Gambling characteristics in Galicia: a Public Health problem

Caracterización del juego de azar en Galicia: un problema de Salud Pública


** CIBER de Epidemiología y Salud Pública, CIBERESP; Área de Medicina Preventiva y Salud Pública. Universidad da Santiago de Compostela, Santiago de Compostela. Spain.

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Send correspondence to:
Mónica Pérez Ríos. CIBER de Epidemiología y Salud Pública, CIBERESP. Departamento de Medicina Preventiva y Salud Pública, Universidad de Santiago de Compostela, Santiago de Compostela, Spain. Phone-Fax: 0034881812277. E-mail: monica.perez.rios@usc.es.

Abstract

Due to the increase in gambling, gambling disorders have become a major social problem of importance for public health, affecting both adults and adolescents. The main objectives of this study were to assess the prevalence of the Galician population who spent money on gambling in the last year and the prevalence of people with, or at risk of, gambling disorder. Data was obtained from a cross-sectional survey carried out in 2017 by the Galician Information System on Risk Behaviors (SICRI). The SICRI conducts annual telephone surveys of Galician residents who were at least 16 years of age, with the sample equi-distributed over a 12-month period. A total of 7,841 participants were selected using stratified random sampling. In order to estimate the prevalence of gambling disorder or at-risk gambling, The South Oaks Gambling Screen (SOGS) questionnaire by Lesieur and Blume was applied. The prevalence of gambling and having or being at risk of gambling disorder was estimated and regression models were adjusted to identify variables associated with gambling disorder or being at risk. Of the Galician population aged 16 years and older, 58.1% (95% CI: 57.0-59.2) spent money on gambling in the 12 months previous to this study, with the highest prevalence of gambling found in men (64.6% vs. 52.2%) in all age groups. The prevalence of gambling disorder or at-risk gambling at the population level is 1.6% (95% CI 1.3-1.9), and is higher among men and younger gamblers. The prevalence obtained signals to gambling as a major public health concern, with young males being at greater risk of developing a gambling problem. Keywords: Gambling; Prevalence; Adult; Behavior; Addictive.

Resumen

Debido a la expansión de los juegos de azar, los trastornos asociados al juego se convierten en un gran problema social con una alta relevancia para la Salud Pública, afectando tanto a adultos como a adolescentes. Los principales objetivos de este estudio fueron conocer la prevalencia de gallegos que gastaron dinero en juegos de azar en el último año y de jugadores con un trastorno de juego o de riesgo. Los datos se obtuvieron del estudio transversal realizado en 2017 por el Sistema de Información sobre Conductas de Riesgo (SICRI). El SICRI se basa en la realización anual de encuestas telefónicas a la población gallega residente que tiene al menos 16 años de edad con la muestra equidistribuida en 12 meses. Un total de 7.841 participantes fueron seleccionados mediante un muestreo aleatorio estratificado. Con el objetivo de estimar la prevalencia de trastorno de juego o de riesgo se utilizó el cuestionario South Oaks Gambling Screen (SOGS) de Lesieur y Blume. Se estimó la prevalencia de juego y jugadores con un trastorno de juego o juego de riesgo y se ajustaron modelos de regresión para identificar las variables asociadas al trastorno de juego o juego de riesgo. De la población gallega de 16 años en adelante, el 58,1% (IC 95%: 57,0-59,2) gastó dinero en juegos de azar en los 12 meses previos a la realización del estudio, siendo la prevalencia de jugadores más alta en los hombres (64,6% vs. 52,2%) en todos los grupos de edad. La prevalencia de trastorno de juego o juego de riesgo en la población es del 1,6% (IC 95%: 1,3-1,9), siendo más alta entre los hombres y en los jugadores más jóvenes. Las prevalencias obtenidas señalan al juego como un importante problema de Salud Pública, siendo los varones jóvenes los que tienen un mayor riesgo de desarrollar un problema asociado al juego. Palabras clave: Juego de azar; Prevalencia; Adulto; Conducta Adictiva.
Playing games of chance is a legal and socially accepted activity. Recent data show that the majority of adults have played games of chance at some point in their lives and that there are more gamblers than non-gamblers at the population level. The practice of gambling varies between populations, with the highest prevalences observed in European countries and the United States. Thus, in 2010 in the United Kingdom, 73.0% of the population aged 16 and over declared having gambled in the previous year, while in 2011-2013, among the population aged 18 and over in the United States, this percentage was estimated at 76.9%, and in North Korea in the same age group in 2011 it was 41.8% (Draft & Griffiths, 2016). Although most adult gamblers do not develop gambling-related disorders (Potenza, Kosten & Rounsaville, 2001), it leads to an addictive disorder in some people that causes health, social, work, or economic problems and high suicide rates (Naulty, Okuda, Hen & Blanco, 2017). The worldwide prevalence of gamblers with gambling-related problems, varied from 0.1% to 5.8% in the last year, with Oceania the continent having the lowest prevalences and North America the highest. Being male, young, having a low educational level or low income are variables associated with gambling problems in different studies (Calado et al., 2016).

