

Article

Underage Problem Gambling: With Whom, Where and Why

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ABSTRACT

Background: Underage gambling is a widespread phenomenon with its own characteristics that differentiate it from adult gambling. In addition, problem gambling has shown a remarkable prevalence in previous studies. The present study examines underage gambling behaviour, studying its characteristics, as well as motivational and contextual aspects, and estimating the volume of problem gambling and possible moderating variables. **Method:** A sample of 9,681 students aged between 12 and 17 years old reported their involvement in gambling and filled in the Brief Adolescent Gambling Screen (BAGS), with 4,617 of them completing a questionnaire about gambling behaviours. **Results:** Almost a quarter (23.5%) of the students reported having gambled in their lifetime (16.2% in-person, 1.4% online and 6% in both modalities), and 1.9% presented symptoms of problem gambling ($BAGS \geq 4$). In-person gamblers preferred sport-betting machines, usually gambled in bars, and did not have their age checked. Online gamblers reported mainly sports betting, doing so on websites and paying with PayPal-like services and credit cards. Most gambled with friends and to win money. Problem gamblers were similar but gambled more frequently. **Conclusions:** These results present an image of the gambling situation among minors and, more importantly, of its context and related variables.

El Juego de Azar Problemático en Menores de Edad: Con Quién, Dónde y Por Qué

RESUMEN

Antecedentes: La participación de menores de edad en juegos de azar es un fenómeno extendido con características diferenciales respecto a las personas adultas y muestra una elevada prevalencia. El presente estudio examina la conducta de juego en menores, estudiando sus características, aspectos motivacionales y contextuales, el volumen de juego problemático y las posibles variables moderadoras. **Método:** La muestra está compuesta por 9.681 estudiantes de 12 a 17 años que cumplimentaron el Brief Adolescent Gambling Screen (BAGS), 4.617 adolescentes completaron además un cuestionario sobre hábitos. **Resultados:** El 23,5% ha apostado alguna vez en su vida (presencial: 16,2%; online: 1,4%; ambas: 6%) y el 1,9% presenta síntomas de juego problemático ($BAGS \geq 4$). Quienes juegan presencialmente prefieren las máquinas de apuestas deportivas; suelen apostar en bares y generalmente sin acreditar su edad. Quienes juegan online principalmente hacen apuestas deportivas, a través de páginas web y pagan con servicios tipo PayPal y tarjetas de crédito. Suelen apostar con amigos y para ganar dinero, aunque mayoritariamente reconocen que es poco probable que esto llegue a ocurrir. Los/as jugadores/as problemáticos muestran características similares, pero apuestan con mayor frecuencia. **Conclusiones:** Estos resultados muestran la situación del juego en menores y permite determinar sus variables contextuales relacionadas.

Palabras clave:

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Gambling is a widespread activity around the world, even among minors. There are reports of high prevalence of underage gambling in several countries, despite it being illegal for minors to participate in gambling activities in most jurisdictions, with some exceptions like them being able to participate in national lottery and scratch cards in the United Kingdom from the age of 16 (Wood & Griffiths, 2002). Data from the *European School Survey Project on Alcohol and Other Drugs* (ESPAD group, 2020) showed that 22.6% of sixteen-year-old European students had gambled in the previous year. These figures varied greatly between countries, ranging from 11% in Kosovo to 33% in Greece and Cyprus. Additionally, the offline gambling rate was found to be higher than online gambling (22% and 7.9% respectively; ESPAD group, 2020). In Spain the most recent national survey showed that 20.1% of teenagers between 14 and 18 years old in 2021 had gambled in the last 12 months (Plan Nacional sobre Drogas [PNSD], 2022).

