

Aspects of Depression, Anxiety and Stress in Problem and Pathological Gambling

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Abstract

The current study is focused exclusively on the comparative analysis of the elements of depression, anxiety and stress for two different categories of gambling addicts, and it is based on data collected between March and April 2021. Comparative analysis was performed on a sample of 49 respondents, who completed the SOGS questionnaire and obtained scores other than 0, which confirmed gambling addiction. The aim of the study is to analyze, based on the same follow-up elements, the differences of anxiety, depression, and stress between the category of problem gamblers (SOGS between 1 - 4) and the category of pathological gamblers (SOGS > 5).

During the data collection period, some of the gamblers were playing mainly online, while others were playing mainly in the game rooms (physical presence). Considering this, the second objective of the study is to analyze the elements of depression, anxiety, and stress for these two different categories of gambling addicts, and to conclude if the online environment brings an additional contribution to the elements of anxiety, depression, and stress for gambling addicts.

Keywords: depression; anxiety; stress; problem gamblers; pathological gamblers; online gambling

1. Introduction

According to the Cambridge International Dictionary (1995) [1] gambling is synthetically defined as “the activity of risking money, based on the outcome of an action, such as a game or a horse race, and in the hope of doing (to earn) money”. Thus, to be considered games of chance, these events must prove the existence of three main elements: the presence of the prize that can be won, the existence of the chance to win the prize and the allocation of a sum (bet, stake) to participate in that event [2,3].

Gambling addiction is included in the section "Substance-related disorders" according to the [4] and is "persistent

pathological behavior, persistent and recurrent, which causes discomfort or clinically significant damage, manifested by four or more of the characteristic elements, over a period of 12 months ". Other aspects that appear as a result of the dependence developed by the gamblers are related to the problems in studies, work and other activities frustrations and negative emotional states that are associated with anxiety, high levels of stress and depression [5]. Gambling addicts face family and social problems, tend to isolate themselves, fall prey to collateral vices such as excessive alcohol and substance use, often having criminal and legal problems [6]. A previous study conducted in 2013 in Romania on a sample



of 119 subjects, supports the existence of a positive correlation between gambling addiction and depression, in gambling addicts [7].

During the study period, the SARS-CoV-2 pandemic imposed major changes on many people, through a completely changed lifestyle because of the imposition of "lockdown" and quarantine periods. Along with the effects of social and economic instability, the most striking feature of this pandemic, namely the application of social isolation measures, has affected people around the world, with a major impact on the international gambling industry, through the closure of casinos, lottery points, gambling halls and the suspension of sporting events for which there were betting systems. As a reaction to the state of social distance imposed by the pandemic, several operators switched to digital platforms and thus a migration took place of gambling activities from the physical to the online environment [8].

During this period, certain moods, such as anxiety and depression, often associated with aspects of problem gambling behavior, were intensified because of social isolation and fear of possible infection with an unknown virus [9].

In addition, by analyzing the effects of anxiety and depression, depending on the environment where the gambling takes place, research has shown that online gambling poses a significantly higher risk to mental health [10], gambling online being a situation extremely common during the COVID-19 pandemic. Also, in terms of players' behavior and the risk situations to which they are exposed, research in the field has shown that the pandemic has led to an increase in gambling problems and the migration to the online area during quarantine [11].

Continuing the studies carried out during this period, the present study aims to analyze the issues related to the consequences of gambling to observe any differences in the conditions of gamblers.

2. Objectives and Hypotheses

2.1. Objectives

The research objectives focus on:

1. Highlighting the levels of depression, anxiety and stress depending on the degree of addiction to gambling.
2. Analysis of the elements of depression, anxiety, and stress

present in gambling addiction, depending on the environment they prefer for gambling: physical or online environment.

2.2. Hypotheses

The research hypotheses are the following:

1. Severe and extremely severe forms of depression, anxiety and stress are present in greater numbers than normal and mild forms, both among problem gamblers and among potentially pathological gamblers.
2. The elements of depression, anxiety and stress are similar for gambling addicts who prefer to play games in the online environment, compared to those who prefer to play games in the physical environment, in the game rooms.

3. Methodology

3.1 Lot of Participants

The studied lot consists of 49 male respondents, of various living conditions and marital status, all of whom are gambling addicts. All respondents completed the proposed questionnaires in March-April 2021.

3.2 Instruments

1. SOGS - "South Oaks Gambling Screen", a questionnaire used to diagnose gambling in pathological form, created by [12]. A total of 33 items forms this questionnaire and the score is obtained based on 20 items whose answers are listed as answers that indicate the risk of gambling addiction.