The development of information and communication technologies (ICT) is causing a revolution in games of chance through the emergence of online gambling, which considerably increases the accessibility of games of chance around the world. After the publication of the Royal Decree of 1977 (Real Decreto-Ley 16/1977, February 25th, regulating the criminal, administrative and fiscal aspects of games of chance and betting), no substantial changes were made in Spanish legislation until Law 13/2011 (Ley 13/2011, May 27th, regulating gambling), which legalised online gambling. This type of gambling is now a growth industry which, in economic terms, is estimated to account for a third of the gambling business in Spain; of the €41,826.8 million spent on gambling in 2017, 32.0% was spent online (Clotas, Bartroli, Caballé, Pasarín & Villalbí, 2020). In Spain, online gambling users are mostly men (83.3%) and under 46 years of age (87.5%) (Dirección General de Ordenación del Juego, 2018). In recent years, due to the expansion of online gambling, gambling disorders have become a problem from a social point of view and of great relevance to public health (Abbott, 2020).

In Spain, 75.7% of the population aged 18 and over declared having spent money on games of chance (Dirección General de Ordenación del Juego, 2015) in 2015, and in 2017 this percentage was 60.2% in the population aged between 15 and 64 years (Observatorio Español de las Drogas y las Adicciones y Delegación del Gobierno para el Plan Nacional sobre Drogas, 2019). In 1980, pathological gambling was formally classified as a mental disorder by the American Psychiatric Association (1980), and in the latest edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) (American Psychiatric Association, 2013), it is listed as a disorder of an addictive nature, included in the chapter on “Substance-related disorders and addictive disorders.” Pathological gambling is a persistent and maladaptive gambling behaviour that generates clinically significant distress (American Psychiatric Association, 2013), affecting both adults and adolescents with a prevalence in the latter at times greater than that of adults (Volberg, Gupta, Griffiths, Olason & Delfabbro, 2010). In 2015, 0.3% of the Spanish population aged 18 years and over had a pathological gambling disorder (Directorate General for Gambling Regulation, 2015) and among the population aged 15 to 64, this percentage was estimated at 0.5% in 2017 (Observatorio Español de las Drogas y las Adicciones et al., 2019).

Given the need for representative data in relation to gambling in Galicia, the objectives of this study were: 1) to ascertain the prevalence of Galicians spending money on gambling in the last year, 2) to ascertain the types of games most used and their frequency of use, 3) to describe the gamblers, 4) to reveal the prevalence of gamblers with or at risk of a gambling disorder, and 5) characterize gamblers with, or at risk of, gambling disorder.

**Methods**

The Information System on Risk Behaviors (SICRI) was established in 2005. It focuses on carrying out cross-sectional studies to obtain information on an annual basis among the population aged 16 and over residing in Galicia by means of telephone surveys using a CATI system (Computed-Assisted Telephone Interview).

