

Exposure of adolescents and youth to Gambling advertising: a systematic review

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Título: Exposición de jóvenes y adolescentes a la publicidad de los juegos de azar: una revisión sistemática

Resumen: Los posibles efectos negativos de la publicidad de juegos de azar (JdA), sobre todo en Adolescentes y Jóvenes (AjJ), generan alarma social. Se realizó una revisión sistemática de las investigaciones sobre publicidad y juego en AjJ, en los últimos 10 años, siguiendo las directrices PRISMA, seleccionándose 31 trabajos. Los resultados destacan que AjJ, en contra de la legislación, participan con frecuencia en JdA, presentando problemas de juego. La publicidad de JdA es variada e intensa en especial en TV, eventos deportivos y redes sociales, estando dirigida a JyA, aunque suelen ser críticos con ella. Afecta más a varones jóvenes y con conductas de juego inadecuadas, consolidándolas. Los contenidos principales tratan de normalizar el juego y resaltar ganancias (sociales o económicas). El nivel de recuerdo y las actitudes sobre la publicidad del juego se asocian a incrementos en la intención de jugar, comportamientos de juego, y problemas de juego. Los incentivos más eficaces para jugar incluyen promociones económicas. La publicidad parece tener efecto, aunque reducido, para mejorar la actitud hacia los JdA e incrementar la participación en éstos, pero es difícil identificar sus efectos a medio y largo plazo. Son necesarios más estudios sobre JdA y publicidad, en especial en España.

Palabras clave: Publicidad. Juego patológico. Revisión sistemática. Adolescentes y Jóvenes.

Abstract: The possible negative effects of gambling Advertising (GA), especially in Adolescents and Youth (A&Y), generate social alarm. A systematic review of the research on advertising and gambling in A&Y in the last 10 years was carried out, following the PRISMA guidelines, including 31 studies. The results highlight that A&Y, against the law, frequently participate in gambling, with some having gambling problems. GA is varied and intense, especially on TV, sporting events and social networks, also targeting A&Y, although they are often critical of it. It affects more young men and people with inappropriate gambling behaviours, consolidating those behaviours. The main messages try to normalise gambling and highlight profits (social or economic). The levels of recall, as well as the attitudes about GA are associated with an increase in gambling intentions, behaviours, and problems. The most effective incentives to gamble include economic promotions. Advertising seems to have an effect, albeit reduced, to improve the attitude towards gambling and increase participation, but it is difficult to identify its effects in the medium and long term. More studies on gambling and advertising are necessary, especially in Spain.

Keywords: Advertising. Gambling disorder. Systematic revision. Adolescents and youth.

Introduction

Gambling is a form of leisure activity that is legal in Spain. In person or online, 89.5% of Spanish people gamble (Labrador et al., 2014), or 70% do so in person (Dirección General de Ordenación del Juego, DGOJ, 2016). Gambling constitutes a relevant employment and income source for the government. 31.993 million euros were bet in 2018, with real betting figures (bets minus prizes) of 9.837 million euros, directly giving employment to 85.047 people (DGOJ, 2019).

A reduced percentage of gamblers see their own lives negatively affected by their gambling activity. Labrador et al. (2014) show a vital prevalence of 1.1% of pathological gamblers, 1% of problematic players and 2.9% of at-risk players. Similar figures are reported by the DGOJ (2016): vital prevalence of 0.95% of “pathological players” and 1% of “problematic players”, and an annual prevalence of 0.3% and 0.6% respectively. To reduce these negative consequences of gambling, many countries, including Spain, have developed policies of responsible gambling.

Factors associated with gambling problems have been flagged regarding (a) the player: being male, having irrational thoughts, high impulsivity, involved in gambling and alcohol abuse; (b) gambling: accessibility and structural characteris-

tics; and (c) the environment: legislation, social and family acceptance of gambling. Moreover, advertising of gambling currently stands out, particularly due to the rise in advertisements of sports bets.

In order for people to play, it is important to make a game known, as well as the opportunity of having fun and winning prizes. Due to this, in 2018 gambling companies in Spain spent 328 million euros on advertising, 48% more than in 2017 (DGOJ, 2019). This expenditure in advertising has been increasing significantly in recent years (Figure 1), coinciding with higher availability and accessibility of gambling, without clear knowledge of the impact this has on at-risk groups, such as adolescents and youth (A&Y).

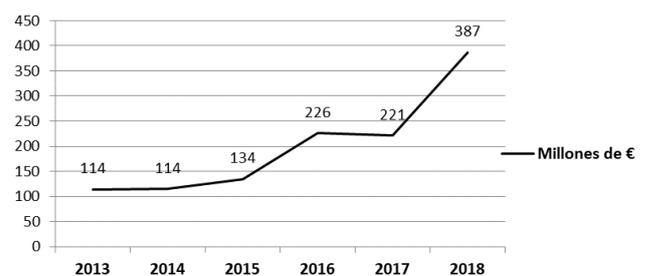


Figure 1. Advertising expenses and promotion of Internet games in Spain (DGOJ, 2019).

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The Spanish government has legislated regarding gambling advertising (Law 13/2011, 27th of May, Gambling regu-

lation). Opting for a self-regulating system from gambling companies, the DGOJ (2012) created a Code of Conduct and a Follow-up Commission. According to this Code, advertising has to be truthful and identifiable, signalling its consequences, not presenting gambling as a solution to any problems, nor like a priority, with special relevance to the protection of those under the age of 18. This legal framework appears insufficient, due to the fact that the self-regulation of gambling companies can conflict with their interest in maximising their profits.