Underage gambling is an important problem beyond its legal status, since this population is especially vulnerable, and the age of onset may affect the relationship between the person and gambling. In a study with treatment seeking gamblers, Sharman et al. (2019) concluded that there was an association between an earlier age of onset and higher gambling severity, as well as the development of other negative outcomes such as drug abuse. In the same line, Rahman et al. (2012) analysed health and gambling-related data from a sample of teenagers, dividing them by the year of their first experience gambling in two groups: 11 years or younger and 12 years or older. Results showed that early onset was associated with increased severity of problem gambling and with the type of gambling activity. Gamblers with an earlier onset tended to engage in non-strategic forms of gambling (Rahman et al., 2012), which are those where the possible impact of the gambler's skill disappears and the outcomes are random and unpredictable, such as gambling machines or lottery tickets (García-Ruiz et al., 2016). Said unpredictability poses a higher risk for the gambler, further aggravating the outcome for early age of onset.

The gambling habits of adolescents have similarities and differences with adult gambling. As in the case of adults, adolescent boys are gamblers in a higher rate than girls and land-based gambling remains the main modality even if online gambling popularity appears to be increasing (Calado et al., 2017; Chóliz & Lamas, 2017; Gómez et al., 2020; Weidberg et al., 2018). Adolescents specifically prefer lotteries, scratch cards and slot machines (Calado et al., 2017), just as adults do (Baggio et al., 2018). However, teenagers and young people have their own motivations to gamble. Among the different reasons assessed in the studies included in the systematic review of Calado et al. (2017) the most common were escapism and the inability to resist temptation, although only two of the 44 studies reported these two items.

Regarding problem gambling, a coordinated study has recently been carried out by Andrie et al., (2019) with the same methodology across several European countries (Greece, Spain, Romania, Poland, Germany, the Netherlands, and Iceland). This study used the *South Oaks Gambling Screen – Revised for Adolescents* [SOGS-RA] for measuring problem gambling in a total sample of 13,284 adolescents aged between 14 and 18 years old, finding that 3.6% of them (28.1% of those who gambled) were considered at risk or problem gamblers. As in gambling participation, there was also great variability in the rates between countries, ranging from 1.3%

in Spain to 8.8% in Romania. The prevalence of problem gambling was associated with the frequency of the use of the Internet and online gambling; and the younger the adolescents had started to use the Internet, the greater they were at risk of developing a problem with gambling (Andrie et al., 2019). The most common sociodemographic characteristics of problem gamblers are being a male in the late adolescence (Andrie et al., 2019; Calado et al., 2017; García-Ruiz et al., 2016; Weidberg et al., 2018), belonging to an ethnic minority (Calado et al., 2017), and having parents who are gamblers themselves (Calado et al., 2017; García-Ruiz et al., 2016; Odame et al., 2021). International research has also shown a relationship between gambling behaviour and drug abuse (Calado et al., 2017; De Luigi et al., 2017; Odame et al., 2021), suggesting the existence of similar processes underlying both problems. Calado et al. (2017) also found in their review that young people show higher prevalence of problem gambling than adults, which the authors relate to the sensation seeking typical of adolescence and to the fact that the current generation of young people is the first to grow up in societies where gambling is widely accepted and available, as well as highly promoted. A recent study highlighted the high rates of gambling participation (58.1%) and gambling disorder (1.6%) in the Autonomous Community of Galicia in population of 16 years old and older, affirming that it supposes a public health concern in the Spanish context (Rey-Brandariz et al., 2021). However, adolescent gambling is an issue of its own and the study of its characteristic is relevant for the creation of intervention and prevention programs.

Although an increasing number of empirical studies have addressed the problem of gambling among adolescents, very few studies have: (a) simultaneously analysed both land-based and online gambling; (b) have reached a large sample; (c) from early ages (12-13 years); (d) focused exclusively on minors (given that it is an illegal activity in most European countries); and (e) aimed to delve into the motivations, beliefs, expectations and different aspects related to the context of gambling (company, places and devices, means of payment, parental knowledge, etc.) additionally to sociodemographic data. Cantero et al. (2015) warned of the limitations that most of the research carried out with adolescents faces. And, although studies such as the one from the *Observatorio Plan Joven Municipal Vitoria-Gasteiz* (2019) explored the motivations and expectations of adolescents, the sample was quite small (407 individuals aged 12-15 and 388 aged 16 to 30 years old), and the results were not disaggregated by land-based and online gambling.

