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Horror Vacui: Emptiness Might Distinguish between Major Suicide Repeaters and Nonmajor Suicide Repeaters: A Pilot Study

Hilario Blasco-Fontecilla
Autonoma University, Spain

Enrique Baca-Garcia
CIBERSAM, Spain

Philippe Courtet
University of Montpellier, France

Rebeca Garcia Nieto
CIBERSAM, Spain

Jose de Leon
University of Kentucky, jdeleon@uky.edu

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Research letter:


Hilario Blasco-Fontecilla,1,2* Enrique Baca-Garcia,3 Philippe Courtet,4,5 Rebeca Garcia-Nieto,3 Jose de Leon6

1Department of Psychiatry, Puerta de Hierro University Hospital, IDIPHIM, CIBERSAM, Autonoma University, Madrid, Spain
2Consulting Asistencial Sociosanitario (CAS), Madrid, Spain
3Department of Psychiatry, IIS-Jimenez Diaz Foundation, CIBERSAM, Madrid, Spain, where the study was conducted.
4Department of Emergency Psychiatry and Post Acute Care, CHU Montpellier, University of Montpellier, France
5Fondamental Foundation, France
6Mental Health Research Center at Eastern State Hospital, Lexington, KY, USA

*Corresponding author: Hilario Blasco-Fontecilla, Department of Psychiatry, Puerta de Hierro University Hospital, IDIPHIM, Calle Manuel de Falla, 1, 28222 Majadahonda, Madrid, Spain. email: hmblasco@yahoo.es hblasco@idiphim.org Phone 34-911 916000, Fax +34-918514707

Running head: major suicide repeaters and emptiness

* In visual art, this Latin expression means the filling of the entire surface of an artwork or space with detail
Empty societies create empty people. No societies perhaps have ever been more empty than those that exist in our present time, on the frontiers of modernity.

Major repeaters (individuals with \( \geq 5 \) lifetime suicide attempts) account for 10% of all suicide attempters, and pose a challenge to clinicians [1]. Recently, we have proposed that major repeaters are a distinct phenotype within suicidal behaviors (SBs) and may share some common features with patients with addictions [2]. Moreover, major repeaters may attempt suicide for different reasons than suicide attempters less prone to repetition. Unfortunately, there is virtually no published information with regard to the functional processes (reasons) that produce and maintain SBs in major repeaters.

Nock & Prinstein [3] proposed four primary functions of self-mutilating behavior that can also be applied to SBs [4]. The four functions differ along two dimensions: contingencies (automatic versus social), and reinforcement (positive versus negative). In automatic-negative reinforcement (ANR), individuals engage in SBs to achieve a reduction of negative affective states (e.g., “to stop bad feelings”). Automatic-positive reinforcement (APR) refers to an individual’s using SBs to create a desirable physiological state (e.g., “to feel something, because you felt numb or empty”). Social-negative reinforcement (SNR) refers to an individual using SBs to escape from interpersonal task demands (e.g., “to avoid punishment”), and social-positive reinforcement (SPR) refers to using SBs for gaining attention from others (e.g., “to let others know how unhappy I am”).

The major aim of this study is to explore these four functions of suicide attempts in major repeaters. Details on the procedures of this study have been reported elsewhere [5]. Basically, 82 individuals who had attempted suicide at least once during their lifetime were recruited from a
Psychiatric Short-Stay Unit in 2012. All participants were administered the Spanish version of
the Self-Injurious Thoughts and Behaviors Interview (SITBI) [5]. Characteristics of suicide
attempts included reported function using a Likert scale (0 to 4) and referred to the most lethal
suicide attempt recalled by the participant, as stated in the SITBI. Significant variables (p<0.05)
in univariate analyses were introduced in multivariate logistic regression models (Table 1).

Most of the 82 individuals were Caucasian, single, and had high school education. 49%
were women. The mean (SD) age was 43.3 years (10.3). Among these 82 individuals there were
11 (13%) major repeaters (≥5 attempts) [2] and 71 (87%) non-major repeaters respectively,
including 35 (42%) with a single attempt and 36 (45%) with 2 to 4 lifetime suicide attempts. The
univariate analyses of clinical variables indicated that there were no significant differences in
clinical variables between repeaters and non-major repeaters with the exception of borderline
personality disorder (BPD) (45% vs. 14%; FET p=0.027; OR was 5.0; 95% CI=1.3, 19.5). All
major repeaters and 93% of the remaining suicide attempters had at least one Axis I diagnosis.
Major repeaters were statistically more likely to report APR than non-major repeaters (OR 4.9;
95% CI 1.3, 18.3). ANR, SNR, and SPR were not significantly more frequent in major repeaters
(Table 1). A logistic regression model with major attempter as the dependent variable verified
that the association between major repeater status and APR was not completely explained by the
association between major attempter status and BPD (see Table 1, footnote2 and footnote4).

The present pilot study confirms that ANR (“To stop bad feelings, psychological pain”) is
reported most frequently as the reason for SB. In our sample these reports were present in almost
all attempters (86% of non-major repeaters and 91% of major repeaters). This finding supports
the concept that people may attempt suicide to relieve a painful or unbearable internal state [6],
and places psychological pain at the core of SB [7]. Shneidman [7] and, more recently, Tossani
[8] stressed the strong link between psychological pain and SB. However, ANR did not differentiate between major and non-major repeaters in our pilot study.

