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Clinical and personality profile of depressed suicide attempters: A preliminary study at the open-door policy Mood Disorder Unit of San Raffaele Hospital

S. Brioschi^a, L. Franchini^a, L. Fregna^b, S. Borroni^{a,b,*}, C. Franzoni^b, A. Fossati^{a,b}, C. Colombo^{a,b}

^a San Raffaele Hospital, Milan, Italy

^b Vita-Salute San Raffaele University, Milan, Italy

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ABSTRACT

Suicidal behavior is a complex phenomenon with high rates among psychiatric inpatients. Mood disorders and personality dysfunctions represent relevant risk factors for suicides attempts and suicidal ideation. Our study aims to investigate the role of the co-occurrence of clinical variables (duration of depressive state, previous suicide attempts), socio-demographic variables (gender, employment and civil status) and narcissistic personality features in the suicide risk of admitted psychiatric patients affected by a mood disorder. The sample was composed of 93 patients consecutively admitted in an open ward psychiatric Unit. Forty-eight participants had a positive history of previous suicide attempts: the suicide attempters (SA) were mostly female, unemployed and married. The SA group were observed to have suffered from a depressive episode with a longer duration; moreover in the SA group, the presence of active suicidal ideation was significantly related to a higher number of previous suicide attempts. In the whole sample, suicidal ideation was significantly related to narcissistic vulnerability personality features. Using a multidimensional approach, the present study allows a preliminary profiling of patients at risk for suicidal behavior during hospitalization.

1. Introduction

Suicide is a complex and multifaceted phenomenon, and clinicians need a multidimensional approach to identify specific suicide risk factors in the psychiatric patient population in order to improve suicide prevention strategies. It is important to note that according to results from a meta-analysis (Walsh et al., 2015) psychiatric inpatient settings show high suicide rates. In this sense, the World Health Organization has recognized suicide as one of the most important areas of interest in terms of public health and emphasizes the importance of intensifying prevention strategies of health care providers.

Among patients affected by a mood disorder, the depressive state contributes to an increased suicide risk (Bostwick et al., 2016); moreover among depressed inpatients two periods are considered to be especially high risk for suicide: one in the first week after admission and another in the first week after discharge (Qin and Nordentoft, 2005). Identifying a suicidal risk profile at the beginning of admission could facilitate clinical management of patients and this is especially important in open wards to better ensure their safety (Mann et al., 2005). Mood disorders are associated with the highest increased risk of

attempted and completed suicide with a lifetime suicide risk of 5–6% (Isometsä, 2014); suicide risk is slightly higher in Bipolar Disorder than in Major Depressive Disorder and about 30% of depressed bipolar patients attempt suicide during their lifetime (Chen and Dilsaver, 1996; Leverich et al., 2003) and about 20% are successful (Jamison, 1986; Ösby et al., 2001). A meta-analysis (Hawton et al., 2005) of risk factors for completed suicide among subjects with Bipolar Disorder found male sex, previous suicide attempts and hopelessness to be the most robust risk factors.

Long-term lithium treatment has been found to markedly reduce the risk for completed suicide and suicide attempts among patients with Bipolar Disorder and other Major Affective Disorders (Baldessarini et al., 2001, 2006; Cipriani et al., 2005; Gonzalez-Pinto et al., 2006; Goodwin et al., 2003; Oquendo et al., 2006; Tondo and Baldessarini, 2009; Yerevanian et al., 2007). Moreover, patients affected by a Mood Disorder with high levels of impulsivity have been associated with a higher risk of suicidal ideation and/or attempted suicide (Conrad et al., 2009; Swann et al., 2005). Individuals with a Mood Disorder and a co-existent Personality Disorder (PD) represent the great majority of all suicides (Foster et al., 1997). A particularly interesting

* Corresponding author at: Vita-Salute San Raffaele University, via Stamira D'Ancona 20, 20127 Milano, Italy.

E-mail address: borroni.serena@hsr.it (S. Borroni).