Currently, gambling advertising, especially sports bets, can reach people's homes through communication media and the Internet, even during time frames dedicated to children, providing a variety of offers in moments of particular implication such as during a sport events, and with information on winning odds that is not always realistic, giving rise to alarm due to the feared negative impact on vulnerable populations such as A&Y. In fact, even though gambling is illegal for minors in Spain, in 2018, 8.3% of 14 years old adolescents had gambled online and 18.6% in person, percentages that increased up to 11.6% and 25.6% in the 17 years old age group. Only 38.8% expressed they were informed of the effects and problems associated with gambling (Survey on drug use in secondary schools in Spain, ESTUDES, 2019).

There are no games of chance directed to minors, at least formally, the same way that minors cannot be represented in any way in gambling advertising. Nonetheless, Chóliz (2016) points out that 44.64% of gambling cases involving young players (below 24 years old) were associated with online betting.

According to Chóliz and Lamas (2017) male minors admitted, in a relevant percentage, to having gambled in relation to sports in the last months: betting games (40.9%) and sports bets (45.6%). In the case of female minors, their preferences are shown for lotteries and scratch cards (with a participation of 20.4% and 25.9%, respectively), without reaching higher figures than those observed for male minors playing any game, except for, marginally, scratch cards (25.9% vs 25.3%), contests (4.7% vs. 4.5%) and online bingo (4.2% vs. 3.3%).

These high percentages of participation in gambling translate, logically, in the presence of a pathology for the players; for example, Becoña (2001) finds 5.6% prevalence of problematic gambling in players younger than 21 years old in Galicia. Nevertheless, this setting can have changed in a significant manner in recent years: Chóliz (2016) describes how, since the passing of the gambling legislation of 2011, the percentage of young players in rehabilitation has increased from 3.8% to 16% in just 3 years.

When considering predisposition factors in the onset of gambling, multiple alternatives have been considered: biological variables; upbringing (abuse, negligence or positive gambling models); stressful life events that generate distress or emotional beliefs that could be alleviated through gambling; early experience (in particular significant initial profits or so-

cial pressure, which are acknowledged by up to 80% of gamblers in rehabilitation who had started gambling as minors); and the characteristics of accessibility, availability and social acceptance of gambling (Instituto de la Juventud, 2018). In this last section we can consider the effect of advertising.

The impact of advertising on the development of gambling problems is unknown, which is also the case for all types of advertisements or games. It is also undetermined whether this has specific effects on certain groups (e.g., young people, students, men), as well as the processes by which advertising facilitates gambling problems. The disparity in the data available could be due to the distinct methods, evaluation instruments, target population, advertising systems, or games advertised, included in the studies available on this matter.

It is difficult to know how many people have gambling problems due to advertising, perhaps because of the small impact this might have (Binde, 2014), or because it could not be the most relevant factor. However, the alarm exists since there are no answers to questions such as: Does gambling advertising promote initial gambling behaviour or its maintenance? Does it influence different collectives in a distinct way? What responsibility does it have in gambling problems?

Consequently, the aim of this investigation is to provide a revision of research on advertising of gambling on A&Y.

Methods

A systematic review was carried out, following PRISMA recommendations (Moher Liberati et al., 2009), and the instrument SPIDER (Cooke et al., 2012) was used to define the research question, allowing greater efficiency in the search of qualitative and mixed studies. The review was focused on studies with A&Y, on exposure to advertising of gambling (quantity, type and contents); with observation or descriptive designs; with the use of interviews, self-reports or objective measures; in quantitative, qualitative and mixed empirical studies. Inclusion criteria were: empirical studies; published in peer reviewed journals; which carry out observations, or quantitative, qualitative or mixed descriptions of exposure to advertisements of gambling in A&Y.

A literature search was carried out through the research database *PsycINFO* and *Web of Science* (WoS, which include WoS core, Medline and Scielo), restricted to articles in Spanish and English before January 1st, 2020. Search words included: ("gambling" or "pathological gambling") and ("advertis*" or "publicity") in any field, filtered by age group selected ("adolescents" or "youth") and ("empirical study").

Two members of the research team screened the articles that fit the criteria of the research question starting from the title and subsequently looking at the abstract. Additionally, the references of the selected articles were revised (and those of the studies not included, such as revisions or meta-analyses) to finalise the search. Figure 2 illustrates this process. Two other members of the research team read the

work and recorded the characteristics of the studies in a form (see Table 1 and 2). Any differences in the selection of the studies, as well as in the characteristic summaries were evaluated and agreed upon.

To analyse risk bias, the work was evaluated in its methodological quality with the CRF scale of McMaster (Law et al., 1998; Letts et al., 2007). In each case the form corresponding to the type of study, quantitative or qualitative, was used.

The results were synthesised by means of a participant recount. The studies included were grouped by interest theme (type, quantity and contents), showing relevant results for each of these. Different areas were considered separately: possible ways in which advertising influences gaming; quantity or volume of advertisements emitted; quantity or volume

of advertising received; contents of advertising; and types of advertising.

Results

From the initial sample including 112 studies, 31 fit inclusion criteria (Figure 2), including 12.979 A&Y (samples ranging from 20 to 4617 participants). More than half were men; age range between 5 and 37 years old. 1056 advertisements, gambling websites and interviews with marketing managers of gambling companies (ranging from 19 to 367) were evaluated. The majority of the studies came from Australia, but there were also samples from Canada, Germany, Ethiopia, USA, Israel, UK and Spain (236 participants).

