Cognitive Behavior Therapy for Online and Offline Portuguese Gamblers: A pilot Study

Pedro Hubert, Ivone Patrão, & Ricardo Maximiano
BACKGROUND

- In nowadays gambling disorder (online and offline) is a public health problem.
- There is personal and family costs (e.g. relationship and communication problems, financial, job problems) associated to psychiatric comorbidity (e.g depression, anxiety, personality disorders).
- The Cognitive Behavior Therapy (CBT) have good results in different areas related with behavior addictions (Patrão & Sampaio, 2016)
- As far as we know there is no CBT intervention studies with a Portuguese gamblers sample.
National problem gamblers prevalence showed that according to SOGS’s score, Portugal would have 0.3% probable pathological gamblers and 0.3% some problem gambling (+- 50.000 subjects) over 16 (Balsa, 2012).

Portugal follows and show very similar results to other European and “Western countries” concerning the overall increase of gambling online and offline (i.e. Problem gambling prevalence, predictors, comorbidities) (Hubert, 2015).

In Portugal 2014 gambling was responsible for 1229 millions euros of gross revenue.
BACKGROUND

- The Portuguese Gambler Support Institute (IAJ) start to develop an individual intervention protocol, based on CBT techniques, with the online and offline gamblers (Hubert, 2016)

- The design of the study is the result of a partnership between IAJ and ISPA - Institute Universitaire (Lisbon)
The aim is to evaluate the efficacy of this particular and individual CBT intervention protocol with important focus on initial therapeutic contract and establish a treatment program to the Portuguese problem gamblers.
METHOD

Participants: 71 participants (female= 10(mean age=50.3; SD=12.0)); male= 61(mean age=33.4; SD= 10.30)); Offline(n=36(mean age=42.2; SD=13.11)); Online(n=35(mean age=29.7; SD=6.06))

Instruments: The evaluation protocol - Sociodemographic and Gambling Behavior Questionnaire (Hubert, 2015); SOGS (Lesieur & Blume, 1987); Therapeutic Goals Contract (Hubert, 2010)

Procedure: The 71 participants where voluntary recruited on the IAJ and fulfill a evaluation protocol before the CBT intervention (moment 1) and at least 6 months after the intervention (moment 2) and agreed with a therapeutic contract on their first session.

All participants did at least 15 sessions (1 p/week in the first 3 months and 1 every 2 weeks on the next 3 months). In treatment, focus were made on: relationships with significant others, life and gambling history, beliefs and cognitive distortions, behavior and gambling triggers patterns, stress and emotional management, life skills development, relapse prevention, family meetings, etc. following our treatment program.
## METHOD

**Therapeutic Contract** for 6 months  

<table>
<thead>
<tr>
<th>Goals/Guidelines</th>
<th>Yes</th>
<th>No</th>
<th>Maybe</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) To prepare and meet debt repayment plan</td>
<td></td>
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<tr>
<td>2) Total abstinence of any kind of (money) gambling</td>
<td></td>
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<tr>
<td>3) Avoid people, places and situations related to gambling</td>
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<td>4) Self-exclusion from physical or virtual gambling (facilities/sites)</td>
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<td>5) Limit/control access to money/cards/checks, etc.</td>
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<td>6) Having significant others/family involved in the treatment</td>
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<td>7) Participate in individual and group psychotherapies (15 in 6 months)</td>
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<td>8) Read and do therapeutic exercises</td>
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<tr>
<td>9) Participate in meetings of self-help groups (GA’s)</td>
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<tr>
<td>10) Be contactable/reachable</td>
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</tr>
</tbody>
</table>

**Consequence chosen by patient, if relapse or stop fulfilling contract during treatment:**

Examples given: go to inpatient treatment, don't see the grandchildren, etc.

