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Gambling-Related Harms and Emerging Gambling Formats Among Late Adolescents: A Cross-Sectional Study in Two Swedish Upper Secondary Schools

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Abstract

Introduction

Youth are increasingly exposed to gambling and gambling-like activities in digital environments, often before reaching the legal gambling age. This development challenges existing regulatory frameworks and may increase the risk of early gambling involvement and gambling-related harm. However, empirical evidence capturing the full range of contemporary gambling exposures among youth remains limited.

Methods

A cross-sectional survey was conducted among upper secondary school students (aged 16–19 years) in two schools in Sweden (N = 722). Gambling participation across traditional and emerging gambling formats, casino stream watching, and gambling-related harms were assessed. Gambling-related harm was defined as reporting at least one harm item (GHS-10 ≥ 1). Analyses were descriptive, with univariable estimates of associations between gambling formats and harm.

Results

Gambling participation was common, with a clear age-related pattern. Students under 18 years frequently engaged in emerging gambling-like activities, including gambling with non-monetary stakes, whereas turning 18 years was associated with a marked shift toward high-risk online gambling formats. Gambling-related harms were substantially more prevalent among students aged 18 years and older. Exposure to casino streaming content was associated with gambling-related harm, and a substantial proportion of students reported gambling after viewing such content. Gambling-related harm was more prevalent across most gambling formats, with particularly elevated levels among students engaging in fast-paced online gambling.

Conclusions

The findings indicate that current regulatory safeguards are insufficient to protect late adolescents from gambling-related harms within an increasingly digital gambling ecosystem. Preventive policies should address the broader risk environment currently shaping late adolescents' gambling, where engagement across multiple gambling formats, gambling-related media exposure, and financial vulnerability, may interact to increase the risk of harm. Enhanced consumer protection measures for late adolescents entering the legal gambling market, alongside stronger regulation of gambling-like activities and gambling-related content accessible to minors, are essential to reduce gambling-related harm.

What is already known about this topic

- Youth gambling is common and they encounter gambling and gambling-like activities in their everyday digital environment. Gambling is becoming normalized via social media and online streaming platforms.

What this study adds.

- This study shows that gambling, gambling-like activities and casino stream watching is common among late adolescents. Fast-paced gambling formats, cryptocurrency trading and casino stream watching were associated with harm.

How this study might affect research, practice or policy

- The results from this study highlights that the current safeguards are not enough to protect late adolescents from harmful gambling formats. Regulations to protect late adolescents from gambling-related harm need to be strengthened.

Background

Gambling can be defined as risking something of value on an event with an uncertain outcome, with the possibility of winning something of greater value (American Psychiatric Association, 2013). Gambling-related harms encompass a broad range of adverse consequences beyond diagnostic thresholds, including financial harm, impaired school or work performance, and suicidal ideation (Langham et al., 2015). Youth are particularly vulnerable to such harms (Wardle et al., 2024). Globally, 18% of youth report past-year gambling, and among those engaging in online casinos or slots, one in four report problem gambling (Tran et al., 2024).

In recent years, the gambling landscape has undergone a rapid digital transformation, substantially increasing youths' exposure to gambling opportunities (Macey & Hamari, 2019). Traditional gambling formats such as casino games, sports betting, and lotteries, previously confined to land-based venues, are now widely available online. Recent Nordic gambling helpline data indicate that gambling-related harms are disproportionately linked to fast-paced online formats, including online casino games and sports betting (Marionneau et al., 2024).

Beyond the expansion of online gambling, the boundaries between gambling and gaming have increasingly blurred, reflecting a broader convergence of digital entertainment and gambling-like mechanisms (Kolandai-Matchett & Wenden Abbott, 2022). One prominent example is loot boxes in video games, where players pay money for randomized virtual items determined by chance (Drummond & Sauer, 2018; Macey & Hamari, 2019). Another is the trade in so-called skins, introduced with *Counter-Strike: Global Offensive* (CS:GO). Although skins do not affect gameplay, they function as tradable virtual assets and can be used as currency on skin-betting platforms offering eSports and casino-style gambling. Engagement in skins betting has been associated with at-risk gambling (Hing et al., 2022).

Extending beyond gaming-related practices, other digitally mediated activities may also attract youth through gambling-like features. Cryptocurrency trading is characterized by high volatility and strong influence from social media and market sentiment (Almeida & Gonçalves, 2025). Retail traders often describe their behaviour as analogous to gambling, and studies among adults show positive associations between cryptocurrency trading and problem gambling (Johnson et al., 2023, 2023). Similar patterns have been observed in traditional financial markets, where speculative stock trading has been linked to gambling-related risk factors (Oksanen et al., 2022), suggesting a broader continuum of financial risk-taking behaviours.

In parallel, youth are increasingly exposed to gambling marketing, through social media and video platforms such as YouTube and Twitch (Bolat et al., 2025; Rossi & Nairn, 2022). Influencers, often sponsored by gambling operators, stream casino content and interact directly with viewers, potentially normalizing gambling and shaping youths' perceptions (Bolat et al., 2025). Although watching gameplay has been shown to increase subsequent gaming behaviour (Cabeza-Ramírez et al., 2022), less is known about whether gambling-related streaming content similarly shapes gambling behaviors. Emerging evidence suggests an association between casino stream viewing and gambling behavior (Grosemans et al., 2024). However, it remains unclear whether exposure to such content precedes subsequent gambling and gambling-related harms among youth.