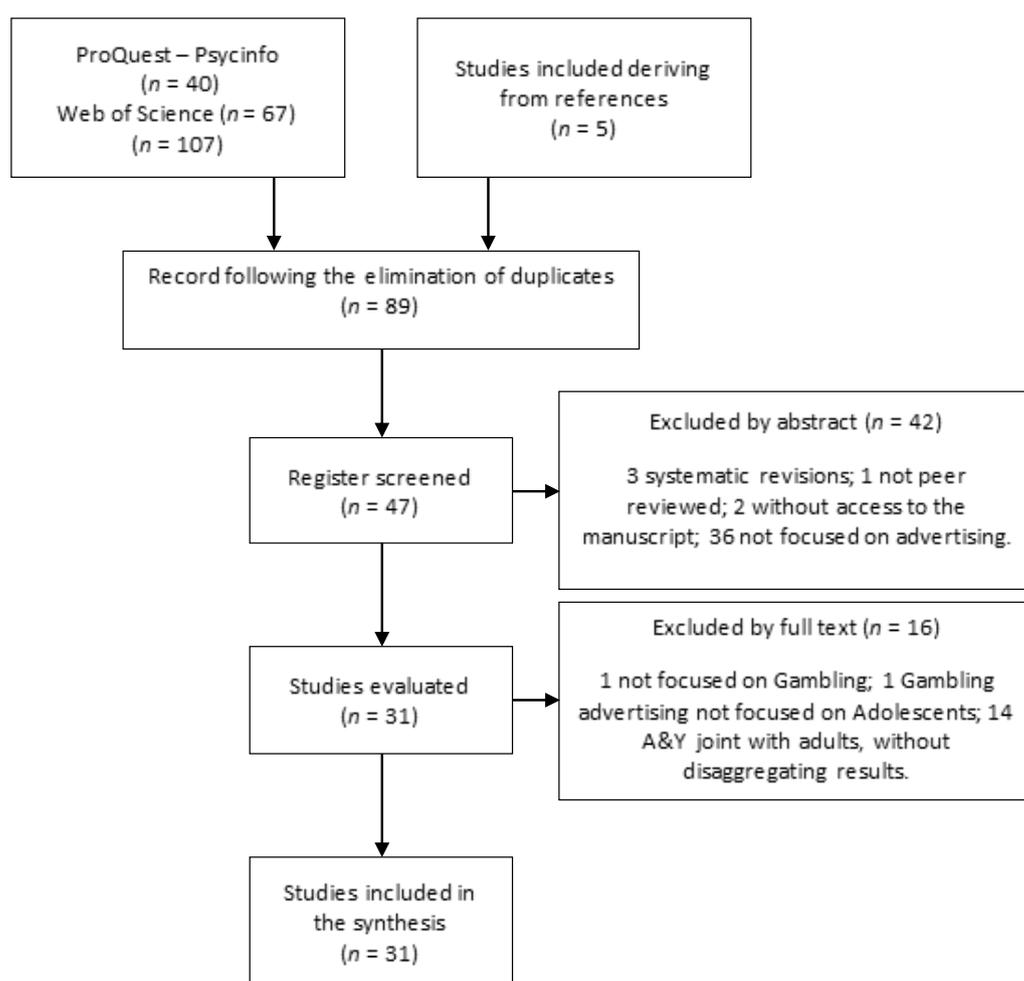


Figure 2. Bibliographical search flow chart.

The methodological quality of the studies, according to the CRF, was moderate to excellent, with an average of 13.4 out of 16 points ($SD = 2.1$). The measurements oscillated between 8 and 16 points, with a single study below 10 points. The quality of the quantitative studies ($M = 13.9$; SD

$= 1.7$) was somewhat superior to that of the qualitative ones ($M = 12$; $SD = 2.7$).

Table 1 summarises the characteristics and results of the studies with a sample of A&Y. Table 2, shows studies on advertising and promotions of gambling.

Table 1. Analysis of Contents of Advertising and its Effects: Studies Included in the Evaluation Comprising Samples of A&Y.

