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## Increase in urgent care for patients with an eating disorder during the COVID-19 pandemic in a Spanish province



## Incremento de la atención de urgencia para los pacientes con trastornos de la alimentación durante la pandemia de COVID-19 en una provincia española

### Introduction

The COVID-19 pandemic has had a great impact on public health, but also on mental health.<sup>1–3</sup> It has affected the mental state of patients suffering from this infection, bereaved relatives having lost loved ones to this disease, health professionals, the general population and patients who had a mental health problem before the pandemic and have seen their symptoms increase and/or their treatment interrupted.<sup>4–6</sup>

Patients with eating disorders are highly sensitive to the pandemic situation due to their physical and psychological risk.<sup>7</sup> The fragility of anorexia nervosa, electrolyte disturbances in bulimia nervosa, and cardiovascular risk in binge eating should be highlighted. In the same way, the psychological stress derived from confinement and the restrictions and anguish inherent to uncertainty, can increase the psychological discomfort of these patients.<sup>8</sup> Isolation and loneliness can be common to those with anorexia nervosa, and may become aggravated during a pandemic. Emotional dysregulation can promote bingeing and purging episodes, while greater external control can cause a decrease in food intake.<sup>9</sup> A pilot study developed during the first two weeks of confinement in an eating disorder unit in Barcelona reports that, in a sample of 32 patients, most of the patients expressed concerns about increased uncertainty in their

lives, such as the risk to themselves or their loved ones of COVID-19 infection, the negative impact on their work and their treatment. Almost 38% (12 of 32) reported a worsening of their eating disorder symptoms and 56.2% (18 of 32) reported additional anxiety symptoms.<sup>7</sup> These findings strengthen the hypothesis that the COVID-19 pandemic may aggravate risk factors for overeating and unhealthy weight gain, especially in vulnerable populations such as children and individuals with an eating disorder and obesity.<sup>10</sup>

It is necessary to remember that the restrictions imposed by the health authorities have limited the accessibility of health care, which is why face-to-face mental health care has been interrupted in many areas, further compromising the state of psychiatric patients.<sup>11</sup> Patients with an eating disorder are vulnerable populations that require specific approaches.<sup>12</sup> As an immediate emergency measure to address this situation, different telemedicine tools have been described within this population, during the pandemic<sup>13,14</sup>; however, there are no studies on their efficacy and acceptability by users.

The objective of this study is to evaluate the impact that the COVID-19 pandemic may have had on the reasons for the urgent care of patients with an eating disorder, comparing the reasons for care with those from a previous period.

### Method

#### Sample and procedure

This study was carried out at the Santa Maria University Hospital in Lleida. This hospital is the only one providing urgent psychiatric care in the province of Lleida, with an area of influence of 137,283 people.<sup>15</sup>

The data in this study were obtained through a retrospective review of digital medical records including patients' sociodemographic data, diagnosis, reasons for consultation and hospital admissions. The observation periods were: 1. before confinement: from January 13, 2020, until March 14,

2020 and 2. during the confinement of the first state of alarm in Spain: from its start on the 15th of March, 2020 until its conclusion on the 20th of June, 2020 and the second state of alarm in Spain: from October 25, 2020 to May 9, 2021.<sup>16</sup>

## Measurements

The following information was collected from digital medical records: number of visits to the emergency unit for psychiatric reasons in the periods described, sociodemographic profile of the patients who attended an emergency unit (gender, date of birth and marital status), psychiatric diagnosis (following the criteria in DSM-IV<sup>17</sup>), reason for consultation and referral upon discharge. For patients with an eating disorder who reported suicide attempts, the following data were also collected: method of suicide attempt, lethality and history of suicidal behaviour. We used Silverman et al.'s definition for attempted suicide: a self-inflicted, potentially injurious behaviour with a nonfatal outcome for which there is evidence (either explicit or implicit) of intent to die.<sup>18</sup> Following the criteria of Beautrais et al., suicide attempts that required more than 48 h of medical attention in the general hospital were considered highly lethal; moderately lethal if they required between 24 and 48 h, and of low lethality if they required less than 24 h.<sup>19</sup>

## Statistical analysis

Statistical analyses were performed using the IBM-SPSS v.23 statistical package. Continuous data were expressed as mean  $\pm$  standard deviation while categorical data were presented as percentages. The normal distribution was evaluated using the Shapiro–Wilk test. Chi-square and *t*-student tests were used for continuous data. As a non-parametric alternative, Fisher's exact test and the Kruskal–Wallis test were used, as appropriate. Univariate analyses were performed to explore whether sociodemographic and clinical variables were associated with suicidal behaviour. Fisher's exact test (FET) provided the significance and the odds ratios (OR) and their 95% confidence intervals (CI) provided the effect size. The significant variables ( $p < 0.05$ ) in the univariate analyses were included in a stepped bivariate logistic regression model. Type I error was set at the usual value of 5% ( $\alpha = 0.05$ ) with a two-sided approximation.