1) ____________________________________________
2) ____________________________________________
3) ____________________________________________

Signature: ____________________________  
Date: ________________
METHOD
Clinical Groups

Distribution by treatment success

- **Group 1:** Abstinents - Patients that never gambled for money since session 1
- **Group 2:** Relapsed one or more months of abstinence: patients that relapsed but are at the moment with one month or more in abstinence
- **Group 3:** Maintained relapse: patients that still gamble
- **Group 4:** Relapsed: Sum of group 2 and 3

Distribution by type of gambling

- **Group A:** Offline gamblers
- **Group B:** Online gamblers
Total sample (N=71)

A: Offline gamblers (N=36)
B: Online gamblers (N=35)

Treatment success

1: Abstinents (N=24)
2: Relapsed but now one or more months of abstinence (N=26)
3: Maintained relapsed (N=20)
4: Relapsed (N=46)

Missing (N=1)
RESULTS

- There is a statistical difference between the MOMENT 1 and MOMENT 2 on SOGS:

  - For all the sample (t=(69)=5.63; p=.000***) Mom1 (M=12.79; SD=3.06) and Mom2 (M=8.03; SD=6.47)
  - Offline sample t(35)=4.214; p=.000*** mom1 12.92; SD=3.09 and mom 2 (M=8.61; SD=5.91)
  - Online sample t(33)=3.821; p=.001*** mom 1 (M=12.65; SD=3.06) e mom2 (M=7.41; SD=7.07)
  - Abstinents t(22)=18.451; p=.000*** mom1 (M=12.91; SD=3.35) e mom 2 (M=0; SD=0)
  - Relapsed with one or more months of abstinence (t(25)=3.366; p=.002**) Mom 1 (M=13.54; SD=2.60) and Mom2 (M=11.42; SD=3.71)
  - Maintained Relapsed (t(19)=-1.680; p=.109 Mom1 (M=11.65; SD=3.15) e mom 2 (M=13.25; SD=2.90)
  - Relapsed t(45)=.827; p=.413 mom1 (M=12.71; SD=2.97) e mom 2 (M=12.22; SD=.51)
RESULTS: Treatment impact

<table>
<thead>
<tr>
<th>Comparison of SOGS scores</th>
<th>Moment 1</th>
<th>Moment 2</th>
<th>Paired sample t test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Total Sample</td>
<td>12.79</td>
<td>3.06</td>
<td>8.03</td>
</tr>
<tr>
<td>Offline</td>
<td>12.92</td>
<td>3.09</td>
<td>8.61</td>
</tr>
<tr>
<td>Online</td>
<td>12.65</td>
<td>3.06</td>
<td>7.41</td>
</tr>
<tr>
<td>Abstinents</td>
<td>12.91</td>
<td>3.35</td>
<td>0</td>
</tr>
<tr>
<td>Relapsed but one ore more months of abstinence</td>
<td>13.54</td>
<td>2.60</td>
<td>11.42</td>
</tr>
<tr>
<td>Maintained Relapse</td>
<td>11.65</td>
<td>3.15</td>
<td>13.25</td>
</tr>
<tr>
<td>Total Relapsed</td>
<td>12.71</td>
<td>2.97</td>
<td>12.22</td>
</tr>
</tbody>
</table>
RESULTS

Total Sample

Moment 1 and 2: Differences on variables of therapeutic contract

Variables of therapeutic contract with highest scores in moment 1:
- Total abstinence of any kind of (money) gambling: 97.2%
- Avoid people, places and situations related to gambling: 95.8%
- Be contactable: 94.4%

Variables of therapeutic contract with highest scores in moment 2:
- Total abstinence of any kind of (money) gambling: 90%
- Having consequence if relapse or no contract compliance during treatment: 88.6%
- Avoid people, places and situations related to gambling: 87.1%

