

# Complicated Grief and Suicidality: The Impact of Subthreshold Mood Symptoms

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## ABSTRACT

**Introduction:** The aim of the present study was to explore the relationship between subthreshold mood symptoms and suicidality in patients with complicated grief (CG).

**Methods:** Fifty patients with CG were included in the study and evaluated by the Structured Clinical Interview for *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition Axis-I disorders, the Inventory of Complicated Grief, and the Mood Spectrum Self Report (MOODS-SR) lifetime version, to evaluate the subthreshold mood symptoms.

**Results:** Twenty-eight patients (56%) reported lifetime suicidal ideation and 11 patients (22%) reported suicide attempts. Subthreshold depressive and rhythmicity/vegetative functions items of the MOODS-SR were significantly associated with increased suicidal ideation and attempts, while subthreshold manic items were associ-

## FOCUS POINTS

- Subthreshold mood comorbidity is quite relevant in patients with complicated grief (CG).
- There is a significant positive association between the number of manic/hypomanic spectrum symptoms and the presence of suicidal ideations in CG patients, while there is a trend towards significance with suicidal attempts.
- The number of depressive spectrum items is significantly associated with an increased likelihood of both suicidal ideation and attempts.
- The correlations between manic/hypomanic or depressive symptoms and suicidal ideation or attempts are not affected by the concomitant presence of mood or anxiety disorders.
- The number of rhythmicity and vegetative functions items is significantly related to both the increased suicidal ideation and attempts.

ated with suicidal ideation only. Relationships were confirmed after controlling for Axis-I disorders comorbidity.

**Conclusion:** The results of the present study suggest the usefulness of exploring lifetime subthreshold mood symptoms in CG patients,

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in order to promptly identify those who may be more prone to suicidality.

## INTRODUCTION

Bereavement is one of the most distressing life events that greatly affects physical and psychological wellbeing,<sup>1-5</sup> and may trigger an increased risk for major depressive disorder (MDD) and anxiety disorders.<sup>6-10</sup> Unresolved grief may occur in ~20% of subjects facing bereavement. Recent research efforts have been devoted to identify its clinical characteristics, which are referred to as traumatic grief, complicated grief (CG), CG disorder, or prolonged grief disorder.<sup>11-13</sup>

Since the first observations by Freud,<sup>14</sup> it was evident that CG is characterized by specific symptom patterns, which can persist for years and resolve slowly.<sup>15-18</sup> The most salient are those related to the separation from the deceased, including longing, yearning, and searching behaviors; and to the excessive loneliness and frequent intense pangs of grief and sadness related to the loss or to the trauma (eg, feelings of disbelief, daydreams about what was lost, a need to remember, fragmented sense of security and trust, intense and prolonged preoccupation with thoughts of the deceased, avoidance, and failure to adapt). Although risk factors, clinical presentation, course, and outcome are different from those of MDD, posttraumatic stress disorder (PTSD), or adjustment disorder, CG has no definite nosological position in the current *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*, due to lack of empirical evidence regarding the symptoms.<sup>12,13,17,19,20</sup> As a result, it is included in a "V" code in the section "other conditions that may be a focus of clinical attention."<sup>19</sup>

Besides the high levels of distress, impaired quality of life, and poor medical outcome, CG is associated with a high incidence of suicidal behaviors, even after excluding confounders such as MDD, PTSD, or other psychopathological conditions.<sup>2,3,21</sup> Recently, the loss of a beloved one was found to be a risk factor for suicide in bipolar disorder.<sup>22</sup> Generally, the bipolar comorbidity, either the full-blown disorder or the subthreshold symptoms, is considered to enhance the vulnerability towards suicide in patients with different psychiatric disorders.<sup>23-26</sup>

Since no information is available regarding

CG, the aim of the present study was to explore the possible relationship between subthreshold mood spectrum symptoms and suicidality in patients with CG.

## METHODS

A consecutive sample of 50 outpatients and inpatients with a diagnosis of CG was recruited in the framework of a multicenter Italian study aimed to assess the validity and reliability of a new structured clinical interview for trauma and loss spectrum and its self-report version.<sup>27,28</sup> Exclusion criteria were severe medical illnesses, neurological diseases, substance abuse, or presence of psychotic symptoms.