The survey carried out in 2017 (SICRI-2017) was designed to guarantee the representativeness of the population by sex and in four age groups: 16-24, 25-44, 45-64 and 65 years and older. Stratified random sampling was carried out using the health insurance card database as a sampling frame; this includes both landlines and mobile phones of all Galicians who have had some contact with the health system and covers approximately 97.0% of the population resident in Galicia. The fieldwork was carried out between January and December 2017, with the sample equidistributed by months and an average of 650 surveys carried out monthly.

Specific questions were included in the SICRI-2017 questionnaire that made it possible to estimate the prevalence of gambling and those with gambling disorders or at-risk gambling. The practice of gambling was determined by an affirmative answer to the question “Thinking about the last 12 months, did you spend money on games such as lottery, slot machines, Internet gambling ...?”. Those answering yes were asked about the types of games they had spent money on, with five categories of non-exclusive
answers: lottery games (lotteries, pools, draws), Internet gambling, casinos/bingo halls, slot machines, and other games. In addition, for each of the response options, they were asked about the frequency with which they gambled with 4 response options: every day, every or almost every week, a few times a month and a few times a year (Consellería de Sanidade, 2018).

People reporting playing games of chance in the 12 months prior to the interview answered 10 questions with the aim of estimating the prevalence of gamblers with gambling disorders or at-risk gambling. These questions form part of the gambling addiction section of the South Oaks Gambling Screen (SOGS) questionnaire by Lesieur and Blume (1987), adapted to Spanish (Echeburúa, Martín-Baez, Fernández-Montalvo & Páez, 1994). Questions from the debt section were not included. The total questionnaire score ranges from 0 to 10 points. To identify a gambling addiction problem, the cut-off point proposed in the validation of the SOGS questionnaire in Spain was used; gamblers scoring 4 points or more are classified as having a gambling disorder and those with 2 or 3 points are at-risk gamblers.

The information thus obtained was used to calculate the following prevalences, globally, by sex, and by age group (16-24, 25-44, 45-64 and 65 years and over): the percentage of people spending money on games of chance in the last year, globally and for each type of game, the percentage of people spending money on the lottery every week, a few times a month, and a few times a year, and the prevalence of people with a gambling disorder or at-risk gambling, those scoring 2 points or more on the SOGS.

To characterise those with gambling disorder or at-risk gambling, a logistic regression model was adjusted which initially included all the variables that were significant in a previous bivariate analysis, with p < 0.1. In the final model, the variables were maintained with p < 0.05. Adjusted odds ratios (OR) were calculated from this model. The following sociodemographic variables were assessed: sex, age group (16-24, 25-44, 45-64, 65 and over), country of birth (Spain, other country), area of residence (rural, semi-urban, urban), employment situation at the time of the survey (working, unemployed, housework, pensioner, student or other situation), level of education in three categories (basic - primary education or below, intermediate - secondary education, higher - university), and whether living with or without a partner. Self-perceived state of health at the time of the survey was also assessed (very good, good, normal, bad and very bad). Behaviour-related variables were analysed: tobacco and cannabis use (smoker or non-smoker of either at the time of the survey), alcohol use (AUDIT questionnaire, with a score ≥ 8 as indicative of risky or problematic drinking, 7 in women and in those aged over 64 years), use of instant messaging applications, social networks and virtual reality games for more than two hours a day, playing games of chance other than the lottery, playing the lottery every week or problematic Internet use (PIU), defined as starting with a score of ≥ 25 on the Internet-Related Experiences Questionnaire (CERI). The prevalences and adjusted ORs are presented with 95% confidence intervals (95% CI). The analysis was carried out with the weighted sample according to the sample design, and Stata v14.2 was used for the calculations.

This study was implemented following good practice guidelines and the Declaration of Helsinki, with express verbal consent requested and obtained from surveyed individuals.

