Problem gambling during Covid-19

Fabio Frisone [1, 2] *, Angela Alibrandi [3], Salvatore Settineri [4]

Abstract

Background: Problem gambling could progressively grow in a period of isolation due to the COVID-19 pandemic to the possibility of gambling directly from home.

Objectives: This pilot study highlights if the problem gambling, during a period of isolation such as that of COVID-19, can be explained by personality or sociodemographic characteristics, therefore it investigates the emotional and impulsive characteristics of problem gamblers and examines whether those who are adults, those who have more years of study or who work are less likely to have problem gambling.

Methods: A total of 200 subjects completed an online survey to examine the associations between problem gambling, alexithymia, and impulsiveness. The standardized tools used were the South Oaks Gambling Screen (SOGS), the Toronto Alexithymia Scale (TAS-20), and the Barratt Impulsiveness Scale (BIS-11).

Results: Problem gambling was positively correlated with male gender, TAS-20 total score, difficulty describing feelings, externally-oriented thinking, attentional, and non-planning impulsiveness. Furthermore, there was a significant inverse correlation between higher SOGS scores and fewer years of study. Multivariate analysis showed that age, gender, years of study, BIS-11 total score, attentional impulsiveness, and non-planning impulsiveness were predictors of gambling.

Conclusions: The results of this exploratory research suggest that in a period characterized by a pandemic, problem gambling is associated with some personality and sociodemographic characteristics. Moreover, age, male gender, low levels of study and impulsive characteristics play a decisive role in problem gambling.

[1] Department of Cognitive Sciences, Psychology, Educational and Cultural Studies (COSPECS), University of Messina, Italy

[2] International Research Center for Theoretical and Applied Cognitive Sciences (CRISCAT), University of Messina, Italy

[3] Department of Economics, Unit of Statistical and Mathematical Sciences, University of Messina, Italy

[4] Department of Biomedical and Dental Sciences and Morphofunctional Imaging, University of Messina, Italy

E-mail corresponding author: fabfrisone@unime.it

1. Introduction

There are several aspects that lead to the increased involvement in the dynamics of Gambling Disorder (GD). One issue refers to the technological development (Hayer et al., 2018; Sirola et al., 2018) in a period of isolation such as that caused by the COVID pandemic (Hayer et al., 2020b; Rumpf et al., 2020) which resulted in more opportunities to gamble online.

Other aspects concerning problem gambling are the poor quality of life (Potenza et al., 2019) and the few regulations to control the gambling activities (Browne et al., 2017; Dassopoulos, 2019; Ho, 2017; Hayer et al., 2020a; Livingstone & Adams, 2011; Livingstone et al., 2018; Lopez-Gonzalez et al., 2017, 2019; Markham & Young, 2015; Meyer et al., 2019; Mizerski, 2013; Newall et al., 2019; Newall, 2019; Orford, 2005, 2010; Rogers, 2013; Salonen et al., 2018; Wardle et al., 2019). In this regard, a study by Korn and Shaffer (1999) found three primary forces that contribute to the growth of gambling: the fact that gambling provides a huge earning opportunity in terms of taxation for the states, the increase in tourism to those places where the chances of gambling are available, and the development of technology, which facilitates the possibility of gambling from home.

At present, the characteristics of GD are linked to impulse control (Chowdhury et al., 2017; Ioannidis et al., 2019; Mestre-Bach et al., 2020b; Navas et al., 2017; Steward et al., 2017), emotional regulation (Bonnaire et al., 2017; Gori et al., 2016; Mestre-Bach et al., 2020a; Rogier & Velotti, 2018) and other factors (Hayer et al., 2018) which lead to a shift in the classification of GD from impulse control disorder to behavioral addiction (Hunt & Blaszczynski, 2019; Mann et al., 2016).

The complexity of the gambling phenomenon has a direct impact on the difficulties in treatment. In this regard, a systematic review by Petry et al. (2017) found that long-term benefits for the treatment of GD are often not achieved.

