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PRELIMINARY STUDY OF THE USE OF ONLINE GAMES AMONG UNIVERSITY STUDENTS WITH AND WITHOUT DISABILITIES

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KEYWORDS

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ABSTRACT

This research is part of a project funded by the Ministry of Consumption (2023) and aims to ascertain the prevalence of gambling and betting, its abuse and addiction among university students at the University of Alicante, both with and without disabilities. Furthermore, the study aims to ascertain their perceptions of risky behaviours in online gambling and betting. A total of 370 students participated in the study by completing a questionnaire. The findings indicated that students do not engage in gambling frequently, with a greater gambling habit observed among the group with disabilities. It would be beneficial for the university to provide counselling and support services that are specifically designed to prevent gambling problems.

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1. Introduction

The phenomenon of gaming addiction has become a matter of increasing concern in contemporary society, and students are not immune to this phenomenon. As technology advances and online gaming becomes more accessible, it is crucial to understand how this population deals with the challenges related to gaming addiction and how to effectively address them (Håkansson and Ford, 2019; Larsson and Håkansson, 2022). Consequently, pathological gambling, also known as gambling addiction, is a disorder characterised by a pattern of compulsive and uncontrolled behaviour related to gambling, resulting in significant negative consequences in the student's life. This type of addiction can manifest itself in various forms of gambling, including but not limited to sports betting, casino games, lotteries and poker.

Non-chemical addictions, also known as behavioural or process addictions, are compulsive and uncontrolled patterns of behaviour that generate dependence and cause psychological, emotional, social or physical harm. In contrast to chemical addictions, which are associated with the use of addictive substances such as drugs or alcohol, non-chemical addictions are linked to specific activities or behaviours.

The online gambling industry offers a plethora of games and types of gambling, ranging from traditional games of chance to sports betting and games of skill. The online gambling industry is characterised by a high degree of diversity and constant evolution, with new games and types of games being developed on a continual basis in order to meet the demands and preferences of players.

As outlined by the American Psychiatric Association (APA, 2013) in its Diagnostic and Statistical Manual of Mental Disorders (DSM-V), key characteristics of online gaming addiction include obsessive tendencies, inability to regulate the frequency, duration, and intensity of gaming, prioritisation of gaming over other activities, and The individual may require an increasing duration or frequency of gambling in order to achieve the same level of satisfaction, or may experience adverse physical or psychological symptoms when attempting to reduce or cease gambling. In such instances, the individual may attempt to minimise or deny the negative impact that online gambling has on their life by justifying their behaviour or rationalising their need to gamble.

The prevalence of problematic online gambling among college youth may vary by region, culture, and other factors. However, it is an issue of growing concern in many parts of the internet world (Krishnamurthy and Chetlapalli, 2015; López-Fernández, 2018; Pino et al., 2021). A number of studies have examined this issue and have found that a significant proportion of university students engage in problem gambling.

For instance, a study conducted in the United States revealed that approximately 10% of college students reported experiencing problems related to online gambling in 2020 (Brime et al. in de Jesús, J. 2021). Another study conducted in Europe found that approximately 5% of university students exhibited pathological gambling behaviours, while a significantly higher percentage displayed indications of gambling-related issues (Tristán et al., in González-Álvarez, 2022).

In general, the accessibility and availability of online gambling, in conjunction with factors such as academic stress, peer pressure, and the ease of concealment, may contribute to the increase in problematic online gambling among college youth (González-Bueso et al., 2018; Martín-Labora, 2005). Furthermore, the immersive and highly stimulating nature of many online gambling games can render it particularly challenging for young people to regulate their participation and identify when they are developing a problem.

The problem of online gaming addiction has the potential to have serious consequences for the mental, emotional, social and physical health of the individual affected. Moreover, the co-occurrence of pathological gambling in students represents a significant mental health concern (Håkansson and Ford, 2019; Larsson and Håkansson, 2022). Students who experience problem gambling may be at increased risk of developing other mental disorders, such as depression, anxiety, attention deficit hyperactivity disorder or substance abuse (Babić et al., 2018; Larsson and Håkansson, 2022; Tristán et al., 2021).

Several factors may contribute to the co-occurrence of pathological gambling and other mental disorders in students. For instance, academic stress, social pressure and the ease of access to online gambling may increase students' vulnerability to developing gambling problems and experiencing other mental disorders.

