not subsequently confirmed: indeed Apter et al. suggested that OC symptoms might be protective against actual suicide attempts²⁶.

In general, OC symptoms are neglected by clinicians when comorbid with an acute psychotic illness or with a severe mood disorder.

The aims of this paper are to examine the lifetime frequency of obsessive compulsive disorders (OCD) and of obsessive compulsive spectrum in patients with schizophrenia, psychotic mood disorders (PM) and non psychotic mood disorders (NPM) and to investigate the association of OCD and OC spectrum features with suicidality.

Methods

The study sample was recruited for a larger multicenter study aimed to assess the validity of the Structured Clinical Interview for the Psychotic Spectrum (SCI-PSY)²⁷. Eligible patients included new and continuing patients between 18 and 60 years of age. Exclusion criteria were severe medical illness, neurological diseases and substance abuse in the month preceding the index assessment, inability to participate because of the severity of psychiatric symptoms. The Ethics Committee of the Azienda Ospedaliera Universitaria of Pisa approved recruitment and assessment procedures. All eligible subjects provided written informed consent, after receiving a complete description of the study and having an opportunity to ask questions and were not paid for their participation. For the purpose of the present report, we selected

patients with schizophrenia, schizoaffective disorder, mood disorders with psychotic features and mood disorders without psychotic features.

Measures

Diagnostic assessment

The diagnostic interview consisted of the administration of the Structured Clinical Interview for DSM-IV axis-I disorders (SCID-I/P)²⁸. The assessment was conducted by psychiatrists or residents in psychiatry, who were trained and certified in the use of the study instruments at the Department of Psychiatry of the University of Pisa. The severity of current psychotic symptoms was rated by using the Brief Psychiatric Rating Scale (BPRS). After the diagnostic assessment patients were administered the Obsessive-Compulsive Spectrum Self-Report (OBS-SR) and the Mood Spectrum Self-Report (MOODS-SR).

The Obsessive-Compulsive Spectrum Self-Report Version (OBS-SR)

The Obsessive Compulsive Spectrum explores the typical symptoms of OCD and a wide range of traits and behaviors that surround the core symptoms of the disorder. It is based on the spectrum approach, that recognizes the clinical significance of these often neglected clinical features that may also appear in patients with axis I disorders other than OCD and modify their course and response to treatment^{29,30}. The OBS-SR consists of 195 items grouped into seven domains: "childhood/adolescence experiences" (22 items), "doubt" (14 items), "hypercontrol" (70 items), "use of time" (8 items), "perfectionism" (18 items), "repetition and automation" (12 items), and "specific items" (51 items). The items explore obsessive-compulsive traits during childhood and adolescence, in particular at school, during leisure time, and in the family environment; expressions of doubt through exploration of insecurity, uncertainty and indecision related to the personal feelings, cognition and behavior; a tendency to control by exploring areas of caution, personal responsibility, checking, emotional control, control of others, conformity and traditional values and magical thinking; poor management of time and slowness; a tendency to precision, exactness, order or symmetry; a behavioral-motor set along a continuum from conscious repetition to "just right" and tic movements. The last 51 items

comprise a checklist of obsessive-compulsive traits and symptoms. This checklist covers seven areas: contamination, cleaning, sexual, existential attitude toward religion and aggressive themes. Items are coded as present or absent in the lifetime. The domain scores are obtained as a count of positive responses.

The Structured Clinical Interview for the Mood Spectrum (MOODS-SR)³¹

This self-report instrument explores features associated with mood disorders. It was developed simultaneously in English and Italian by capitalizing on the long-standing clinical experience of Italian and American psychiatrists and psychologists. It consists of 154 items coded as present or absent for one or more periods of at least 3-5 days through the subject's lifetime. For some questions exploring temperamental features or the occurrence of specific events the duration is not specified because it would not be applicable.

Items are organized into 3 manic-hypomanic and 3 depressive domains exploring mood, energy and cognition, plus a domain that explores disturbances in rhythmicity (i.e. changes in mood, energy and physical well-being according to the weather, the season and the phase of menstrual cycle) and in vegetative functions, including sleep, appetite and sexual function. The sum of the scores on the three manic-hypomanic domains constitutes the manic-hypomanic component while that of the three depressive domains constitute 'the depressive component'.