Concerning age differences, several studies showed that the phenomenon of gambling affects not only adolescents (Calado et al., 2017; Delfabbro et al., 2016; Frisone et al., 2020; Savvidou et al., 2017; Sideli et al., 2018) but also adults (Calado & Griffiths, 2016; Caputo, 2015; Tirachaimongkol et al., 2010), albeit with some differences related to the higher levels of impulsiveness manifested during adolescence (Abbott et al., 2018; McCarthy et al., 2018; Secades-Villa et al., 2016).

The possibility of having a job could be a protection factor regarding problem gambling, however, a study by Banwell et al. (2006) showed that having a job may not be enough to eliminate the risk and other studies (Binde & Romild, 2020; Revheim & Buvik, 2009) highlighted that the type of occupation may increase or decrease the risk of being a problem gambler.

Education attainment is another variable that could affect GD. In this regard, Tan et al. (2010) found that a high level of education helps to reduce gambling expenses, but socio-demographic determinants show that this does not occur in all cultures.

1.1 The present study

In this work, we assumed that: (1) adolescents in isolation due to the COVID-19 pandemic have more problem gambling than adults; (2) those with more years of study have less problem gambling; (3) those who kept working during the pandemic have fewer problem gambling than the unemployed; (4) emotional difficulties are predictors of gambling; (5) impulsiveness is a predictor of gambling.

2. Methods

2.1 Study design and setting

A cross-sectional online survey was made utilizing Google Form. The study was sent to social media groups and e-mails, and the results were obtained in an anonymous form. The data was collected between the 2nd of March 2020 and the 13th of November 2020. All participants completed the survey, answering all questions (total time: 10 minutes).

2.2 Participants

The sample contained 200 subjects, 125 women (62,5%) and 75 men (37,5%). The age of participants ranged from 16 to 80 years old (Mean age = 31,19; SD = 11,77). All included participants completed the following survey after giving their consent.

2.3 The Survey

2.3.1 Sociodemographic data

Participants were asked to provide personal data such as age, gender, years of study and employment status.

2.3.2 Observation instruments

Three psychological self-report scales were administered. All scales have been translated and validated into Italian (Bressi et al., 1996; Caretti & Barbera, 2005; Fossati et al., 2011; Guerreschi & Gander, 2002).

Toronto Alexithymia Scale – 20 (TAS-20) – The TAS-20 is a 20-item questionnaire increasingly used to assess alexithymia (Bagby et al., 1994). Every item is classified based on a five-point Likert-type scale ranging from 1 = "strongly disagree" to 5 = "strongly agree" and the total scores range from 20 to 100. Scores ≥ 61 reveal alexithymia and scores between 51 and 60 are

on the boundaries of alexithymia. The TAS-20 is composed of three factors: difficulty in identifying feelings; difficulty describing feelings; externally-oriented thinking. The inner structure of the Italian version (Bressi et al., 1996; Caretti & Barbera, 2005) of the questionnaire is adequate (Cronbach's alpha = 0.81) and respects the original English version.

Barratt Impulsiveness Scale-11 (BIS-11) – The BIS-11 is a 30-item instrument intended to assess impulsiveness (Barratt, 1959). Every item is classified based on a four-point scale ranging from 1 = "rarely/never" to 4 = "almost always/always". Despite the BIS-11 is composed of six first-order factors (Patton et al., 1995), the main focus was on three second-order factors (Stanford et al., 2009): attentional impulsiveness (linked to quick decision-making); motor impulsiveness (means acting without thinking); nonplanning impulsiveness (referred as decision-making without thinking about the future consequences). The Italian version of the BIS-11 (Fossati et al., 2011) respects the structure of the original English version.

South Oaks Gambling Screen (SOGS) – The SOGS is a questionnaire created to assess gambling problem and is widely utilized in epidemiological research (Abbott & Volberg, 2006; Stinchfield et al., 2007). The score on the SOGS generates three different categories: 'non-problem gamblers', score 2 or less; 'at risk gamblers', score 3 or 4; 'problem gamblers', score 5 or more. The Italian version of SOGS developed by Guerreschi and Gander (2002) respects the inner structure of the original English version (Barbaranelli et al., 2013).

2.4 Ethics

A consent form was inserted at the beginning of the study to inform the participants of the aim of the research and the protection of privacy. To continue with the administration of the questionnaires, each participant had to accept the terms of the study that complied with the Helsinki declaration.