The assessment included the Structured Clinical Interview for *DSM-IV* Axis-I disorders,<sup>29</sup> the Inventory of Complicated Grief (ICG),<sup>30</sup> and the Mood Spectrum Self Report (MOODS-SR) lifetime version.<sup>31</sup> The Structured Clinical Interview for *DSM* Disorders, Patient Edition was administered by psychiatrists trained and certified in the use of the study.

The ICG is a self-report instrument to assess maladaptive symptoms of loss and is generally used to diagnose CG when the total score is  $\geq 25$ .

The MOODS-SR is an instrument developed and validated to implement the concept of the mood spectrum.<sup>32</sup> It includes 161 items, coded as present/absent, grouped in three components: manic; depressive; and rhythmicity and vegetative functions. The manic and depressive components, each one exploring mood, energy, and cognition domains, focus on manic and depressive symptoms respectively, including either isolated or clustered typical and atypical ones, and traits and lifestyles characterizing temperamental mood dysregulations that make both fully syndromal and subthreshold mood disturbances. The rhythmicity and vegetative functions domain explores changes in energy, physical well-being, mental and physical efficiency related to the weather and season, besides changes in appetite, sleep, and sexual activities. The features explored in the questionnaire may be present throughout the individual's lifetime. The sum of the scores on the three manic domains (mood, energy, cognition) constitutes the "manic component" (62 items) and that of the three depressive domains the "depressive component" (63 items). The rhythmicity and vegetative functions domain includes 29 items.<sup>33</sup>

The Ethics Committee of the “Azienda Ospedaliero-Universitaria” of Pisa approved all recruitment and assessment procedures. All subjects provided written informed consent, after receiving a complete description of the study and having the opportunity to ask questions.

### Statistical Analyses

Logistic regression models were used to analyze the relationship between suicidality and the number of subthreshold depressive or manic symptoms. To this purpose, suicidality was explored using six questions of the MOODS-SR, that inquire whether the subject had ever experienced periods of  $\geq 3$ –5 days when he or she: thought that life is not worth living (Item 102); wished he/she would not wake up in the morning or that he/she would die in an accident or from a medical condition like a heart attack or a stroke (Item 103); wanted to die or hurt him/herself (Item 104); wanted to die and had a specific plan to hurt or kill him/herself (Item 105); and two questions asking whether the patient actually committed a suicide attempt (Item 106) and whether the attempt required medical attention (Item 107). The first four questions and the last two questions were combined into a composite indicator and then dichotomized to denote the presence or absence of suicidal ideations and/or plans or the presence or absence of suicide attempts, respectively. All statistical analyses were carried out using the Statistical Package for Social Science (SPSS Inc., Chicago 2006), version 15.0.

### RESULTS

Forty-three patients (86%) were women and 7 (14%) were men, with a mean age  $\pm$  standard deviation (SD) of  $49.5 \pm 14.6$  years (Table 1). Half of the patients ( $n=25$ ) reported the loss of a parent, 26% ( $n=13$ ) that of their husband or wife, 16% ( $n=8$ ) that of a brother or sister, while 8% ( $n=4$ ) that of a son or a daughter.

Thirty-six patients (72%) fulfilled *DSM-IV-TR* criteria for MDD, 8 (16%) for Type II bipolar disorder, and only 1 (2%) for Type I bipolar disorder. Other current Axis-I diagnoses were: PTSD ( $N=27$ , 54%), panic disorder ( $N=14$ , 28%), generalized anxiety disorder (GAD) ( $N=6$ , 12%), social anxiety disorder (SAD) ( $N=3$ , 6%), and alcohol abuse ( $N=2$ , 4%). Multiple diagnoses were common: 13 patients (26%) met criteria for MDD and PTSD, 11 (22%) for both MDD and panic disorder, 4 (8%) for both bipolar disorder and panic disorder.

Only one patient had four diagnoses, in particular bipolar disorder, alcohol abuse, GAD, and panic disorder.

The number (mean $\pm$ SD) of total MOODS-SR items endorsed was  $57.6 \pm 22.4$ . On average, CG patients endorsed  $29.4 \pm 12.7$ ,  $15.7 \pm 9.6$ , and  $12.5 \pm 5.3$  items on the depressive, manic, and rhythmicity and vegetative functions components, respectively.

