

The gambling disorder: family styles and cognitive dimensions

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Abstract. – OBJECTIVE: In this study we present data from a research carried out on a population of people with gambling disorder (GD).

SUBJECTS AND METHODS: This research investigated the representation of family styles for subjects with gambling disorder, using the Family Adaptability and Cohesion Evaluation Scale (FACES-IV), their cognitive distortions through Gambling Related Cognitions Scale (GRCS-I), and the relation between these two dimensions.

RESULTS: People with GD represent families with emotional detachment, while in the area of management of relational rules and roles, they reveal a perception of disorganization. Concerning their cognitive bias, GD people show the illusion of being able to control and predict the winnings and the perception of being unable to quit playing.

CONCLUSIONS: Overall, these data provide specific directions for both the prevention and the therapeutic treatment of GD, highlighting the importance of a family therapeutic approach for the prevention of cognitive distortions.

Key Words:

Gambling disorder, Family valuation, FACES-IV, Cognitive bias, GRCS-I, Family therapy.

Introduction

The American Psychological Association (APA) defines gambling as a problematic, persistent, and recurrent behavior, which causes difficulties and distress that are clinically significant. In 1994 the APA officially recognized gambling as a pathology (i.e., GD), including it in the DSM-IV¹ as an impulse control disorders not elsewhere classified. More recently, the DSM-V² classifies GD among substance-relat-

ed and addictive disorders. Numerous studies, especially in neurobiology field, showed similarities between GD and the substance addiction disorder. Due to the increasing incidence of the GD phenomenon in Italy, this result is difficult to be estimated. Data provided by the Ministry of Health³ bring out a worrying and onerous framework. On an estimated population of about 60 million people, the estimate of problematic gamblers varies from 1.3% to 3.8%, while the estimate of pathological gamblers varies from 0.5% to 2.2%. In 2011 the Department of Drug Control Policy examined a population of 34.328 middle school students. The survey highlighted that 21.4% of males and 9.4% of females presented some problems concerning game behaviors, at least once in life. The results show that a sample of 4544 subjects showed a higher prevalence of male subjects compared to female subjects (82% vs. 18%).

The age range of people with a GD that more frequently require a recovery treatment, were between 35 to 54 years in males and 45 to 64 in women, respectively. One of the specific aspects of GD's people is the presence of erroneous cognitions related to the game^{4,5}. Toneatto et al⁶ distinguish three different categories: the first category (i.e., illusory control) is the belief to be able to control the results of the game using skills, abilities or personal knowledge; the second category consists of the belief to be able to predict the results of the game; the last category (i.e., errors of interpretation), is the belief by which the winnings are attributed to own abilities and losses to external negative influences. Further dimensions in the GD analysis are represented by the motivations to the game that lead gamblers to continue

playing despite the losses. Studies^{4,5} have shown that patients with GD showed important cognitive distortions in the development, maintenance, and difficulty to abandon this dependence. At the same time, the experiences within troubled families appeared an important factor in the genesis of this disorder^{7,8}.

Therefore, the aim of the present study was to investigate how people who have GD think and represent their family and which are their specific cognitive distortions. Since the literature showed similarities between the GD and substance abuse disorder⁹, in this research we assumed that people with GD would present (1) a family representation characterized by unbalanced family functioning, low levels of satisfaction and effective communication, (2) high levels of cognitive distortions, and (3) a relation between the own family representation and the specific cognitive distortions.

Subjects and Methods

The sample consisted of a total of 41 men aged from 18-70 years (mean age = 44 ± 15 years). Participants to this research were people in a recovery treatment in the Italian Public and Private Health Services. The research sample met the diagnostic criteria listed in the DSM-V. Most of the sample enrolled in this research reported to have a high school education (37%) and a middle school education (34%). On the side of working dimension, most of the sample had a job (49%), 22% of participants were unemployed and the 7% of them were retired. Considering the sphere of family relations, 34% of the sample were conjugated once in marriage, 29% had never been married, 20% were separated/divorced, 10% were married a second time, 5% were in cohabitation and the 2% of them were widowers. Most of the subjects declared to live with partner and sons (34%), 22% lived with parents, 20% were living alone, 15% lived just with the partner.

