Development of a Scale to Assess Craving on Pathological Gambling

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Malmö 2005
DEFINITION OF CRAVING

*Cravings are* motivational states—physiological and psychological states—that promote the seeking of a substance and subsequent addictive behaviour of, for example, ingesting food or drugs. (Moreno, 2003).
One of the objectives of research in Pathological Gambling is to identify variables which may predict success in treatment.
Many experts in drug dependence suggest that the treatment success will depend on the capacity of the patient to confront craving during abstinence periods. (Staiger y cols., 1999; McCuster y Brown, 1995).

In the case of Pathological Gambling there are no studies about the influence of this variable either in the maintenance of the pathology or in relapses.
We therefore propose the study of craving in Pathological Gambling with the following objectives: 1) To review the concept of craving. 2) To develop a scale to evaluate craving in Pathological Gambling and 3) To examine the relationship between craving and psychopathological variables.
DIAGRAM OF THE EXPLORATORY STUDY

- Literature Review
- Analysis of craving assessment
- Development of craving scales
  - State scale
  - Trait scale
    - Ethics committee
    - Administration
- Results Analysis
AIMS

1. Main aim:
   - Evaluate craving in Pathological Gambling.

2. Specific aims:
   - Develop a scale to assess craving in pathological gamblers: “Pathological Gambling Craving scale”.
   - Observe a possible relation between craving and comorbidity in Pathological Gambling.
METHOD
Sample

- 34 patients who were seeking treatment for a gambling problem at the Pathological Gambling Unit of Mataró Hospital or the Gamblers Association (ACENCAS).

- Exclusion criteria: None
METHOD
Measures

- Social and demographic questionnaire. (Lourido-Ferreira, Saldaña, González-Ibáñez).

- Craving Scales of Pathological Gambling (Lourido-Ferreira, Saldaña, González-Ibáñez).


- Brief Symptom Inventory: BSI (Derogatis y Spencer, Spanish version TEA, 2002).

- Depression, Anxiety, Stress Scale: DASS-21 (Lovibond y Lovibond, 1995. Spanish version, Bados, Solanas y Andrés, accepted for publication).
PROCEDURE

- After analysis of craving in other addictions, the items for the evaluation of craving in Pathological Gambling Scales were made up.

- Craving can be evaluated through two perspectives: as a state (immediate desire) and as a trait (general desire)
The items were formed taking into account the following dimensions:

Categories

- **Plan:** Intentions consistent with gambling.
- **Positive reinforcement:** Anticipation of the positive consequences of gambling.
- **Negative reinforcement:** Anticipation of avoiding the negative consequences of not gambling.
- **Loss of control:** Lack of control and difficulty to resist the desire to gamble
PROCEDURE

(Scales Categories)

- **Distress:** Intrusive worrying thoughts related to gambling.

- **Emotions:** Mood states before and during gambling episodes.

- **Context:** Situations that promote and increase the probability of gambling.

- **Guilt:** Feelings of guilt and self-loathing associated with the desire to gamble.

- **Physiological State:** Desire to gamble in response to physiological signals.
PROCEDURE
(Example – State scale)

State scale:
- If I gamble now I’ll feel less worried about my problems.
- I would do anything to be able to gamble now.
- My desire to gamble now seems irresistible.
- If I gamble now the bad things in my life will seem less bad.
PROCEDURE
(Example – Trait scale)

Trait scale:

- I will gamble whenever I have the opportunity.
- I urge myself to gamble to avoid feeling tense and anxious.
- I don’t stop to think about how I can earn money to be able to gamble.
- Sometimes I find myself thinking and worrying about gambling.
PROCEDURE

STATE SCALE
- Items: 52
- Related to: Immediate desire
- Scoring: 5 degrees on a Likert scale

TRAIT SCALE
- Items: 69
- Related to: Frequency of desire
- Scoring: 6 degrees on a Likert scale
Session 1:
- Social and demographic questionnaire.
- Craving Scales on Pathological Gambling.

Session 2:
- SSS-V
- BSI
- DASS-21
ANALYSIS

STATISTICAL ANALYSIS

- Non-parametric statistics
- Comparison of means: Mann-Whitney U test
- Variables Correlation: Spearman test.
RESULTS
(Demographic data in percentage)

Age (21-69)

<table>
<thead>
<tr>
<th>Percentage</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>21-30</td>
<td>36.4%</td>
</tr>
<tr>
<td>31-40</td>
<td>18.1%</td>
</tr>
<tr>
<td>41-50</td>
<td>27.2%</td>
</tr>
<tr>
<td>51-60</td>
<td>9%</td>
</tr>
<tr>
<td>61-69</td>
<td>9%</td>
</tr>
</tbody>
</table>
RESULTS

(Demographic data in percentage)
RESULTS

(Demographic data in Percentage)
RESULTS

(Demographic data in Percentage)
RESULTS

(Demographic data in Percentage)

- **Personal Monthly Income**

<table>
<thead>
<tr>
<th>Income Range</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>450 €</td>
<td>5</td>
</tr>
<tr>
<td>450-750 €</td>
<td>20</td>
</tr>
<tr>
<td>750-1050 €</td>
<td>25</td>
</tr>
<tr>
<td>1050-1350 €</td>
<td>45</td>
</tr>
<tr>
<td>1350 €</td>
<td>10</td>
</tr>
</tbody>
</table>
RESULTS