Results

In SICRI-2017, 7,841 people over 15 years of age were interviewed, with a response rate of 78%.

Of the Galician population aged 16 years and over, 58.1% (95% CI: 57.0-59.2) spent money on games of chance in the 12 months prior to the study. The prevalence of gambling increased with age, reaching a maximum in the 45-64 age group, both in men (73.1%) and women (62.8%) and decreasing thereafter (Figure 1). The prevalence of gambling was higher in men, both globally (64.6% vs. 52.2%) and by age group, although the differences were greater in the extreme age groups (16-24 and ≥75), where the gap between the two exceeded 20 percentage points (Figure 1).

In terms of the type of gambling on which Galicians spent money in the last 12 months, 97.9% (95% CI: 97.5-98.2) declared spending on lottery, pools, draws and similar, followed by online gambling with a prevalence of 2.1% (95% CI: 1.7-2.4) (Table 1).

When assessing the frequency of gambling among Galicians who reported doing so, a few times during the year was the most frequent response, regardless of sex and age group. Among the Galician population playing the lottery, pools or draws, 33.9% (95% CI: 32.4-35.4) did so on a weekly basis, with the highest prevalence in men (41.8% vs. 25.2%). Depending on the age group, the lowest weekly gambling frequency was observed among those aged between 16 and 24 years [16.2% (95% CI: 12.3-20.2)] and the highest among those in the 45-64 group [37.9% (95% CI: 35.3-40.4)] (Figure 2).

Online gambling was practised by 1.2% (95% CI: 1.0-1.4) of Galicians aged 16 and over in the last year. The prevalence varied both by sex and by age group, being higher in men (2.4% vs. 0.1%) and decreasing with age (Table 2). The prevalence of online gambling reached 6.3% (95% CI: 5.2-7.4) among Galicians aged 16 to 24 years compared to 0.2% (95% CI: 0.1-0.3) in the population aged 45 and over. Of gamblers, 2.1% (95% CI: 1.7-2.4) reported placing online bets, with the prevalence reaching a maximum of 22.8% (95% CI: 19.2-26.5) in younger gamblers.
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Figure 1. Percentage of the population aged 16 and over that spent money on gambling in the last 12 months, by sex and age group, with 95% confidence interval (95% CI). Galicia, SICRI-2017.

Table 1. Percentage of people 16 years and older who spent money on gambling in the last 12 months, by type of game. Data for the entire population, gamblers and gamblers with gambling disorder or at-risk gambling, with 95% confidence interval (95% CI). Galicia, SICRI-2017.

<table>
<thead>
<tr>
<th>Game type</th>
<th>In the entire population</th>
<th>In the gamblers</th>
<th>In gamblers with gambling disorder or at-risk gambling</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% CI95%</td>
<td>% CI95%</td>
<td>% CI95%</td>
</tr>
<tr>
<td>Lottery, pools, draws</td>
<td>56.9 [55.7 - 58.0]</td>
<td>97.9 [97.5 - 98.2]</td>
<td>88.9 [84.2 - 93.6]</td>
</tr>
<tr>
<td>Other games</td>
<td>2.1 [1.8 - 2.3]</td>
<td>3.5 [3.1 - 4.0]</td>
<td>24.3 [17.1 - 31.5]</td>
</tr>
<tr>
<td>Internet gambling</td>
<td>1.2 [1.0 - 1.4]</td>
<td>2.1 [1.7 - 2.4]</td>
<td>14.1 [8.6 - 19.5]</td>
</tr>
<tr>
<td>Casino/Bingo</td>
<td>0.3 [0.2 - 0.3]</td>
<td>0.4 [0.3 - 0.6]</td>
<td>2.4 [0.4 - 4.3]</td>
</tr>
<tr>
<td>Slot machines</td>
<td>0.5 [0.3 - 0.6]</td>
<td>0.8 [0.6 - 1.1]</td>
<td>10.2 [4.8 - 15.5]</td>
</tr>
<tr>
<td>Sports bets</td>
<td>0.3 [0.2 - 0.4]</td>
<td>0.5 [0.4 - 0.7]</td>
<td>1.9 [0.5 - 3.3]</td>
</tr>
</tbody>
</table>

Figure 2. Percentage distribution of gamblers playing lottery, pool or draws, by gambling frequency. The data are presented by sex and age group. Galicia, SICRI-2017.
Table 2. Percentage of people aged 16 and over who spent money on Internet gambling in the last 12 months, by sex and age group. Data for the entire population and gamblers, with 95% confidence interval (95% CI). Galicia, SICRI-2017.

