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The efficacy of cognitive-behavioral intervention in pathological gambling treatment

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Abstract

Pathological gambling is a mental disorder characterized by a continuous or periodic loss of control over gambling, a preoccupation with gambling and with obtaining money which to gamble, irrational thinking and a continuation of the behavior despite adverse consequences. It can negatively influence the gambler's physical and mental health. Early identification and appropriate treatment can limit the long-term adverse consequences and improve outcome.

The purpose of the study is to evaluate a new model of cognitive-behavioral therapy for pathological gambling and to see if it is effective even after a three month follow-up.

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1. Introduction

Pathological gambling is currently the only behavioral addiction included in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), and is classified as an "Impulse Control Disorder," where the "essential feature is the failure to resist an impulse, drive or temptation to perform an act that is harmful to the person or to

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others” (DSM-IV, American Psychiatric Association, 2000). The American Psychiatric Association defines pathological gambling as having five or more of the following symptoms:

- Committing crimes to get money to gamble;
- Feeling restless or irritable when trying to cut back or quit gambling;
- Gambling to escape problems or feelings of sadness or anxiety;
- Gambling larger amounts of money to try to make back past losses;
- Losing a job, relationship, education, or career opportunity due to gambling
- Lying about the amount of time or money spent gambling;
- Making many unsuccessful attempts to cut back or quit gambling;
- Needing to borrow money due to gambling losses;
- Needing to gamble larger amounts of money in order to feel excitement;
- Spending a lot of time thinking about gambling, such as remembering past experiences or ways to get more money with which to gamble.

Pathological gambling can coexist with substance abuse, mental illness and other addictive disorders, although these relationships and the pathogenesis are incompletely understood.

It is proposed that pathological gambling will be renamed Gambling Disorder, and moved to a new category, Addiction and Related Disorders, for the next edition, DSM V. As problem gambling has been increasingly recognized, treatment of problem gambling has fallen within the realm of addiction services and it includes: cognitive-behavioral therapy, self-help support groups, such as Gamblers Anonymous and medications: antidepressants and opioid antagonists (naltrexone).

Cognitive behavioral therapy (CBT) is the primary psycho-therapeutic modality for the treatment of disordered gambling; currently, it also is the most broadly utilized primary counseling modality that is supported by randomized controlled clinical trials demonstrating efficacy and improved clinical outcomes (Chambless & Ollendick, 2001).

A recent review (Cowlshaw, Merkouris, Dowling, Anderson, Jackson & Thomas, 2012) indicated benefits of CBT in the period immediately following treatment.

The basic principle of cognitive behavioral therapy for pathological gambling is to identify negative thoughts, cognitive distortions and erroneous perceptions about gambling that are responsible for continued gambling (Tavares, Zilberman & el-Guebaly, 2003).

Cognitive behavioral therapy for pathological gambling attempts to alter gamblers’ cognitions and behaviors and it involves identifying high-risk situations that lead to urges to gamble.

Research is also showing that treatment and early intervention works and that those with pathological gambling no longer have to rely solely on the passage of time to improve.

We developed a cognitive-behavioral approach with the following key tasks (Rizeanu, 2012):

- assessment and formulation;
- psycho-education;
- cognitive restructuring;
- problem-solving training;
- assertiveness skills training;
- relapse prevention.

The specific intent of the treatment is to minimize the harmful consequences of gambling, reduce the risks associated with gambling, cope effectively with negative mental states and satisfy need for entertainment.

2. Method

This study aims to evaluate the efficacy of a new model of cognitive-behavioral therapy for pathological gambling.

2.1. Hypothesis

We expect that the application of the proposed CBT model will lead to a reduction of gambling addiction symptoms, along with a reduction of depression and anxiety levels among the participants.

2.2. Participants

The participants in this study were 119 pathological gamblers, ranging in age from 17 to 60, with a mean age of 29, 86 years, who joined the Responsible Gambling Project in Romania, seeking treatment for problem gambling.

2.3. Measures and procedure

We used clinical interviews with the subjects and their family, the South Oaks Gambling Screen (SOGS), the Beck Depression Inventory (BDI) and the Hamilton Anxiety Scale (HAS) before applying the therapy program, after the program and at a three month follow-up.

The South Oaks Gambling Screen – SOGS (Lesieur & Blume, 1987) has been widely used in numerous studies and it includes 16 items related to the practice of gambling. A score of 5 or more points is considered specific for a potentially pathological gambler.

Beck Depression Inventory (BDI) is a 21-question multiple-choice self-report inventory, one of the most widely used instruments for measuring the severity of depression. Its development marked a shift among health care professionals, who had until then viewed depression from a psychodynamic perspective, instead of it being rooted in the patient's own thoughts.

The Hamilton Anxiety Scale (HAS) is a widely used interview scale that measures the severity of a patient's anxiety, based on 14 parameters, including anxious mood, tension, fears, insomnia, somatic complaints and behavior at the interview.

