Suicidal ideation and suicidal attempts in patients with Obsessive-Compulsive Tic-related Disorder (OCTD) versus OCD: results of multicenter Italian study

Beatrice Benatti[1*], Silvia Ferrari[1], Benedetta Grancini[1], Nicolaja Girone[1], Matteo Briguglio[2], Donatella Marazziti[3], Francesco Mucci[3], Liliana Dell'Osso[3], Orsola Gambini[4,5], Antonio Tundo[6], Domenico De Berardis[7,8], Roberta Galentino[2], Sara De Michele[2], Umberto Albert[9], Sylvia Rigardetto[10], Giuseppe Maina[10], Giacomo Grassi[11], Stefano Pallanti[11], Andrea Amerio[12,13], Mario Amore[12,13], Alberto Priori[4,5], Domenico Servello[2], Caterina Viganò[1], Monica Bosi[1], Anna Colombo[1], Mauro Porta[2], Bernardo Dell'Osso[1,5,14]

[1] Luigi Sacco University Hospital, Psychiatry 2 Unit, University of Milan, Italy.
[2] Department of Functional Neurosurgery, IRCCS Galeazzi Hospital, Tourette Center, Milan, Italy.
[3] Department of Clinical and Experimental Medicine, Section of Psychiatry, University of Pisa, Italy.
[4]Department of Health Sciences, University of Milan, Italy.
[5] "Aldo Ravelli" Center for Nanotechnology and Neurostimulation, University of Milan, Italy.
[6] Institute of Psychopathology, Rome, Italy.
[7] NHS, Department of Mental Health, Psychiatric Service of Diagnosis and Treatment, Hospital "G. Mazzini", ASL 4 Teramo, Italy;
[8] Department of Neuroscience, Imaging and Clinical Science, Chair of Psychiatry, University "G. D'Annunzio", Chieti, Italy;
[9] Dipartimento Universitario Clinico di Scienze Mediche Chirurgiche e della Salute, Università degli Studi di Trieste
[10] San Luigi Gonzaga Hospital, Orbassano, University of Turin, Italy
[11] INS, Institute of Neuroscience, Florence, Italy
[12] Department of Neuroscience, Rehabilitation, Ophthalmology, Genetics, Maternal and Child Health (DINOGMI), Section of Psychiatry, University of Genoa, Genoa, Italy.
[13] IRCCS Ospedale Policlinico San Martino, Genoa, Italy
[14]Department of Psychiatry and Behavioral Sciences, Stanford University, CA, USA.

***Corresponding Author:**
Dr Beatrice Benatti, MD
Luigi Sacco University Hospital
via GB Grassi, 74, 20157, Milan.
E-mail: beatricebenatti@gmail.com

Abstract: 250 words
Manuscript: 3010 words
Tables 2
Figures 3

ABSTRACT

Introduction: Obsessive-Compulsive Disorder (OCD) and Tic Disorder (TD) represent highly disabling, chronic and often comorbid psychiatric conditions. While recent studies showed a high risk of suicide for patients with OCD, little is known about patients with OCD and comorbid TD (OCTD), whose characterization represented the aim of this study.

Methods: 313 outpatients with an OCD (n=157) and an OCTD diagnosis (n=156) were recruited from nine different psychiatric departments across Italy and assessed using an ad hoc developed questionnaire investigating, among other domains, suicide attempt (SA) and ideation (SI). The sample was divided into 4 subgroups: OCD with SA (OCD-SA), OCD without SA (OCD-noSA), OCTD with SA (OCTD-SA) and OCTD without SA (OCTD-noSA).

Results: No differences between groups were found in terms of SI, while rates of SA were significantly higher in OCTD patients compared to OCD patients. OCTD-SA group showed a significant male prevalence, lower rates of full-time occupation and higher unemployment rates compared to OCD-SA and OCD-noSA sample. Both OCTD- groups showed an earlier age of comorbidity onset compared to the OCD-SA sample. Moreover, OCTD-SA patients showed higher rates of psychiatric comorbidities and family history compared to the OCD-SA group and to the -noSA groups. OCTD-SA and OCD-SA samples showed higher rates of antipsychotics therapies and treatment resistance compared to -noSA groups.

Conclusions: OCTD versus OCD patients showed a significantly higher rate of SA but no differences in SI. OCTD-SA group in particular showed different unfavorable epidemiological and clinical features which need to be confirmed in future International studies.

