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# Clinical syndromes, Complicated Grief and Substance Use Disorder

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*Summary*

**Background:** People with substance use disorders present high psychopathological comorbidity. Research has demonstrated that bereaved individuals with Complicated Grief (CG) symptomatology present unusually severe and prolonged symptoms, and that affects important domains. **Aim:** This study aimed to assess the association between clinical syndromes and CG symptoms among patients with Substance User Disorder (SUD). **Methods:** A convenience sample of 196 bereaved drug-dependent patients was studied. Sociodemographic characteristics, bereavement and drug-related variables as well as psychopathology were examined. CG symptomatology was measured by the Spanish version of the Inventory of Complicated Grief (ICG). Anxiety, Major Depressive Disorder and Posttraumatic Stress Disorder (PSTD) were assessed by utilizing the clinical syndrome section of the Spanish version of MCMI-III. A logistic regression analysis was adjusted to identify which variables were associated with CG symptoms. **Results:** 78.1% were men, and mean age in the sample was 45.59 years (SD=10.14). 34.2% of participants reported symptomatology of CG. Individuals with CG symptoms showed 31.2% higher frequency of Anxiety, 12.5% higher Major Depression and 7.4% higher PTSD. The symptomatology of CG was associated with the presence of Major Depressive Disorder (OR= 1.029) as well as PTSD (OR=1.041). **Conclusions:** Depression and PTSD were associated with symptomatology of CG. This study suggests the importance of carrying out a rigorous and accurate differential diagnosis of CG symptomatology as well as clinical syndromes among addicted people.

*Key Words:* Substance Use Disorder, Complicated Grief, Anxiety, Major Depressive Disorder, PTSD

## 1. Introduction

Although psychological responses to loss of a significant person are complex and vary in intensity and types of symptoms [2, 44], majority of patients can manage the loss with minimal disruptions in functioning, while others experience initially acute symptoms that gradually subside [22]. However, a subset of bereaved individuals, usually 10-15% of the total, experience persistent and disabling symptoms [4, 23] called complicated grief (CG) [48]. This symptomatology includes intense feelings of yearning, longing or emotional pain, separation distress, frequent preoccupying thoughts and memories of the deceased person, a feeling of disbelief or an inability to accept the loss, avoidance of and intense distress at reminders, difficulty in imagining a meaningful future without the deceased person, and substantial impairments to social and role obligations [3, 46].

In addition, several studies have further supported the fact that symptoms of CG are separable from other psychiatric diagnoses such as Major Depressive Disorder, Post-traumatic Stress Disorder (PTSD) and Anxiety [2, 5, 13, 18, 31, 37, 42]. These studies provide evidence that the different syndromes are not isomorphic and the core symptom clusters are empirically dissociable [12]. In this sense, the point to be made is that the response to the PTSD stressor must involve fear or horror, and is thus subjective [1] whereas a reaction to bereavement does not involve fear, although it may implicate feelings of helplessness [35]. Despite the fact that the traumatic distress symptoms of CG appear to be similar to some of the symptoms of PTSD, the separation distress compo-

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nent is unique [18]. Some authors [38] differentiate CG symptoms from those of PTSD in clarifying how the person who presents the former tends to avoid memories that evoke the absence of the deceased, or seeing things that remind them of the deceased, or remembering the deceased in any way. In PTSD, however, the person tries to avoid the memories associated with the traumatic event. As it is related to depression, CG symptomatology is defined by longing and guilt related to that specific death, and by preoccupation with thoughts and memories of the deceased. In contrast, Major Depressive Disorder is linked with general sadness, guilt, shame or low self-esteem [43]. Although CG symptoms and depression are frequently comorbid, they can occur independently [10]. From the same perspective, in studies on bereaved individuals, yearning loads highly on the grief factor, but not on depression or anxiety factors, whereas sadness loads only on a depression factor, while feeling nervous and worried loads only on an anxiety factor [16, 31, 34].