Assessment of suicidality

Six items of the MOODS-SR explore suicidality by enquiring whether the subject has ever experienced periods of 3-5 days of more when he or she 1) felt like life was not worth living; 2) hoped to die; 3) wanted to die; 4) made suicide plans, and two questions asking; 5) whether he/she actually made a suicide attempt and 6) whether medical attention was required following the attempt. Patients were classified into 6 mutually exclusive groups (no suicidality, only thoughts, ideation, plans, attempts, serious attempts) according to the highest level achieved in the lifetime. For instance, if a patient endorsed items 1, 2 and 4, he/she was assigned to the group 'plans'. Similarly, if a patient reported that medical attention was required after the attempt

TABLE I.Demographic and clinical characteristics of the sample. *Caratteristiche cliniche e demografiche del campione.*

	Schizophrenia SCHI (N = 76)	Psychotic mood disorders, PM (N = 53)	Non-psychotic mood disorders (N = 92)
Sex: male n (%) [*]	53 (69.7)	19 (35.8)	36 (39.1)
Single: n (%) ^{**}	65 (85.5)	27 (50.9)	46 (50)
Age (mean)	36.5 (10.4)	40.4 (11.5)	39.9 (11.4)
BPRS, mean (SD) ^{***}	44.5 (16.4)	39.0 (12.9)	34.7 (8.5)

^{*} SCHI > MP and NPM: $p < 0.0001$; ^{**} SCHI > MP and NPM: $p < 0.0001$; ^{***} SCHI > NPM: $p < 0.000$.

(items 6), patient was assigned to the group 'serious attempts' regardless of the answers to the other 5 questions.

Chi-square test was used to compare the demographic characteristics (gender, marital status) and comorbidity distribution among the study groups. Age and BPRS scores were compared among groups using ANOVA followed by post-hoc Bonferroni test.

OBS-SR scores were compared among groups using a general linear model. The significance level for post-hoc tests on pairwise differences between groups was set at of 0.016 to correct for multiple comparisons.

Ordinal regression with a logit link was used to analyse the association between, OCD, OC spectrum domains and suicidality. Gender and clinical severity (total BPRS score) were included in these models to adjust for their effects.

Results

Study sample

The study sample includes 76 patients with schizophrenia or schizoaffective disorder (SCHI: schizophrenia = 45; schizoaffective disorder = 31), 53 with psychotic mood disorders (PM: 36 with bipolar I disorder; 17 with unipolar depression) and 92 with non-psychotic mood disorder (NPM: 23 with bipolar I disorder, 70 with unipolar depression). The majority of patients with schizophrenia were male and single, while subjects in the other groups were mostly female and about 50% single. Patients with schizophrenia were on average 4 years younger than the other two groups but the difference was not significant (Tab. I). The severity of psychopathology was significantly higher in the SCHI group compared to the NPM group. The differences be-

TABLE II.Estimated means and standard errors of OBS-SR domains and total score (adjusted for gender and BPRS score). *Media stimata ed errore standard dei punteggi ai domini dell'OBS-SR (corrette per sesso e punteggi BPRS).*

	Schizophrenia SCHI (N = 76)	Psychotic mood disorders PM (N = 53)	Non-psychotic mood disorders (N = 92)
OC during childhood and adolescence (range 0-22)	5.5 (0.4)	4.0 (0.5)	4.3 (0.4)
Doubt (range 0-14)	5.0 (0.4)	4.2 (0.5)	4.9 (0.4)
Hypercontrol (0-70) [*]	22.6 (1.5)	16.5 (1.7)	19.7 (1.3)
Use of time (0-8)	2.4 (0.2)	2.0 (0.2)	2.1 (0.2)
Perfectionism (0-18)	4.6 (0.4)	3.2 (0.5)	4.3 (0.4)
Repetition and automation (0-12)	2.5 (0.3)	1.5 (0.4)	2.4 (0.3)
Specific OC themes (0-51)	12.0 (1.2)	7.8 (1.4)	10.1 (1.1)
Total score (0-195) ⁺	54.7 (4.1)	39.2 (4.6)	48.0 (3.6)

^{*} SCHI > MP, ⁺ SCHI > MP.

tween the SCHI group and the PM group did not reach statistical significance.