<table>
<thead>
<tr>
<th></th>
<th>In the entire population</th>
<th>In the gamblers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>All</td>
<td>7,841</td>
<td>1.2</td>
</tr>
<tr>
<td>By sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>3,914</td>
<td>2.4</td>
</tr>
<tr>
<td>Female</td>
<td>3,927</td>
<td>0.1</td>
</tr>
<tr>
<td>By age group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-24 years</td>
<td>1,829</td>
<td>6.3</td>
</tr>
<tr>
<td>25-44 years</td>
<td>2,007</td>
<td>2.0</td>
</tr>
<tr>
<td>45 years and over</td>
<td>4,005</td>
<td>0.2</td>
</tr>
</tbody>
</table>

Table 3. Distribution of the population and gamblers aged 16 and over by scores obtained in the South Oaks Gambling Screening questionnaire. Percentages with 95% confidence intervals (95% CI). Galicia, SICRI-2017.

<table>
<thead>
<tr>
<th></th>
<th>In the entire population</th>
<th>In the gamblers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>CI95%</td>
</tr>
<tr>
<td>Do not gamble</td>
<td>41.9</td>
<td>40.8</td>
</tr>
<tr>
<td>0 points</td>
<td>52.4</td>
<td>51.2</td>
</tr>
<tr>
<td>1 point</td>
<td>4.1</td>
<td>3.6</td>
</tr>
<tr>
<td>2 points</td>
<td>0.9</td>
<td>0.7</td>
</tr>
<tr>
<td>3 points</td>
<td>0.3</td>
<td>0.2</td>
</tr>
<tr>
<td>&gt;=4 points</td>
<td>0.4</td>
<td>0.3</td>
</tr>
</tbody>
</table>

Figure 3. Percentage of gamblers aged 16 years and older scoring 1 point, 2-3 points and 4 points or more in the South Oaks Gambling Screening questionnaire, by sex and age group, with 95% confidence interval (95% CI). Galicia, SICRI-2017.

With regard to gambling addiction, 90.2% of the Galicians who declared playing a game of chance in the last year did not score any points on the SOGS questionnaire and 7% scored 1 point (Table 3). The population prevalence of gambling disorder or at-risk gambling was 1.6% (95% CI: 1.3-1.9), with 0.4% (95% CI: 0.3-0.6) classified as having gambling disorder and 1.2% (95% CI: 1.0-1.5) as at-risk gamblers. Restricting this analysis to gamblers, this prevalence was 2.8% (95% CI: 2.3-3.3): 0.7% (95% CI: 0.5-1.0) with a gambling disorder and 2.1% (95% CI: 1.6-2.5) with at-risk gambling (Figure 3). The prevalence of gambling disorder among gamblers was higher among men (1.3% vs. 0.1%) and in the 16-24 age group (2.4%) (Figure 3).
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Regarding the type of gambling, those with gambling disorder or at-risk gambling mostly played lottery, pools, draws and similar games, as did gamblers as a whole, but the percentage in the latter was lower [88.8% (95% CI: 84.2-93.6)]; on the other hand, it was higher in Internet gambling [14.1% (95% CI: 8.6-19.6)] and slot machines [10.2% (95% CI: 4.5-15.5)] (Table 1).

