Impact of CBT based treatment and therapeutical contract on problem gambler treatment

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BACKGROUND

• Gambling disorder (both online and offline) is a generalised public health problem with scarce treatment efficacy studies.

• It incurs personal and family costs (e.g. problems with relationships, communication, finances and work) associated with psychiatric comorbidity (e.g. depression, anxiety, personality disorders) whether in at-risk or disordered gamblers (DG).

• Cognitive Behavior Therapy (CBT) shows good results in various areas related to behavior addictions (Patrão & Sampaio, 2016).

• As far as we know, there are no CBT intervention studies using Portuguese gamblers as a sample except for the previous one done by IAJ with a sample of 70 problem gamblers.
Portugal: National prevalence by SICAD using SOGS

**2012:**
- Disordered gambling = 0.3% = (+- 24,000 ?)
- At-risk gambling = 0.3% = (+- 24,000 ?) Total = +- 48,000

**2017**
- Disordered gambling = 0.6% = (+- 48,000 ?)
- At-risk gambling = 1.2% = (+- 96,000 ?) Total = +- 144,000

- Portugal follows other European and “Western countries” in that it shows very similar results concerning the overall increase of gambling, both online and offline (i.e. prevalence of problem gambling, predictors, comorbidities) (Hubert, 2015).

- Covid pandemics contributed to the rise of persons gambling and to the rise of PG but treatment possibilities/facilities (on/offline) didn’t augment in the same proportion. One more reason for rising treatment efficacy levels.

- We have little evidence of what works in Portugal.
BACKGROUND

• The Portuguese Gambler Support Institute (IAJ) is a private and independent organization centered on problem gambling treatment, helplines, training, supervision and research.

• The IAJ started to develop an individual intervention protocol, based on CBT techniques, that has been applied to online and offline gamblers since 2006 (Hubert, 2016).

• This study is ongoing, produced voluntarily by IAJ psychologists (4) and Nottingham Trent University (1) without any funding and we expect to have final data by the end of 2022.
STUDY AIM

This study aims to test the efficacy of a:

- **(CBT)** Cognitive Behavioral Therapy combined with
- **(TC)** an initial therapeutical contract with variables like; gambling abstinence, self-exclusion, limited access to money, psychotherapy sessions for problem gambler and significant others, Gamblers Anonymous attendance, therapeutical exercises, pre-determined consequences if relapse, among others
- **(PG)** in a Portuguese outpatient treatment center for Problem Gamblers and trying to better establish a
- **(RPP)** Relapse Prevention Program
METHOD

Procedure: The 24 participants were voluntarily recruited by the IAJ and fulfill an:

A) evaluation protocol/questionnaire before the CBT/TC intervention right after the first session (moment 1) and

B) the second evaluation after the intervention (12 to 20 sessions - moment 2).

This is agreed and embodied in a Therapeutic Contract during their first session.

➢ Exclusion factors: Having: less than 18, severe psychiatric disorder, done previous treatments in IAJ, having less than 12, or more than 20, sessions.
METHOD

During treatment, the central focus was on the following:

a) Therapeutic Contract + for client and family
b) CBT,

- Session 1-3: strategies regarding relationships with significant others, life and gambling history, beliefs and cognitive distortions, behavior and patterns of gambling, triggers, coping with urges,

- Session 4-7: life skills development like: assertiveness, decision making, management of stress and emotions communication, building support network, pre-symptoms of relapse,

- Session 8-12: patterns of behaviors, feelings, values and general positive vs negative beliefs, awareness, adopt new perspectives and attitudes,

- 12 and more: abstinence maintenance through working life skills, relapse prevention, goals, relaxation techniques, family sessions, coping with personality traits,
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) Perform and comply with a debt repayment plan</td>
<td></td>
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<tr>
<td>2) Total abstinence from any kind of (money) gambling</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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<tr>
<td>5) Limit/control access to money/cards/checks, etc.</td>
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<tr>
<td>6) Having significant others/family involved in the treatment</td>
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<tr>
<td>7) Participate in individual and group psychotherapy sessions</td>
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<td>8) Read and write suggested therapeutic exercises</td>
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<td>9) Participate in meetings of self-help groups (Gamblers Anonymous groups)</td>
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<td>10) Exercise regularly (at least 3 x week)</td>
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</table>

Consequence chosen by patient, if relapse or failure to fulfill contract terms during treatment:

Examples given: go to inpatient treatment, do not see the grandchildren, nor having the mobile, etc.