Turning the attention on the side of clinical data, 54% of the sample used to play live (for example, cards and betting), 27% used to play live and online and 19% used to play only online through smartphones and computers. The average onset of GD was at 11 years old ($SD = \pm 34$), while the average time the sample declared to have been in treatment for GD was 7 months ($SD = \pm 12$). Lastly, 65.9% of the sample declared they have no other forms of addiction, 17.1% of participants

affirmed they were also addicted to drugs, 7.3% are also addicted to alcohol, 2% declared they were also addicted to medicines and the last 2% by other addictions (e.g., shopping).

Procedure

First, participants provided their informed consent to the research and then filled a clinical and socio-demographic questionnaire. Subsequently, participants filled out the Family Adaptability and Cohesion Evaluation Scale IV (FACES-IV)¹⁰ in the Italian version¹¹; they responded to the FACES-IV referring to their own family in the last three months. Those who lived alone were asked to fill the scale with reference to their family of origin. At the end, participants filled the Gambling Related Cognitions Scale I (GRCS-I; 12; 13) in the Italian version¹⁴.

FACES-IV: The Family Adaptability and Cohesion Evaluation Scale IV¹⁰ is a self-report measure used to evaluate the family styles and functioning of the family relations. Participants report their responses to 62 items ($\alpha = .91$) on a scale ranging from 1 (= Absolutely Disagree) to 5 (= Absolutely Agree). The FACES-IV is composed of two dimensions, called balanced and unbalanced. The former is referred to the protective factors that provide a good family functioning, while the latter concerns the risk factors highlighting a problematic family functioning. The Balanced dimension is composed by two subscales. The first one is the Balanced Cohesion ($\alpha = .84$), which indicates the level of emotional closeness between the family members; the second subscale is the Balanced Flexibility ($\alpha = .81$) that indicates the level of change in leadership in the family, the rules and relational roles. Meanwhile, the Unbalanced dimension is composed of 4 subscales. The first one is called Disengaged ($\alpha = .83$), the second subscale is the Enmeshed ($\alpha = .50$), the third subscale is the Rigid ($\alpha = .71$) and the last one is called Chaotic ($\alpha = .82$).

Furthermore, the FACES-IV (2014) includes the subscale of the Family Communication ($\alpha = .93$) and the Family Satisfaction ($\alpha = .95$).

GRCS-I: The Gambling Related Cognition Scale I is a self-report measure used to evaluate the level of the gambler's cognitive distortions^{12,13}. Participants are asked to fill the 23 items ($\alpha = .89$) on a scale ranging from 1 (= Completely disagree) to 7 (= Completely agree). The GRCS-I is composed by 5 five-factor structure emerged that identify five specific erroneous evaluations. The first one is the

gambling-related expectancies ($\alpha = .71$), which evaluate how gambling expectancies can make better the gambler's life condition. The second is the Illusion of Control ($\alpha = .60$), which estimates the presence of rituals that deceive the gambler of an upcoming win. The third is the Predictive Control ($\alpha = .74$) that identify the gambler's ability to predict the winnings. The fourth is the perceived inability to stop gambling ($\alpha = .71$). The last one is called interpretative control/bias ($\alpha = .84$), which evaluates the interpretative mistakes associate to the winnings..

Results

Family Styles

In order to analyze participant's family representations, we first considered the relation between the Balanced and the Unbalanced scales (Global, Cohesion and Flexibility). When this relation exceeds the value of 1, it is indicative of a better family functioning (i.e., Ratio > 1), when the score is less than 1, it is indicative of a problematic family functioning (i.e., Ratio < 1). Overall, most of the participants (68%) showed the own family representation characterized by a problematic functioning because the weight of the Unbalanced scales was greater than the Balanced scales (Global Ratio < 1). This pattern was also similar for both the Cohesion (66%; Cohesion Ratio < 1) and the Flexibility (71%; Flexibility Ratio < 1).

Following the procedure adopted by the Italian version of the FACES-IV¹¹, we assumed as problematic the Balanced scales with values of less than 60, the Unbalanced scales greater than 45 and the Family Communication and the Family Satisfaction scales less than 35. Most of participants had a medium-low score in the Cohesion ($M = 35.61$, $SD = \pm 30.93$) and in the Flexibility ($M = 37.07$; $SD = \pm 33.10$). Regarding the Unbalanced scales, the Disengaged scale ($M = 48.78$, $SD = \pm 34.63$), the Enmeshed scale ($M = 43.85$, $SD = \pm 30.26$) and the Rigid scale ($M = 47.10$; $SD = \pm 27.84$) emerged as partially problematic, while the Chaotic scale appeared as problematic ($M = 56$; $SD = \pm 28.88$). In addition, the sample showed low scores both in the Family Communication scale ($M = 29.71$, $SD = \pm 10.92$) and in the Family Satisfaction scale ($M = 31.66$, $SD = \pm 11.73$).