Several studies suggest that CG symptomatology is common in treatment samples in which psychiatric outpatients have being sought. Studies in clinical settings in different countries revealed that about a third of psychiatric outpatients may have symptoms of CG: that was true of 33% of psychiatric outpatients in Vancouver, [32] and 34% of psychiatric outpatients in Pakistan [36]. A German study of 73 inpatients with unipolar depression found an 18% rate of CG [15]. Those who met this criterion had greater severity of other co-occurring psychiatric disorders [42].

Taking into account the focus sample of the present study, it is important to consider the high comorbidity existing among people with SUD [6, 9, 11, 29, 30, 40, 50]. Individuals with co-occurring Major Depressive Disorder, anxiety or PTSD and SUD report more severe symptomatology, greater health problems, greater functional impairments, and fare less well in treatment, which contributes to a heightened vulnerability to relapse after discharge [8, 39]. An American study based on 401 drug-dependent individuals shows that several baseline psychiatric disorders predicted worse outcomes at follow up. Major Depressive Disorder predicted the use of a larger number of substances and having more drug dependence diagnoses and symptoms [8]. 21% of another American sample (participants in 10 geographically diverse outpatient drug treatment programmes) screened positive for depression and were significantly more likely to screen positive for anxiety (66.9%), and almost half of them for PTSD (42.9%) [41]. A Spanish study found that 36.5% of the 115 patients with cocaine dependence in treatment presented psychiatric disorder criteria [21].

There is a lack of evidence regarding clinical syndromes and CG symptomatology among SUD populations. For this reason, the present study aims to assess the association between the presence of clinical syndromes (Anxiety, Major Depressive Disorder, PTSD) and CG symptoms among bereaved people with SUD.

## 2. Methods

### *2.1. Design of the study*

We used an observational and cross-sectional design.

### *2.2. Sample*

Recruitment of patients was based on a convenience sampling procedure. The participants in this study were 196 adult patients (78.1% male) receiving treatment at the Public Addiction Treatment Centre in Girona (Catalonia, Spain). The inclusion criteria were 1) they had a diagnosis of alcohol, cocaine or heroin dependence carried out by clinical specialists in the centre according to DSM-IV-TR criteria, 2) they had suffered a loss of a significant person (family, best friend or partner) at some time in their life, but at least a year previously to the interview, and any bereavement within the year previous to the interview would exclude them from this study, and 3) abstinence during the last month to avoid the toxic effect of drugs.

### *2.3. Instruments*

We used an ad hoc questionnaire to register sociodemographic characteristics (age, gender, marital status, education and work status), bereavement-related variables (the most significant/closest loss experience, time since death and circumstances of death), as well as drug use-related variables (main drug dependence).

Complicated grief was measured using the Spanish version of the Inventory of Complicated Grief (ICG) [17]. It consists of 19 items. Responses are provided on a 5-point Likert scale to indicate an increase in severity (0-never, 1-seldom, 2-sometimes, 3-often and 4-always) (maximum score: 76). The cut-off point was 25, it was based on the English version of the ICG [29]. We categorized a respondent as hav-

ing symptoms of CG if the total score was higher than 25. The internal consistency of the Spanish version was high (Cronbach's alpha = 0.88; test-retest reliability = 0.81).

Anxiety, Major Depressive Disorder and PTSD were assessed using the Spanish version of Millon Clinical Multiaxial Inventory-III (MCMI-III) [28]; Spanish translation by Cardenal and Sánchez-López [7]. We used the most conservative criteria with scores equal to or greater than 85 to define the presence of the clinical syndromes. The MCMI-III is a 175 item self-report questionnaire with dichotomous answers (true/false). It measures 11 clinical personality patterns, 3 traits of severe personality pathology, 7 syndromes of moderate severity, 3 severe syndromes and a validity scale with 3 modifying indices. The personality disorders scales cover the major diagnostic criteria of DSM-IV. The internal consistency ranges between 0.66 and 0.80, and the test-retest reliability for dimensional ratings has a range of 0.85 to 0.93. The test-retest reliability for the categorical diagnosis is Kappa <0.45. To correlate with the MCMI scores, SCL-90-R (Symptomatological Check List in its revised form) and the Inventory Minnesota Multiphasic Personality (MMPI) scores >0.50 were used. MCMI shows a sensitivity range of 0.44-0.92 (mean=0.60), and its predictive power has a range of 0.30 to 0.81 (mean=0.69).