2. The DASS questionnaire - "Depression, anxiety and stress scale" was created by [13] and adapted in Romania by Adela Perțe (coordinator) and Monica Albu, under the name DASS-21R. The Romanian version of the DASS-21R questionnaire has 21 items, divided equally on 3 scales, which are Depression, Anxiety and Stress, for assessing negative emotional states. Each scale has 7 items, these being interspersed at random, the completion of each item being done by the respondent through self-assessment.

3.3 Procedure

The questionnaires were completed by the respondents, stating that both the code of ethics and the GDPR legislation were complied with. All participants were instructed in the research and consented, being aware of their anonymous identity.

3.4 Research Design.

For the research design, the following variables were



considered:

1. Independent variables: gambling addiction category (problem players - whose SOGS score is between 1 and 4, and possibly pathological players - whose SOGS score is higher than 5), depression, anxiety and stress categories according DASS-21R and game mode (physical and online).
2. Dependent variables: depression, anxiety, stress.

Results

In the first stage, the mean values and standard deviations were calculated and indicated in Table 1, for the following variables: depression, anxiety, stress and the level of gambling addiction, for both groups of gamblers: problem gamblers and possible pathological gamblers.

Table 1

Variable	Problem Gamblers		Pathological Gamblers	
	Mean	Std. Deviation	Mean	Std. Deviation
Depression	20.62	3.07	21.22	1.10
Anxiety	15.69	2.18	15.00	1.28
Stress	29.08	2.82	30.50	1.29
Gambling addiction	2.31	0.38	7.33	0.38
N	13		36	

The results indicate that the calculated average for depression is higher for pathological gamblers (21.22), compared to the average value of depression for problem gamblers (20.62). Also, the calculated average for stress is higher for pathological gamblers (30.50) compared to the average value of stress for problem gamblers (29.08).

To verify Hypothesis 1, the data analysis was performed, using contingency tables, for the following variables: gambling addiction category (1 - problem gamblers; 2 - pathological gamblers) and forms of depression, anxiety, and stress (1 – normal forms, 2 - mild forms, 3 - moderate forms, 4 - severe forms, 5 - extremely severe forms).

Table 2

			DEPRESSION CATEGORIES					Total
			1	2	3	4	5	
GAMBLING ADDICTION	1	Count	1	2	5	2	3	13
		Total %	2.0%	4.1%	10.2%	4.1%	6.1%	26.5%
	2	Count	1	3	16	10	6	36
		Total %	2.0%	6.1%	32.7%	20.4%	12.2%	73.5%
Total	Count	2	5	21	12	9	49	
	Total %	4.1%	10.2%	42.9%	24.5%	18.4%	100.0%	

Table 2. presents the results of this analysis for depression.

Hypothesis 1 is confirmed for depression: in table 2 it is observed that for sub-group 1, which represents the problem gamblers, the percentage of forms of normal and mild depression (categories 1 and 2) characterizes a percentage of 6.10% of respondents, while forms of severe and extremely severe depression (categories 4 and 5) characterize a total of

10.20% of study participants.

Among the possible pathological gamblers (sub-group 2) the percentage of forms of normal and mild depression (categories 1 and 2) characterizes a percentage of 8.10% of the respondents, while the forms of severe and extremely severe depression (categories 4 and 5) characterize a total of

32.60% of study participants.

Table 3

		<i>ANXIETY CATEGORIES</i>					<i>Total</i>	
		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>		
<i>GAMBLING ADDICTION</i>	<i>1</i>	<i>Count</i>	2	1	5	2	3	13
		<i>Total %</i>	4.1%	2.0%	10.2%	4.1%	6.1%	26.5%
	<i>2</i>	<i>Count</i>	4	5	17	5	5	36
		<i>Total %</i>	8.2%	10.2%	34.7%	10.2%	10.2%	73.5%
<i>Total</i>		<i>Count</i>	6	6	22	7	8	49
		<i>Total %</i>	12.2%	12.2%	44.9%	14.3%	16.3%	100.0%

Table 3. presents the results of the analysis for anxiety.

Hypothesis 1 is confirmed for anxiety: in table 3 it is observed that for sub-group 1, which represents the problem gamblers, the percentage of normal and mild forms of anxiety (categories 1 and 2) characterizes a percentage of 6.10% of respondents, while severe and extremely severe forms of anxiety (categories 4 and 5) characterize a total of 10.20% of study participants.

Among the possible pathological gamblers (sub-group 2) the percentage of normal and mild forms of anxiety (categories 1 and 2) characterizes a percentage of 18.40% of respondents, while the forms of severe and extremely severe anxiety (categories 4 and 5) characterizes a total of 20.40% of study participants.