Therefore, the present study was carried out with three main objectives: 1) analysing the frequency of gambling among minors; 2) studying motivational aspects and contextual characteristics surrounding underage gambling; and 3) analysing the variables that could moderate the presence of problem gambling.

Method

Participants

A non-probabilistic sampling was employed, selecting schools that were geographically accessible to the research team. Two investigations, with two different samples, were conducted in parallel. On the one hand, a sample of 5,773 adolescents was surveyed within the framework of a broader project on addictive behaviours in adolescents (henceforth, the first sample). On the

other hand, 5,428 completed a specific questionnaire on their gambling habits and motivations (henceforth, the second sample).

A final sample of 5,064 adolescents for the first sample and 4,617 for the second was achieved after the process of elimination of subjects with missing values, inconsistent response patterns, and people of legal gambling age (18 years or older). No statistically significant differences by age nor gender were found between the two samples (Mean age First Sample = 14.45, SD = 1.55; Male = 49.6% vs Mean age Second sample = 14.55, SD = 1.46; Male = 49.2%).

Between the two studies, this amounts to a total final sample of 9,681 adolescents aged between 12 and 17 years (Mean = 14.50; Standard Deviation = 1.51). Regarding their gender, 49.4% reported being male and 50.6% being female.

Instruments

Data were collected through two ad hoc questionnaires. On the one hand, the first sample reported their participation in both land-based and online gambling and covered the Brief Adolescent Gambling Screen (BAGS). On the other hand, the second sample filled a specific questionnaire on their gambling habits and motivations. This questionnaire had three blocks: one dedicated to offline or land-based gambling; another dedicated to online gambling and a third with questions on gambling and betting in general. There were also questions about socio-demographic aspects included at the end of the questionnaire (gender, age, and school).

Besides asking whether the adolescents had ever gambled either offline or online, the first and second blocks included items to know their gambling frequency, the types of games or bets and the places (for land-based) or devices (for online) where they did it. The land-based block also included a Yes/No item about whether they had ever been asked for an identification card while gambling, and the online block included an item inquiring about the means through which payments were made.

The last block explored with whom they gambled or betted; their reasons for doing so; the amount of money they spent gambling; the frequency of winning prizes; how likely they believed they were to win; and how they had learned about the type of gambling or betting they were involved in. There were also Yes/No questions about whether they knew that gambling was illegal for minors, whether their parents knew about their gambling behaviour, and whether they had had arguments at home as a result of said behaviour. This block also included the BAGS (Stinchfield et al., 2017), a short scale made up of three items that screens for problem gambling behaviour. The three items have a four-point response options coded as 0–3, with a total score range of 0–9. As the original authors stated in the development of the scale, a subject with a score of 3 or below showed almost no chance of having a Gambling Disorder (GD), while a score of four or greater indicated a very high likelihood of GD, and scores of 6 or greater indicated certainty of having GD (Stinchfield et al., 2017), establishing two possible thresholds or cut-off points. The internal consistency measured by the Cronbach Alpha was .56 in the present study, a low coefficient but adequate in accordance with Hinton et al. (p. 363, 2004).

Procedure

The schools were contacted in order to be able to count on the collaboration of both the school management and the respective

parents' associations. A letter form was delivered to the school management staffs to be sent to the parents asking for their permission to include their children in the study, to which they could refuse.

Data were collected in 58 schools across the region of Galicia (Spain) during the first half of 2019. The gathering was carried out in the classrooms themselves in small groups of around 20 students through a self-administered paper-and-pencil questionnaire that each student completed individually. All students, and previously their parents, were informed of the purpose of the study, as well as of the confidentiality and anonymity of the answers. The students were also informed that their participation was voluntary, and they could refuse to fill the questionnaire or opt-out of the study at any moment. The time taken to complete the questionnaire was approximately 15 minutes for the specific questionnaire on gambling habits and motivations. Only 6 of the contacted schools refused to participate in the study, citing logistical and/or time constraints. Furthermore, there were few cases of students in the classrooms refusing to participate, or whose parents had expressed their non-consent (less than 5%). The Bioethics Committee of the University of Santiago de Compostela approved this study.