2.5 Statistical analyses

Categorial variables were indicated as number and percentage, and numerical data as mean and standard deviation. The nonparametric Mann-Whitney-Wilcoxon test was used to obtain the comparison of means for nominal variables, while Spearman correlations were used for the numerical variables. Multivariate linear regressions were used to assess dependence relations. A set of predictors (e.g. age, gender, years of study, employment, TAS-20 and BIS-11) were analyzed to highlight dependence relations according to the considered variable. Statistical analyses were made using SPSS 26 for the Windows package. A *p*-value smaller than 0.05 was considered statistically significant.

3. Results

Table 1. Means and standard deviation for numerical variables

	Mean	Standard deviation
Age	31,19	11,77
South Oaks Gambling Screen	1,65	1,88
Toronto Alexithymia Scale total score	12,02	11,49
Difficulty in identifying feelings	14,00	5,73
Difficulty describing feelings	5,77	4,23
Externally-oriented thinking	-7,75	4,51
Barratt Impulsiveness Scale total score	5,02	10,47
Attentional impulsiveness	5,93	3,53
Motor impulsiveness	16,09	4,93
Nonplanning impulsiveness	-17,00	4,61

Table 2. Spearman non-parametric correlations

	SOGS
Age	-,005
Gender	**-2,44***
Years of study	**-,260****
Employment	-,610
Toronto Alexithymia Scale total score	**,234****
Difficulty in identifying feelings	,114
Difficulty describing feelings	**,159****
Externally-oriented thinking	**,198****
Barratt Impulsiveness Scale total score	**,168***
Attentional impulsiveness	**,294****
Motor impulsiveness	,134
Nonplanning impulsiveness	**,296****

Descriptive statistics are shown in Table 1. The results of the correlational analysis (Table 2) indicated that problem gambling is positively correlated with male gender, TAS-20 total score, difficulty describing feelings, externally-oriented thinking, attentional and nonplanning impulsiveness. Furthermore, there was a significant and inverse correlation between higher SOGS score and fewer years of study.

Table 3. Multivariate linear regression analysis - total factors in relation with the dependent variable of SOGS

	ß	95% CI	P
Age	,027	(,006 / ,048)	**,010***
Gender	-,523	(-1,025 / -,022)	**,041***
Years of study	-,142	(-,241 / -,043)	**,005***
Employment	,144	(-,412/ ,700)	,610
Toronto Alexithymia Scale total score	,021	(-,008 / ,049)	,150
Barratt Impulsiveness Scale total score	,037	(,006 / ,068)	**,018***

ß= Beta coefficient; CI= Confidence Interval; p < 0.05 was considered as significant for the multivariate linear regression analyses.

Table 4. Multivariate linear regression analysis – partial factors in relation with the dependent variable of SOGS

	ß	95% CI	P
Age	,025	(,005 / ,045)	**,016***
Gender	-,635	(-1,141 / -,130)	**,014***
Years of study	-,136	(-,234 / -,038)	**,007***
Employment	,068	(-,477/ ,612)	,806
Difficulty in identifying feelings	0,36	(-,023 / ,096)	,232
Difficulty describing feelings	-,034	(-,037 / ,105)	,350
Externally-oriented thinking	-,034	(-,032 / ,100)	,308
Attentional impulsiveness	-,112	(-,203 / ,022)	**,015***
Motor impulsiveness	,059	(-,003 / ,122)	,061
Nonplanning impulsiveness	,090	(,029 / ,151)	**,004***

ß= Beta coefficient; CI= Confidence Interval; p < 0.05 was considered as significant for the multivariate linear regression analyses

The results of multivariate analysis (Table 3,4) showed significant dependence relations among a set of selected predictors and the considered dependent variable of gambling. With reference to table 3, emerged significant dependence relations among the SOGS and age, gender, years of study, BIS-11 total score. With reference to table 4, emerged significant dependence relations among SOGS and age, gender, years of study, attentional and nonplanning impulsiveness.

Compared to the first hypothesis, it did not appear that adolescents in isolation due the COVID-19 have more problem gambling than adults. Regarding the second hypothesis, the analysis showed not only a significant inverse correlation between gambling and years of study, but also that the years of study represented a negative predictor of gambling. Hypothesis 3 was not

proved, suggesting that problem gambling can affect both those who have a job and those who are unemployed.