Furthermore, participants who were less than 40 years old represented the global functioning of own family as more problematic (81%) than

those who were 40 years old and above (68%). Participants who did not have a relationship represented the global functioning of the own family as more problematic (90%) than those who had a relationship (50%).

Cognitive Distortions

Following the procedure adopted by the Italian version of the GRCS-I¹⁴, we assumed as problematic the total average score greater than 50. The cut-off value for the Gambling-Related Expectancies is 7.98, for the Illusion of Control is 8.94, for the Predictive Control is 8.46, for the Inability to Stop Gambling is 9.38 and for the Interpretation Control/Bias is 16.15. Thus, the sample showed a high level of total cognitive distortions ($M = 62.76$; $SD = \pm 23.27$). Specifically, the subscales, which emerged as problematic, were: gambling-related expectancies ($M = 12.90$, $SD = \pm 6.08$), the Predictive Control ($M = 14.54$, $SD = \pm 7.08$) and the perceived inability to stop gambling ($M = 15.29$; $SD = \pm 6.61$). Conversely, the subscales of the Illusion of Control ($M = 7.73$; $SD = \pm 3.71$) and the Interpretative control/bias ($M = 12.29$, $SD = \pm 6.80$) did not emerge as problematic.

Additional Results

In order to identify possible relations between the family representation and the specific cognitive distortions of GD, we proceeded to calculate the correlations between the scales of the FACES-IV and the GRCS-I, which turned out as problematic from the analysis mentioned above. The analysis yielded a significant negative correlation between the Global Ratio and the Predictive Control ($r = -.43$, $p = .01$), indicating that the family functioning were more negative, more present was the ability to predict the winnings (i.e., Predictive Control) and *viceversa*. Given that the correlation analysis provided only an indication and not the process, we also proceeded with a regression analysis. The result of this analysis showed that the level of family functioning predicted a negative response, the level of Predictive Control of participants ($R^2 = 0.19$, $t(40) = -3.10$, $p = 0.005$), explaining the 19% of the variance.

Discussion

The present study was aimed to investigate how gamblers think and represent their individ-

ual families and how this representation is associated with specific cognitive distortions. Overall, the results underlined that people with GD show an unbalanced family functioning. The disorganization in the management of rules, the negotiation of conflicts with a family dissatisfaction and an ineffective family communication, are the most problematic areas that emerged in the representation of the gambler's family. The absence of protective factor is associated with difficulty of the family to balance the process of belonging/identification and of stability/change. These factors confirm a close analogy with people presenting a substance abuse disorder¹⁵ and highlighted two possible risk factors: the age and the state of relations. Gamblers who are younger than 40 years and do not have an emotional relationship, show more problematic family functioning.

On the side of cognitive functioning, as suggested by previous research^{16,17}, gamblers show a high expectation to win at the game and believe that this would positively influence their life condition. They believe that the gambling represents an essential part of themselves, to the point that they declare to be unable to stop gambling.

The negative relation between the general family functioning and the predictive control suggests that a family psychotherapy treatment would represent an appropriate approach. The treatment would be focused on promoting belongingness, effective communication and a functional management of relational rules and roles. Furthermore, this psychotherapeutic approach seems to be the best way to prevent one of the most recurrent mechanisms in the GD, that is, the ability to predict when the winnings will happen, a psychological mechanism that triggers the continuous and future gambling behavior.

The sample analyzed here is represented by people who were in treatment for GD in the Public and Private Health Services and we observed a high prevalence of the men (the women who participated in the research were only 5). Following previous GD's literature^{12,18}, suggesting that there are specific gender differences in gambling, we decided to focus specifically on a sample of men and to exclude from these analyses the 5 female participants because we thought that a sample of 5 people would not be representative. A future research, using a larger and more representative sample, would focus

to provide indications for a more specific and effective diagnosis and treatment.

Conclusions

Overall, the results of the present study provide specific directions for both the prevention and the therapeutic treatment of GD, highlighting the importance of a family therapeutic approach for the prevention of cognitive distortions.

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Conflict of Interest

The Authors declare that they have no conflict of interests.

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