Data analysis

The BAGS scale was coded so that a total score equal or superior to 4 would be equivalent to Problem Gambling, the same criteria proposed by the original developers of the scale (Stinchfield et al., 2017), but the most discriminating 6 cut-off point was also calculated. Bivariate tabulations were carried out using Chi-square test (χ^2) for the comparison of percentages and Contingency Coefficient (CC) for calculating the effect size. A binary logistic regression analysis was performed to try to deepen the analysis of the relationship between problem gambling and contextual variables. Problem gambling was the dependent variable, and all variables previously detected by the χ^2 analysis as significantly associated with problem gambling were used as independent variables. Gender and age were also taken into account for the multiple predictor models. The analyses were performed with the statistical package IBM SPSS Statistics 25 (IBM Corp. Released, 2017).

Results

Of the total sample ($n = 9,681$), 16.2% gambled land-based only, 1.4% gambled online only and 5.9% gambled in both modalities. This adds up to a total of 23.5% of gamblers regardless of the modality, who claim to have gambled at some point in their lives. The remaining 76.5% of the sample not gambling at all. In other words, of the total sample, 22.2% gambled land-based and 7.4% online. The information segmented by gender and age is presented in Table 1. All the data presented here refers to the whole lifetime of the subjects in the sample. It can be highlighted that in the 14-17 age group, 27.4% have gambled at least once in their lives, 25.9% land-based and 8.9% online.

Regarding problem gambling, 1.9% ($n = 178$) of the total sample obtained a positive score in the BAGS (≥ 4), 1.3% had a score between 4 and 5, while 0.6% reached or even surpassed a score of 6. The information segmented by gender and age is presented in Table 2. The cut-off points used are the same in all cases.

Table 1
Overall lifetime gambling involvement and segmentation by gender and age.

Gambling	Overall Sample	Gender			Age (in years)				
		Male	Female	χ^2	CC	12-13	14-15	16-17	χ^2
Land-based	22.2%	32%	12.4%	534.12**	.23	12.9%	20.9%	33.8%	347.70**
Online	7.4%	12.5%	2.1%	382.91**	.20	3.5%	6.7%	12.4%	161.37**

** $p < .001$

Table 2.
Overall problem gambling and segmentation by gender and age.

BAGS	Overall Sample	Gender			Age (in years)				
		Male	Female	χ^2	CC	12-13	14-15	16-17	χ^2
Cut 4	1.3%	2.2%	0.3%	102.11**	.10	0.4%	1.3%	2.2%	40.59**
Cut 6	0.6%	1%	0.1%			0.3%	0.7%	0.6%	
Total	1.9%	3.2%	0.5%	100.49**	.10	0.7%	2%	2.8%	34.90**

** $p < .001$

As it can be seen in Table 3, most of land-based gamblers engage in gambling with a monthly frequency or even more rarely: 84.2% would gamble occasionally, either “at least once a month”, or even less frequently (“rarely”). The most common land-based game was sports betting machines, and the place a bar or coffee shop. The other places where they reported gambling were mainly houses, the street itself or other non-specialized places where they could buy coupons (such as a grocery store), fairs, and two gamblers reported specifically the hippodrome. When asked if they had been requested for an identification card to prove that they were over the legal gambling age, only 20.2% reported that it had indeed happened to them.

In the case of online gamblers (Table 4), 83.3% reported gambling with a monthly frequency or even more rarely, the most common type was also sports betting, the most common channel used was gambling webpages, and they paid through a PayPal account or similar. Even if the original questionnaire asked about “Other gambling types” where gamblers could freely report any activity, they only reported videogames (skins gambling, in-game prizes roulette) or multiplatform webpages. When reporting other payment methods, they referred to money from their Steam or Google Play Store account, other videogame skins, the money given by the websites or apps themselves when a new account is made, and one reported that they didn’t know because an older friend was in charge of payments.