KEYWORDS: Obsessive Compulsive Disorder, Tic disorder, Suicidality

Introduction

Obsessive-Compulsive Disorder (OCD) and Tic Disorder (TD) represent highly disabling, chronic and often comorbid psychiatric conditions (1). The Diagnostic and Statistical Manual of Mental Disorders (DSM-5) introduced the "tic-related" specifier for OCD, highlighting the tendency of patients with obsessive-compulsive tic-related disorder - "OCTD" - to show different clinical characteristics (e.g. symptoms, comorbidity, course, and familial transmission) compared to OCD alone (2,3). Available literature identified several distinctive features for OCTD, such as early onset, male gender, sensory phenomena, specific obsessions (e.g., symmetry, aggressiveness, hoarding, exactness), attention-deficit/hyperactivity disorder (ADHD) comorbidity and positive family history for OCD and/or TD (4–6). A recent consensus article identified the need of further studies to better characterize OCTD with a particular focus on clinical aspects, such as epidemiology, etiology, course of illness, overall burden and disability, treatment response and suicide risk (7).

Focusing on suicidality, historically OCD has been considered to show an overall low suicide risk, which was mainly attributed to comorbidities, such as mood disorders. Recent studies, however, highlighted how OCD *per se* is associated with increased levels of suicidality compared to the general population (8,9), even in the absence of other psychiatric comorbidities (10). A previous meta-analysis by Angelakis and coworkers and a recent review by Albert and colleagues estimated a median rate of suicidal ideation ranging from 26.3-73.5% and a median rate of suicide attempts from 10.3 to 14.2% for patients suffering from OCD (8,11). Several studies found an association between a higher suicide risk in OCD and specific clinical factors, including: previous history of suicide attempts, suicide attempts in a family member, tobacco smoking, hopelessness, specific obsessions and compulsions (e.g., aggressive, symmetry/ordering, sexual/religious obsessions and obsessions subjectively

considered as unacceptable), substance use disorder, childhood trauma, alexithymia and psychiatric comorbidities (8,11–13). Among comorbidities, depression has been largely investigated in patients suffering from OCD and several studies suggested an association between higher suicidality and mood disorders or, more in general, higher depressive/anxiety symptoms (8,13,14).

Suicidality has been poorly and only recently explored in TD. Indeed, patients affected by TD often present clinical features related to a well-established suicide risk, such as social isolation, bullying, rejection and psychiatric comorbidities, particularly ADHD, OCD and depression (10).

In light of the above, the present multicenter study aimed to investigate and compare clinical and sociodemographic features in a multicentric sample of OCTD vs OCD subjects with no history of tic, with a specific focus on suicidal ideation and attempts, hypothesizing that OCTD compared to OCD patients might exhibit a different profile in this respect.

Methods

Patients with a DSM-5 diagnosis of OCD diagnosis with and without comorbid TD of either gender or any age were recruited from nine different psychiatric departments across Italy. diagnoses were assessed by means of a semi-structured interview based on DSM-IV crite- ria Structured Clinical Interview for DSM-IV (SCID-I and II) (15,16). Additional protocol details have been fully described elsewhere (1). In brief, patients recruited in different psychiatric departments were assessed using a novel questionnaire, under validation, developed to better characterize OCTD and composed of 35 questions assessing the following areas: 1) prevalence of OCTD; 2) patient's main socio-demographic features (i.e., age, gender, occupation, level of education, marital status); 3) clinical history (i.e., age at

OCD onset and TD onset, presence of other psychiatric comorbidities and age at comorbidities' onset, family history, OCD duration of untreated illness - DUI); 4) perceived quality of life, course of illness, current psychotherapy and psychopharmacological therapies, treatment response (defined as a decrease of at least 35% of the Yale-Brown Obsessive-Compulsive Scale - Y-BOCS - total score, (17)) and treatment resistance, presence of past/ current suicidal ideation (SI) or suicidal attempts (SA).

In order to compare clinical and demographic features of OCD and OCTD patients with and without suicidal behaviour, after a preliminary analysis of these features on the whole sample, we further divided it in OCD patients with and without past SA and OCTD patients with and without SA. SI and previous SA were assessed with detailed open questions on patients' previous and actual suicidal behavior without the use of Columbia Suicide Severity Rating Scale.

Pearson Chi-squared tests and Student' t-test were used, as appropriate. All analyses were performed using SPSS 24 for Windows software (Chicago, IL) with the level of statistical significance set at 0.05.

Results

Three hundred and thirteen patients were enrolled in the study, distributed as follows: 50 (13.7%) from Policlinico Hospital and Ospedale Universitario Luigi Sacco, Milan; 43 (16%) from Galeazzi Hospital, Milan; 16 (5.1%) from San Paolo Hospital, Milan; 60 (19.2%) from Istituto di Psicopatologia, Rome; 63 (20.1%) from Rita Levi Montalcini Department of Neuroscience, Turin and the Department of Biomedical Sciences of Alma Mater Studiorum University of Bologna; 24 (7.7%) from Department of Neuroscience, Florence; 19 (6.1%) from the Department of Neuroscience of Pisa and 38 (12.1%) from Teramo Hospital.