### *2.4. Procedure*

Each participant who met the three inclusion criteria was informed by his/her therapist about their possible participation in the study. If patients agreed to collaborate, the psychologist (who is the first author) called each patient to arrange an appropriate time for an interview in the centre. All participants were informed about the study procedure as well as terms of confidentiality. The average time for each interview was one hour and a half in total. Informed consent was obtained from all participants, and the protocol was approved by the Institutional Ethics and Research Review Board of the Institut Assistència Sanitària (IAS).

### *2.5. Data analysis*

In order to compare normal grievers with complicated grievers, we used chi-square tests, to identify relationships between the categorical variables (applying the Yates correction when necessary) and the Student's t-tests, to determine the relationship between the quantitative and the qualitative variables. To assess the association between CG symptoms and clinical syndromes we performed a logistic regression. The results are expressed as absolute numbers, percentages, odds ratios, as well as showing the means and standard deviations. To assess the relation between different variables and CG, we adjusted a logistic regression model using the presence or absence of symptoms of CG (dichotomous variable) as dependent variables and the following factors as independent variables: gender (1=male; 2=female), education (1=primary; 2=secondary and beyond), marital status (married as a reference category), work status (working as a reference category), relationship with the deceased (father as a category), circumstances of death (1=natural; 2=traumatic), and the three clinical syndromes (Anxiety Disorder; PTSD and Major Depressive Disorder) as dimensional variables. A statistical significance of 0.05 was set for testing the hypotheses. All analyses were carried out using the Statistical Package for the Social Sciences (SPSS 21.0) for Windows.

## 3. Results

### *3.1. Sociodemographic and drug-related characteristics*

The mean (SD) age of the clinical sample was 45.59±10.14 years and 78% (n=153) were men.

As shown in Table 1, education background was found to be statistically significant. The majority of normal grievers report a history of secondary education. With respect to working status, 67.3% of complicated grievers reported no working status.

Considering now the addiction variables, more than a half of the individuals reported alcohol dependence as the first main diagnosis (68.9%), 18.4% heroin dependence and 12.8% cocaine dependence. 74.5% of the substance use participants were taking a prescribed psychopharmacological therapy.

### *3.2. Bereavement variables*

Among the complicated bereaved substance users, the sibling was the most frequently-experienced significant deceased person, followed by 22.4% for the father. In contrast, the father was the relative most frequently experienced (40.3%) among normal grievers. More than a half of participants with CG symptomatology (50.9%) indicated "traumatic" as the

**Table 1.** Sociodemographic variables

| | | Normal grievers (n=129) | Complicated grievers (n=67) | p |
|---|---|---|---|---|
| Gender | Man | 103 (79.8) | 50 (74.6) | 0.40 [a] |
| | Women | 26 (20.2) | 17 (25.4) | |
| Age, M (SD) | | 45.43 (10.36) | 45.85 (9.7) | 0.14 [b] |
| Marital status | Single | 27 (20.9) | 17 (25.4) | 0.15 [a] |
| | Married/partner | 49 (38) | 24 (35.8) | |
| | Separated/divorced | 46 (35.7) | 17 (25.4) | |
| | Widowed | 7 (5.4) | 9 (13.4) | |
| Studies | Primary education | 29 (23.2) | 30 (45.5) | 0.002 [a] |
| | Secondary and beyond | 96 (76.8) | 36 (54.5) | |
| Work status | Working | 50 (38.8) | 22 (32.8) | 0.02 [a] |
| | Others* | 79 (61.4) | 45 (67.3) | |

* Retired, unemployed, inactive, disability aid; [a] chi-square test; [b] t-test test.

most frequent circumstance of death (Table 2).