Reference (country)	<i>n</i>	Age (years)	% Men	Other characteristics and study aim	Results
Abarbanel, Gainsbury, King, Hing, & Delfabbro, 2017 (Australia)	20	< 25	55%	Students, users of Social Media (SD). Commercialization and promotion of gambling and casinos amongst youngsters.	Majority of advertisements from Facebook (FB) ($n = 84$), mainly from sponsors ($n = 45$), posts and apps. Those with bright colours captured most attention ($n = 51$), cartoons ($n = 35$) and realistic images ($n = 23$). More frequently of slot machines ($n = 50$), car races and sports bets ($n = 24$). Eye-catching promotion techniques: activity buttons that execute actions, appeal to familiarity, indicating the number of existing players. Most used messages of gaming as glamorous ($n = 43$). A third of the companies promoted vouchers.
Abdi, Ruiter, & Adal, 2015 (Ethiopia)	422	12-21	55.9%	Students. Environmental, personal and social risk variables of gambling.	Relation of environmental factors (accessibility of establishments and advertising) with gambling problems according to the DSM-IV-R ($r = .297$; $p < .01$) and Anonymous Gamblers - 20 questions ($r = .331$; $p < .01$).
Bestman, Thomas, Randle, & Thomas, 2015 (Australia)	85	5-12	60%	Athletes of local leagues. Association of sponsors with teams and sports activities by age group.	19% showed preference for a gambling brand. 33% associated teams and sponsors of gambling (casinos) after repeated exposure. The appeal of the logo influenced preference. Exposure produced long term effects.
Clemens, Hanewinkel, & Morgernstern, 2017 (Germany)	4617	13-25	55.2%	Students (38 schools). Association of exposure to sports bets with different Gambling responses, such as frequency and problems.	Association between exposure to Gambling advertising and Gambling behaviour, related to age and gaming results in the subsequent 12 months. Association between legal age and development of problematic behaviour (OR = 2.4).
Deans, Thomas, Derevensky, & Daube, 2017 (Australia)	50	20-37	100%	Gamblers of sports bets. Social bond between bets and sports; its effect on the increase in Gambling frequency, and starting to bet.	Most effective advertising: Incentives of betting houses. Best incentives: 1) Earning money for free, which leads to opening an account to bet; 2) which gives rise to higher perception of control on the game. Implicit support of the teams, normalising Gambling. Gambling Advertising seeks to match the bets with the value given to the sport. Different ways to participate are achieved through mobile phones. Gambling activities which are most integrated in sports, using sports codes and with an active role of the teams. Some felt overwhelmed by the quantity of advertisements. Impact of marketing saturation on the normalisation of sports bets.
Derevensky, Sklar, Gupta, & Messerlian, 2010 (Canada)	1147	12-19	50.1%	Secondary school students. Influence of advertising in the start or maintenance of gambling, especially in participants with problems	Advertisement on television (96%) and by email (61%). Depending on their behaviour and attitudes, 79% of men and 57% of participants, between 17 and 19 years old, were classified as vulnerable. Greater recall of advertising by vulnerable participants in magazines, televisions, newspapers, shows, e-mails, billboards and radios but not pop-ups. Most common reactions to advertisements: for problematic gamblers: excitement (57%), identification (67%), desire to try (64%). For non-gamblers: perceptions of lack of realism (73%), indifference (70%).
Djohari, Weston, Cassidy, Wemyss, & Thomas, 2019 (UK)	99	8-16	67%	71 families from the south of London (99 adolescents and 71 adults). Recall of sports bets brands.	Recall of at least one brand: 46% minors, 71% adults. At least three brands: 14% minors, 33% adults. Greater recall amongst men and "superfans". Belief on the impact of advertising on behaviour, especially those transmitted on television: 80% minors, 62% adults. Betting as a normal part of sports: 74.7% of minors. Opinion of minors on advertising during games: negative 31%, positive 23%, neutral 23%, were not sure 18%. Better recognition of brands: 27% for team t-shirt sponsors

Reference (country)	<i>n</i>	Age (years)	% Men	Other characteristics and study aim	Results
					and 24% for team sponsorship. Most common advertisement places recalled: television, <i>n</i> = 78; screens, <i>n</i> = 49; sports teams, <i>n</i> = 16.
Dussault et al., 2017 (Canada)	1220	14-18	37.9%	Secondary school students. Moving from simulated gambling to monetary games with real values.	9% played simulated online poker games and 5.3% engaged in other simulated gambling. Higher proportion of real gambling in the second measurement between players of simulated games <i>OR</i> = 1.57; <i>p</i> < .001; especially poker, <i>OR</i> = 4.89; <i>p</i> < .001.
Fried, Teichman, y Rahav, 2010 (Israel)	1069	16-19	50.4%	Secondary school students. Function of temperament, sense of coherence (SOC) and exposure to advertising in gambling behaviour.	The legality of gambling can reduce risk perception. 77.6% of the sample was implicated in some gambling. Associations of exposure to advertising with gambling behaviour (<i>r</i> = .28) and pathological gambling (<i>r</i> = .17), however not of SOC and other predictors.
Guerrero-Solé, López-González, & Griffiths, 2017 (Spain)	201	18-24	23.4%	University students. Effects of advertising of online bets, especially of bonuses and in public places.	Greater influence of advertising of online betting with promotional vouchers: students perceive more influence on others than on themselves. Institutional campaigns had greater influence on them. Only (negative) paternalism explains the differences in reactions to online betting.
Hayer, Kalke, Meyer, & Brosowski, 2018 (Germany)	1178	<i>M</i> = 13.6	47.5%	Secondary school students. Moving from simulated games to real monetary gambling.	Greater participation in gambling in the following year, amongst those who took part in simulated games (<i>OR</i> = 2.42). Interaction of 66.86% with real gambling during the study. Exposure to advertising as main predictor (<i>OR</i> = 3.53). Without relation: microtransactions, impulsivity, motivation to play, amplitude and frequency of simulated games.
Hing, Vitartas, Lamont, & Fink, 2014 (Australia)	131	<i>M</i> = 14.9	49.5%	Adolescents registered in an online survey panel. Effects of attitudes and exposure to advertising on intention to play in those of legal age.	In general, participants have a negative attitude towards advertising; they think it does not affect their gambling behaviour, but it does prompt initial gambling. Less than 11% approve strategies (adverts by famous people, presence of logos and brands, etc.), 10-15% felt incited to play. 42% remembered less than one betting brand during sports events. Prediction of betting for those older than 18: Sports $R^2 = .45$; $F(5, 100) = 6.51$, <i>p</i> < .001; males, <i>b</i> = -.298; <i>p</i> < .001; attitude towards sponsorship, <i>b</i> = .340; <i>p</i> < .001; attitude towards advertising during sports, <i>b</i> = -.273; <i>p</i> < .050. Not sports related, $R^2 = .42$; $F(5, 106) = 2.92$; <i>p</i> < .001; men; <i>b</i> = -.179; <i>p</i> < .050); subjective rules on betting (family and friends), <i>b</i> = .299; <i>p</i> < .001; attitude towards advertising during sports, <i>b</i> = .307; <i>p</i> < .05.
Kim, Wohl, Gupta, & Derevensky, 2017 (Canada)	21	18-24	85.7%	University students who bet online at least twice a month. Association between social gambling in casinos and online gambling.	Factors involved in the onset of gambling: Incentives (vouchers and credits), friends' suggestions, facility and accessibility of online gaming. The incentives attract new clients; however, they do not increase loyalty or increase gambling volume. Some participants took a step from online casino games to real gambling due to constant advertisements.
King, Delfabbro, Kaptis, & Swaans, 2014 (Australia)	1287	12-17	49.6%	Secondary school students. Prevalence and implication in digital or social gambling change from simulated to real gambling. Association between simulated and pathological gaming.	Implication in simulated games (video games) in 31.5%, more frequent in at-risk/pathological players, $X^2(1) = 86.1$; <i>p</i> < .05, $\eta = .27$. In a multiple regression, simulated gambling was found to be the main predictor of pathological gambling, <i>B</i> = 73, $X^2(1) = 63.6$, <i>p</i> < .01).
Li, Langham, Browne, Rockloff &, Thorne, 2018	848	14-17	52.1%	Online sample. Association between gambling and sports, and from this, inten-	Implicit association between gaming and sports (in different forms and channels), moderated by attitudes towards gambling, especially in those sports that present more bet-