McNemar Test: p < 0.05
RESULTS

Offline Gamblers

Moment 1 and 2: Differences on variables of therapeutic contract

- McNemar Test: p < 0.05

<table>
<thead>
<tr>
<th>Variables of therapeutic contract with highest scores in moment 1:</th>
<th>Variables of therapeutic contract with highest scores in moment 2:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Be contactable: 97.2%</td>
<td>Total abstinence of any kind of (money) gambling: 88.9%</td>
</tr>
<tr>
<td>Avoid people, places and situations related to gambling: 94.4%</td>
<td>Limit/control access to money/cards/checks, etc.: 88.9%</td>
</tr>
<tr>
<td>Total abstinence of any kind of (money) gambling: 94.4%</td>
<td>Read and do therapeutics exercises: 86.1%</td>
</tr>
</tbody>
</table>
RESULTS

Online Gamblers

Moment 1 and 2: Differences on variables of therapeutic contract

- McNemar Test: $p < 0.05$

<table>
<thead>
<tr>
<th>Variables of therapeutic contract with highest scores in moment 1:</th>
<th>Variables of therapeutic contract with highest scores in moment 2:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total abstinence of any kind of (money) gambling: <strong>100%</strong></td>
<td>Total abstinence of any kind of (money) gambling: <strong>91.2%</strong></td>
</tr>
<tr>
<td>Avoid people, places and situations related to gambling: <strong>97.1%</strong></td>
<td>Avoid people, places and situations related to gambling: <strong>91.2%</strong></td>
</tr>
<tr>
<td>To prepare and meet debt repayment plan: <strong>94.3%</strong></td>
<td>Be contactable: <strong>91.2%</strong></td>
</tr>
</tbody>
</table>

- $p = .035$
RESULTS

Abstinents

Moment 1 and 2: Differences on variables of therapeutic contract

<table>
<thead>
<tr>
<th>Variables of therapeutic contract with highest scores in moment 1:</th>
<th>Variables of therapeutic contract with highest scores in moment 2:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total abstinence of any kind of (money) gambling: <strong>100%</strong></td>
<td>Total abstinence of any kind of (money) gambling: <strong>95.8%</strong></td>
</tr>
<tr>
<td>Avoid people, places and situations related to gambling: <strong>100%</strong></td>
<td>Having significant people involved in the treatment: <strong>91.7%</strong></td>
</tr>
<tr>
<td>Participate in individual and group psychotherapies: <strong>95.8%</strong></td>
<td>Participate in individual and group psychotherapies: <strong>91.7%</strong></td>
</tr>
</tbody>
</table>
RESULTS

Relapsed one or more month of abstinence
Moment 1 and 2: Differences on variables of therapeutic contract

McNemar Test: p < 0.05

Variables of therapeutic contract with highest scores in moment 1:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Moment 1</th>
<th>Moment 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total abstinence of any kind of (money) gambling</td>
<td>97.2%</td>
<td>80.8%</td>
</tr>
<tr>
<td>Avoid people, places and situations related to gambling</td>
<td>96.2%</td>
<td>76.9%</td>
</tr>
<tr>
<td>To prepare and meet debt repayment plan</td>
<td>96.2%</td>
<td></td>
</tr>
</tbody>
</table>

Variables of therapeutic contract with highest scores in moment 2:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Moment 1</th>
<th>Moment 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total abstinence of any kind of (money) gambling</td>
<td></td>
<td>80.8%</td>
</tr>
<tr>
<td>Consequences if relapse</td>
<td></td>
<td>80.8%</td>
</tr>
<tr>
<td>Avoid people, places and situations related to gambling</td>
<td></td>
<td>76.9%</td>
</tr>
</tbody>
</table>
RESULTS

Maintained Relapse

Moment 1 and 2: Differences on variables of therapeutic contract:

- Variables of therapeutic contract with highest scores in moment 1:
  - To prepare and meet debt repayment plan: 100%
  - Total abstinence of any kind of (money) gambling: 95%
  - Be contactable: 95%

- Variables of therapeutic contract with highest scores in moment 2:
  - To prepare and meet debt repayment plan: 100%
  - Avoid people, places and situations related to gambling: 100%
  - Limit/control access to money/cards/checks, etc.: 100%
  - Having consequence if relapse or no contract compliance during treatment: 100%