The authors state that all the procedures contributing to this work comply with the ethical standards of the relevant national and institutional committees on human experimentation and with the 1975 Declaration of Helsinki, revised in 2008.<sup>20</sup> This study was approved by the ethics and clinical research committee of Arnau de Vilanova University Hospital.

## Results

### Description of patients with an eating disorder who go to an emergency unit before and during the two states of alarm

Table 1 shows the sociodemographic characteristics and reason for consultation in the two periods studied. We ana-

lyzed a total of 107 ED patients (90.7% female) with a mean age of 27.1 ( $\pm 12.7$ ) years. Visits for eating disorders increased from 1.7% of all emergencies attended in the pre-pandemic period to 3.1% during the pandemic ( $p = 0.030$ ). During the state of alarm, visits of patients in a relationship increased ( $p = 0.017$ ) and visits of patients who were separated decreased ( $p = 0.025$ ). The rest of the sociodemographic variables did not show statistically significant differences. There were also no differences in the destination on discharge in the two periods.

### Description of reasons for consultation with patients with an eating disorder before and during the two states of alarm

Regarding the reason for consultation, a change in the pattern is observed, consultations for anxious decompensation decreasing ( $p < 0.001$ ) and suicidal behaviour ( $p = 0.016$ ) and behaviour alteration increasing ( $p = 0.022$ ).

Of all the patients with an ED, 21 (19.6%) presented suicidal behaviour. The mean age was 25.6 years (9.4) and all were female. Table 2 shows the most relevant results of the analysis by univariate logistic regression and stepwise regression for suicidal behaviour in patients with an ED. As risk factors for suicidal behaviour, the diagnosis on axis II (OR = 3.83 [1.79–6.59]) and unemployment (OR = 2.40 [1.12–3.44]) stand out, both of which remain independent in the logistic regression. The rest of the variables did not show differences between either group.

## Discussion

In our work, we observed a marked increase in psychiatric emergency care for patients with eating disorders due to the pandemic, as has already been observed in recent studies, identifying this group as a group at risk of psychopathological decompensation.<sup>21</sup> The restrictions imposed by the health authorities to try and limit the risk of infection have promoted greater loneliness and social isolation, these being risk factors for a negative evolution of patients with an eating disorder.<sup>22</sup> In our sample, however, we have observed a significant increase in visits of patients with a partner and a decrease in patients who are separated. As a guideline, regarding the nucleus of coexistence, we have observed an increase in visits in patients who cohabit with other people and a decrease in patients who live alone, but this finding has not been statistically significant. This result could be interpreted considering that these patients frequently experience severe social isolation, which is why they might have been less sensitive to the effects of confinement.<sup>23</sup> It should also be considered that continued coexistence can generate greater mental discomfort in experiencing constant supervision.<sup>24</sup>

Despite an increase in stress and emotional anguish, as has been described during the pandemic, due to specific fears regarding the current situation,<sup>25</sup> we observed a decrease in urgent consultations for eating disorders due to anxiety symptoms in our sample.

We did not find recent literature linking suicidal behaviour with eating disorders during the pandemic, but it is clear that this is a psychopathological complication that

**Table 1** Sociodemographic characteristics and reason for consultation in the two periods studied.

|                                    | Pre-pandemic<br>(N= 11) | State of alarm<br>(N= 96) | p-Value |
|------------------------------------|-------------------------|---------------------------|---------|
| % ED during the period             | 1.6                     | 3.1                       | 0.030   |
| Female (%)                         | 10 (90.9)               | 87 (90.6)                 | 0.976   |
| Age (SD)                           | 30.4 (13.5)             | 26.7 (12.6)               | 0.365   |
| <i>Marital status (%)</i>          |                         |                           |         |
| Single                             | 7 (62.6)                | 54 (59.3)                 | 0.639   |
| In a relationship                  | 2 (18.2)                | 33 (36.3)                 | 0.017   |
| Separated                          | 2 (18.2)                | 4 (4.4)                   | 0.025   |
| <i>Household</i>                   |                         |                           |         |
| Living alone                       | 3 (27.3)                | 13 (13.7)                 | 0.226   |
| Cohabiting with relatives          | 8 (72.7)                | 80 (84.2)                 | 0.383   |
| In care                            | 0                       | 2 (2.1)                   | 0.629   |
| <i>Unemployed (%)</i>              | 2 (18.2)                | 20 (20.8)                 | 0.511   |
| <i>Psychiatric antecedents (%)</i> | 11 (100)                | 90 (93.8)                 | 0.393   |
| <i>Diagnosis axis II</i>           |                         |                           |         |
| No diagnosis                       | 6 (54.5)                | 52 (54.2)                 | 0.981   |
| Cluster B                          | 4 (36.4)                | 43 (44.8)                 | 0.594   |
| Cluster C                          | 1 (9.1)                 | 1 (1)                     | 0.062   |
| <i>Reason for consultation (%)</i> |                         |                           |         |
| Substance use                      | 0                       | 1 (1)                     | 0.734   |
| Suicidal ideation                  | 0                       | 13 (13.5)                 | 0.023   |
| Suicide attempt                    | 0                       | 8 (8.3)                   | 0.054   |
| Any suicidal conduct               | 0                       | 21 (21.9)                 | 0.016   |
| Conduct disorder                   | 0                       | 13 (13.5)                 | 0.022   |
| Anxious decompensation             | 8 (72.2)                | 12 (12.5)                 | <0.001  |
| ED                                 | 3 (27.3)                | 45 (46.9)                 | 0.216   |
| Administrative                     | 0                       | 1 (1)                     | 0.734   |
| Others                             | 0                       | 3 (3.1)                   | 0.552   |
| <i>Referral on discharge</i>       |                         |                           |         |
| Discharge at home                  | 7 (63.6)                | 53 (55.2)                 | 0.594   |
| Admission into psychiatric unit    | 4 (36.4)                | 43 (44.8)                 |         |