The context, motivations and expectations reported by gamblers are presented in Table 5. Most adolescents gamble in the company of other people, mainly friends and classmates (63.4%) with 23.8% reporting having gambled by themselves. Winning money is the primary reason for gambling. The most frequent bets are of less than 10 euros, 1 out of 3 (35.7%) reported having won a prize often or always/almost always, and a similar ratio (36.5%) believed that it was fairly likely or very likely to win money. When reporting other reasons for gambling, they mainly referred to curiosity to try it, family tradition, gambling with family members that said that they brought them good luck, or even to get rid of loose change.

Regarding the last Yes/No questions of the questionnaire, 85.2% knew that it was illegal for minors to bet or gamble, 63.7% reported that their parents knew about their gambling behaviour, but only 7.9% informed about having had arguments with their parents because of gambling.

Table 3.
Characteristics of land-based gambling ($n = 1047$).

Frequency of gambling behaviour	Total
Rarely	52.4%
At least once a month	31.8%
At least once a week	12.5%
Daily or almost every day	3.3%
Gambling type (could mark more than one)	
Slot machines	14.2%
Cards or other games of chance (poker, roulette...)	12.1%
Lotteries, pools, bingo	35.2%
Sport betting machines	61%
Scratch cards	27.2%
Places of gambling or betting (could mark more than one)	
Bar/coffee shop	67.9%
Gambling parlours	11.4%
Lottery administration	24.4%
Tobacconist's	5.8%
Arcades	7.8%
Casino or Bingo	4.8%
Private tournaments	3.5%
Other	3.9%

Finally, although the characteristics of the problem gamblers varied greatly (Tables 6 and 7), some stood out. The 12-to-17 problem gambler has learnt about gambling and usually gambles with friends or classmates, does so to win money, usually spends less than 10€ a month and believes that it is not very likely to win money by gambling. Those who gamble online mainly do so by placing sports bets on websites, while those who gamble offline usually bet on sports in bars or coffee shops. In both modalities they gamble significantly more frequently than non-problem gamblers.

As shown in Table 8, the model resulting from the logistic regression performed can explain the problem gambling through five variables ($\chi^2 = 49.225$; $p < .01$). Gambling or betting at a Casino/Bingo or Bingo online, in order to win money and because of their friends gambling and they wanting to belong to the group are risk

factors for problem gambling. Conversely, gambling or betting with parents was shown to be a protective factor. The goodness of fit of the model was adequate (Hosmer Lemeshow: $\chi^2 = 4.075, p = .539$), it classified correctly the 86.7% of the problem gamblers and it explained 36.3% of the variance of the dependent variable (Cox-Snell $R^2 = 0.230$; Nagelkerke $R^2 = 0.363$).

Table 4.
Characteristics of online gambling (n = 265).

Frequency of gambling behaviour	Total
Rarely	52.9%
At least once a month	30.4%
At least once a week	10.9%
Daily or almost every day	5.8%
Gambling type (could mark more than one)	
Online poker	20.7%
Online Slot machines and roulette	20.9%
Online Bingo	10.3%
Online sports betting	60.5%
Online non-sports betting	15.2%
Online scratch cards	8%
Other	7.8%
Places of gambling or betting (could mark more than one)	
Gambling webpages	49.1%
Social networks	16.6%
Mobile apps	36.6%
Online videogames	23.8%
Payment methods (could mark more than one)	
Credit card	20.2%
Bank account	8.7%
PayPal account or similar	32.3%
Paysafe card or any other prepaid card	30%
Other	8.6%

Table 6.
Characteristics of gambling. Comparison between problem and non-problem gamblers.