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personality feature that may play a role in suicidal ideation and suicidal behavior is narcissism. Pathological narcissism and Narcissistic PD (NPD) are clinically and empirically recognized as significant risk factors for suicidal ideation and behavior in adolescent, adult, and geriatric populations (Links, 2013; Pincus et al., 2015; Ronningstam, 2011). It is believed that a certain percentage of suicide completers also exhibit elevated NPD symptoms (Apter et al., 1993). However the association between NPD and suicidal behavior remains a controversial issue. For example, a study carried out in patients with a mood disorder seems to show that patients with NPD were 2.4 times less likely to make a suicide attempt compared with non-NPD patients and NPD was not associated with lethality behaviors (Coleman et al., 2017). On the other hand, several findings have suggested the relationship between NPD and suicide in psychiatric populations, also demonstrating some specific features of narcissism-related suicidality. For example, Stone (1990) conducted a 15-year follow-up study of 550 general psychiatric patients and showed that those with NPD or narcissistic traits were more likely to have died by suicide compared with patients without the disorder or traits. Also a study by Heisel et al. (2007) with geriatric patients attending a depression day hospital reported a significant relationship between narcissistic pathology and suicidal ideation, even after controlling for demographic factors, depression severity and cognitive function. In addition, it has also been empirically suggested that patients with NPD exhibit particularly deliberate and lethal forms of suicidal behavior (Blasco-Fontecilla et al., 2009).

A comprehensive understanding of suicide requires a multi-dimensional approach in order to identify specific socio-demographic, clinical and narcissistic personality factors useful for better profiling the risk of hospital suicide. In the present study, we considered suicide attempts and suicidal ideation as different dimensions of suicide risk. Indeed, several data (Kessler et al., 1999; Wang and Mortensen, 2006; Su et al., 2018) suggested that attempted suicide (SA) is one of the strongest predictors for death by suicide, and 60% of planned first attempts occur within the first year of ideation onset. Suicidal Ideation (SI) represents a relevant precursor of SA, and SA has been known to be a potent predictor of completed suicide (Su et al., 2018). From this point of view, it is highly important to understand the risk factors of SI and SA in order to identify preventive strategies.

Starting from these considerations the aim of the present study was to apply a suicide risk evaluation to a high-risk sample in the Mood Disorder Unit of San Raffaele Hospital (Milan), a rehabilitative psychiatric ward with an open-door policy. In order to better profile the higher suicide risk participants during hospitalization, we:

- Compared socio-demographic and clinical characteristics of participants who attempted suicide during their life time versus participants who did not attempt suicide. Specifically we hypothesized that the co-occurrence of some clinical variables (duration of depressive state) and socio-demographic variables (gender, employment and civil status) would be related to suicide attempts;
- Tested the relationship between the presence of active suicidal ideation and the number of previous suicide attempts in those patients with prior attempts.
- Evaluated the association between narcissistic personality features, number of suicide attempts and suicidal ideation. Furthermore, we investigated the association between narcissistic personality and suicidal ideation in males and females separately. Literature data suggest that antagonistic personality traits (see narcissism) are more common in males (Grijalva et al., 2015)

2. Methods

2.1. Subjects

The sample was composed of 93 patients consecutively admitted in the Mood Disorder Unit of the San Raffaele Turro Hospital in Milan, from

May 2017 to May 2018. There were 40 (43.0%) women and 53 (57.0%) men who participated in the study. Participants' mean age was 52.38 years, SD = 13.0412.43 years. There were 28 (30.1%) patients affected by Bipolar Disorder (BD), 45 (48.38%) exclusively affected by Major Depressive Disorder (MDD), 20 (21, 5%) affected by Major Depressive Disorder and another DSM-5 Section II (American Psychiatric Association (APA), 2013) psychiatric disorder (namely Obsessive Compulsive Disorder, Panic Disorder and Generalized Anxiety Disorder). During hospitalization all patients were in a depressive phase and received anti-depressant therapy according to the clinical judgment (SSRI, SNRI, TCA); 43% of the whole sample (40/93) was undergoing a maintenance treatment: 23 (57.5%) with lithium salts and 17 (42.5%) with anticonvulsants. Neither suicides nor attempts occurred during admission; however one patient committed suicide one week after discharge.

Inclusion criteria were (1) Major Depressive Episode in a diagnosis of Major Depressive Disorder (MDD) or Bipolar Disorder (BD), (2) age, > 18 years; (3) an education level beyond primary school; (4) ability to give informed consent to participate in the study.