All behaviour-related variables were significantly associated with gambling disorder or at-risk gambling in the bivariate analysis (p<0.05). Among the sociodemographic variables, the association was significant for sex, age group, educational level and living with a partner. When adjusting the multivariate model, it was found that the characteristics independently associated with gambling disorder or at-risk gambling were being male, having risky alcohol use, spending more than two hours a day using instant messaging applications, having problematic Internet use, playing games of chance other than the lottery, and playing the lottery every week. The adjusted OR of each variable, together with its 95% confidence interval, is shown in Figure 4, where it is observed that all values are greater than 2, and that problematic Internet use multiplies the probability of having a gambling disorder or at-risk gambling by 10.

Discussion

In the last year, 58.1% of the Galician population aged over 15 spent money on games of chance, mainly in lottery, pools, draws and similar. The prevalence of gamblers was higher in men and in the population aged 45 to 64 years. Among Galicians between the ages of 16 and 24, 16 out of 100 placed bets online. Of the Galician population in general, 0.4% had a gambling disorder and 1.2% had at-risk gambling; among gamblers, these prevalences were 0.7% and 2.1%, respectively.

The estimated prevalence of gamblers in Galicia in this study is lower than that obtained for the whole of Spain in the 2015 study on the prevalence of gambling in the population aged 15 years and over (67.0%) (Dirección General de Ordenación del Juego, 2015) and similar to that estimated by the 2017 Spanish survey on alcohol and other drugs (EDADES) among the population aged 15 to 64 years (60.2%) (Observatorio Español de las Drogas y las Adicciones et al., 2019). The sociodemographic characteristics of gamblers identified in both studies are similar, with the gambler profile being a man aged between 45 and 64 years.

As in the EDADES-2017 survey, among the most frequent gambling modalities in Galicia were lotteries, pools, and draws, while online bets were the second option. Thus, 1 in 100 Galicians aged 16 and over, 25,890, placed bets online and of those, 10,278 were aged 16 and 24 years. This is an important aspect since it is precisely online gambling that is more addictive than any other type of gambling (Monaghan, 2009; Wood, Williams & Parke, 2012) and is the main cause of gambling addiction in younger people (Chóliz, 2016). Among the European 16-year-old student
population, 16.2% acknowledged having gambled online in the last 12 months (Molinaro et al., 2018). In Galicia, in this study, we estimate the prevalence of online gambling in 16-year-olds at 11.9% (data not shown in results). In fact, although gambling is illegal for minors, according to SI-CRI-2017 data (not shown in results) up to 19.4% of men and 3.8% of women aged between 16 and 17 years spent money on some type of game of chance, either in person or online. Higher figures were obtained among 16-year-old students in Europe (31.6% men vs. 13.8% women) (Molinaro et al., 2018). From a clinical point of view, these data are worrying since early exposure to gambling increases the risk of gambling-related problems in adult life (Burge, Pietrzak, Molina & Petry, 2004; Dowling et al., 2017).

Although it might seem that in Galicia the prevalence of problems associated with gambling is low, 0.4% of Galicians are gamblers with a gambling disorder and 1.2% have at-risk gambling. The prevalences obtained indicate that 38,399 Galicians have problems with gambling. In addition, it is important to note that it is precisely among the youngest population, aged 16 to 24 years, that the highest prevalence, 9.1%, is observed.