Other variables, such as personality variables, may influence pathological gambling, including impulsivity (Matheson et al., 2021; Medina-Ortiz et al., 2021; Miller et al., 2022; Small et al., 2022). Individuals with high levels of impulsivity are more likely to act without considering the long-term consequences of their actions. This may render them more susceptible to engaging in problematic gambling behaviours, as they are prone to succumbing to the allure of gambling without considering the adverse consequences (Mehroof and Griffiths, 2010; Widyanto and Griffiths, 2006). Additionally, sensation seeking may contribute to pathological gambling. Young people who seek intense emotions and new experiences may be more likely to engage in pathological gambling as a way of satisfying their need for stimulation (Echeburúa and Corral, 2010; Muñoz-Rivas et al., 2010). Other authors have identified neuroticism as a significant contributing factor. Consequently, individuals with high levels of neuroticism may be more prone to experiencing negative emotions, such as anxiety and depression. This may increase their vulnerability to pathological gambling as a form of coping (Sundqvist and Rosendahl, 2019; Wejbera et al., 2021). Finally, low frustration tolerance is another factor that has been identified by numerous authors. A correlation has been identified between low frustration tolerance and difficulties in coping with loss in gambling. This may result in individuals continuing to gamble in an attempt to regain what they have lost, which can lead to the development of problematic gambling behaviours.

When addressing other variables that may affect or have a greater vulnerability to problem gambling participation, and which, in other virtual spaces, seems to have a greater incidence, it is the group of students with disabilities (Krishnamurthy and Chetlapalli, 2015; Pino et al., 2021). The issue of online gambling, including online gambling, among students with disabilities is of particular relevance, as they may face additional challenges that make them more vulnerable to developing gambling problems (Mateu and Gómez, 2015; Ñíguez and Sanmartín, 2021).

One of the factors that may contribute to participation in online gambling among students with disabilities is the ease of accessibility. Consequently, online gambling platforms may be accessible to individuals with disabilities, thereby facilitating their participation. Another factor contributing to increased vulnerability is social isolation. Consequently, some students with disabilities may experience social isolation and may turn to online gaming as a form of escape or entertainment. Additionally, the dearth of employment opportunities presents a further challenge for people with disabilities, who frequently encounter obstacles to employment. This may contribute to the appeal of online gambling as a potential source of income (Mateu and Gómez, 2015). In addition, they may be more inclined to take on greater financial risks, which may make online gaming and gambling seem an attractive way to make quick money. Finally, some students with disabilities may face social stigma or low self-esteem, which may cause them to turn to online gambling as a way to escape their problems (Ñíguez and Sanmartín, 2021).

These factors could result in students with disabilities being more susceptible to the negative effects of online gambling and having fewer resources to cope with the economic, emotional and social consequences of problem gambling (García-Ruiz and Bonilla del Río, 2020; Irles and Perona, 2019).

In light of the aforementioned considerations and the existing gap in the literature regarding the problematic participation of this group of students, the objective of this study is to ascertain whether there are differences in the degree of use, abuse, or addiction of university students with and without disabilities who gamble and/or bet on the Internet. The general objective is divided into the following specific objectives:

1. To determine whether there are discernible variations in the profile of use, abuse and/or addiction among university students with and without disabilities.
2. To make a comparison to ascertain which aspects of this practice are detrimental to students with and without disabilities.
3. To investigate whether there is an association between problematic gambling and harmful gambling behaviours in students with and without disabilities.

2. Method

2.1. Participants

A total of 369 participants were included in this study, with 58 individuals aged between 18 and 22, 158 between 23 and 27, 81 between 28 and 33, 37 between 34 and 38, and 33 between 39 and 44. In terms of gender, the study population comprised 277 men and 112 women. Conversely, 301 participants did not report any disability, while 68 indicated the presence of some form of disability.

Table 1. Frequency and percentage of participants

Socio-demographic profile		N	%
Age	18 a 22	58	15,7
	23 a 27	158	42,8
	28 a 33	81	22,0
	34 a 38	37	10,0
	39 a 44	36	9,4
Sex	Man	257	69,6
	Woman	112	30,4
Disability	Non-disabled	301	81,6
	Disabled	68	18,4
	Total	369	100,0

Source: Own elaboration

2.2. Instruments

1. The instrument employed was a form designed to collect data pertaining to the students' sociodemographic characteristics.
2. The questionnaire sought to ascertain the profile of use, time and preferences of games and gambling.
3. The Massachusetts Gambling Screen (Shaffer et al., 1994; Secades and Villa, 1998) was employed.