2.2. Procedures

All participants volunteered to take part in the study after being presented with a detailed description and the investigation was carried out in accordance with the latest version of the Declaration of Helsinki; none of the participants received an incentive for participating and all were administered all study-related measures were incorporated into the routine clinical assessment. This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Psychiatric disorder diagnoses were assessed by the clinicians who were following the participants in treatment according to the DSM-5 criteria. Sociodemographic variables and clinical information, including the history of suicide attempts and the duration of the current depressive episode, were assessed by the interviewer and independent clinicians using best estimation procedure, taking into account available charts, case notes and information provided by at least one relative (Leckman et al., 1982). After an explanation of the study to the subjects, written informed consent was obtained. None of the patients who qualified refused to participate in the study.

At the beginning of the admission, two independent and trained psychiatrists (SB and LF) administered the 21-Hamilton Depression Rating Scale (HAMD) to measure the severity of the present depressive symptomatology and Beck Scale for Suicide Ideation (SSI) to assess suicidal ideation. A trained Psychologist (BS) took care of administering the Five Factor Narcissism Inventory (FFNI) to assess patients for narcissistic personality traits just before discharge.

2.3. Measures

2.3.1. Hamilton Depression Rating Scale (HAMD, Hamilton, 1960)

The HAMD (Hamilton, 1960) is a 21-item rating scale designed to systematically quantify expert clinical judgment regarding the severity of illness in patients diagnosed with depression.

Symptoms are defined by anchor-point descriptors that increase in intensity and clinical evaluators are encouraged to utilize all available information including both the intensity and frequency of symptoms in assigning rating values (Williams, 1988). In the present study we relied on HAMD total score.

2.3.2. Beck Scale for Suicide Ideation (SSI, Beck et al., 1979)

SSI (Beck et al., 1979) is a semi-structured interview composed by 19 items designed to quantify the intensity of current conscious suicidal intent by scaling various dimensions of self-destructive thoughts or wishes. Suicidal ideation also encompasses "suicidal threats" that have been expressed in overt behavior or verbalized to others. Each item consists of three alternative statements graded in intensity from 0 to 2.

The total score is computed by adding the individual item scores. Thus, the possible range of scores is 0–38. The items assess the extent of suicidal thoughts and their characteristics as well as the patient's attitude towards them; the extent of the wish to die, the desire to make an actual suicide attempt, and details of plans, if any; internal deterrents to an active attempt; and subjective feelings of control and/or "courage" regarding a proposed attempt. Those subjects who obtained scores lower than five were not considered to be at risk, while those with scores higher than five were considered at risk. Through the Scale of Suicide Ideation, we aimed to quantify the intensity of the present suicidal ideation, giving specific importance to the different thought dimensions and self-harm domains. In the evaluation, verbally expressed or behavioral suicidal threats were also included. As suicidal ideation is a fundamental prerequisite for suicidal action, the authors of the scale considered it important to highlight the ideation pervasiveness and intensity in order to formulate a reasonable suicide risk prediction and, therefore, plan the prevention strategy. In the present study we relied on the total SSI score and we used the SSI score both as a continuous variable and a dichotomous one. Following previous studies (Sokero et al., 2006), we considered an SSI score ≥ 5 as an indicator of moderate to severe suicidal ideation and a score of zero as indicator of no suicidal ideation.

2.3.3. Five-Factor Narcissism Inventory-Short Form (FFNI; Sherman, et al., 2015)

FFNI-SF is a 60-item self-reported measure of 15 traits related to Narcissistic Personality Disorder as well as vulnerable and grandiose narcissism. Vulnerable narcissism (NV) is the sum of Cynicism/distrust, Need for Admiration, Reactive Anger, and Shame. Grandiose narcissism (NG) is the sum of the remaining scales. Items are measured on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). In the current study, Cronbach's alpha values were 0.84 for the FFNI-SF NV scale, 0.90 for the FFNI NG scale, and 0.90 for the total score. In the present study we considered both the NV and NG scales.

2.4. Data analysis

The statistical analysis has been performed using the Stat-Soft STATISTICA 8.0 and SPSS 22 software. Cronbach's alpha was used to assess the internal consistency of the measures; *t* tests were used to evaluate the presence of significant differences on the continuous clinical variables (i.e. HAMD and SSI mean scores) between participants who attempted suicide (SA group) and participants who did not attempt suicide (NSA group). Moreover, *t* tests were used to evaluate the presence of significant gender differences on the FFNI, and SSI scale scores; Cohen's *d* values was used as an effect size measure for gender comparisons. With dichotomous variables (namely psychiatric diagnosis and socio-demographic variables), we used χ^2 contingency tables in order to evaluate significant differences between SA and NSA groups.