The sample consisted of 156 OCTD patients and 157 patients with pure OCD. In regards to suicidal behaviour, no differences between the OCTD groups vs the OCD group were found in terms of SI (OCTD 23.7% vs OCD 25.4%) while rates of SA were found to be significantly higher in patients with OCTD compared to patients with pure OCD (OCTD 16% vs OCD 13.3% ; $p<0.05$) (Figure 1).

The two groups were then divided into four subgroups on the basis of presence or absence of SA: OCD with SA (OCD-SA), OCD without SA (OCD-noSA), OCTD with SA (OCTD-SA) and OCTD without SA (OCTD-noSA). Main socio-demographic and clinical features of total sample and related subgroups are reported in Tables 1 and 2.

As concerns socio-demographic features, the OCTD-SA group was characterized by a significant male prevalence compared to OCD-SA and OCD-noSA patients (respectively: 68% vs 57.1% vs 48.4%; $p<.05$). In addition, the OCTD-SA and OCTD-noSA mean age were significantly lower compared to the OCD-SA sample (respectively: 34.9±8.8, 33.05±15.07 vs 44.1±12.2 years; $p<0.05$). No differences were found in terms of marriage rates and educational status, while the OCTD-SA sample showed significantly lower rates of full-time occupation when compared to OCD-SA and to OCD-noSA patients (OCTD-SA: 52% vs OCD-SA: 66.7% vs OCD-noSA: 63.2% $p<0.05$). Moreover, the OCTD-SA sample revealed significantly higher unemployment rates compared to OCD-SA, OCTD-noSA and OCD-noSA patients (OCTD-SA: 28% vs OCD-SA: 19% vs OCTD-noSA: 14.3% vs OCD-noSA: 15.8%; $p=0.05$).

The age at OCD onset was lower in the OCTD-SA group compared to the other three groups, though not reaching statistical significance (OCTD-SA: 17.7±5.6 years vs 21.6±9.0 years, OCD-SA: 20.2±7.6 years, OCTD-noSA 18.5±10.7 years, OCD-noSA 21.8 ± 8.5 years; $p=0.07$; Figure 2).

With regards to psychiatric comorbidities, OCTD-SA and OCTD-noSA patients showed an earlier age of comorbidities onset compared to the OCD-SA sample (21.5±5.8 years vs 20.8±13.3 years vs 28.5±10.8 years; $p<0.05$; Figure 2). Moreover, OCTD-SA patients showed a higher rate of psychiatric comorbidities compared both to the OCD-SA group and to the OCTD-noSA and OCD-noSA groups (OCTD-SA: 96% vs OCD-SA: 85.7% vs OCTD-noSA: 58.4% vs OCD-noSA: 47.4%; $p<0.001$). The most frequent comorbidities in patients with SA were represented by affective disorders (OCTD-SA 44% vs OCD-SA 73.7% vs OCTD-noSA 30.3% vs OCD-noSA 32.5%; $p<0.001$) and poly-comorbidities (OCTD-SA 32% vs OCD-SA 5.3% vs OCTD-noSA 4.5% vs OCD-noSA 7.8%; $p<0.001$), while neurodevelopmental disorders were present only in the OCTD-noSA group (13.6%, $p<0.001$).

The presence of family history was significantly higher in the OCTD-SA group vs the OCD-SA group and compared to patients without SA (OCTD-SA 84% vs OCD-SA 71.4% vs OCTD-noSA 63.6% vs OCD-noSA 56.8%; $P<0.001$). In particular, affective disorders were sigificantly more represented in the OCTD-SA and OCD-SA groups compared to OCTD-noSA and OCD-noSA groups (OCTD-SA 44% vs OCD-SA 38.1% vs OCTD-noSA 14.7% vs OCD-noSA 22.1%; $p<0.05$).

With respect to pharmacological treatment, OCTD-SA patients compared to OCD-SA patients showed a higher rate of antidepressant use (72% vs 57.1%; $p<0.001$), while OCTD-SA and OCD-SA samples were treated with a higher rate of antipsychotics augmentation therapies compared to OCD-noSA and OCTD-noSA groups (OCTD-SA 80% vs OCD-SA 76.2% vs OCTD-noSA 58.7% vs OCD-noSA 27.4%; $p<0.001$; Figure 3).