Land-based gambling (n = 1047)	Problem gambling	Non problem gambling	χ^2	CC
Frequency				
Rarely	37.6%	53.9%	23.31**	.15
At least once a month	33.7%	31.7%		
At least once a week	18.8%	11.9%		
Daily or almost every day	9.9%	2.5%		
Gambling type				
Slot machines	26.2%	12.9%	12.41**	.11
Cards or other games of chance	21.4%	11.1%	8.25*	.09
Lotteries, pools, bingo	32%	35.7%	0.39	-
Sport betting machines	74.8%	59.6%	8.37*	.09
Scratch cards	29.4%	27.1%	0.15	-
Places of gambling or betting				
Bar/coffee shop	76.7%	67.1%	3.49	-
Gambling parlours	18.4%	10.7%	4.71*	.07
Lottery administration	18.4%	25.1%	1.87	-
Tobacconist's	12.6%	5.1%	8.23*	.09
Arcades	14.6%	7.1%	6.11*	.08
Casino or Bingo	15.5%	3.6%	26.38**	.16
Private tournaments	10.7%	2.8%	14.79**	.13
Online gambling (n = 265)				
Frequency				
Rarely	36.6%	55.2%	38.65**	.36
At least once a month	17.1%	33.5%		
At least once a week	22%	9%		
Daily or almost every day	24.4%	2.4%		

Table 5.
Context, motivations and expectations of gambling (n = 1107).

Whit whom they gambled or betted (could mark more than one)	Total
By themselves	23.8%
With friends or classmates	63.4%
With their parents	21%
With someone else from their family	17.5%
Their reasons for gambling (could mark more than one)	
For entertainment	45%
To win money	59.1%
Because their friends gamble/to belong to the group	3.7%
They don't know	10.6%
Other reasons	2.4%
Money they usually spend per month on gambling or betting	
Nothing (other people's money or prior earnings)	16.9%
Less than 10€	65.6%
Between 10 and 30€	12.9%
Between 31 and 50€	2.2%
More than 50€	2.4%
Times they have won a prize by gambling or betting	
Never or hardly ever	20.7%
Sometimes	43.6%
Often	28.2%
Always or almost always	7.5%
How probable they believe it is to win money on gambling or betting	
Not likely at all	8.2%
Not very likely	61.6%
Fairly likely	26.2%
Very likely	4.1%

Table 6.
Characteristics of gambling. Comparison between problem and non-problem gamblers (continuation).

Online gambling (n = 265)	Problem gambling	Non problem gambling	χ^2	CC
Gambling type				
Online poker	31.7%	18.5%	2.90	-
Online Slot machines and roulette	35.7%	18.4%	5.29*	.15
Online Bingo	31%	6.5%	20.07**	.28
Online sports betting	59.5%	60.8%	< 0.01	-
Online non-sports betting	28.6%	12.9%	5.47*	.16
Online scratch cards	19%	6%	6.39*	.17
Places of gambling or betting				
Gambling webpages	71.4%	44.7%	8.90*	.19
Social networks	28.6%	14.2%	4.33*	.14
Mobile apps	35.7%	37%	< 0.01	-
Online videogames	28.6%	23.3%	.29	-
Payment methods				
Credit card	33.3%	18%	4.20*	.14
Bank account	23.8%	6%	11.70*	.22
PayPal account or similar	33.3%	32.3%	< 0.01	-
Paysafe card/prepaid card	35.7%	29.5%	0.38	-

Table 7.
Context, motivations and expectations. Comparison between problem and non-problem gamblers.

	Problem gambling	Non problem gambling	χ^2	CC
How did they learn about this kind of gambling or bet				
From friends	62.3%	48.9%	6.27*	.08
From publicity	34.9%	39.3%	0.60	-
On the Internet	23.6%	18.6%	1.19	-
Seen in the street	30.2%	30.6%	< 0.01	-
With whom they gambled or betted				
By themselves	28%	23.3%	0.95	-
With friends or classmates	75.7%	61.9%	7.24*	.09
With their parents	4.7%	22.9%	18.11**	.14
With another relative	13.1%	18%	1.27	-
Their reasons for gambling				
For entertainment	46.7%	44.8%	0.07	-
To win money	73.8%	57.3%	10.14*	.10
Because their friends gamble/to belong to the group	10.3%	2.9%	12.54**	.12
They don't know	5.6%	11.2%	2.59	-
Money they usually spend per month on gambling or betting				
Nothing	8.6%	17.8%	23.97**	.15
Less than 10€	58.1%	66.5%		
Between 10 and 30€	23.8%	11.6%		
Between 31 and 50€	5.7%	1.8%		
More than 50€	3.8%	2.3%		
Times they have won a prize by gambling or betting				
Never or hardly never	20.8%	20.7%	2.11	-
Sometimes	37.7%	44.3%		
Often	32.1%	27.7%		
Always or almost always	9.4%	7.3%		
How probable they believe it is to win money gambling or betting				
Not likely at all	7.6%	8.2%	3.54	-
Not very likely	54.3%	62.4%		
Fairly likely	32.4%	25.5%		
Very likely	5.7%	3.9%		

Table 8.
Logistic regression model to predict problem gambling.