Pearson bivariate correlations were used to evaluate the association between the number of previous suicide attempts and the presence of active suicide risk (SSI score > 5). Finally Pearson bivariate were calculated to test the association between FFNI and SSI total scale scores.

3. Results

Clinical and sociodemographic characteristics of the sample are summarized in Table 1. In our sample, 51.6% (48/93) of participants previously attempted suicide (SA group); among them, 20/48 attempted suicide within the last 12 months during the index episode, whereas 28/48 attempted suicide at some point in their life. 75% of attempters was affected by MDD (36/48) and the 25% was affected by BD (12/48). The majority of individuals attempted suicide with pharmaceutical overdose (33/48; 68.7%); other methods included stabbing (8/48, 16.6%), hanging (5/48, 10.4%) and defenestration (2/48, 4.3%).

In Table 2 the socio-demographic and clinical variables significantly associated with suicidal attempts are listed. The SA group was composed

Table 1

Clinical and sociodemographic variables of the sample ($n = 93$).

Characteristics	All patients, $n = 93$
<i>Socio-demographic features</i>	
Age (years), mean (SD)	52.3 (1.3)
Gender, n (%)	
Male	53 (56.9)
Female	40 (43.1)
Married or cohabiting, n (%)	43 (46.2)
Employed, n (%)	67 (72%)
Education, mean years (SD)	13 (3.8)
<i>Psychiatric diagnosis</i>	
MDD, n (%)	45 (48.38)
MDD/co-occurrence other DSM-5 disorder n (%)	20 (21.5)
BD, n (%)	28 (30.1)
<i>Clinical history</i>	
Age of onset (years), mean (SD)	32.8 (13)
Number of episodes, mean (SD)	6.9 (7.4)
Depressive episodes, mean (SD)	5.2 (5.4)
Manic episodes, mean (SD)	1.6 (3.4)
<i>History of suicidal behavior</i>	
SA group, n (%)	48 (51.6)
NSA group, n (%)	45 (48.4)
<i>Depression-related characteristics</i>	
Total time in depression (weeks), mean (SD)	31.4 (3.5)
<i>Symptoms scores</i>	
HAMD score, mean (SD)	20.9 (6.9)
SSI score, mean (SD)	3.79 (5.84)
<i>Family history</i>	
Presence of suicidal behaviors family history, n (%)	9 (9.7)
Presence of psychiatric family history, n (%)	61 (65.6)

Note. MDD, Major Depressive Disorder; BD, Bipolar Disorder; SA, Suicide Attempters; NSA, Non Suicide Attempters; SSI, Scale for Suicide ideation; HAMD, Hamilton Rating Scale for Depression.

Table 2

Statistically significant differences between Suicide ($n = 45$) and non-suicide attempters ($n = 48$).

Characteristics	NSA	SA	χ^2	ϕ
Total, n (%)	45 (48.4)	48 (51.6)		
<i>Socio-demographic features</i>				
Female (%)	10 (22.2)	30 (62.5)	15.37*	-0.41*
Married or cohabiting, n (%)	16 (35.6)	48 (56.25)	4**	0.21**
Employed, n (%)	38 (84.4)	29 (60.4)	6.6**	-0.27**
<i>Psychiatric variables</i>				
MDD with other DSM-5 disorder ^a	13 (43.3)	7 (20)	4.13**	-0.25**

Note: NSA, non suicide attempters; SA, suicide attempters.

* = $p < .001$.

** = $p < .05$.

^a Among MDD patients.

by more women and included a higher percentage of unemployed and married participants than NSA group. Moreover, the SA group contained fewer patients with MDD and a concomitant DSM-5 disorder than the NSA group. In the SA group we found a longer index depressive episode duration, compared to the NSA group. Considering the differences in the HAM-D and SSI mean scores between the SA and NSA groups, SA participants scored significantly higher than NSA participants on the item 3-HAMD mean score and SSI total mean score (Table 3).