Significantly lower treatment response rates were found in the OCTD-SA group compared to the OCD-SA, OCTD-noSA and OCD-noSA groups (OCTD-SA 28% vs OCD-SA 47.6% vs

OCTD-noSA 50.6% vs OCD-noSA 57.9%; $p<0.05$; Figure 3) and treatment resistance was reported in a significantly higher portion of patients in the OCTD-SA and OCD-SA groups, compared to the OCTD-noSA and OCD-noSA patients (OCTD-SA 32% vs OCD-SA 28.6% vs OCTD-noSA 10.5% vs OCD-noSA 5.3%; $p<0.001$; Figure 3).

Finally, rates of family involvement were significantly higher in the OCTD-SA group compared to the other groups (OCTD-SA 72% vs OCD-SA 61.9% vs OCTD-noSA 39% vs OCD-noSA 40%; $p<0.05$), while perceived worsened quality of life rates was higher in OCD-SA group compared to OCTD-SA, OCTD-noSA and OCD-noSA groups (OCTD-SA 66% vs OCD-SA 76.2% vs OCTD-noSA 36.4% vs OCD-noSA 47.4%; $p<0.05$).

Discussion

To authors' knowledge this is the first study investigating SI and SA in a multicentric sample of OCTD vs OCD patients.

The OCTD compared to the OCD subgroup revealed a higher rate of SA (OCTD: 16% vs OCD: 13.3%), but no difference in terms of SI (OCTD: 23.6% vs OCD: 25.4%). This result may be related to the latent impulsiveness characterizing subjects affected by OCTD (18), in a putative context of anger, frustration and externalizing behaviors, often experienced by these patients and emerging in a sudden and disruptive way with SA, therefore more difficult to diagnose and prevent. A previous manuscript from our group on a sample of 266 OCTD and OCD patients showed a higher rate of SI and SA in OCTD patients compared to OCD patients (1); the difference with present results may be due to the increased number of subjects recruited and the tertiary setting of the assessment. After dividing the two subgroups on the basis of previous SA, several socio-demographic and clinical differences were observed.

As regards gender differences, the OCTD-SA group was characterized by a significant male prevalence compared to OCD-SA and OCD-noSA sample. Limited studies have recently analyzed suicidality and its correlates not specifically in OCTD but, separately, in TD and OCD. In previous reports on suicidal behaviors in TD patients mixed results emerged: in 2015, Storch and colleagues did not find any gender differences between youth with chronic TD subjects with and without suicidal behaviors (19), while in 2017 Fernández de la Cruz and colleagues found that female gender was associated to an increased risk of SA in a sample of 7736 cases of patients with TS/chronic TD from the Swedish National Patient Register, compared with control subjects (10). In 2017, the ICOCS group investigating clinical correlates of OCD patients with a previous SA did not find any gender difference between patients with vs without previous SA (20).

OCTD-SA patients showed significantly lower rates of full-time occupation and higher unemployment rates when compared to OCD-SA and OCD-noSA individuals. These findings are consistent with previous results on OCTD patients, showing lower full-time employment rates (1) and to authors' knowledge, no previous study on SA in TD, TS or OCTD investigated this variable. However, previous studies focused on suicidal behaviour in OCD found no significant differences in terms of employment status between patients with vs without SA or SI (21,22).

As previously mentioned, both OCD and OCTD can extensively affect patients' and their caregiver's quality of life. Thus, we investigated their family involvement, representing an important source of support in patients' overall management and, in some cases, an essential help for their everyday life. In the present sample the OCTD-SA group showed a significantly higher rate of family involvement compared to the other groups, revealing a higher need for caregivers' support. This result could be partially explained by the younger mean age of the

OCTD-SA group compared to the OCD-SA and noSA groups; however, mean ages of OCTD-SA and OCTD-noSA patients did not show any difference, suggesting a greater need for family support in the OCTD-SA group independently from age, and probably related to the higher clinical severity. To authors' knowledge, no other studies investigated this aspect in the context of suicidal behaviour in OCD/OCTD.

To further investigate the burden of OCD and OCTD patients, we examined their perception of a globally worsened quality of life. In this case, the OCD-SA group showed the highest rate of perceived worsened quality of life, compared both to the groups of OCD-noSA and OCTD with and without SA. This finding could be related first to a globally worse clinical picture of OCD-SA group compared to the OCD-noSA group. Also, when comparing OCD-SA with the OCTD-SA and noSA groups, it may depend on a better insight about their illness in OCD patients. Moreover, in some previous studies, patients with OCD reported levels of quality of life that are lower than those exhibited by individuals with chronic and disabling conditions, such as schizophrenia (23,24).

The analysis of the clinical features of the sample revealed an overall worse condition in patients with a history of SA.