1)______________________________________
2)______________________________________
3)______________________________________

Signature:____________________

Date:______________
Sample Characterization

| Participants – 24 | Age: 35  
SD – 14,62  
Min -19; Max – 70; |

<table>
<thead>
<tr>
<th>Descriptive statistics</th>
<th>Frquency</th>
<th>Percent%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender Male</td>
<td>21</td>
<td>87,5%</td>
</tr>
<tr>
<td>Female</td>
<td>3</td>
<td>12,5%</td>
</tr>
<tr>
<td>Employed</td>
<td>15</td>
<td>62,5%</td>
</tr>
<tr>
<td>Unemployed</td>
<td>9</td>
<td>37,5%</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>less than 10-12 years (no license)*</td>
<td>14</td>
<td>58,4%</td>
</tr>
<tr>
<td>more than 10-12 years (license or more)*</td>
<td>6</td>
<td>25%</td>
</tr>
</tbody>
</table>

* 4 missing values
Sample Characterization

Which devices do you mainly use for online gambling?

- Home Computer: 45.8%
- Smartphone: 62.5%
- Personal Laptop: 33.3%
- Work Computer: 12.5%
- Tablet: 8.3%
- Smart TV: 4.2%
- Non Applicable - I never gambled online: 4.2%
- College Computer: 0%
- Public Computer: 0%
- Interactive TV: 0%
- Console: 4.2%
Sample Characterization

Which of these games did you engage in the most during the past year?

- SOCIAL NETWORKS' GAMES (FARMVILLE; MAFIAWARS; ETC.): 1.6%
- LOTTERY: 4.2%
- VIDEOGAMES (RPG; FPS, MOBA, MMORPG, ETC.): 8.3%
- POKER (TOURNAMENTS, ETC.): 20.8%
- CARDS' GAMES (BLACKJACK; BACCARAT, ETC.): 25.0%
- EUROMILLIONS/LOTTO: 25.0%
- SCRATCHCARDS: 45.8%
- SLOT MACHINES: 62.5%
- SPORTS BETS: 62.5%
Which of the following people have gambling related problems? %

- **FRIENDS**: 79.2% Yes, 20.8% No
- **CHILDREN**: 100.0% Yes
- **SPOUSE**: 95.8% Yes, 4.2% No
- **GRANDPARENTS**: 100.0% Yes
- **SIBLINGS**: 91.7% Yes, 8.3% No
- **MOTHER**: 91.7% Yes, 8.3% No
- **FATHER**: 95.8% Yes, 4.2% No
METHOD

Instruments:

1- The evaluation protocol: Sociodemographic and Gambling Behavior Questionnaire (Hubert, 2015);
2- Therapeutic Goals Contract (Hubert, 2010)

3) SOGS (Lesieur & Blume, 1987) + DSM-5 (APA, 2013) for disorder gambling

4) BSI The Brief Symptom Inventory, short version of the SCL-R-90 (Derogatis, 1977) covering wide diversity of symptoms,

5) BIS – The Barratt Impulsiveness Scale (BIS-11; Patton et al., 1995) designed to measure impulsivity,

6) WHOQOL-BREF - a shorter version of the WHOQOL-100 developed by the World Health Organisation covering four domains for quality of life: Physical health, Psychological, Social relationships and Environment,

7) EPQ-R short scale- The Eysenck Personality Questionnaire- Revised Short Scale is a 48 item-self-report questionnaire. The Portuguese version (Almiro, P.A. & Simões, M. R., 2013) is composed by 70 items and contains a fourth dimension, measuring Lie/Social Desirability scale (L), and

8) EDS 20 (Simões, Almiro & Sousa, 2014) is an unidimensional social desirability scale, with 20 items.
Results: Abstinents vs relapsed

- Average number of psychotherapy sessions = 16

- Total abstinence from gambling = 19 (74%)

- Relapsed = 5 (26%) and kept coming to sessions...

- Good results but nevertheless the sample is still too small to establish conclusions and we know how volatile abstinence vs relapse can be.
During the treatment, how do you rate your commitment to the previous suggestions of TC in %?

- **a) Perform and comply with a debt repayment plan**: 20% 9,1 4,3 4,5 4,5 8,7 22,7 4,5 13,6
- **b) Total abstinence from any kind of (money) gambling**: 13,6 9,1 9,1 9,1 22,7 9,1 27,3
- **c) Avoid people, places and situations related to gambling.**: 4,3 8,7 4,3 8,7 17,4 21,7 34,8
- **d) Self-exclusion from physical/virtual gambling (facilities/sites)**: 10% 5 5 10% 10% 10% 35
- **e) Limit/control access to money/cards/checks, etc.**: 8,7 8,7 17,4 13% 4,3 8,7 39,1
- **f) Having significant others/family involved in the treatment**: 9,5 14,3 33,3 42,9
- **g) Participate in individual and group psychotherapy sessions**: 4,3 4,3 8,7 4,3 13 17,4 47,8
- **h) Read and write suggested therapeutic exercises**: 9,1 4,5 4,5 9,1 22,7 50
- **i) Participate in self-help meetings groups Gamblers Anonymous**: 4,3 30,4 4,3 52,2
- **j) Exercise regularly (at least 3 x week)**: 4,3 8,7 8,7 13 65,2
- **k) Having pre-established consequences if relapse**: 10% 5% 5% 10% 70