Regarding hypothesis 4, the multivariate analysis of this study showed that the emotional difficulties highlighted by the TAS-20 did not constitute a statistically significant predictor. Compared to hypothesis 5, instead, it was found that BIS-11 total score, attentional impulsiveness and nonplanning impulsiveness are predictors of gambling.

4. Discussion

According to several studies (Desai et al., 2005; Scholes-Balog et al., 2014; Wong et al., 2013) the results of this exploratory research suggested that problem gambling was correlated with male gender, representing also a statistically significant predictor. Unlike what was stated in the hypothesis, adolescents in isolation due the COVID-19 did not show more problem gambling than adults although they live different life experiences (Felaco & Parola, 2020; Frisone et al., 2020; Hayer & Griffiths, 2015; Hayer, 2017; Parola & Donsì, 2019; Parola & Felaco, 2020; Merlo et al., 2020b; Settineri et al., 2018, 2019b). However, correlations and causal relationships were observed between years of study and the considered gambling variable. These data suggested that the cultural level can be decisive to oppose problem gambling and consequently the related emotional and impulsive difficulties (Bonnaire et al., 2017; Chowdhury et al., 2017). Contrary to what was hypothesized, employed are not protected from the dynamics of gambling. This finding suggests that also those who live a more active life through their work may have gambling problems. This study, however, did not specify the type of occupation and did not consider any differences that characterize a worker who is satisfied with his job from one who is dissatisfied. Hypothesis 4 revealed that emotional difficulties did not represent a predictor of problem gambling. However, according to several research (Lumley, 1995; Toneatto et al., 2009) the results in table 2 highlighted that alexithymia could be a risk factor for problem gambling. The last hypothesis instead showed that impulsiveness is a predictor of gambling. It was found that the Barratt Impulsiveness Scale total score, the attentional impulsiveness and nonplanning impulsiveness are predictors of gambling. It seems that problem gamblers gamble without paying attention to the consequences of their behavior.

5. Limitations and conclusion

The present study, using a cross-sectional design and collecting data through online self-assessment surveys, could not avoid some biases such as social desirability. To further investigate the phenomenon, future studies need to collect data using longitudinal studies or qualitative analysis. A further limitation of this study relates to the sample size. Selected inclusion criteria were not used and, as pointed out by Schönbrodt and Perugini (2013), the recommended

thresholds for obtaining stable correlation estimates exceed the number of participants in this study. Despite the above-mentioned limitations, the research offers several contributions to the literature on behavioral addictions. Regression analysis demonstrated the role of some predictors considering gambling, showing the importance of age, gender, years of study and impulsiveness on problem gambling.

The phenomenon of gambling is complicated because it hides the pleasure of self-destructiveness, as well as the desire to challenge death (Galimberti, 2018). In this regard, some studies (Mazzocchi, 2005; Petry, 2001) highlight that gambling has to do with some narcissistic defenses such as omnipotence, but also involves different spheres linked to emotional immaturity and impulsiveness. Given the complexity of the phenomenon, it is necessary to increase the resources of scientific research (Cortegiani et al., 2019; Frisone & Micali, 2020) to optimize the efforts of those working in the field of psychological health (Merlo et al., 2020a, 2020c; Settineri et al., 2019a). Increasing knowledge on the phenomenon of gambling even in a particular period such as that caused by the COVID-19 pandemic can be decisive in both the prevention and treatment phases. For both phases, the therapist should recognize the difficulties of those who, through the tool of gambling, want to gamble their profound subjectivity to reveal it (Dal Lago & Rovatti, 1993; Frisone, 2019; Picone & Di Stefano, 2016). To obtain positive results to reduce the impact of gambling in our society, it is not enough to use what logical empiricism reveals. For this reason, Jaspers (1964) suggests that the starting condition for any treatment can start only from relational involvement: "*Emotion is not […] knowledge but a source of intuition, which provides the indispensable material for knowledge. Impassivity and emotion proceed together and cannot oppose each other, while the cold observation itself does not see anything essential*" (Jaspers, 1964, p. 24). A strong commitment is needed in many sectors of health to reduce the impact of the gambling phenomenon.

Acknowledgements

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