First, the age at onset of OCD was found to be earlier in the OCTD-SA group compared to the other three groups, but this difference only trended towards statistical significance. An earlier age at onset, however, has been frequently associated to a higher severity of illness in OCD (25,26). It has to be noted that OCTD-SA and OCTD-noSA mean ages were significantly lower compared to the OCD-SA sample. Moreover, OCTD-SA patients showed a higher rate of psychiatric comorbidities compared to OCD-SA, OCTD-noSA and OCD-noSA groups, affective disorders and poly-comorbidities being the most frequent comorbid conditions, and an earlier age of comorbidity onset compared to the OCD-SA individuals.

Similarly, Storch and colleagues in 2015 reported that, in patients with TS and TD, higher frequencies of suicidal thoughts and behaviors were frequently associated to comorbid disorders such as depression, OCD and anxiety disorders (19). More recently, Fernández de la Cruz and colleagues, in a sample of patients with TS and chronic TD, reported that 78.13% of the individuals who died by suicide in the TS/TD cohort had other recorded psychiatric comorbidities versus 41.89% in the population-matched control group. This pattern was more pronounced for SAs, with almost all the patients in the TD/CTD cohort that had attempted suicide having comorbidities (94.28%) versus less than half of the control subjects (46.14%) (10). No reports showing differences in terms of age at onset or age at comorbidity onset are available for TS/TD with suicidal behaviors. With respect to patients with an OCD diagnosis and suicidal behaviour, a recent study by the ICOCS group highlighted that OCD patients with a previous SA showed a significantly higher rate of psychiatric comorbidities compared to OCD patients with no SA (60 vs 17%), being TD the most frequent comorbidity (41.9%), followed by major depressive disorder and poly-comorbidity (8.1%) and TS (1.6%). No differences were found in terms of age at OCD onset (20). Previous studies also reported an increased risk of SA in OCD patients with comorbid depressive, personality and substance abuse disorders (22,27,28).

Family history resulted significantly higher in the OCTD-SA group compared to the OCD-SA group and compared to patients without SA. More in detail, the most common type of family history was represented by affective disorders in OCTD-SA and OCD-SA groups compared to OCTD-noSA and OCD-noSA groups. As regards suicidal behaviours in OCD, Alonso and colleagues in 2010 followed up from 1 to 6 years a sample of 218 outpatients and did not find any difference in terms of family history between patients with and without a history of SAs (28). In 2016, Velloso and colleagues conducted a study with 548 OCD patients comparing

subjects with vs without suicidality and their associations with specific clinical characteristics. Of note, they found that having a family member who attempted suicide increased by 78% the risk of suicidality (13). No data are currently available in literature in patients diagnosed with TD/TS reporting associations between family history and suicidal behaviours.

Finally, we analyzed prescribed pharmacological treatment, treatment response and treatment resistance in the four subgroups. OCTD-SA compared to OCD-SA patients showed a higher rate of antidepressant use, while OCTD-SA and OCD-SA samples showed a higher rate of antipsychotic augmentation therapies compared to OCD-noSA and OCTD-noSA groups. Lower treatment response was found in the OCTD-SA group compared to the OCD-SA, OCTD-noSA and OCD-noSA groups and, consistently, a higher treatment resistance rate was found in the OCTD-SA and OCD-SA groups, compared to the OCTD-noSA and OCD-noSA patients. Taken as a whole, these results highlight a higher severity in the OCTD-SA group; the presence of both TD/TS comorbidity and SA seem to require a higher rate of antidepressants and antipsychotics prescriptions, that often do not lead to a satisfying response and, ultimately, evolve in treatment resistance (29). However, also OCD-SA showed higher rate of augmentation therapies with antipsychotics and higher rates of treatment resistance compared to OCTD-noSA and OCD-noSA groups. A possible explanation could be that, independently from the comorbidity with TS/TD, features related to treatment resistance in a context of higher severity of illness and distress may have increased the risk of SA. In 2008 a French group compared a sample of treatment resistant OCD patients with a group of ‘good responders’: the inter-group analysis showed significantly higher rates of SA, psychiatric admissions and psychiatric comorbidities in treatment resistant OCD subjects (30). As regards TD/TS, to authors’ knowledge, there are no data on treatment resistance/

response in TS/TD and suicidal behaviour. However, Storch and colleagues in 2015 and Fernández de la Cruz in 2017 observed that tic severity, tic-related impairment, poor overall functioning, social withdrawal and the persistence of tics in adulthood - all common consequences of a low treatment response/treatment resistance - were more frequently related to an increased risk of SA (10,31).