In order to interpret the results, we used the comparative analysis approach at three distinct stages in the process: before applying the therapy program, at the end of the therapy program and three months after the end of the program, using descriptive indicators such as: mean, median, mode and standard deviation, skewness and kurtosis. We also carried out a significance analysis using the student's T- test, as well as criterion prediction using SPSS 19.0.

3. Results

The clinical interview revealed that out of 119 participants, 7 participants were female and 112 were male; 74 persons had completed high-school education, while 45 were in the process of completing or had already completed a university-level degree. Moreover, 95 participants stated that they were married or in a consensual relationship at the time of the treatment, while 24 stated they were single; 70.58% of the total number of participants reported an additional form of addiction (not counting gambling): around 50% participants engaged in alcohol consumption, 41.2% smoked, and 16.8% of them reported occasional drug use.

The initial application of the South Oaks Gambling Screen (SOGS) showed a mean value of 10.55 points and a median value of 10 points. The lowest score was 7 points, while the highest score was 14 points, meaning that both values were within the pathological gambling range.

The initial application of the Beck Depression Inventory showed a mean value of $mg1=19,28$, which indicates moderate depression; the scores ranged from 6 points for the lowest score (normal range) to 43 points for the highest score (indicating severe depression).

The subjects obtained a mean value of $mg1=15,08$ for the anxiety score, which is at the lower end of the moderate anxiety range; the scores ranged from 2 points for the minimum score (no anxiety) to 39 points for the maximum score (severe anxiety), with a standard deviation of 10.411.

During the treatment, out of the total number of 119 subjects who joined the Responsible Gambling Project, 56 subjects dropped out, while 63 subjects completed the whole program. No significant group differences were

noticed between the subjects who left the program and those who completed it, in what concerns the distribution for each of the subject variables.

The results showed that, after applying the proposed therapy model, 74.6% of the participants no longer fulfilled the diagnostic criteria for pathological gambling, being reclassified as problem gambling. The results were consistent at the 3-month follow-up. After completing the counseling program, the subjects obtained a mean value of $mg1=3,71$ on the SOGS scale, which is around 56% lower than the pre-intervention score.

Furthermore, after the proposed intervention, the subjects obtained a mean value of $mg1= 10,71$ on the depression scale, which is around 30% lower than the pre-intervention value.

The participants obtained a mean value of 8.79 on the anxiety scale, which represents a 44% drop in the mean value between the pre-intervention and the post-intervention assessment tests.

At the three-month follow-up after the end of the counseling program, the SOGS revealed a mean value of $mg1=3.82$, which is around 3% higher than the value recorded at the end of the intervention. The scores ranged from 2 points for the minimum score (problem gambling) to 5 points maximum score (pathological gambling), with a standard deviation of 0.819. The frequency table shows that the distribution of scores is 82.14% within the range of problem gambling, and 17.86% within the range of pathological gambling.

Moreover, also at the 3-month follow-up, the mean value of the depression score was $mg1= 10,79$, which is an increase of only 0.07% compared to the post-intervention evaluation score, while the mean value of the anxiety score was $mg1=10,21$, which indicates a 16% increase since the end of the program.

4. Discussion and conclusions

Gambling is a common, socially acceptable and legale leisure activity that involves wagering something of value (usually money) on a game or event whose outcome is unpredictable and determined by chance (Ladouceur, Sylvain, Boutin & Doucet, 2002).

At the present time, a number of different treatment modalities have been applied to pathological gamblers, but not standardized practice guidelines have been developed (Fong, 2005).

The present study investigated the efficacy of a cognitive-behavioral model of therapy for pathological gambling introduced in Romania.

Psychological intervention techniques in the case of pathological gambling are primarily concerned with reducing risk behaviors during gambling and indirectly with increasing the subject's quality of life, as the subject progresses towards working out the problems that led to the onset of the addiction (Walker et al., 2006).

Cognitive-behavioral therapy argues that irrational thoughts about a person's ability to control the game and to predict earnings represent the key factors in the onset and continuation of this pathology.

The results of this study show that after the application of the therapy program, 74.6% of the subjects who completed the program no longer fulfilled the diagnostic criteria for pathological gambling and were reclassified as problem gamblers.

Furthermore, the therapy program led to significant gains by lowering the depression score by 30% and the anxiety score by 44% in all the participants.

The proposed model of cognitive-behavioral therapy was effective in the treatment for pathological gambling and those with pathological gambling no longer have to rely solely on passage of time to improve.

Posttest results indicated highly significant changes in the treatment group on all outcome measures and analysis of data from 3 month follow-up revealed maintenance of therapeutic gains.

The limitations of this study concern the use of only one subject group: no control group was used, given the subject selection method, which included all gamblers who requested psychological counseling for pathological gambling within the Responsible Gambling Project and it would have been unethical to place them on a waiting list. It is recommended that the research model should be replicated using a larger group in order to verify the correlation with the results of this study.

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