Considering socio-demographic characteristics, we did not find significant differences between the SA and NSA group for the mean age ($t(91) = -1.34, p > .10$), years of education ($t(91) = 0.217, p > .10$) and for associated life events ($\chi^2(1) = 1.74, p > .10$). With regard to clinical variables, no significant associations were found between MDD and BD diagnosis ($\chi^2(1) = 0.19, p > .10$), familiarity history of psychiatric disorder ($\chi^2(1) = 0.42, p > .50$), family history of suicide ($\chi^2(1) = 0.21, p > .50$) and total number of mood episodes ($t(18) = -0.89, p > .30$). Moreover, no significant differences in the type of stabilizing treatment have been observed between SA and NSA

Table 3
Statistically significant differences between suicide ($n = 45$) and non-suicide attempters ($n = 48$).

Characteristics	NSA	SA	<i>t</i> -value	<i>D</i>
Total, <i>n</i> (%)	45 (48.4)	48 (51.6)		
<i>Depression-related characteristics</i>				
Total time in depression (weeks), mean (SD)	23.3 (25.6)	39 (42)	-2.16*	0.45
<i>Symptoms scores</i>				
HAMD item-3 score, mean (SD)	0.62 (0.7)	1 (1)	-2*	0.44
SSI total score, mean (SD)	2.5 (4.4)	5.3 (7)	-2.2*	0.48

Note: NSA, non suicide attempters; SA, suicide attempters; HAMD, Hamilton Rating Scale for Depression.

* $p < .05$.

groups ($\chi^2(1) = 0.12, p > .50$). Finally, we have found no differences in the mean scores on the narcissistic personality scale: $t(91) = -0.907, p > .30, t(91) = -2.05, p > .20$ and $t(91) = 1.79, p > .20$ for FFNI total score, NV and NG respectively)

Considering the suicidal ideation, our results showed that in the SA group ($n = 48$) the presence of active suicide risk (SSI score > 5) was positively associated only with the number of previous suicide attempts $r = 0.24, p < .05$. No significant associations were found between SSI score > 5 and other socio-demographic and clinical variables.

Considering the narcissistic personality features, we found a negative and significant association between NG and the number of previous suicide attempts: $r = 0.39, p < .05$

Descriptive statistics and Pearson bivariate correlations for the FFNI and SSI scales are listed in Table 4. With regard to gender differences in the FFNI scales, male participants scored significantly higher than female participants on the FFNI NG scale and total score and the effect sizes for these differences were medium for FFNI total score and large for NG scale: $t(91) = -2.78, p < .005$, Cohen's $d = 0.68$ for FFNI total score and $t(91) = -3.40, p < .001$, Cohen's $d = .81$ for NG). Considering the SSI overall level, FFNI NV scale showed significant association with SSI total score. When we separately considered the male and female samples, the correlation with FFNI NV remained significant only in the male participants: $r = 0.52, p < .001$. Moreover, we found significant differences in the r value between male and female participants in the association between SSI total score and FFNI NV scale: male participants, $r = 0.52, p < 0.001$, female participants, $r = -0.005, > 0.05, z = 2.68, p < 0.01$.

4. Discussion

The aim of the present study was to test the role of clinical, socio-demographic and personality features in the suicide behavior risk assessment of a sample of depressed inpatients hospitalized in an unlocked unit. In our sample, we found the rate of suicide attempts aligned with literature data (51.6%) (Sokero et al., 2003;

Valtonen et al., 2005; Malone et al., 1995). Reported prevalence of lifetime history of suicide attempts among psychiatric patients with mood disorders varies between studies, with reported values of approximately 30–40% in MDD and 50% in BD. Considering the role of any mood disorder, we did not find an association between bipolar and non-bipolar mood disorder and suicidal ideation in suicide attempters. These findings are consistent with reported data in other inpatients samples (Taylor et al., 2016).

In our sample, the SA group were mostly female, who were unemployed and married. The association between female gender and suicidal behavior was consistent with studies in western countries, which showed higher percentages of non-fatal suicidal behavior among females (Boeninger et al., 2010; Wichstrøm and Rossow, 2002). In our sample, suicidal behaviors were associated with unemployment status. This result confirms literature data, suggesting higher vulnerability of female gender to unemployment (Denton et al., 2004). Moreover, in our study, we found that marriage does not represent a protective factor against suicidal behaviors. This could seem counterintuitive but it is supported by Agerbo's study (2007) of psychiatric population where the loss of income, employment status, and marital status were all associated with increased suicide risk.