Reference (country)	<i>n</i>	Age (years)	% Men	Other characteristics and study aim	Results
(Australia)				tion to bet.	ting. No association with gender, greater desire to play in the future, lack of knowledge or gambling effects. Effects of sports names and logotypes of gambling games on future intention to play.
McMullan, Miller, y Perrier, 2012 (Canada)	50	13-17	52%	Urban settings. Gambling experience and exposure to advertising. Understanding of the discourse on advertisements. Association between age, advertisements and social identity.	74% saw gambling advertisements on TV, weekly or fortnightly. The majority acknowledged the aim of prompting to gamble with images and positive messages. Appeal of advertisements with images, colour and music, the humour and simplicity of contents. Advertisements to earn money, showing gambling as a normal activity and promise of amusement were considered simple. Negative reactions to the clear intention of inviting to play. The message of winning was not overtly refused. Men in particular were sensitive to considering gambling as a skills sport. Messages of responsible gambling were evaluated as insincere and ineffective. Gambling as an element of glamour and excitation for those older than 15.
Nyemcsok et al. 2018 (Australia)	111	11-16	59,5%	Basketball players. Recall of brands and advertisements strategies of sports bets. Its influence in the decision to bet.	73% correctly identify betting brands associated with at least one promotion. 23.4% correctly identified brands with three or more advertisements. Most selected incentives: cash refund (42.3%) and registration offers (18%); because of lower risk in betting. Without differences between attributes and attractiveness strategies. Advertisements more oriented towards winning money were better recalled. Promotions based on partnerships were described in greater detail. Little discrimination between brands using distinctive voiceovers. Women succumb less to promotions.
O'loughlin & Blaszczynski, 2018 (Australia)	120	18-30	100%	First-year psychology students. Assessment of Facebook (FB) advertisements if coming from peers or operators.	58% exposed to FB advertisements of various bets various times during the previous year (percentage comparable to traditional methods). Better attitude towards gaming and more gambling in the medium term (not short term), if adverts came from FB. Without difference in attitude towards gaming in short or medium term between FB and traditional methods.
Pitt, Thomas, & Bestman, 2016 (Australia)	61	14-18	54.1%	61 adolescents and 59 parents (20.3% of parents were men). Perception of the relation between betting and sports; interpretation of messages and possible factors.	Initiation to sports bets: relevance of the ubiquity of advertising in sports events; alignment of gambling with the feeling of belonging to a team; role of athletes and commentators. Influence of sports bets: easy way to win money; linked to sports and emotions of playing; facility of betting on TTCs. Normalisation of gambling as part of the sports (confusion amongst adolescents on where information ends and advertisements begin); discussion on sports from the prism of gambling.
Pitt, Thomas, Bestman, Daube, & Derevensky, 2017a	48	8-16	85.4%	Football players or Australian Football League (AFL) fans.	Normalisation and popularity of sports bets attributed to their commercialisation on TV. Factors in future intention to bet: (a) relation between