### *3.3. Presence of clinical syndromes*

The three disorders (Anxiety, Major Depressive Disorder and PTSD) were statistically significant as comorbidities in those patients who reported CG symptoms. Anxiety disorder was the most frequent disorder. More than a half (53.7%) of addicted individuals with CG symptoms also presented Anxiety Disorder, 17.9% presented symptoms of Major Depressive Disorder and 9% PTSD (Table 3).

### *3.4. Variables associated with CG symptomatology*

Table 4 shows the results of a logistic regression in which scores of CGs were the dependent variables, while sociodemographic and bereavement variables as well as psychopathological disorders were considered independent variables. It was found that being a woman, together with the condition of being separated or divorced, showed an association with CG symptoms. Participants who lost their sibling reported a higher risk of presenting CG symptoms. As to comorbidity, presenting PTSD in combination with a Major Depressive Disorder was strongly associated with the symptomatology of CG.

## 4. Discussion

The current study aimed to increase knowledge about the relationships between CG and clinical syn-

**Table 2.** Bereavement variables (n (%))

| | | Normal grievers (n=129) | Complicated grievers (n=67) | p |
|---|---|---|---|---|
| Relationship to deceased | Father | 52 (40.3) | 15 (22.4) | <0.001[a] |
| | Mother | 30 (23.3) | 7 (10.4) | |
| | Sibling | 12 (9.3) | 24 (35.8) | |
| | Grandparent | 9 (7) | 2 (3) | |
| | Friend | 10 (7.8) | 4 (6) | |
| | Spouse | 9 (7) | 10 (14.9) | |
| | Others | 7 (5.4) | 5 (7.5) | |
| Time since death, M (SD) | | 13.33 (11.48) | 9.36 (9.78) | 0.02[b] |
| Circumstances of death | Natural | 102 (71.8) | 26 (49.1) | 0.003[a] |
| | No natural* | 40 (28.2) | 27 (50.9) | |
| CG symptoms | M, (SD) | 11.37 (7.02) | 41.67 (10.85) | <0.001[b] |

[a] chi-square test; [b] t-test test. * No natural: Accident, Suicide, Homicide and Overdose

**Table 3.** Clinical syndromes found in the sample (n (%))

| | | Complicated grievers (n=129) | Normal grievers (n=67) | P |
|---|---|---|---|---|
| Anxiety | M (SD) | 82.45 (18.41) | 56.04 (32.72) | 0.000 [a] |
| | Yes | 36 (53.7) | 29 (22.5) | 0.000 [b] |
| | No | 31 (46.3) | 100 (77.5) | |
| Depression | M (SD) | 64.93 (22.59) | 35.84 (29.31) | 0.000 [a] |
| | Yes | 12 (17.9) | 7 (5.4) | 0.005 [b] |
| | No | 55 (82.1) | 122 (94.6) | |
| PTSD | M (SD) | 64.99 (17.06) | 41.21 (25.58) | 0.000 [a] |
| | Yes | 6 (9) | 2 (1.6) | 0.013 [b] |
| | No | 61 (91) | 127 (98.4) | |

[a] t-test test; [b] chi-square test

dromes among substance users. Participants with SUD reported high scores in ICG, showing 34.2% of CG symptoms, as presented in another publication arising from the same study [26]. We found that participants with CG symptoms also reported a higher frequency of clinical syndromes. Taking into account that we used the most conservative criteria by including only scores equal to or greater than 85, more than half of the individuals in the sample (53.7%) presented Anxiety Disorder, almost two out of ten (17.9%) reported Major Depressive Disorder and 9% PTSD. These results were along the same lines as those of other studies [32, 42], despite the fact that those studies were focused on psychiatric samples, whereas the current study was based specifically on people with SUD.