Problem gambling	
Variable	Multiple ¹ OR (95% CI)
Casino or Bingo	7.89 (2.27–27.46)
Online Bingo	4.10 (1.25–13.41)
With their parents	0.03 (>0.01–0.53)
To win money	3.08 (1.12–8.55)
Their friends gamble/to belong to the group	9.63 (1.77–52.34)

Note: OR = Odds ratio; CI= confidence interval; ¹Adjusted by the independent variables included in the column.

Discussion

One of the objectives of the present study was to analyse the frequency of gambling among minors. As such, it was found that overall gambling reached 23.5% in the whole sample, being more prevalent among male and older students. Land-based gambling remains as the main modality in all socio-demographic groups surveyed. The figures found in overall and land-based gambling are similar to the ones found in the Spanish ESTUDES 2019 report (Plan Nacional sobre Drogas [PNSD], 2020), which includes data from 14 to 18 years old students. The overall gambling participation in the ESTUDES was 25.5%, and land-based gambling was 22.7%, while online gambling was 10.3%. Due to the ESTUDES including an older sample, it could have been expected to find even lower figures in our study. A possible explanation for this discrepancy could be the different time frames used. While the ESTUDES asks about having gambled in the last 12 months, the present study addressed the whole lifetime, thus making it possible for one aspect to counterbalance the other and the resulting percentages to be similar.

Regarding the second objective, the description of motivational aspects and the context of gambling, the most frequent motivation to gamble was “to win money” (59.1%). In a recent meta-analysis carried out by Tabri et al., (2021), they highlighted the association of financial gambling motives with gambling frequency, especially in younger samples. This meta-analysis also showed a relationship between the development of a problem and the economic underlying motivations for gambling. The high percentage of this motivation and the risk it supposes make it a priority objective to target in preventive interventions. Accordingly, Keen et al. (2017) recommend addressing gambling misconceptions and educating about gambling mathematics to build effective gambling prevention programs. An in-depth analysis of the variables that lead to see gambling as a viable way to win money in adolescents may also prove useful to create adequate treatment and preventive interventions. The second most common motivation was “for entertainment” (45%). While financial motives may be specific to gambling, the role of boredom as a risk factor has been studied in several other risky behaviours among adolescents. It has been linked, either by itself or together with other variables, to alcohol consumption (Biolcati et al., 2018), substance use (Sharp et al., 2011; Xie et al., 2020), and delinquency (Newberry & Duncan, 2001; Spaeth et al., 2015). Addressing this motivation to gamble would require a different, community-based approach, transversal to those other risky behaviours.

Intervention proposals should consider that most of the students gambled with friends or classmates (63.4%), and many of them accompanied by a relative (38.5%). Having friends and relatives who gamble is not only a strong predictor of gambling participation,

but also a predictor of at-risk and problem gambling (García-Ruiz et al., 2016; Mazar et al., 2018). Caselles et al. (2018) warned of the risk of increased gambling involvement when adolescents perceive gambling as a normalized behaviour between parents and friends. However, this also represents an opportunity for preventive intervention that makes use of offline social networks. Peer-led preventive interventions have already been tested for smoking, drug use or sexual health with positive results (Dobbie et al., 2019), and could also prove beneficial for gambling.

Sports betting is the main gambling activity in both online and land-based gambling, which is a different result from the one found in the ESTUDES (PNSD, 2020), where the main activities were the lottery for land-based gambling, and videogames in the online modality. This higher preference over other gambling activities could be explained by the perception of sports betting by the Spanish young people, following López-González et al. (2019) description of sports betting as being “socially perceived as a distinctive form of gambling with its own singularities”. In particular, sports betting would be less socially stigmatized due to higher positive and lower negative connotations in relation to other forms of gambling.