Comorbidity with obsessive compulsive disorder and obsessive compulsive spectrum profiles in the study groups

Comorbidity with obsessive compulsive disorder was more frequent in patients with schizophrenia or schizoaffective disorder (14.5%) than in patients with mood psychotic (3.8%) or non-psychotic disorders (4.3%) ($\chi^2 = 7.5$, $df = 2$, $p = 0.023$).

Scores on the OBS-SR domains are shown in table II. Significant differences among groups were found after correcting for the effects of gender and severity. Post-hoc comparisons showed that patients with SCHI had significantly higher scores than those with PM on the domain "Hypercontrol" and on the total OBS-SR scores and no difference from patients with NPM.

Obsessive compulsive spectrum and suicidality

Suicidality was more common in patients with mood disorders than in schizophrenia (Fig. 1). While 40% of patients with schizophrenia endorsed at least one suicidality items, this was the case in 62% of patients with psychotic mood disorders (of whom 26% committed a serious suicide

attempt) and 56% of patients non-psychotic mood disorder.

In an ordinal regression model examining the effect on suicidality of OCD, OBS-SR domains and study group adjusted for gender and severity, the domains 'Doubt' and 'OC themes' predicted significantly increased levels of suicidality while 'perfectionism' predicted decreased levels of suicidality (Table III). OCD was unrelated with suicidality. Compared to patients with non-psychotic mood disorders (the reference category in the model), those with schizophrenia exhibited a lower level of suicidality. This result, however, failed to reach statistical significance ($p = 0.07$).

Discussion

Our findings indicate that OC spectrum features are common in patients with schizophrenia/schizoaffective disorders, psychotic and non psychotic mood disorders. Differently from previous reports¹², our data indicate that patients with schizophrenia/schizoaffective disorder endorse more OC symptoms than patients with psychotic mood disorders, and have a different symptom profile. In particular, patients with SCHI exhibited significantly higher scores than patients with PM on the "Hypercontrol" domains. No differences emerged between patients with SCHI and those with NPM.

Suicidality (including ideation, plans and attempts) among patients with SCHI were less frequent than in patients with mood disorders. Data from the literature point out that 5% of patients with SCHI die from suicide³²⁻³⁴ while 20-40% commit a suicide attempt during the course of their illness³⁵⁻³⁶. Data from our study, based on the highest suicidality level achieved in the lifetime, indicate that 19.8% of patients with SCHI reported ideation or plans and 14.5% of patients committed serious suicide attempts. The higher number of patients who committed serious suicide attempts among patients with PM compared with patients with NPM confirms previous data suggesting that psychotic features confer a higher suicidal risk in patients with a mood disorder³⁷⁻³⁸. Moreover differences seem to emerge within groups, where patients with PM show lower ideation and higher attempts while patients with NPM show higher ideation and lower attempts. This suggests a higher level of impul-

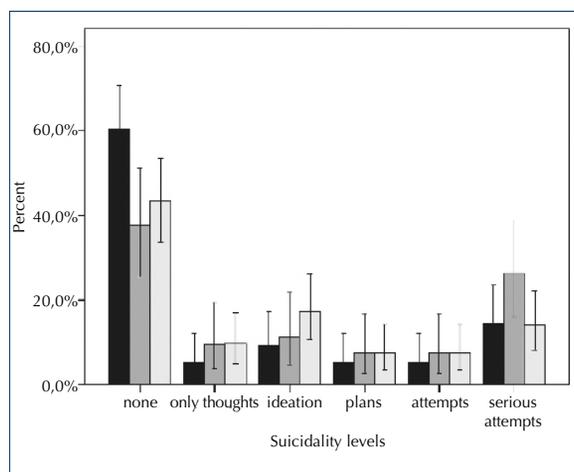


FIG. 1. Suicidality levels in the study groups. Black: SCHI; dark gray: PM; pale gray: NPM. *Livelli di suicidalità nei gruppi di studio. In nero: pazienti con schizofrenia; grigio scuro: pazienti con disturbi dell'umore psicotici; grigio chiaro: pazienti con disturbi dell'umore non psicotici*

TABLE III.