Overall, 28 patients (56%) reported lifetime suicidal ideation and 11 (22%) suicide attempts. The frequency of endorsement of the suicidality items of the MOODS-SR was 48% for thought that life is not worth living, 34% for wished he/she would not wake up in the morning, 44% for wanted to die or hurt him/herself, 22% for wanted to die/had a specific plan to hurt or kill him/herself, 18% for actually committed a suicide attempt, and 16% for whether the attempt required medical attention.

Table 2 shows the results of the logistic regression models. The number of depressive spectrum items was associated with an increased likelihood

**TABLE 1.**  
**Demographic and Clinical Characteristics of 50 Patients With Complicated Grief**

	<i>CG (N=50)</i>
Age (years)	$49.5 \pm 14.6$
	<i>N (%)</i>
Women	43 (86)
Men	7 (14)
<i>Marital Status</i>	
Single	12 (24)
Married/living with partner	23 (46)
Widows/widowers	13 (26)
Separated/divorced	2 (4)
<i>Education</i>	
Primary school	13 (26)
Secondary school	12 (24)
Professional school	4 (8)
High school	17 (34)
University degree	4 (8)
<i>Occupational</i>	
Employed full/part time	25 (50)
Unemployed	3 (6)
Retired	15 (34)
Other	7 (14)

CG=complicated grief.

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of both suicidal ideation (depressive component: odds ratio [OR]=1.08, 95% confidence interval [CI]: 1.02-1.14) and attempts (depressive component: OR=1.09, 95% CI: 1.02-1.16). The number of items of the manic component was related to an increased likelihood of suicidal ideation only (manic component: OR=1.08, 95% CI, 1.02-1.16). The OR of 1.08 for suicidal ideation corresponds to an 80% increase in risk of suicidal ideation for a 10-item difference in the number of manic symptoms endorsed (Table 2). Finally, the number of rhythmicity and vegetative functions items was significantly related to both the increased suicidal ideation (OR=1.19, 95% CI: 1.05-1.36) and attempts (OR=1.22, 95% CI: 1.03-1.45).

Since the study group included many patients with Axis-I comorbidity, we examined the possible confounding effect of mood or anxiety disorders

on the association between mood spectrum symptoms and suicidality. To this purpose, we used three dichotomous variables in the logistic regression models: any anxiety disorder (including panic disorder, GAD, SAD), PTSD, and any mood disorder (MDD or bipolar disorder). Adjusted ORs of suicidal ideation were significant for depressive, and manic symptoms as well as for rhythmicity items. Adjusted ORs for suicide attempts were significant for depressive items (Table 2) and rhythmicity items, with one exception.

## DISCUSSION

The results of the present study showed the presence of a high level of suicidality in patients with CG. In fact, more than half of them reported suicidal ideations, and almost one fourth

**TABLE 2.**  
**Association of the MOODS-SR Depressive, Manic/Hypomanic, and Vegetative Functions Components With Suicidal Ideation and Attempts in 50 Patients With Complicated Grief: Results From 6 Logistic Regression Models**

Dependent Variable: Suicidal Ideation											
	<i>b</i>	<i>SE(b)</i>	<i>Wald</i>	<i>df</i>	<i>P</i>	<i>Crude OR</i>	<i>95% CI</i>		<i>Adjusted OR*</i>	<i>95% CI</i>	
<i>Model 1</i>											
Depressive spectrum	0.077	0.029	6.978	1	0.008	1.08	1.02	1.14	1.09	1.02	1.17
Constant	-1.967	0.876	5.039	1	0.025	0.14					
<i>Model 2</i>											
Mania-hypomania spectrum	0.084	0.035	5.913	1	0.015	1.088	1.016	1.164	1.07	0.99	1.16
Constant	-1.040	0.596	3.047	1	0.081	0.354					
<i>Model 3</i>											
Rhythmicity	0.179	0.066	7.377	1	0.007	1.196	1.051	1.362	1.18	1.02	1.37
Constant	-1.957	0.8661	5.163	1	0.023	0.141					
Dependent Variable: Suicide Attempts											
	<i>b</i>	<i>SE(b)</i>	<i>Wald</i>	<i>df</i>	<i>P</i>	<i>Crude OR</i>	<i>95% CI</i>		<i>Adjusted OR*</i>	<i>95% CI</i>	
<i>Model 4</i>											
Depressive spectrum	0.083	0.034	6.087	1	0.014	1.087	1.017	1.161	1.09	1.01	1.17
Constant	-3.992	1.250	10.193	1	0.001	0.018					
<i>Model 5</i>											
Mania-hypomania spectrum	0.056	0.038	2.171	1	0.141	1.057	0.982	1.138	1.02	0.92	1.13
Constant	-2.216	0.777	8.125	1	0.004	0.109					
<i>Model 6</i>											
Rhythmicity	0.203	0.087	5.406	1	0.020	1.225	1.032	1.454	1.23	0.98	1.54
Constant	-4.090	1.369	8.926	1	0.003	0.017					