Reference (country)	<i>n</i>	Age (years)	% Men	Other characteristics and study aim	Results
(Australia)				Factors of: socialisation on the perception and comprehension of a product; configuration of attitudes towards gambling and intention of use.	gambling and culturally valued activities, (b) perception of gambling knowledge, c) quantity of adverts and publicity (especially of sports bets), (d) influence of friends and family.
Pitt, Thomas, Bestman, Daube, & Derevensky, 2017b (Australia)	48	8-16	85.4%	Fans of the AFL. Advertising factors that affect predisposition to taking part in sports bets.	Attractive strategies: humour, distinctive voiceovers, famous people, catchy adverts. Specific names of brands and adverts were identified. Older than 12 years of age could identify and remember more brands. Younger than 8 years of age could associate more adverts with brands. Advertisements as the main factor associated with positive attitudes towards gambling, generating perception of facility, entertainment and socialisation.
Rubio, 2018 (Spain)	35	13-17	51.4%	Sample considering gender and age intervals (13-14 years old and 15-17 years old). Perception of online gambling and its communication, incorporating mobile phones.	Advertising is associated with television (advertising, sponsorship or broadcasters' commentaries). The use of the association idol-fan as appealing is highlighted. Welcome vouchers do not appear truthful; however, they are perceived as appealing and eye-catching.
Thomas et al., 2018 (Australia)	111	11-16	59.5%	Fans of basketball. Memory and assessment of advertising and bets.	Opinions on the negative impact of advertising were found; generating risk in young populations, normalising sports bets and associating entertainment with bets.

Table 2. Analysis of Contents of Advertising and its Effects. Studies with Samples of Advertisements Included in the Revision.

Reference (country)	Study Aim	Results
Deans, Thomas, Daube, Derevensky, & Gordon, 2016. (Australia)	Role of logos and symbols in the normalisation of sports bets, both at the individual and group level.	Advertising messages: Betting as part of the ritual of a sports fan (78%), bonding with peers (48%), masculine stereotypes (40%), sexualisation of women (25%), higher social status given to gambling (29%).
Gainsbury, Delfabbro, King, & Hing, 2016 (Australia)	Use of SM and latent messages.	Operators present on FB: 84.6%; Twitter: 51.1%. Greater use of SM for betting websites than casinos and betting shops, $F(3, 83) = 12.59, p < .05$. Information on responsible gambling on SM profiles in 12 operators (11.9%). Contents of gambling promotions accompanied by the normalisation of gambling (aligning sports and bets, emphasising social advantages), by associations (knowledge and association with the brand, promotion of assistance to businesses), showing gambling as glamorous, easy to use and win, inviting to begin to bet, encouraging to bet.
Gainsbury, King, Hing, & Delfabbro, 2015 (Australia)	Use, strategies and gambling content in SM from operators.	Contents: advertisements and promotions, compromise with the client, earnings and communitarian compromise, promotion of events. Most used channels: FB (feedback and giving information), Twitter (delivering advertising). Employees inform considering responsible gambling; however, they have little influence on explicit messages. They acknowledge the difficulty in limiting the content to minors, who are not the declared target audience of the campaign.
Hing, Vitartas, & Lamont, 2017 (Australia)	Characteristics and amplitude of "instigators to play" on website pages and adjustment to policies of responsible gambling.	15 types of instigators, including offers to register on the website (13%), refunds (27%), vouchers on odds (13%), and vouchers on winnings (12%). Lead to greater gaming volume, more concentrated, impulsive, risky and detrimental for problematic players. Without restrictions for minors. Promotions with terms difficult to find, obscure and with legalistic language. 12% of advertisements contained information on responsible gambling, without prominence. 100% of the Australian operators and 78% of internationals included these in their home page.
Kim, Lee & Jung, 2013 (EEUU)	Indirect communication strategies.	Target audience: young men. Predominant topics in advertisements, year 2006: humour (42.6%), wealth (36.6%), leisure (20.8%). Year 2010: celebrities (39.3%), excitation (23.9%), self-confidence (21.4%), friendship (11.1%).

Reference (country)	Study Aim	Results
		Websites which point to educational purposes, year 2006: 48.5%. Year 2010: 90.6%. Presence of legal warnings, year 2006: 91.1%. Year 2010: 92.3%. Promise of great quantities of money, year 2006: 59.4%. Year 2010: 1.7%. Online gambling advertising, year 2006: 23.2%. Year 2010: 29.2%. Advertisements unrelated to gambling (beverages, video games...) which employed the theme of gambling as strategy, year 2006: 17.7%. Year 2010: 4.6%.
McMullan & Miller (Canada)	Frequency, location, design, objective, meaning, messages use and cultural references of casino advertisements.	Printed channel, $n = 43$ (reaching 453.000 people); 90% appealing to the excitement of playing; 75% directed to 19-35 years old; majority of masculine figures; feminine figures sexualised in 27.9%. Radio, $n = 58$ (230.851 people); atmosphere of wellness of casinos, normalisation and minimisation of gaming costs (80%). TV, $n = 2$; companionship and escape from everyday life. Retailers, $n = 262$; topic centred in excitement (appealing to entertainment, winning, sex), 70%; human figure in claims, 81%. 66% included references to responsible gambling, however not complete or persuasive.
Pitt, Thomas, Randle & Daube (Australia)	Best-Similarity of strategies of betting advertisements with other areas of public health and its effects.	Hearing strategies: music, 87.9%; voiceovers, 86.8%; catchy adverts, 85.7%. Technology instruments (phones, tablets, etc.) to show how to bet, 60.4%. Humour, 53.8%; animation, 46.2%; specific colours, 45.1%.
Sklar & Derevensky (Canada)	Underlying themes of gambling advertisements and their potential effects.	New themes: easy money; achieving dreams; social status: glamour; identification or distancing from "normal people"; sports; excitement; humour; youth culture; rhetoric language use.

Discussion

The results are discussed according to quantity, type and content of advertising.