In our study, among the sociodemographic variables considered, age and education level were not associated with the presence of previous suicide attempts. In previous data, the role of age in suicide risk remained an open issue: some studies found evidence of higher risk among younger inpatients, while other studies either show that the risk increased with increasing age or suggest age had no significant impact (Madsen et al., 2017). In community studies, the education level has been associated with lower mortality rates including suicide; on the other hand, in clinical populations other studies found that higher levels of education, higher income and being employed were associated with an increased risk of suicide. In this sense, it is commonly hypothesized that the role of insight in the course of the mental illness could increase the risk of suicidal behavior (Stebalaj et al., 1999).

Contrary to our expectations but consistent with the finding of other Authors (Pompili et al., 2011), stressful life events did not represent a relevant risk factor suicide in our sample. We could theorize that other protective factors contribute to balancing out negative life experiences in our sample. Other studies are needed to investigate which factors could play a protective role with respect to life events. It is important to note that in our study the lifetime evaluation of life events may have been affected by the depressive state of participants. From this point of view, it would be appropriate to use standardized interviews or questionnaires for the evaluation of life events.

As far as clinical variables are concerned, compared with the NSA group, the SA group was characterized by lower association of the mood disorder with a co-existing DSM-5 Section II psychiatric disorder (Obsessive Compulsive Disorder, Panic Disorder and Generalized Anxiety Disorder), characterized by behavioral expression of anxiety. The role of anxiety in suicidal behavior is controversial. Some Authors suggest a protective role of general anxiety against suicidal behaviors (Uebelacker et al., 2013;

Table 4
Descriptive statistics pearson correlation coefficient values for five factor narcissism inventory–short form and scale for suicide ideation ($n = 93$).

Measure	Whole sample ($n = 93$)		Male sample ($n = 53$)		Female sample ($n = 40$)		Bivariate correlations			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	1	2	3	4
1. FFNI total score	141.04	22.04	148.34 ^a	25.60	131.07 ^a	26.14				
2. FFNI NG	92.28	22.58	99.61 ^b	22.49	82.58 ^a	19.01	0.91**			
3. FFNI NV	48.37	11.53	48.73	10.23	47.87	13.27	0.58**	0.18*		
4. SSI total score	3.79	5.84	3.35	4.72	4.36	7.07	0.07	-0.08	0.21*	

Note, FFNI, Five Factor Narcissism Inventory-Short Form; NG, Narcissistic Grandiosity; NV, Narcissistic Vulnerability; SSI, Scale for Suicide ideation. Letters in superscript indicate significant differences in mean scores between male and female participants.

^a $p < .001$;

^b $p < .005$;

* $p < .05$;

** $p < .001$.

Lewitzka et al., 2017). On the contrary, in some studies anxious symptomatology and anxiety disorders are considered risk factors for suicidal behaviors (Pompili et al., 2011; Villa-Manzano et al., 2009; Rhimer, 2007; Hawton et al., 2005). Moreover, a recent meta-analytic review (Bentley et al., 2016) showed that anxiety represents a statistically significant, yet weak, predictor of suicidal ideation and attempts, but not death.

In our sample, the SA group showed a longer duration of the index depressive episode than the NSA group. Our findings confirmed that an important clinical factor leading to suicidal behaviors is the time spent in illness phases (Holma et al., 2014; Valtonen et al., 2005). Consistent with other data (Madsen et al., 2017), this finding suggests that the duration of the depressive episode represents a relevant variable to investigate in the assessment of the suicidal risk in depressed inpatients.

As a whole, our sample found no significant associations between a history of suicide attempts and the biological features of the mood disorder. In fact, participants who attempted suicide and participants who did not were similar in diagnosis, total number of mood disorder episodes, family history of psychiatric illness and family history of suicide. On the contrary and in line with the suicide capability theory, in the SA group, the presence of active suicidal ideation was significantly related to subjects with a higher number of previous suicide attempts, indicating a potential risk of progression from ideation to action (Smith et al., 2010). In particular, at the beginning of the admission, we found significantly higher HAM-D- item 3 mean scores (suicide) and higher SSI total mean score in the SA group. Additionally, our correlation analysis results showed a significant association between the number of previous suicide attempts and the presence of active suicidal ideation measured with SSI in the SA group. These findings agree with the interpersonal theory of suicide (Van Orden et al., 2010) that showed non-lethal suicide attempts increase the risk of death by suicide due to their facilitation of acquired capability. The acquired capability for suicide develops over time through repeated exposure to psychologically provocative events including previous suicide attempts, impulsivity, childhood maltreatment as well as fear-inducing and physically painful life-events (Joiner et al., 2005).