\*Adjusted for mood disorders, posttraumatic stress disorder, panic disorder, social anxiety disorder, and generalized anxiety disorder.

MOODS-SR=Mood Spectrum Self Report; SE=standard error; df=degrees of freedom; OR=odds ratio; CI=confidence interval.

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reported suicide attempts. This finding is in agreement with those of previous studies indicating that bereaved subjects who meet criteria for CG had a heightened risk for both suicidal thoughts and acts.<sup>2,3,13,34-38</sup>

As already underlined by others,<sup>39-41</sup> we observed that the majority of our CG patients was suffering also from a comorbid mood disorder, in particular, almost two thirds from MDD and ~20% from bipolar disorder. However, it is noteworthy that the comorbidity with anxiety disorders was quite frequent: 27 patients were affected by PTSD, 14 by panic disorder, 6 by GAD, and 3 by SAD. Not surprisingly, multiple diagnoses were recorded in 28 cases. To our knowledge, this is the first study highlighting the presence of different anxiety disorders, as well as of multiple diagnoses, in CG, since previously the comorbidity with MDD or PTSD was underlined.<sup>39,42</sup>

Not surprisingly, in line with literature data showing higher suicidality in patients with both CG and MDD,<sup>3,35,42</sup> a significant correlation was detected between the number of subthreshold depressive symptoms, as recorded by the MOODS-SR, and an increased likelihood of lifetime suicidal ideations or attempts. In addition, even the number of subthreshold manic symptoms was associated with an increased likelihood of suicidal ideation, although this association was slightly weaker after adjusting for comorbidity. This may be considered in agreement with the available information reporting a link between subthreshold manic symptoms and suicidality in both the general population and in other psychiatric disorders.<sup>23,25,43-47</sup> It is noteworthy that also the rhythmicity and vegetative function symptoms were related to increased suicidality. Although this matter is controversial, it can be concluded that some patients with different diagnoses may be more sensitive to weather- and/or season-related changes<sup>48-50</sup> and, as such, more prone to suicide.<sup>51-58</sup> Our data suggest that also some CG patients may share this characteristic.

All these associations remained significant even after controlling for the presence of any anxiety or mood disorder, while suggesting that only the subthreshold mood components might, perhaps, be considered important clinical correlates of suicidality in patients with CG, independently from Axis I diagnoses.

Several limitations of the present study

should be acknowledged. First, the majority of our patients were women, who generally have been reported to be more prone to suicide<sup>58-60</sup>; therefore, studies in larger samples of CG male patients are warranted. Second, several patients were also suffering from other comorbid psychiatric disorders. As explained above, the comorbidity did not affect the general results. Our sample may be considered peculiar and, perhaps, our findings cannot be generalized. Third, the use of a lifetime assessment does not allow establishing whether the mood symptoms preceded or co-occurred with suicidal ideation or attempts.

## CONCLUSION

Despite the limitations mentioned above, our results clearly suggest that, not only subthreshold depressive symptoms, but also manic and rhythmicity and vegetative functions symptoms may be relevant risk factors for suicide in CG. From such a perspective, our data highlight the need to comprehensively explore lifetime subthreshold mood symptoms in CG patients in order to promptly identify those who may be more prone to suicidal ideation and/or attempts. **CNS**

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