2.3. Design

The research was conducted using a cross-sectional, non-probabilistic and purposive design, as the sample was drawn from a specific context (the university environment). It should be noted that the population was not randomly distributed, as the students were grouped according to whether or not they had a disability.

2.4. Procedure

The data collection procedure entailed the administration of the questionnaire to the sample of students. The sample was selected between January and February 2024, with the prior informed consent of the study participants. Access was relatively straightforward, with the sample comprising university graduates from the University of Alicante. The questionnaire was hosted on Google and disseminated on campus through the collaboration of the Vice-Rectorate for Research. The estimated time required to complete the questionnaire was approximately ten minutes.

2.5. Statistical Analysis

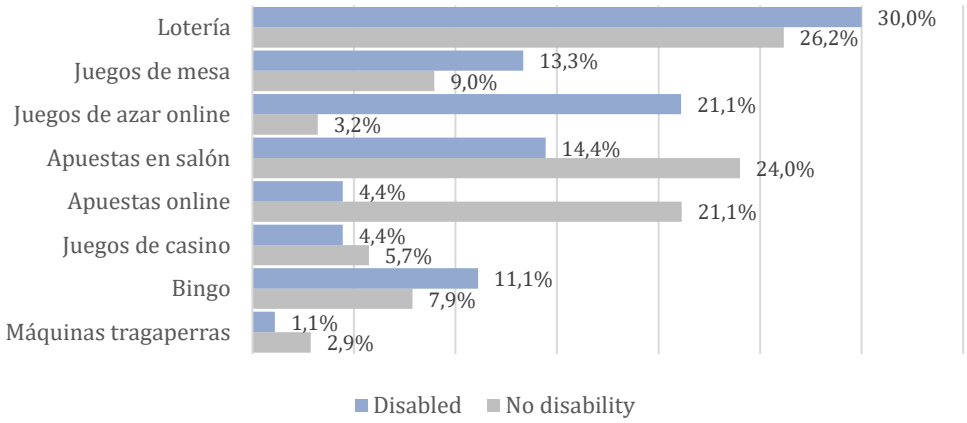
In order to examine the socio-demographic data, frequencies and percentages were calculated. To identify any significant differences between the groups on the various items of the rating scale, the data

was analysed using the student's t-test for two independent samples. Subsequently, Pearson's correlation index was employed to identify correlations.

3. Results

Firstly, an analysis of the type of gambling games in which students frequently participate revealed that a higher percentage of students engage in lottery games. Additionally, statistical differences were observed between students with and without disabilities in online gambling and in table games and bingo, the type of games preferred by students with disabilities, and parlour and online gambling, preferred by students without disabilities.

Figure 1. Preferences in game types



Source: Own elaboration

A statistical analysis of the frequency with which students typically engage in gaming revealed that the highest percentages were observed between once a month and once a year. This indicates that students with disabilities have a higher percentage of weekly gaming than the group of students without disabilities ($p<.05$).

Table 2. Frequency in games

	How often do you play?						Total
	Once a year	Once a month	Once a week	Several times a week	Every day	Several times a day	
No disc	72	129	44	22	7	5	279
	25,8%	46,2%	15,8%	7,9%	2,5%	1,8%	100,0%
With disc	18	27	24	14	4	3	90
	20,0%	30,0%	26,7%	15,6%	4,4%	3,3%	100,0%
Total	90	156	68	36	11	8	369
	24,4%	42,3%	18,4%	9,8%	3,0%	2,2%	100,0%

Source: Own elaboration

With regard to the reasons for playing, the majority of respondents indicated that their primary motivation was economic, namely, to earn money. Students with disabilities were more likely to play because it is fun and because they enjoy the risk, while students without disabilities indicated that they enjoy playing, indicating statistically significant differences in these preferences ($p < 0.001$).

Table 3. Motivation to play

	What motivates you to play?				
	For entertainment	**Because it amuses me**	**For earning money**	**Because I love risk**	**Total**
No disc	42	91	138	8	279
	15,1%	32,6%	49,5%	2,9%	100,0%
With disc	19	17	41	13	90
	21,1%	18,9%	45,6%	14,1%	100,0%
Total	61	108	179	21	369
	16,5%	29,3%	48,5%	5,7%	100,0%

Source: Own elaboration

In terms of the expenditure on gambling, the highest percentages are grouped in a maximum expenditure of 30 euros. This indicates that 5.4% of students spend more than 120 euros, with notable differences observed in students with disabilities, where 8.9% spend more than this amount compared to 4.3% of students without disabilities ($p < 0.048$).