**Likert scale:** 1 = not committed 7 = totally committed
What was more beneficial to your treatment?

- **a) Limit/control access to money/cards/checks, etc.**
- **b) Self-exclusion from physical/virtual gambling (facilities/sites)**
- **c) Participate in individual psychotherapy sessions**
- **d) Participate in group psychotherapy sessions**
- **e) Read and write suggested therapeutic exercises**
- **f) Good relationship with psychologist**
- **g) Being employed/having an occupation**
- **h) Having significant others/family involved in the treatment**
- **j) Perform and comply with a debt repayment plan**

Likert scale: 1 = not committed 7 = totally committed
### Therapeutical Contract (Moment 1) correlation treatment impact (Moment 2)

<table>
<thead>
<tr>
<th>Therapeutical Contract Moment 1</th>
<th>Correlation</th>
<th>Impact of treatment Moment 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agreed to total abstinence</td>
<td>with Problems with alcohol</td>
<td>p=.040*;R=.467</td>
</tr>
<tr>
<td></td>
<td>with Drugs</td>
<td>p=.000***;R=.792</td>
</tr>
<tr>
<td></td>
<td>with Addictive behaviours</td>
<td>P=.000***;R=.792</td>
</tr>
<tr>
<td></td>
<td>with Depression</td>
<td>p=.026*;R=.523</td>
</tr>
<tr>
<td></td>
<td>with Peer pressure to relapse</td>
<td>p=.005**;R=.619</td>
</tr>
<tr>
<td></td>
<td>with Legislation that facilitates gambling</td>
<td>P=.034*;R=.488</td>
</tr>
<tr>
<td></td>
<td>with Culture that facilitates playing</td>
<td>p=.048*;R=.459</td>
</tr>
<tr>
<td></td>
<td>with Willingness to play Euro Millions</td>
<td>p=.000***;R=1</td>
</tr>
<tr>
<td></td>
<td>with Willingness to play scratchcards</td>
<td>p=.000***;R=1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Agreed to join Gamblers Anonymous</th>
<th>with Difficulties with parents in treatment</th>
<th>p=.011*;R=.602</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>with Participate in group therapy</td>
<td>P=.041*;R=.500</td>
</tr>
</tbody>
</table>
Avoided people, places and situations

- with Difficulties in the profession $p=0.014^*; R=-0.614$
- with Difficulties with tobacco $p=0.043^*; R=0.0446$
- with Need for medication $p=0.012^*; R=-0.551$
- with Positive to have done physical exercise $p=0.021^*; R=0.448$
- with Having practiced hobbies $p=0.007^{**}; R=0.555$
- with Pressure with games like slots $p=0.034^*; R=-0.634$
- with Pressure with games like poker $p=0.024^*; R=-0.775$
- with Pressure with games like roulette $p=0.024^*; R=-0.775$

have been in abstinence

- with Frequency of Anonymous Gamblers $P=0.019^*; R=0.519$

Had a relapse

- with Difficulties in facing others $P=0.000^{***}; R=0.979$
- with Feel frustration $p=0.041^*; R=0.728$
- with Willingness to play EuroMillions $p=0.000^{***}; R=1$
- with Willingness to play scratch cards $p=0.000^{***}; R=1$
<table>
<thead>
<tr>
<th>Therapeutic Contract (Moment 2) correlated with treatment impact (Moment 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Have limited access to cash/money</strong></td>
</tr>
<tr>
<td>with</td>
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<tr>
<td>with</td>
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<tr>
<td>with</td>
</tr>
<tr>
<td><strong>Having had significant others in treatment</strong></td>
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<td>with</td>
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<td>with</td>
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<td>with</td>
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<tr>
<td>with</td>
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<tr>
<td><strong>Attended Gamblers Anonymous</strong></td>
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<tr>
<td>with</td>
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<td>with</td>
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<td>with</td>
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</tbody>
</table>
World Health Organization- Quality of Life Assessment

The psychological domain refers to: self-image, negative thoughts, positive attitudes, self-esteem, mentality, learning ability, memory concentration, religion and the mental status.