In Galicia, three previous studies were carried out, in 1991, 1993 and 2001, in which the prevalence of problems related to gambling in the adult population was estimated (Becoña, 1993; Becoña & Fuentes, 1995; Becoña, 2004). Given changes in the design, in the measurement instrument or in the age of the population under study, an accurate assessment of the development of the prevalence of gambling problems among the Galician population is not possible. From the first to the current estimates, a decrease in the point prevalence estimates is observed, but the presentation of results in previous studies, which did not include the precision of the estimates presented (in no case were confidence intervals included), could point to a stabilization of prevalences scenario. Thus, the 1993 study in Galicia, using SOGS, estimated the prevalence of gamblers with a gambling disorder (labelled pathological gambling in the study) to be 1.4% (n = 14) and of gamblers with problematic gambling (problem gamblers in the study) to be 2.0% (n = 21) (Becoña et al., 1995). In the present study, these prevalences, using the same instrument, are estimated at 0.7% (0.5-1.0) and 2.1% (1.6-2.5), respectively, so that the changes observed in the point estimates of the prevalence of gamblers with gambling disorder could be residual. The latest estimates available for Galicia are from a study carried out in 2001 in a population aged 18 years and over, applying the NODS questionnaire (Dirección General de Ordenación del Juego, 2015). Nevertheless, it should be taken into account that the NODS is considerably more restrictive when it comes to identifying people with gambling problems compared to the SOGS, which, according to some authors, may overestimate prevalences when applied to population samples (Raylu & Oei, 2002). The two studies are separated by 16 years and gambling has changed in our environment (Abbott, 2020).

The characteristics of Galicians with gambling disorders or at-risk gambling coincide with those of other studies carried out in Spain, being more likely among men and among those gamblers with risky alcohol use (Echeburúa, González-Ortega, de Corral & Polo-López, 2013; Jauregui, Estévez & Uribiola, 2016). Problematic Internet use or messaging for more than two hours a day are other characteristics that increase the probability of gambling disorders or at-risk gambling. Previous studies had already found that people with these behaviours shared similar personality traits and emotional distress (Mallorquí-Bagué et al., 2017).

Among the limitations of this study, it should be noted that in estimating the prevalence of gambling disorder or at-risk gambling, the questions included in the SOGS questionnaire related to being in debt were not applied. This could cause an underestimation of the prevalence, since the nine questions about who people ask for money to spend on gambling were not included. It is important to explain that the debt questions are aimed at those people who answer positively to the question: “Have you ever borrowed money to gamble or to pay gambling debts?” Of the 4,142 people who claimed to have spent money on gambling in the 12 months prior to the survey, only 19 answered affirmatively to this question and of these, 12 had already scored 4 points or more in the previous questions, meaning that they were already classified as having gambling disorder. Two of them had 3 points, and since they would have at least one more point in the debt questions, they would also be classified as having gambling disorder. Only 5 cases with 1 or 2 points were excluded from the analysis since it was not possible to know whether the debt questions would add one or more points. This allows us to conclude that the impact of these questions related to debt in estimating the prevalence of gambling disorder is very low. Therefore, the non-inclusion of these questions, which take up considerable time in the application of the questionnaire, in this case have an imperceptible impact on the estimated prevalence. On the other hand, having identified only 37 people with gambling disorder, a comparative analysis between their characteristics and those of the rest of the sample was not possible.

Among the biases that could affect the results of this study, social desirability stands out; this can manifest itself with concealment of gambling and would particularly affect those with a gambling disorder. The inclusion of gambling...
questions in a questionnaire assessing other behaviours, both risky and protective, could mitigate the impact of this bias. Among the strengths of this study, it is worth highlighting the large sample size and a response rate close to 80.0%; the first guarantees the accuracy of the results, and both ensure the representativeness of the sample.

In conclusion, the percentage of the population that spends money on gambling is lower in Galicia than in Spain as a whole, yet even so, the prevalences obtained indicate that gambling is a relevant public health issue. The prevalence of gamblers, both men and women, reaches a maximum in the 45-64 years age group, but it is young men who have a higher prevalence of problems associated with gambling; thus both primary, secondary or tertiary prevention measures should target them, without forgetting other vulnerable groups. Sensitised to the problem, the regional administration of Galicia is working on modifying Law 14/1985, Regulating Gambling and Betting in Galicia. As was the case with the regulation of other health areas to do with changing behaviours such as smoking and adopting healthy lifestyles, this revision of the law incorporates both educational and regulatory measures to protect the population, especially the most vulnerable groups, and to reduce the prevalence of gambling disorders.

**Conflict of interests**

All authors declare that they have no conflicts of interest.

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