Table 4

		<i>STRESS CATEGORIES</i>					<i>Total</i>	
		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>		
<i>GAMBLING ADDICTION</i>	<i>1</i>	<i>Count</i>	1	1	2	3	6	13
		<i>Total %</i>	2.0%	2.0%	4.1%	6.1%	12.2%	26.5%
	<i>2</i>	<i>Count</i>	1	2	5	13	15	36
		<i>Total %</i>	2.0%	4.1%	10.2%	26.5%	30.6%	73.5%
<i>Total</i>		<i>Count</i>	2	3	7	16	21	49
		<i>Total %</i>	4.1%	6.1%	14.3%	32.7%	42.9%	100.0%

Table 4 presents the results of the analysis for stress:

Hypothesis 1 is confirmed for stress: in table 3 it is observed that for sub-group 1, which represents the problem gamblers, the percentage of normal and mild forms of stress (categories 1 and 2) characterizes a percentage of 4.0% of respondents, while severe and extremely severe forms of stress (categories 4 and 5) characterize a total of 18.30% of study participants. Among the possible pathological players (subgroup 2) the percentage of normal and mild forms of stress (categories 1

and 2) characterizes a percentage of 6.10% of respondents, while severe and extremely severe forms of stress (categories 4 and 5) characterizes a total of 57.10% of study participants. To verify Hypothesis 2, the T test for two independent sampling was applied, analyzing the differences for the level of depression, anxiety and stress of gambling addicts, depending on the environment the prefer for gambling: online or physically (in game halls).

Table 5

Group Statistics					
	Group	N	Mean	Std. Deviation	S.E. Mean
DEPRESSION	Game Halls	23	21.83	6.95	1.45
	Online	26	20.38	8.76	1.72
ANXIETY	Game Halls	23	14.52	6.91	1.44
	Online	26	15.77	8.36	1.64
STRESS	Game Halls	23	31.91	7.22	1.51
	Online	26	28.54	9.10	1.78

Table 5 shows the results of the T test applied:

Table 6

		Levene's Test for Equality of Variances		T-Test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
DEPRESSION	Equal variances assumed	.66	.421	.63	47.00	.530	1.44	2.28	-3.15	6.03
	Equal variances not assumed			.64	46.49	.525	1.44	2.25	-3.08	5.97
ANXIETY	Equal variances assumed	.41	.525	-.56	47.00	.575	-1.25	2.21	-5.69	3.19
	Equal variances not assumed			-.57	46.80	.570	-1.25	2.18	-5.64	3.14
STRESS	Equal variances assumed	1.41	.240	1.43	47.00	.161	3.37	2.37	-1.39	8.14
	Equal variances not assumed			1.45	46.50	.155	3.37	2.33	-1.32	8.07

Independent Samples Test

Hypothesis 2 is confirmed, as the statistical significance is not relevant for all these variables ($p > 0.05$), so the conclusion is that there are no differences in the level of depression, anxiety and stress between gamblers who prefer online gambling, compared to those who regularly play in physical mode, in the game halls, the values being relatively similar and at high levels, which is characteristic for gambling addicts.

Conclusions

The comparative analysis conducted in this research leads to a series of conclusions regarding compulsive gamblers: both categories of addicts, problem gamblers and potentially pathological gamblers, report the presence of severe and extremely severe levels of depression, anxiety and stress. The study results indicate that normal and mild forms of depression, anxiety and stress occur in smaller numbers in both categories of gamblers, while moderate, severe and



extremely severe forms of depression, anxiety and stress are present in larger numbers. This conclusion supports previous studies that have shown that gambling addicts face emotional, family, and social problems, tend to isolate themselves, fall prey to collateral vices, often having criminal and legal problems [7,14, 15].

The second conclusion of the study indicates that there are no differences in the level of depression, anxiety and stress between gambling addicts who play mainly online, compared to those who prefer gambling in the physical environment, in the game halls. These results do not confirm, for the studied lot and studied period, the results of previous research which indicate that online gambling poses a significantly higher risk to mental health [11], and that the mental health has much lower levels for those gamblers who play mainly online games, compared to the mental health of those who have never played online [16].

In conclusion, the results of this study highlight the fact that the effects of gambling addiction are similar among gamblers, regardless of the environment the gambling takes place, involving negative emotional states associated with anxiety, increased levels of stress and depression, and involving other issues that arise because of addiction developed by gamblers, due to the fact that it generates financial losses which induce frustrations related to the study, work and other activities in society.

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