The final objective of this research was to identify which variables can be associated with symptoms of CG among SUD patients. Logistic regression analysis allowed us to examine the complexity of the CG construct. In connection with sociodemographic and bereavement variables, we concluded that CG symptomatology was associated with gender (being a woman), with being separated or divorced, and having lost a sibling. General population studies similarly raised the issue of gender, because of the fact that being a woman was found to carry a greater risk of developing CG symptoms than for men, as found

**Table 4.** Logistic regression of associated variables in CG's symptomatology

| | B | E.T. | Wald | df | Sig. | Exp(B) |
|---|---|---|---|---|---|---|
| Age | .007 | .023 | .095 | 1 | .758 | 1.007 |
| Woman | 1.251 | .572 | 4.783 | 1 | .029 | 3.494 |
| No working status | -.288 | .468 | .377 | 1 | .539 | .750 |
| Primary studies | -.744 | .448 | 2.763 | 1 | .096 | .475 |
| Marital status | | | 8.405 | 3 | .038 | |
| Married or in a couple | -.918 | .595 | 2.382 | 1 | .123 | .399 |
| Separated or divorced | -1.753 | .623 | 7.920 | 1 | .005 | .173 |
| Widow | -.245 | 1.190 | .042 | 1 | .837 | .783 |
| Relationship with the deceased | | | 10.265 | 6 | .114 | |
| Mother | .281 | .658 | .182 | 1 | .670 | 1.324 |
| Sibling | 1.680 | .641 | 6.861 | 1 | .009 | 5.365 |
| Grandparent | -.417 | .960 | .189 | 1 | .664 | .659 |
| Friend | -.129 | .868 | .022 | 1 | .882 | .879 |
| Spouse | 1.096 | 1.058 | 1.073 | 1 | .300 | 2.992 |
| Others | 1.047 | .871 | 1.446 | 1 | .229 | 2.850 |
| Traumatic circumstances of death | 1.069 | .561 | 3.633 | 1 | .057 | 2.912 |
| Anxiety | .005 | .015 | .106 | 1 | .745 | 1.005 |
| PTSD | .040 | .019 | 4.337 | 1 | .037 | 1.041 |
| Depression | .029 | .011 | 7.556 | 1 | .006 | 1.029 |
| Constant | -4.652 | 1.456 | 10.208 | 1 | .001 | .010 |

independently in our study [19, 20, 45].

With respect to the clinical syndromes, symptoms of CG were associated with Major Depressive disorder and PTSD disorder. These two clinical syndromes reported a high association with the construct of CG symptoms. These results were along the same lines as those in other studies [6, 27, 49]. Despite overlap with the criteria for CG symptoms and Anxiety, Depression and PTSD reactions following bereavement, the phenomenological distinctiveness of CG symptoms (such as yearning, searching, disbelief), from those of bereaved-related anxiety, depression and PTSD was shown in several studies on the general population [12, 31]. To sum up, CG symptoms showed incremental validity in predicting physical problems after checking for the effects of Major Depressive disorder, anxiety and PTSD following the bereavement in question [12].

*Limitations*

This study had a number of limitations. We relied exclusively on self-report measures. Moreover, the clinical syndromes were assessed with the psychometric test focus on personality disorders. The present study had a cross-sectional design instead of a longitudinal design; hence causal inferences cannot be made.

## 5. Clinical implications

The comorbidities portend challenges that lie ahead for patients and clinicians alike [40]. It is highly valuable to have clear correlations between specific comorbid psychiatric disorders and SUD in order to appropriately treat patients [8]. At a therapeutic level, it would be appropriate to take into account whether the patients have experienced the loss of a significant person in their life and how the factors could affect them. Moreover, most individuals with undiagnosed CG would be relieved to know that their symptoms are indicative of an identifiable syndrome and might be interested in receiving treatment for their grief [14]. Finding clear correlations between specific comorbid psychiatric disorders for those in substance use treatment would have important implications for predicting treatment outcomes [8, 51].

## 6. Conclusions

This study highlights psychiatric comorbidity among substance users. Our data demonstrate that comorbid disorders may be a risk factor for CG symptomatology. Specifically, our results indicate that Major Depressive disorder and PTSD are clinical syndromes related to CG symptomatology.

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*Conflict of interest*

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the article.

*Ethics*

Authors confirm that the submitted study was conducted according to the WMA Declaration of Helsinki - Ethical Principles for Medical Research Involving Human Subjects. Informed consent was obtained from all participants, and the protocol was approved by the Institutional Ethics and Research Review Board of the Institut Assistència Sanitària (IAS).

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