must be routinely evaluated given its high comorbidity.<sup>24</sup> There are many studies that indicate suicide attempts as a relevant problem in patients with eating disorders.<sup>26</sup> In our population, we found a significant increase in patients with an eating disorder who during the confinement attended urgent care presenting with suicidal behaviour, mainly suicidal ideation. In fact, the variables that are related to suicidal behaviour care in patients with eating disorder during the confinement are comorbidity with personality disorders and unemployment. There are many theories that postulate that individuals with an eating disorder experience deficits in the regulation of emotions<sup>27</sup> and it has also been hypothesized that the deficits in the regulation of emotions observed in these individuals are the basis for the high prevalence of self-injurious thoughts and behaviours in this population.<sup>28</sup> Vieira's team related difficulties in emotion regulation and a greater number of non-suicidal self-harm methods with a greater severity of eating disorder symptoms.<sup>29</sup> Moreover, unemployment has been linked

to the risk of suicide<sup>30</sup> and the current crisis situation inevitably evokes data from the 2008 economic crisis, when the increase in suicides preceded the real increase in the unemployment rates.<sup>31</sup>

### Strengths and limitations

These results must be interpreted with some limitations in mind. Since the data come from the digital medical records, we have relied on the clinical diagnosis made by different psychiatrists. In addition, the severity of symptoms was not assessed and psychometric scales were not used. Being a cross-sectional study, causal relationships cannot be established.

As a strength of the study, we have been able to obtain a sample that represents all the psychiatric emergencies dealt with in the province, related to eating disorders, during the two states of alarm.

**Table 2** Univariate and backward stepwise logistic regression model for suicidal behaviour in patients with ED.

|  | Non suicidal<br>(N=86) | Suicidal<br>(N=21)         | p-Value | OR univariate | CI        |
|--|------------------------|----------------------------|---------|---------------|-----------|
| Female (%)   | 76 (88.4)              | 21 (100)                   | 0.140   |               |           |
| Age (SD)   | 27.5 (13.4)            | 25.6 (9.4)                 | 0.409   |               |           |
| <b>Marital status (%)</b>                                      |                        |                            |         |               |           |
| Single   | 50 (61)                | 11 (55)                    | 0.716   |               |           |
| In a relationship  | 26 (31.7)              | 9 (45)                     | 0.214   |               |           |
| Separated  | 6 (7.3)                | 0                          | 0.552   |               |           |
| <b>Household (%)</b>   |                        |                            |         |               |           |
| Living alone   | 13 (15.1)              | 3 (15)                     | 0.870   |               |           |
| Cohabiting with relatives                                      | 71 (82.6)              | 17 (85.1)                  | 0.638   |               |           |
| In care  | 2 (2.3)                | 0                          | 0.067   |               |           |
| Unemployed (%)   | 15 (16.2)              | 8 (38.1)                   | 0.031   | 2.40          | 1.12–3.44 |
| Diagnosis axis II (%)  | 30 (34.8)              | 19 (90.5)                  | <0.001  | 3.83          | 1.79–6.59 |
| Psychiatric antecedents (%)                                    | 81 (94.2)              | 29 (95.2)                  | 0.676   |               |           |
| <b>Backward stepwise logistic regression model<sup>a</sup></b> |                        |                            |         |               |           |
|  | Variable               | Wald $\chi^2$ <sup>a</sup> | p-Value | OR Corrected  | CI        |
| First step   | Diagnosis axis II      | 10.17                      | 0.001   | 3.12          | 1.26–6.37 |
|  | Unemployed             | 4.89                       | 0.027   | 2.01          | 1.04–9.74 |

<sup>a</sup> Hosmer–Lemeshow test was non-significant ( $\chi^2 = 0.382$ ,  $df = 2$ ,  $p = 0,710$ ).

## Conclusions

In our study, we stated an increase in urgent care given to patients with an eating disorder during the two states of alarm, highlighting a decrease in consultations due to anxiety symptoms. However, visits for suicidal behaviour increased, especially in women with comorbidity of personality disorders and who were unemployed.

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