Table 4. Investment in games

	How much money have you gambled in the last 12 months?						**Total**
	One euro or less	**Between EUR 2 and EUR 6**	**Between EUR 6 and 30**	**Between EUR 30 and 60**	**Between EUR 60 and 120**	**More than 120 euros**	
No disc	78	99	65	23	2	12	279
	28,0%	35,5%	23,3%	8,2%	0,7%	4,3%	100,0%
With disc	11	39	22	9	1	8	90
	12,2%	43,3%	24,4%	10,0%	1,1%	8,9%	100,0%
Total	89	138	87	32	3	20	369
	24,1%	37,4%	23,6%	8,7%	0,8%	5,4%	100,0%

Source: Own elaboration

Upon examination of the beliefs and behaviours perceived in their gambling behaviour, statistically significant differences were observed in certain dimensions in both groups. For instance, they are more likely to gamble in order to recoup their losses ($p < .001$), to experience negative emotions when spending money ($p < .001$), and to engage in gambling or betting beyond their intended limits ($p < .001$). This tendency is observed to a greater extent in the group of non-disabled students.

Table 5. Beliefs towards their gambling behaviours

		No disc	**With disc**	**T**
Have you ever gambled to get back what you have lost?	M	1,63	1,51	.045
	D.T.	,49	,50	
Have you ever felt bad about spending money gambling?	M	1,85	1,62	.001
	D.T.	,49	,66	
Have you ever played more than you intended to?	M	1,86	1,51	.000
	D.T.	,65	,52	
Have you ever borrowed or stolen money to gamble or repay your debts?	M	1,51	1,42	.108
	D.T.	,50	,49	
Have you ever missed classes, family or personal plans because of gambling or gambling?	M	1,51	1,42	.136
	D.T	,50	,49	

Source: Own elaboration

With regard to the relationship between the variables, it can be observed that there is a high correlation between the frequency of gambling and the amount of money gambled (r = 0.188, p < 0.001). Similarly, relationships were identified between gambling to recoup losses and feelings of regret about gambling (.320, p < .001), between the need to beg or steal to gamble and the occurrence of missed classes, obligations or appointments to gamble (.768, p < .001), and between the need to beg or steal to gamble and the occurrence of missed obligations or appointments to gamble (.743, p < .001). With regard to feelings or regrets about gambling, there is a relationship with asking or stealing to gamble (.376, p < .001), and with missing obligations or appointments (.362, p < .001). Finally, the strongest relationship is between missing obligations to gamble and having to ask or steal to gamble (.978, p < .001).

Table 6. Correlations between frequency of gambling and gambling beliefs and behaviours

	Frec play	**Play to recover**	**Feeling bad about gambling**	**begging or stealing to gamble**	**Missing obligations or appointments to play**
Frequency of play	1	-,010	-,050	,019	,007
Play to recover	-	1	**,320****	**,743****	**,768****
Feeling bad about gambling	-	**-**	1	**,376****	**,362****
Asking or stealing to gamble	-	**-**	-	1	**,978****
Missing obligations or appointments to play	-	**-**	**-**	**-**	1

Source: Own elaboration

4. Discussion

The objective of this paper is to examine the prevalence of online gaming and gambling among university students, with a particular focus on the potential influence of variables such as disability on participation in these environments. It is therefore evident that online gambling has been a popular activity among university students for years, and that trends in this area are always evolving.

In this context, the findings indicate that while the proportion of students engaging in excessive gambling (e.g., on a daily basis) is relatively low, a small number of participants report spending several days a week on this type of leisure activity. The prevalence of online gambling among this population has increased significantly. As previously documented in the published literature (Balanzá-Martínez et al., 2020; Blasco et al., 2021; Fazeli et al., 2020; Medina-Ortiz et al., 2021), several factors may contribute to this phenomenon. For instance, the ready availability of internet-connected devices and the plethora of online games can prove alluring for students, tempting them to spend long hours engaged in gaming activities rather than fulfilling their academic responsibilities. Furthermore, academic stress and social pressures may prompt some students to seek solace in online gaming as a means of relaxation or as a means of evading their difficulties.