The main limitations of our study include possible recall bias in the retrospective information that was collected using a cross-sectional design and the lack of information on the severity of the disorder (measured with specific psychopathological scales). In addition, in measuring suicidality, we did not use specific validated questionnaires, like the Columbia suicide severity rating scale. Further follow-up studies are therefore needed to better characterize long-term course and suicidal behaviour of OCTD patients, their functional impairment and treatment response.

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Table 1. Socio-demographical and clinical data of the sample.

		OCD-noSA n=95	OCTD-noSA n=77	OCD-SA n=21	OCTD-SA n=25	TOTAL SAMPLE
AGE		36.8±14.1	33.05±15.1	**44.1±12.2***	**34.9±8.8***	36±14.1
AGE AT OCD ONSET		21.8±8.5	18.5±10.7	20.2±7.6	**17.7±5.6**	20.1±9.1
AGE AT TIC ONSET		-	13.2±9.9	-	12.9±3.9	13.2±8.8
DUI		56.6±90.2	86.4±113.2	83.1±88.5	65.3±51.9	70.6±95.9
MALE RATIO		46 (48.4%)	52 (67.5%)	**12(57.1%)**	**17 (68%)***	127 (58.3%)
FAMILY HISTORY		54 (56,8%)	49(43.5%)	15(71.4%)	21(84%)	139 (63.8%)
FAMILY HISTORY	**Affective**	21 (22.1%)	**11 (14.7%)***	**8 (38.1%)***	**11 (44%)***	61 (23.6%)
	Psychosis	2 (2.1%)	5 (6.7%)	0	0	7 (3.2%)
	Anxiety	4 (4.2%)	6 (8%)	1 (4.8%)	0	11 (5.1%)
	Personality	0	0	1 (4.8%)	0	1 (0.5%)
	OCD	18 (18.9%)	16 (21.3%)	5 (23.8%)	6 (24%)	45 (20.8%)
	TS/TD	0	1 (1.3%)	0	0	1 (0.5%)
	Neurodevelopment	-	-		-	-
	Policomorbidity	9 (9.5%)	8 (10.7%)	1 (4.8%)	5 (20%)	23 (10.6%)
PSYCHIATRIC COMORBIDITY		**45 (47.4%)**	**45 (58.4%)**	**18 (85.7%)***	**24 (96%)***	132 (60.6%)
PSYCHIATRIC COMORBIDIT	**Affective**	25 (32.5%)	20 (30.3%)	**14 (73.7%)**	**11 (44%)**	70(37.4%)

COMORBIDITY	**Psychosis**	4 (5.2%)	1 (1.5%)	1 (5.3%)	1 (4%)	7 (3.7%)
	Anxiety	7 (9.1%)	11 (16.7%)	0	4 (16%)	22 (11.8%)
	Personality	1 (1.3%)	1 (1.5%)	2 (10.5%)	0	4 (2.1%)
	Neurodevelopment	0	**9 (13.6%)***	0	0	9 (4.8%)
	policomorbidity	6 (7.8%)	3 (4.5%)	1 (5.3%)	**8 (32%)***	18 (9.6%)
	eating disorders	2 (2.6%)	0	0	0	2 (1.1%)
AGE AT COMORBIDITY ONSET		24.3±8.9	**20.7±13.3***	28.5±10.8	**21.4±5.8***	23.2±10.7
MARRIED Y:N		36 (37.9%)	27 (35.1%)	9 (42.9%)	9 (36%)	81 (37.2%)
PROFESSIONAL STATUS	**unoccupied**	15 (15.8%)	11 (14.3%)	4 (19%)	**7 (28%)***	37 (17%)
	fulltime job	60 (63.2%)	41 (53.2%)	14 (66.7%)	**13 (52%)***	128 (58.7%)
	part time job	0	2 (2.6%)	**2 (9.5%)***	0	4 (1.8%)
	retired	2 (2.1%)	4 (5.2%)	0	1 (4%)	7(3.2%)
	student	15 (15.8%)	19 (24.7%)	0	4 (16%)	38 (17.4%)
EDUCATION	**middle school**	11 (11.6%)	19 (24.7%)	2 (9.5%)	5(20%)	37 (17%)
	high school	50 (52.6%)	35 (45.5%)	9 (42.9%)	11 (44%)	105 (48.2%)
	university	34 (35.8%)	23 (29.9%)	10 (47.6%)	9 (36%)	76 (34.9%)