The third and final objective of the present study aimed to describe the characteristics of problem gamblers. The Brief Adolescent Gambling Screen [BAGS] was applied and corrected following the cut-offs proposed by the original authors’ (Stinchfield et al., 2017), showing that 1.9% of the students scored 4 or higher. The prevalence of a problem was significantly higher in males and in older students. However, the overall rate found in the present study is lower than the 4.7% reported by the PNSD (2020). The differences between both data, collected one year apart, could be explained by the use of different instruments. The BAGS and the Lie/Bet used in the ESTUDES both have evidence of being appropriate tools to assess problem gambling (Dowling et al., 2019; Stinchfield et al., 2017; Johnson et al., 1997), but Rossow & Molde (2006) warned that the Lie/Bet could inflate the rates due to its low-cut scores. Another possible explanation for this difference could be that underage problem gambling is less prevalent in this region of Spain (Galicia), since the ESTUDES report does not have disaggregated data per region.

By performing a logistic regression model, it was possible to detect four risk factors and one protective factor related to Problem Gambling. All factors had a big impact on the model, especially gambling in a Casino or Bingo (7.890 OR) and because their friends are gamblers or in order to belong to the group (9.635 OR). The role of friends in underage gambling has previously been discussed in this paper. Regarding the importance of gambling on Casinos, Bingos or online Casinos, previous studies have stated that the casino ambience (such as noises, interactions with the staff or even room temperature) can influence gambling behaviour and gambling-related harm (Thomas et al., 2010). Besides, it has been found an association between underage gambling in online bingos and problem gambling (Weidberg et al., 2018). However, in their report on product-based harm minimization, Parke et al., (2016) conclude that ambient characteristics are the most under-researched among those related to problem gambling behaviour, this is especially true when referring to underage gambling and to online gambling. Likewise, the results found in this paper showed that current measures trying to prevent minors from accessing casinos and bingo establishments are not effective, neither land-based nor online. The enforcement of this prohibition should be a priority.

The most salient result in the regression analysis was the inclusion of “gambling with parents” as a protective factor. To interpret this, it is important to note that the third item of the BAGS is “Have you hidden your gambling/betting from your parents, family or teachers?”, which implies that many adolescents would not hide gambling from their parents. Several studies have analysed the role of family on underage problem gambling and have found a complex relationship. Parental problem gambling or having parents who gamble excessively could act as a risk factor (Dowling, Shandley et al., 2017; Derevensky & Gilbeau, 2019), whilst parent supervision have been found to be protective factors (Dowling, Merkouris et al., 2017; Derevensky & Gilbeau, 2019; Pisarska & Ostaszewski, 2020). Gambling together could act as a protective factor since parents may be able to monitor the whole gambling activity. Consequently, part of the prevention efforts should be directed to them.

However, this paper is not without limitations. Firstly, the use of a screening scale does not allow a diagnosis to be made, and only the presence of symptoms can be assessed. Although the BAGS scale (Stinchfield et al., 2017) has international empirical support, the internal consistency shown in this work (.56) is somewhat lower than that the one obtained by the original authors (.72), which should lead to interpret the results with caution. Secondly, it is noteworthy that because this study was conducted in a pre-Covid 19 context its results may not be representative of the current situation. Finally, the fact that the sample only includes students from the Autonomous Community of Galicia (Northwest of Spain), obtained through a non-random sampling procedure, limits the external validity of the results.

To conclude, preventive interventions should consider the motivations and the social factors involved in underage gambling. This study gives us an in-detail view of the gambling situation of minors in 2019 and many variables associated to it, but future studies need to be carried out to analyse the potential impact of the worldwide lockdowns derived from Covid-19 on the reality described in the present paper. Additionally, the high gambling participation found calls for studies assessing gambling related harm, something that appears to have been gaining more importance in last years (Gambling Commission, 2021).

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