(Demographic data in Percentage)

- Favourite game

<table>
<thead>
<tr>
<th></th>
<th>Slot mach.</th>
<th>Casino</th>
<th>Bingo</th>
<th>Lottery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage</td>
<td>80%</td>
<td>10%</td>
<td>20%</td>
<td>5%</td>
</tr>
</tbody>
</table>
RESULTS
(Significant items)

- State scale:
  Total: 10 items

- Trait scale:
  Total: 60 items
## RESULTS

State Scale - Sensation Seeking Scale form V

- **SSS-V:**

<table>
<thead>
<tr>
<th></th>
<th>BEM</th>
<th>BEX</th>
<th>DES</th>
<th>SAB</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>r</strong></td>
<td>-0.013</td>
<td>0.213</td>
<td>0.315</td>
<td>0.224</td>
</tr>
<tr>
<td><strong>P</strong></td>
<td>0.941</td>
<td>0.227</td>
<td>0.070</td>
<td>0.203</td>
</tr>
</tbody>
</table>
## RESULTS

### CORRELATIONS

**State Scale - Brief Symptom Inventory**

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>r</strong></td>
<td>0.539**</td>
<td>0.430*</td>
<td>0.454*</td>
<td>0.713*</td>
<td>0.688*</td>
<td>0.595*</td>
</tr>
<tr>
<td><strong>P</strong></td>
<td>0.001</td>
<td>0.011</td>
<td>0.007</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>r</strong></td>
<td>0.655*</td>
<td>0.269</td>
<td>0.634**</td>
<td>0.692**</td>
<td>0.685**</td>
<td>0.426*</td>
</tr>
<tr>
<td><strong>P</strong></td>
<td>0.000</td>
<td>0.124</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.012</td>
</tr>
</tbody>
</table>
**RESULTS**

**CORRELATIONS**

State Scale - Depression, Anxiety, Stress Scale

- DASS-21

<table>
<thead>
<tr>
<th></th>
<th>Depression</th>
<th>Anxiety</th>
<th>Stress</th>
</tr>
</thead>
<tbody>
<tr>
<td>r</td>
<td>0.557**</td>
<td>0.459**</td>
<td>0.706**</td>
</tr>
<tr>
<td>p</td>
<td>0.001</td>
<td>0.006</td>
<td>0.000</td>
</tr>
</tbody>
</table>

**P** values are significant at **P < 0.001**.
## RESULTS

### CORRELATIONS

**Trait Scale - Sensation Seeking Scale form V**

- **SSS-V:**

<table>
<thead>
<tr>
<th></th>
<th>BEM</th>
<th>BEX</th>
<th>DIS</th>
<th>SAB</th>
</tr>
</thead>
<tbody>
<tr>
<td>r</td>
<td>-0.047</td>
<td>0.190</td>
<td>0.438**</td>
<td>0.269</td>
</tr>
<tr>
<td>P</td>
<td>0.793</td>
<td>0.281</td>
<td>0.010</td>
<td>0.124</td>
</tr>
</tbody>
</table>
# RESULTS
## CORRELATIONS
### Trait Scale - Brief Symptom Inventory

- **BSI:**

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>r</strong></td>
<td>0.562**</td>
<td>0.447*</td>
<td>0.420*</td>
<td>0.706**</td>
<td>0.69*</td>
<td>0.597**</td>
</tr>
<tr>
<td><strong>P</strong></td>
<td>0.001</td>
<td>0.008</td>
<td>0.013</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>r</strong></td>
<td>0.705**</td>
<td>0.154</td>
<td>0.555**</td>
<td>0.649**</td>
<td>0.696**</td>
<td>0.416*</td>
</tr>
<tr>
<td><strong>P</strong></td>
<td>0.000</td>
<td>0.383</td>
<td>0.001</td>
<td>0.000</td>
<td>0.000</td>
<td>0.014</td>
</tr>
</tbody>
</table>
## RESULTS

### CORRELATIONS

**Trait Scale - Depression, Anxiety, Stress Scale**

- **DASS-21**

<table>
<thead>
<tr>
<th></th>
<th>Depression</th>
<th>Anxiety</th>
<th>Stress</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>r</strong></td>
<td>0.500**</td>
<td>0.366</td>
<td>0.564**</td>
</tr>
<tr>
<td><strong>p</strong></td>
<td>0.003</td>
<td>0.033</td>
<td>0.001</td>
</tr>
</tbody>
</table>
CONCLUSIONS

- The low scores obtained in Craving Scales shows that craving on Pathological Gambling can be different with respect other addictions (substance, food) probably of the biological components.
CONCLUSIONS

- The findings of this exploratory study shows no relation between the SSS-V and the craving scale. Only we found significative differences in the subscale Desinhibition and Craving Trait Scale.
- The scores on the BSI and DASS-21 are correlated with the scores on the Craving scale. This results corroborate the relation between craving and psychopathology.
- The results of this study should be taken with caution because of the reduced sample size.
Our suggestions for future research are:

1) A larger sample.
2) To devise a shorter, easy to administer scale through factor analysis and item correlations.
3) Analysis of the relationship between a new shorter scale and treatment variables such as relapses, discontinuation of treatment and comorbidity.