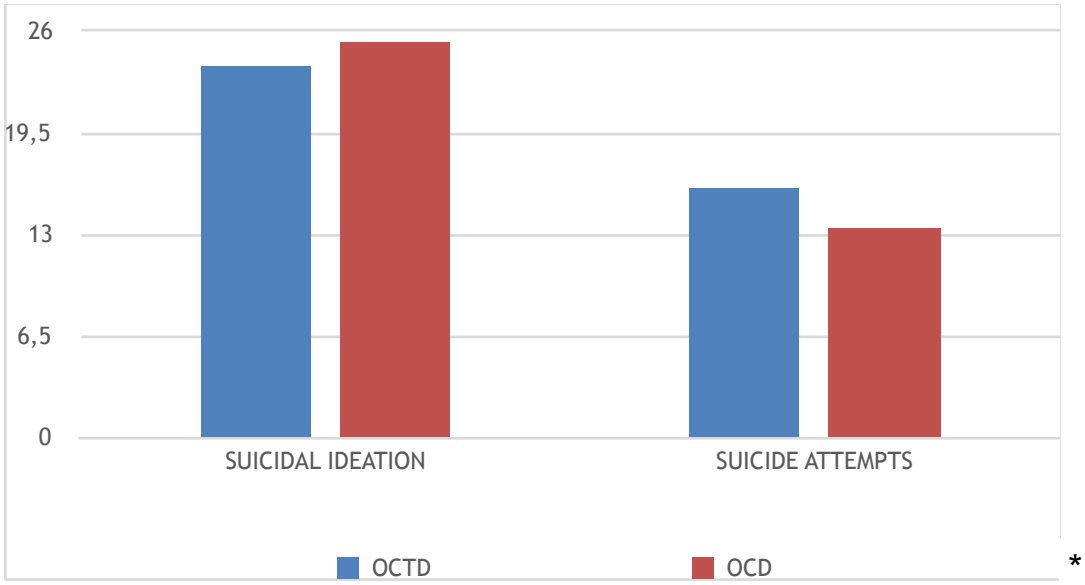
Values for categorical and continuous variables are expressed as N (%) and mean± SD,
respectively. Reported variables had a percentage of missing data ranging from 0% to 15%.
*p<.05

Table 2. Treatment-related features of the sample.

	OCD-noSA n=95	OCTD-noSA n=77	OCD-SA n=21	OCTD-SA n=25	TOTAL SAMPLE
PSYCHOPHARMACOLOGICAL TX	95 (100%)	75 (97.4%)	19 (90.5%)	25 (100%)	214 (98.2%)
CURRENT TREATMENT RESPONDERS	55 (57.9%)	39 (50.6%)	10 (47.6%)	7 (28%)	111 (50.9%)
CURRENT PARTIAL TREATMENT RESPONDERS	33 (36.3%)	37 (48.1%)	8 (38.1%)	**17(70.8%)***	95 (44.6%)
TREATMENT RESISTANCE	5 (5.3%)	8 (10.5%)	**6 (28.6%)**	**8 (32%)***	27 (12.4%)
ANTIDEPRESSANT TX	88 (92.6%)	70 (93.3%)	12 (57.1%)	**18 (72%)***	188 (87%)
ANTIPSYCHOTIC TX	26 (27,4%)	44 (58.7%)	**16 (76.2%)***	**20 (80%)***	106 (49.1%)
FAMILY INVOLVEMENT	38 (40%)	30 (39%)	13 (61.9%)	**18 (72%)***	99 (45.4%)
WORSENED QUALITY OF LIFE	45 (47,4%)	28 (36.4%)	**16 (76.2%)***	15 (60%)	104 (47.7%)
SUICIDAL IDEATION	25 (35.7%)	20 (35.7%)	15 (100%)	17 (100%)	77 (48.7%)