Quantity of advertising

Gambling companies do not usually publish the amount of advertising they emit. The alternative, systematic tracking of advertising in communication methods, is costly and in practice impossible due to the indirect effects of advertising. Thus, many A&Y perceive advertising of sports bets in settings not designed for betting (Deans et al., 2017). As a consequence of the quantity of advertisements, 96% of A&Y acknowledge having seen publicity of gambling on television (TV) and 71% received gambling spams by email (Derevensky et al., 2010).

The majority of A&Y are exposed to gambling advertising on TV, internet and sports events, weekly or fortnightly (McMullan et al., 2012), for which part of this advertising is directed to A&Y, including to those younger than the legal age to gamble, sometimes due to the inability to restrict contents to this young audience (Gainsbury et al., 2015; Kim et al., 2013).

Being exposed to advertising does not imply that this is "attended to". As a consequence, some studies look at its recall rate, finding that people who take part in gambling appear to have a better memory of it (Pitt et al., 2017b), perhaps due to greater interest and attention paid to advertisements. Through self-reports (Derevensky et al., 2010; McMullan et al., 2012) it was found that A&Y were familiar with the content of gambling advertisements, publicity had affected them and they had grasped the message. The major-

ity of A&Y recognised brands of betting houses associated with a promotion (Nyemcsok et al., 2018), with greater recall found in men, increasing in "superfans" (Djohari et al., 2019).

A&Y were critical of advertising contents, pointing out that they are biased, exaggerated, pushing people to gamble through the use of tricks, with the intent to deceive, etc. A third of gambling advertisements were ignored, not understood or rejected. The youngest (13-14) were most distanced from colour, style or aspects considered appealing in advertisements and less prone to associating gambling with friendship, economical advantage, amusement and entertainment. Although 42% of adolescents acknowledged having seen at least one betting brand during a sports event, they did not believe that advertising would affect their gambling behaviour (Hing et al., 2014).

A minority of A&Y (10-15%) does not share this critical sense. Some saw themselves as taking part in gambling, even before the legal age to bet (McMullan et al., 2012). Men and A&Y with gambling problems perceive and accept more publicity and they acknowledge that gambling advertisements make them want to try and bet (Derevensky et al., 2010). The memory of the exposure to advertisements is a significant predictor of gambling behaviour in A&Y (Fried et al., 2010; Hayer et al., 2018), especially in young people over the age of 18 (Clemens et al., 2017) and it also predicts the change from simulated bets to gambling with real money (Hayer et al., 2018).

Types of advertising

Advertising is diverse, including advertisements in media channels, participation vouchers, promotions, sports spon-

sorships, clothes with publicity etc. The majority of the studies considered in this review investigated the content of advertising in general, considering different types of bets and analysing their diffusion channels (Kim et al., 2013; McMullan & Miller, 2010; Sklar & Derevensky, 2010). TV, radio, cinema, magazines and newspapers are widely used. To a lesser extent, although still relevant, advertisements were received on digital displays and through sports teams (Djohari et al., 2019). Advertisements on the Internet are becoming increasingly frequent and more specific to their target audience and game. Thomas et al. (2018) found that 96.4% of their participants had generally received adverts on multimedia platforms. Derevensky et al., (2010) point out that 93% of adolescents acknowledge having seen promotions for betting games as pop-ups and 61% received unwanted emails promoting betting. The use of Social Media (SM), such as Facebook or Twitter, is of relevance in incrementing positive attitudes (O'Loughlin & Blaszczynski, 2018), or in broadcasting adverts (Gainsbury et al., 2015). Additionally, advertisements appear as insertions in free gaming apps for mobile phones (Rubio, 2018). Blaszczynski, Parke, Harris, Parkes, and Rigbye (2014) highlight that SM will play an increasingly important role in the gambling marketing, seeking emotional reactions which lead to the players sharing this information in their private networks.

Although advertising of gambling has restricted time frames, advertisements or sponsorships appear at any time during sports transmissions (McMullan et al., 2012; Thomas, et al., 2018), limiting the effectiveness of time restrictions and child protection. In Spain, 17 of the 25 most followed transmissions for children (4-12 years old) on television in 2013 were sports events after 8 pm. Greater exposure to these advertisements, in addition to the direct effect, increases the normalisation of these games and the message that gambling is acceptable and it does not need protection for A&Y.

Advertising in retail points can attract A&Y to gambling locations, facilitating gambling in an impulsive and immediate manner.

Sports sponsorship is an effective form of indirect publicity, which helps form a positive attitude towards the gambling business and its products, associating activities potentially harmful with healthy events and images. Sponsorships allow products that are general objects of business promotion, such as sports t-shirts, to include gambling advertising. In some cases, the name of the sports club includes that of the gambling business. Djohari et al. (2019) found that t-shirts and sponsorships were the format in which brands were best recognised. This exposure and normalisation entailed higher direct risk for A&Y, in particular for men.

The use of promotional items with the name or logo of a gambling business is frequent, which appears to be an efficient way of getting the brand known (Nyemcsok et al., 2018), in the same way as indirect adverts, associating gambling with positive aspects of life (elegance, good living, humour...). This is especially evident in the use, each time

more frequent, of celebrities, who through vicar learning of A&Y have a great influence on them, giving more credibility to the product and promoting more positive attitudes towards it.