- McNemar Test: $p < 0.05$

- Moment 1: 100%
  - Limit access to $ / Visas
  - Individual psychotherapies
  - Therapeutic works (CBT)
  - Consequence if relapse

- Moment 2: 100%
  - Avoid people / places / st
  - Limit access to $ / Visas
  - Individual psychotherapies
  - Therapeutic works (CBT)
  - Consequence if relapse
RESULTS

Relapsed (relapsed but now more than one month abstinent + relapsed maintained)

Moment 1 and 2: Differences on variables of therapeutic contract

Variables of therapeutic contract with highest scores in moment 1:
- To prepare and meet debt repayment plan: 97.8%
- Total abstinence of any kind of (money) gambling: 95.7%
- Be contactable: 93.5%

Variables of therapeutic contract with highest scores in moment 2:
- Having consequence if relapse or no contract compliance during treatment: 89.1%
- Total abstinence of any kind of (money) gambling: 87%
- Avoid people, places and situations related to gambling: 87%

McNemar Test: p <0.05
Gambling problem behavior/intensity assessed by the patients at the end of treatment has always diminished except for the ones that kept gambling.

Compared to offline patients, online patients had similar appreciations on guidelines for treatment at the beginning BUT differently at post-treatment possibly due to age and gambling type. This must considered in future treatment designs.

The results of Therapeutical Contract variables/goals are more leveled (between themselves) at treatment’s end, showing that the set of these guidelines may have acquired a more homogeneous, integrated, balanced perception on global importance of the treatment.

This may contribute to increased adhesion to treatment and a better prognosis.
The overall most important changes, in all groups, between beginning and end of treatment are related to:

1. The participation in meetings of self-help groups (GA’s) (more at moment 2) (5X)
2. Being contactable (less at moment 2) (4X)
3. The compliance with the debt repayment plan (less at moment 2) (3X)
4. To control the access of money, cards and checks (more at moment 2) (1X)
5. The participation in individual psychotherapies (15 in 6 months) (less at moment 2) (1X)

“(… ) need to adapt the therapy for those individuals at risk, placing greater emphasis on motivating patients(…)” Jiménez-Murcia (2015).
Patients that are in abstinence gave higher value to the goals/guidelines in early treatment and less at its end (but high); while Relapsed groups gave less importance to these guidelines in early treatment and extremely strong value at the end of treatment.

Results show that, if we consider all abstinents (n=50) more than 71% managed to stop gambling. Abstinents since beginning (n=24) = (34,%) + those relapsed but are now in abstinence (n=26) = (37%).

This therapeutic contract has specific goals/guidelines and different levels of impact. These guidelines are characterized by being “easily” followed in patients daily lives, having direct impact in patients, including significant others in the process, enabling treatment success.
There was no control group.

These were self filled questionnaires answered by phone, email or at the clinic with some member of the staff.

More focus on patients with prescribed (or not) medication, should have been done.

In group “relapsed but now with one or more months of abstinence” (=26), we choose subjectively that one month could reveal already a “commitment” to treatment but we could not find any scientific literature on this subject. Doubts may show, where to include this group: abstinence or relapsed.
Suggestions

- More research in the field of the “patients that relapsed but are now in abstinence” should be done in order to better understand the impact of treatment variables in: causes to relapse while in treatment, gained motivation, changing factors, motivational interview. etc..

- More research concerning guidelines of Therapeutical Contract that may be predictors of treatment success should be done.

- Research on: How non motivated patients may become attracted to treatment following TC guidelines and treatment goals (dropouts).
References


- Lopes, H. (s.d.). Avaliação e calibração de três instrumentos de medição de dependência de jogo na população adulta portuguesa por via CATI: SOGS, DSM-IV e NORSC. Estudo de apoio à emissão de Parecer Técnico entregue pela República Portuguesa para o Tribunal das Comunidades Europeias em 2008. UCP-CESOP Universidade Católica Portuguesa (Manuscrito não publicado).


THANK YOU

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