On the other hand, major repeaters were nearly 5 times more likely than non-major repeaters to endorse APR (“To feel something, because you felt numb or empty”) as a reason for attempting suicide. SBs may also function as a means of generating feelings. Emptiness, which is one of the factors of the Orbach & Mikulincer Mental Pain questionnaire [6], is considered a relevant factor influencing the occurrence of SBs [9, 10]. This study extends our previous findings by suggesting that emptiness appears to be particularly relevant as a reason for SB for major repeaters. Although speculative, it is possible that major repeaters were more likely victimized during childhood or adolescence. In a previous work, we found that major repeaters were more likely to be diagnosed with any type of childhood maltreatment, and childhood and adolescent victimization have been related to the repetition of SB [2].

Finally, the relationship between APR and major repeater status was more relevant than the relationship between BPD and major repeater status. In other words, individuals who attempt suicide because they feel empty or numb, or just want to feel something, even if pain, were more likely to be major repeaters. This occurs in patients with BPD and in other patients. We acknowledge that there are probably other pathways leading to major repetition of SBs, but our pilot study strongly suggests that one of the major ones may be relieving emptiness.

Future studies should consider some of the limitations of the present study. As in all retrospective studies, the current study provided statistical associations that cannot be interpreted as providing etiological links. As explained elsewhere [2], we collapsed single attempters and “minor repeaters” into one category to gain statistical power [2]. Furthermore, we “equated” APR to emptiness in our discussion, and the concept of APR as a motivation for suicide attempts
may have served to elicit other sensations such as pain or satisfaction. In any case, the different sensations usually included in APR tend to load onto the same factor [3].

In conclusion, the primary purpose of most suicide attempts is the regulation of emotions. APR and ANR are frequent among major repeaters, but only APR significantly distinguished major repeaters from non-major repeaters. Therapeutic approaches focused on enhancing emotion regulation would be most effective [3].

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References

Table 1. Univariate and backward stepwise logistic regression model for major repeaters.

<table>
<thead>
<tr>
<th>Reported function</th>
<th>Major repeater (n=11)</th>
<th>Non-major repeater (n=71)</th>
<th>FET p-value</th>
<th>Univariate OR</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic negative reinforcement</td>
<td>91</td>
<td>86</td>
<td>1.0</td>
<td>1.6</td>
<td>0.19-14.2</td>
</tr>
<tr>
<td>Automatic positive reinforcement</td>
<td>55</td>
<td>20</td>
<td>0.021</td>
<td>4.9^2</td>
<td>1.3-18.3</td>
</tr>
<tr>
<td>Social negative reinforcement</td>
<td>0</td>
<td>24</td>
<td>0.11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social positive reinforcement</td>
<td>18</td>
<td>42</td>
<td>0.19</td>
<td>0.30</td>
<td>0.06-1.5</td>
</tr>
</tbody>
</table>

**BACKWARD STEPWISE LOGISTIC REGRESSION MODEL**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Wald χ²</th>
<th>p values</th>
<th>Corrected OR</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>First step</td>
<td>Automatic positive reinforcement</td>
<td>2.5</td>
<td>0.11</td>
<td>3.2</td>
</tr>
<tr>
<td>Borderline personality disorder</td>
<td>2.2</td>
<td>0.14</td>
<td>3.1</td>
<td>0.70-14.1</td>
</tr>
<tr>
<td>Second step</td>
<td>Automatic positive reinforcement</td>
<td>5.5</td>
<td>0.019</td>
<td>4.9</td>
</tr>
</tbody>
</table>

CI: confidence interval. FET: Fisher exact test; OR: odd ratio. Significant results are in italics.

Automatic negative reinforcement: “To stop bad feelings”. Automatic positive reinforcement: “To feel something, because you felt numb or empty”. Social negative reinforcement: “To avoid doing something you don’t want to do”. Social positive reinforcement: “To communicate with someone or get his/her attention”.

^1Patients presenting high levels: (2-4 vs. 0-1) in the Spanish version of the Self-Injurious Thoughts and Behaviors Interview (SITBI).

^2This univariate OR is not adjusted by the association between automatic positive reinforcement and borderline personality disorder. These two variables were significantly associated (FET p=0.001; OR=7.6, CI 2.3, 25.8).

^3One of the cells has a 0 value. Therefore, it is not possible to calculate an OR.

^4Further statistical proof of the greater importance of automatic positive reinforcement in predicting major attempter status was done with a logistic regression model using the interaction between automatic positive reinforcement and borderline personality disorder as an additional variable. This interacting variable can be thought as representing the overlap of these two variables. When automatic positive reinforcement, borderline personality disorder, and the interacting
variable were introduced in the backward stepwise logistic regression models with major attempter status as the dependent variable, it was interesting that automatic positive reinforcement was the only variable selected by the model as significant. This can be interpreted to mean that the significant association between major repeater status and automatic positive reinforcement was not explained by personality disorder nor by the overlap between automatic positive reinforcement and borderline personality disorder. The logistic regression model included a constant not described in the table. The Hosmer–Lemeshow test was non-significant ($\chi^2=.042; \text{df}=2; p=0.98$), suggesting that the model fit the data well. 

Degrees of freedom=1.