Between the incentives to bet, financial offers stand out. Hing et al., (2017) show up to 15 types of economic incentives, such as registration offers, "happy hours", offers for mobile phone bets and vouchers to bet, improvements on probabilities of winning, paying winnings even if not won, refund offers etc. These incentives used to be subject to numerous terms and conditions, redacted in a complex language (especially in the case of vouchers to buy, sometimes without fulfilling the basic requisites for an informed choice). The vouchers (free money to open an account, or duplicating the balance paid by the player) are also perceived as influential and appealing to A&Y (Deans, et al., 2017; Guerrero-Solé et al., 2017; Rubio, 2018). They appear to be the most effective strategy to motivate the participation in betting (Deans et al., 2017), and to begin online gambling (Kim et al., 2017), although this method does not appear to incentivize client loyalty. Amongst players looking for treatment, a significant proportion increased their gambling behaviour with voucher offers requiring playing before making any profits.

Other marketing strategies have been considered, such as simulated games (web applications or SM which stimulate poker games, roulette or gaming machines). Almost a third of A&Y has access to these simulated bets, without the restriction of betting games (King et al., 2014), finding them in some occasions as inserts in video games, as part of the narration of the history of the game or as forms of improving gaming ("loot boxes"). The results showed that the use of simulated games is a relevant predictor of real gambling within a year in A&Y (Dussault et al., 2017; King et al., 2014; Hayer et al., 2018).

Advertising Content

McMullan et al. (2012) highlight three themes: winning money, presenting gambling as a normal everyday activity and promise of entertainment. Advertising intends to normalise gambling as a leisure activity, and it highlights possible profits which would change the life of the gambler. These could well be economical profits, change in social status or quality of life, by gaining access to a more glamorous world (Sklar & Derevensky, 2010).

To normalise gambling, advertising places it in a wider social context, together with news and events, related or not to gambling (Gainsbury et al., 2016). Thus, gambling appears as a form of entertainment or diversion to share with friends, associating gambling with friendship and social cohesion (Deans et al., 2016), without giving relevance to economical profits or losses. Gambling can be seen as an accepted and legitimate social activity (Pitt et al., 2016), providing it with recognition since it is paired with culturally relevant events such as sports, emphasising the relation between

loyalty to a sports team and betting in its favour. This normalisation of gambling advertising appears to come into effect, since constructs such as “sense of coherence” (Antonovsky, 1979), which predict an attitude of rejection towards advertising of tobacco or alcohol, do not predict rejection of gambling (Fried et al., 2010).

However, the most perceived messages are those that reference gambling as an activity that brings substantial prizes (Gainsbury et al., 2016), highlighting the concept of easy money (high winning possibilities, “it can happen to you”). Furthermore, it can be noted that betting is entertaining, it begins with a lifestyle without worries, which does not require the efforts of studying or working. Gambling is associated, through words, signs, myths and symbols, to the image of “winning spirit”. This publicity is rarely compensated with effective information on the negative consequences of gambling. The messages of responsible gambling, although present in the majority of gambling companies’ websites, are perceived as inefficient, not very eye-catching and not very believable. In other areas, such as SM, there are almost no messages of responsible gambling amongst the published content (Abarbanel et al., 2017; Hing et al., 2017; McMullan y Miller, 2010).

Since the main target of this kind of advertising is a young man (Kim et al., 2013), it is important to note the presence of advertisements showing a sexualised image of women, associated with a gambling and betting environment (Deans et al., 2016; Hing et al., 2017; McMullan & Miller, 2010). Perhaps due to this Nyemcsok et al. (2018) found that women were less sensitive to promotions and advertisements, arguing moral justifications.

Additionally, advertising offers strategies and leads to bet “better”, with the intent of increasing the players’ perception of control, a relevant factor in their implication in gambling (Deans et al., 2017). These recommendations are centred in promoting complex bets, instead of simpler ones, in a way that makes it difficult for gamblers to form a realistic opinion on their odds to win (Newall et al., 2017). In other cases, the wording of the terms in which such promotions were funded were obscure, hard to find and written in legalistic

language. Some gambling platforms advertise themselves as having “educational contents” or as “betting schools” (Kim et al., 2013). In summary, strategies that make a rational approach to gambling difficult are employed, in particular making it difficult for gamblers to identify the real odds to win.

Ultimately, advertisements that generate a greater impact in A&Y are those that result striking and visually appealing; those that offer free money (bonuses) and give rise to expectations of control over the game, showing it as a test of skills; those that are shown repeatedly in channels such as television; those that offer some kind of simulated online game; and those that appeal to gambling as a normalised activity, associating it with sports, with famous people and with sports idols.

Limitations and Conclusion

Gambling involves a complex reality, evolving and adapting to legislations and social trends. Perhaps the results drawn from older studies in this revision, which includes research from the past 10 years, can have now a limited validity.

The majority of the results from the studies revised stem from self-reports. Moreover, advertising of gambling was considered in general terms, nonetheless, it is possible that advertising or its effects are specific to the type of bet.

Most of the research studies revised correspond to just a few countries, in particular to Australia and Canada, with barely any studies on Spanish samples. Due to the differences, just as much legal as social, as well as of accessibility of gambling, these biases could limit the possibility of generalizing the results.

The lack of studies in Spain should be noted, especially considering the relevance of the gambling sector. More studies are needed to obtain an updated and consistent image of gambling advertising. This knowledge would allow the evaluation of policies oriented towards maintaining balance between the benefits of gambling, the promotion of responsible gambling and the protection of A&Y.

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