Considering the personality features, we have found no differences in mean scores on narcissistic personality scales between the SA and NSA groups, but we found a negative and significant association between NG and the number of previous suicide attempts. This result seems to suggest that the grandiose aspects of narcissism, namely sense of superiority, arrogance, and behavior of dominance, could represent a protective factor with respect to repeated suicide gestures. On the other hand, considering suicidal ideation, in the whole sample the SSI total score was significantly related to vulnerable narcissistic personality features. In other words, NV seems to be the narcissistic dimension significantly related to suicidal ideation. Suicidal ideation was associated with a personality profile characterized by susceptibility to self and emotional dysregulation (shame, self-esteem, anger, anxiety, envy) when narcissistic needs are not met (Pincus et al., 2015). Our findings were consistent with a study (Jaksic et al., 2017) conducted in a sample of 250 adult psychiatric outpatients which suggested that narcissistic vulnerability seems to be more strongly related to suicidal tendencies than narcissistic grandiosity. Up to now, only a few studies have evaluated the relationship between both narcissistic grandiosity and narcissistic vulnerability with suicidal behavior but the results remain controversial. Pincus et al. (2009), conducting a chart review of 25 patients, found that the report and number of suicide attempts was positively related with both grandiose and vulnerable dimensions of narcissism. Ellison et al. (2013) in a sample of 62 outpatients showed no significant relationships between suicidal ideation and either feature of narcissism, although the interaction between grandiosity and vulnerability was marginally related to suicidality. Further research is warranted in order to better elucidate the matter. Moreover when we separately considered male and female genders this relation was significant only in the male subsample. According to our preliminary results the co-existence of depression in males with NV features could represent a relevant clinical marker to be considered in the assessment of suicidal risk in inpatients with mood disorders.

As a whole, our findings are consistent with a recent study (Lewitzka et al., 2017) conducted in participants with mood disorders that considers the role of personality traits and sociodemographic factors for assessing suicidal risk.

In our sample, the presence of suicidal gestures as a risk factor for suicide was associated with a long lasting depressive state and with the presence of active suicidal ideation as well as some socio-demographic variables. In addition to these factors already known, the evaluation of the vulnerable features of narcissism seem to represent an additional clinical variable related to the intensity of the suicidal ideation. This finding could represent a useful element in the management of depressed patients for suicide prevention and risk assessment.

The need of a multidimensional approach to assess suicide risk and its complexity is supported by the story of the patient who committed suicide one week after being discharged. T.D. was a 30-year old male who was single and unemployed. His official diagnosis was resistant major depression with behavioural expression of anxiety and obsessive-compulsive disorder. He presented a high suicidal ideation (SSI total score = 12) during a severe depressive episode (HAM-D total = 31) of long duration (32 weeks). Considering narcissistic aspects of personality, T.D. showed a low score on the NG scale (NG = 85, a score that fits between the 10th–15th percentile of the normative distribution data) and a moderately high score on the NV scale (NV = 55, a score that fits to the 75th percentile). The patient waited until his parents were on summer vacation, a few days after discharge, before barricading the door to his apartment and ingesting poison he had procured several months prior to being admitted. His actions ensured that an effective intervention and resuscitation would not be possible under the circumstances.

There are several limitations to our study that should be noted. Our sample was composed of adults who volunteered to participate in the study and from a methodological point of view this could represent a more convenient study group than a random sample; we used a single measure for each construct which limits the generalizability of our results to other measures; the sample size was small and composed only of patients admitted in our ward that excluded non-cooperative and acute patients. In this sense our results cannot be generalized to psychiatric emergency hospitals. Moreover, the study was trans-sectional, this does not allow for the evaluation of the intensity and the oscillation of suicidal ideation that represent a relevant aspect in the progression from ideation to action (Law et al., 2015) As a whole, these limitations stress the need for further replication and expansion. In spite of this, to our knowledge, the present study allows a preliminary profiling of patients at risk for suicidal behavior during hospitalization in an open-door hospital. Using a multidimensional approach, preliminary profiling of inpatients with mood disorders and suicidal ideation could allow for early detection and management of those with the highest risk of attempting suicide.

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Supplementary materials

Supplementary material associated with this article can be found, in the online version, at [doi:10.1016/j.psychres.2019.112575](https://doi.org/10.1016/j.psychres.2019.112575).

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