This phenomenon is somewhat more pronounced in students with disabilities. In line with other authors, online gaming and gambling platforms offer the advantage of accessibility 24 hours a day, without the need to travel, which facilitates connecting without mobility limitations (García-Ruiz and Bonilla del Río, 2020; Pallesen et al., 2021; Pino et al., 2021). It has also been postulated that internet gambling may be particularly appealing to numerous vulnerable populations, including those who spend extended periods of time at home, such as students with disabilities and young individuals who may remain socially isolated due to their circumstances (Corney and Davis 2010; McCormack et al., 2013; Pino et al., 2021).

With regard to the financial investment, the results are consistent with the time spent gambling. It can be observed that the majority of respondents do not typically spend more than 30 euros per year. However, there is a small increase in those who invest more than 120 euros. In particular, 8.9% of the

group of students with disabilities indicated that they spend this amount, compared to 4.3% of students without disabilities.

This hypothesis can be supported by examining the reasons why individuals engage in gambling activities. Approximately 25% of respondents indicated that they participate in these activities because they enjoy the element of risk. This is an intriguing observation, given that the allure of gambling and the ease of access can potentially lead to a detrimental cycle if it becomes an addictive behavior that interferes with daily activities, such as academic performance, mental health, and personal relationships.

Consequently, and in accordance with other research, students with disabilities may be particularly susceptible to gambling-related issues, as they may confront additional challenges in their lives that could augment their vulnerability to developing gambling problems (McCormack et al., 2013; Pallesen et al., 2021; Pino et al., 2021; Pitt et al., 2021).

The results of this study indicate that, although there is no clear evidence of pathological gambling among the participants, students with and without disabilities do perceive some concern or discomfort about their gambling behaviours. The majority of participants expressed ideas that could be considered worrying, such as feeling bad about spending money or engaging in behaviours that are included in the DSM-V classification as defining behaviours of pathological gambling, such as spending more than intended or asking or stealing to gamble.

Consequently, although the results of the study do not indicate the presence of highly concerning behaviours, a small percentage of students may be at risk of developing pathological gambling, with this risk being more pronounced among students with disabilities. In light of the aforementioned considerations, and in view of the ongoing evolution towards the commercialisation and legalisation of these virtual spaces, it would be prudent for universities and educational authorities to be aware of this problem and to implement preventive and intervention measures. This could include the dissemination of information regarding the potential risks associated with excessive gambling, the promotion of balanced lifestyles that incorporate time for study, work, and responsible leisure, as well as the provision of resources and support for students who may be struggling with a gambling addiction.

It is similarly vital that students themselves are educated about the risks associated with online gambling and encouraged to seek help if they feel they are losing control. It is evident that open dialogue and mutual peer support can be of significant benefit in the prevention and treatment of gambling addiction. Ultimately, the resolution of this issue necessitates a collaborative approach between educational institutions, students and their families, with the objective of establishing a healthy and productive university environment.

In the case of students with disabilities, it would be necessary to offer counselling and emotional support services that are specifically designed for students with disabilities who may be experiencing gambling problems. Consequently, it is necessary to create employment opportunities and inclusive social activities for students with disabilities in order to reduce social isolation and provide healthy alternatives to online gambling. In addition, it would be beneficial to collaborate with disability organisations in order to develop specific strategies and resources to address online gambling among students with disabilities.

Despite the relevance of the present study, several limitations should be acknowledged that could affect the validity and generalisability of the results of a study with this population and methodology. Firstly, it is important to consider the size of the sample. A study with only 370 participants may not be representative of the general university student population. The sample size may be insufficient to detect small effects or significant differences. Furthermore, the issue of generalisability must be addressed. As the study is limited to university students with and without disabilities, the findings may not be generalisable to other age groups, educational levels or cultural backgrounds. With regard to the questionnaire and response bias, It is possible that the questionnaire results may be biased by participants' tendency to respond in a socially desirable manner or to exaggerate or minimise their online gambling addiction problems. It is also important to consider the self-selection of the sample. It is possible that students who agree to participate in the study may differ from those who choose not to participate in terms of their characteristics, which could potentially bias the results. Finally, the lack of diversity in the sample is a further limitation. The sample may lack diversity in terms of the types of disability, the severity of the disability, gender, ethnicity or other important factors that could influence online gambling addiction.

To address these limitations, it would be beneficial to conduct a study with a larger and more diverse sample, utilise multiple data collection methods (e.g. qualitative interviews in addition to questionnaires), and ensure that measurement instruments are adapted to address the specific needs of people with disabilities. By proactively addressing these issues and providing the necessary support, we can help to prevent problem gambling and promote the well-being of all students, including those with disabilities.

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