Relationship between suicidality, OCD, OBS-SR scores and diagnostic group, adjusted for gender and total BPRS score. *Associazione fra suicidalità, diagnosi di DOC, punteggi OBS-SR e gruppi diagnostici, corretta per sesso e punteggi BPRS.*

	Estimate	Std. error	Wald	df	Sig.	95% CI	
						Lower bound	Upper bound
OC experiences during childhood and adolescence	0,036	0,056	0,414	1	0,520	-0,074	0,146
Doubt	0,183	0,065	7,995	1	0,005	0,056	0,310
Hypercontrol	-0,033	0,022	2,331	1	0,127	-0,076	0,009
Use of time	0,058	0,099	0,346	1	0,556	-0,136	0,252
Perfectionism	-0,234	0,065	12,876	1	0,000	-0,361	-0,106
Repetition/automation	-0,023	0,075	,098	1	0,755	-0,169	0,123
Specific obsessive themes	0,124	0,026	22,143	1	0,000	0,072	0,175
Obsessive-compulsive disorder	0,243	0,535	0,206	1	0,650	-0,806	1,291
Total BPRS score	-0,003	0,011	0,054	1	0,817	-0,204	0,019
Gender	0,637	0,289	4,873	1	0,027	0,071	1,203
Schizophrenia	-0,645	0,360	3,217	1	0,073	-1,350	0,060
Psychotic mood disorders	0,532	0,335	2,516	1	0,113	-0,125	1,189
Non-psychotic mood disorders	0 ^a	.	.	0	.	.	.

sivity among psychotic patients. The pathways linking suicidal thoughts to completed suicide is still unclear and their knowledge could lead to a more effective prevention of suicide ³⁹.

Across the three diagnostic groups, the presence of specific OC spectrum features ('Doubt' and 'OC-specific issues') was associated with higher suicidal risk, whereas perfectionism seemed to have a protective role. Previous studies reported that patients with mood disorders and obsessive compulsive features experience more suicidal thoughts ^{15 18 25}, even if in the study of Simon et al. ¹⁸ the authors found an association only with current OCD, while lifetime comorbidity was not associated with higher suicidal risk. On the other hand another study suggested that OC symptoms might be protective against actual suicide attempts ²⁶.

The results of our study provide useful hints to understand these discrepancies: while the SCID diag-

nosis of OCD was unrelated with a higher suicidal risk, the spectrum approach allowed us to identify OC domains associated with different suicidal risk after adjusting for the effect of the diagnosis. In conclusion, our findings highlight the importance of early recognition and treatment of OC spectrum features in these patients as they may be related to a higher suicidal risk. Further studies are needed to confirm these findings and to better clarify the predictive and prognostic value of obsessive-compulsive spectrum features.

Study limitations

This study has a number of limitations: first, the sample size is relatively small. We found lower lifetime comorbidity between obsessive-compulsive disorder and mood disorders than the one reported in the literature ¹⁵⁻¹⁸. This may be due to selection bias, because these patients were recruited for a

larger study for the validation of an instrument to assess psychotic spectrum, that had specific exclusion criteria, among which drug abuse in the last month and age between 18-60 years.

For these reasons, our sample is probably not representative of the full range of patients with schizophrenia/schizoaffective disorders and mood disorders.

Moreover, patients were recruited when they were in partial or full remission from the index episode. This has prevented us from examining the relationship between mood dysregulations and OC symptoms.

Because the MOODS-SR and the OBS-SR assess symptoms and behaviors retrospectively, there might be a recall bias. In this paper, we assumed that the bias does not differentially affect the recall of mood and obsessive-compulsive symptoms.

In summary, our results should be interpreted with caution due to their preliminary nature.

Declaration of interest

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