<table>
<thead>
<tr>
<th>WHOQOL-BREF</th>
<th>Variable - Normative Value</th>
<th>Moment 1</th>
<th>Moment 2</th>
<th>Sig. P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of life assessment (WHOQOL)</td>
<td>Psychological domain- M=72,38; DP=13,5</td>
<td>M=19,33; DP=4,29</td>
<td>M=21 DP=4,23</td>
<td>0,021*</td>
</tr>
</tbody>
</table>
### BSI - Brief Symptom Inventory, SCL-R-90 short version

<table>
<thead>
<tr>
<th>Variable - Normative Value</th>
<th>Moment 1</th>
<th>Moment 2</th>
<th>Sig. P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpersonal Sensitivity</td>
<td>M=1.37; DP=0.85</td>
<td>M=0.98; DP=0.83</td>
<td>0.017*</td>
</tr>
<tr>
<td>Depression</td>
<td>M=1.78; DP=0.96</td>
<td>M=0.95; DP=1</td>
<td>0.001**</td>
</tr>
<tr>
<td>Anxiety</td>
<td>M=1.25; DP=0.83</td>
<td>M=0.76; DP=0.89</td>
<td>0.024*</td>
</tr>
<tr>
<td>Psychoticism</td>
<td>M=1.33; DP=0.92</td>
<td>M=0.85; DP=1.06</td>
<td>0.032*</td>
</tr>
<tr>
<td>Somatization</td>
<td>M=0.49; DP=0.62</td>
<td>M=0.45; DP=0.71</td>
<td>0.737</td>
</tr>
<tr>
<td>Hostility</td>
<td>M=0.49; DP=0.62</td>
<td>M=0.80; DP=0.92</td>
<td>0.18</td>
</tr>
</tbody>
</table>

- **Interpersonal Sensitivity** - Feelings of personal inadequacy and inferiority in comparison with others.
- **Depression** - Symptoms of dysphoric mood and affect, lack of motivation and loss of interest in life.
- **Anxiety** - Nervousness and tension as well as panic attacks and feelings of terror.
- **Psychoticism** - Withdrawn, isolated, schizoid lifestyle as well as first rank symptoms of schizophrenia such as thought control.
- **Somatization** - Distress arising from perceptions of bodily dysfunction
- **Hostility** - Thoughts, feelings or actions that are characteristic of anger
Discussion and Therapeutical Contract

• Sample is too small at this moment to be able to compare abstinent and relapse group although we can figure some future directions as...

• CT (mom1) measures like; total abstinence, self exclusion, avoiding “dangerous” situations, doing therapy (and others) are variables/concepts that are accepted by almost all patients, (breaking denial and preparing motivational interview)

.....When clients and significant others, know what to do (awareness).... the focus becomes on how to manage/proceed to achieve it on their personal context, and it helps to the “involvement/motivation” shown by the reported adhesion and positive impact to the different variables of CT in moment 2, with CBT approach help
Discussion and Correlations

Correlations show significant therapeutical directions to better explore as sample will get larger:

**Exemples:**

a) Agreement to total abstinence related to severity of gambling, other comorbidities and cravings

b) Those that avoided most people places and situations felt more cravings, difficulties in their profession, with tobacco and felt need for medication,

c) Those who had significant others participation in treatment practiced more hobbies, followed more rules, solved financial problems and maintained good relationship with psychologist.
CBT+ CT treatment seems to be effective as anxiety and depression (that were 16.7% and 20.8% of the sample respectively and it is known as PG’s comorbidities that often lead to relapse) had significant improvement, as well as the interpersonal sensitivity scale that also often refers to the guilt and shame that problem gamblers feel, or also withdrawn or feeling isolated in the psychoticism scale that diminished.

The increase in life quality (the best relapse prevention...) seems also to be confirmed by the psychological domain of the WHOQOL-BREF that refers to an improvement in self-esteem, self-image and positive attitude of the sample subjects, as well as diminution concerning negative thoughts.
Conclusion

• From this data, it seems that cognitive behavioral strategies, and the agreement of a therapeutic contract are effective strategies that need to be incorporated in the treatment of problematic gambling, however, there are some aspects of the contract that seems more effective than others, and that more people seem to adhere better.

• The findings suggests that this intervention was effective in promoting psychological adjustment, and in improving quality of life.

• The findings of this study stress the importance of conducting further research on the efficacy of interventions in the treatment of problematic gambling among adults.

• Although these studies can be costly and time consuming, they generate very relevant insights that could be very useful in informing the design of future treatments
More focus on the reasons for relapses.

More research concerning the Therapeutic Contract guidelines that may be predictors of treatment success should be conducted.

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

More longitudinal research with different evaluation’s moments 15-20 sessions, 35-40, more than 60 or 6 months 12 months, 24 months.
LIMITATIONS

• These were self report questionnaires

• More focus should have been given to patients with prescribed (or unprescribed) medication.

• Reduced N in the sample
Thank You, for your attention!

Contacts

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