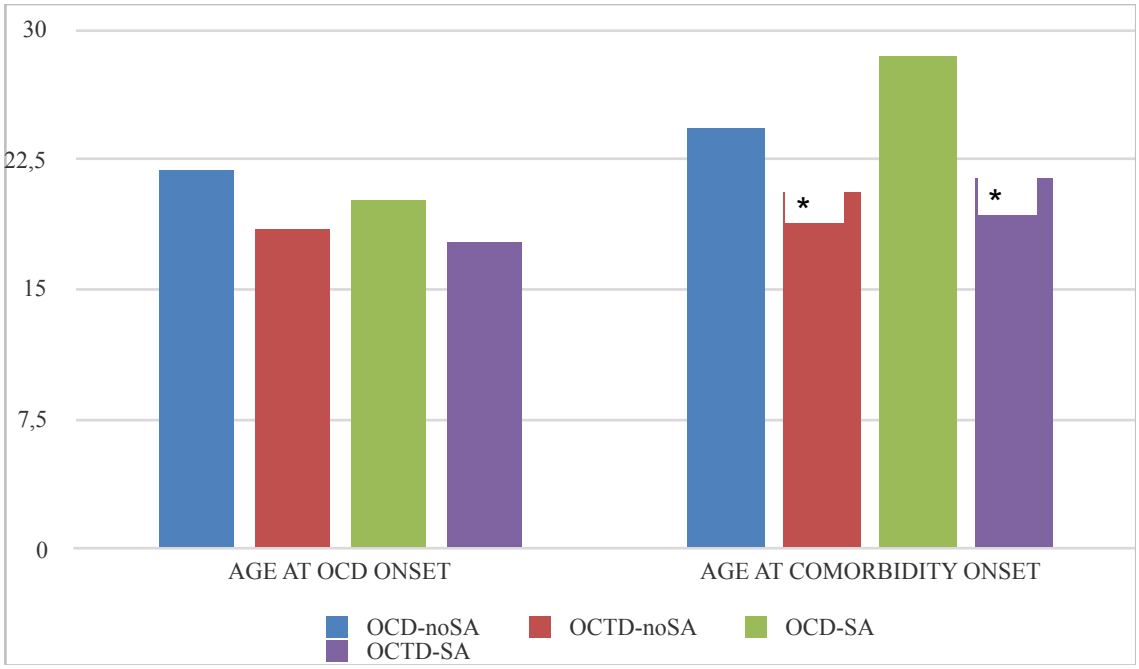
Values for categorical and continuous variables are expressed as N (%) and mean± SD,
respectively. Reported variables had a percentage of missing data ranging from 0% to 15%.
*p<.05

Figure 1. Suicidal ideation and suicide attempt in OCD and OCTD subgroups.



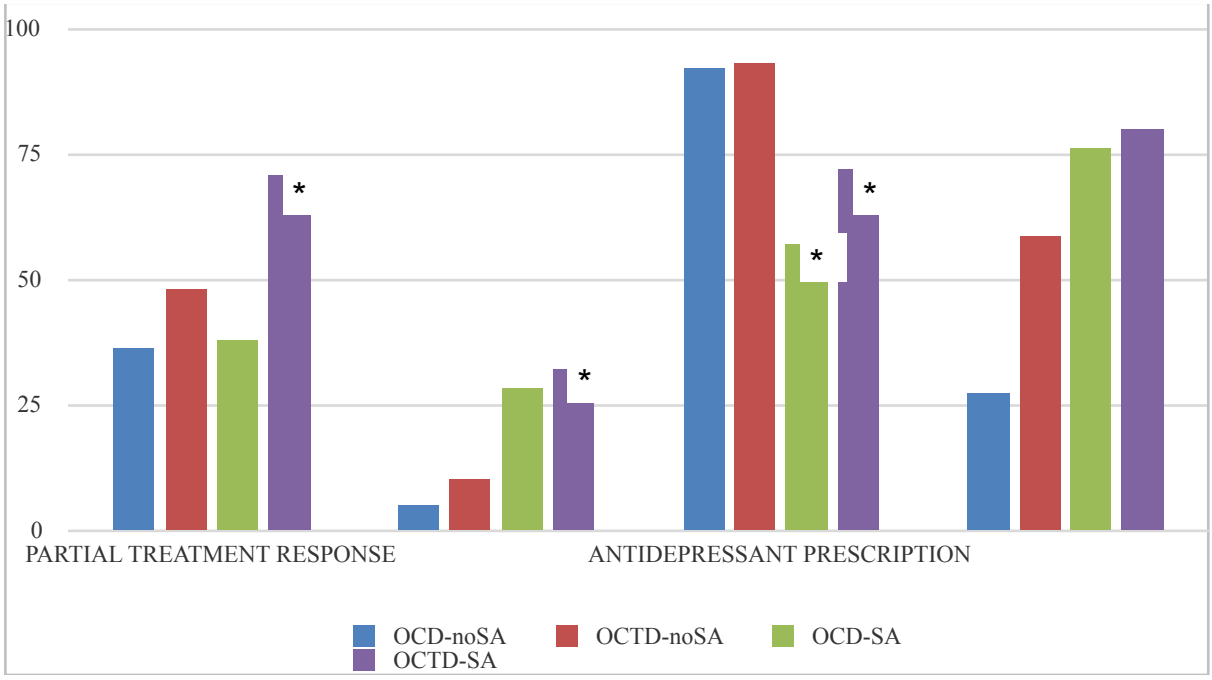
*** p<.05**

Figure 2. Age at OCD onset and age at comorbidity onset across the sample.



*** p<.05**

Figure 3. Treatment related variables of the sample.



*** p<.05**