Taken together, this evolving digital gambling ecosystem poses challenges for research and policy making Traditional measures for capturing gambling participation and harm, may fail to assess the emerging gambling-like practices, risking an underestimation of gambling and related harms. Given the rapid digitalization of gambling opportunities and the increasing structural convergence between gaming, gambling,, and financial risk-taking, there is a clear need to systematically investigate how youth are exposed to and engage with gambling and gambling-like activities, in contemporary digital environments.

The aim of this study was to examine (i) gambling participation among upper secondary school students across traditional and emerging formats, (ii) the prevalence of gambling-related harms, (iii) the extent to which students watched casino streams and subsequently engaged in gambling and experienced harms, and (iv) which gambling formats were associated with gambling-related harm.

Methods

Study design and Setting

A cross-sectional survey was conducted at two upper secondary schools in Sweden that expressed interest in the project and were invited to participate in. Students aged 16–19 years were invited to participate between December 2023 and February 2024. These schools had sports-oriented profiles, with approximately half of the students enrolled in a variety of individual and team sports programs. To increase response rates, students had the opportunity to complete the survey during school hours

(mentor sessions). At participating schools, principals and teachers selected the classes in which the survey was administered, and all students present during the designated class session were invited to complete it. In total, 791 students received the link to the web survey; among them, 43 opened the survey but did not complete the informed consent registration, and 26 did not respond to any items and were removed from analysis. This yielded a response rate of 94% among students who received survey invitations. The survey took approximately 15 minutes to complete. No reimbursement was provided. This study was conducted in accordance with the principles of the Declaration of Helsinki, and ethical approval was obtained from the Swedish Ethical Review Authority (Ref. 2024-04862-01). Informed consent was obtained from all participants prior to data collection. Clinical trial number: not applicable.

Questionnaires and statistical methods

The survey consisted of items measuring demographic and school background, educational program type, sports orientation, and living conditions. Gambling participation was assessed through questions on 15 gambling formats, both traditional formats (i.e., online slots, sports betting, and lotteries) and new emerging formats (e.g., gambling with non-monetary stakes, lottery-like gaming (e.g., loot boxes), cryptocurrency trading, and eSports betting), and frequency for each format on a seven-category frequency scale (from “never” to “several times per day”). Gambling harms were measured with the Gambling Harms Scale – 10 items (GHS-10) (Browne, 2018), comprising five items assessing financial harms, four assessing emotional harms, and one assessing relationship harms. Respondents indicated whether each harm was present (yes/no) within the past year. Casino stream watching was assessed with a question asking how often students had watched videos or livestreams on platforms like Twitch or YouTube. Responses were given on a seven-category frequency scale (from “never” to “several times per day”). For analysis, this variable was recoded into three categories: (1) never, (2) monthly (1–4 times per month), and (3) weekly or more often (≥ 2 times per week). Those reporting casino stream watching were also asked if they had gambled during the past year after watching a casino stream (yes/no).

Statistical analysis

All analyses were conducted with a descriptive focus. Descriptive statistics were used to estimate past-year participation across gambling formats. Prevalence estimates were presented overall and stratified by age group (< 18 years and ≥ 18 years) to reflect differences in legal access to gambling. Gender-stratified descriptive results are provided in the supplementary material.

The prevalence of each harm item and the proportion of students reporting any gambling-related harm (GHS-10 ≥ 1) were calculated among students reporting past-year gambling. A cut-off of GHS-10 ≥ 1 was used to indicate the presence of any gambling-related harm, consistent with a public health approach focusing on early harms (Heirene, 2026). Results are presented descriptively and stratified by age group, with additional gender-stratified results provided in the supplementary material. Gambling participation and gambling-related harms were compared across categories of casino stream watching (never,

monthly, weekly, or more often). These analyses were descriptive and intended to characterize differences between groups.

Students in the sample reported participation in a wide range of gambling formats. Given this diversity of gambling activities, the final analysis examined how gambling-related harms were distributed across different gambling formats. Prevalence of any gambling-related harm among students reporting past-year participation in each gambling format was calculated and compared with those not reporting participation in that format. Prevalence ratios (PRs) were estimated using Poisson regression models with robust standard errors, and results are presented with 95% confidence intervals and p-values. These analyses describe associations between participation in specific gambling formats and gambling-related harm and should not be interpreted as estimates of isolated or causal effects of individual gambling products.

Since most students engaged in multiple gambling formats and exposures were operationalized as binary indicators, multivariable models would have limited capacity to meaningfully disentangle associations between individual gambling formats and gambling-related harm, as shared information would be redistributed across highly overlapping predictors. For this reason, multivariable regression models were not fitted.

All analyses were conducted using R version 4.3.1.

Results

Results are presented in relation to the study aims, covering gambling participation, gambling-related harms, casino stream watching and subsequent gambling, and gambling formats associated with harm.

The sample (n = 722) consisted of 62% male students, and the majority were enrolled in university preparatory and sport-oriented educational programs. Descriptive statistics are presented in Table 1, stratified by age group, while Supplementary Table 1 provides the same variables stratified by gender.

Table 1
Sample descriptives (N = 722)

Gender	**Overall N = 722** n (%)	**< 18 yrs N = 544** n (%)	**≥ 18 yrs N = 178** n (%)
Female	270 (37)	200 (37)	70 (39)
Male	449 (62)	341 (63)	108 (61)
Neither	3 (0.4)	3 (0.6)	0 (0)
Type of school program			
Vocational program	232 (32)	170 (31)	62 (35)
University-prep program	483 (67)	370 (68)	113 (63)
Other	2 (0.3)	1 (0.2)	1 (0.6)
Missing	5 (0.7)	3 (0.6)	2 (1.1)
Sports-focused program	439 (61)	349 (64)	90 (51)
Living situation			
Live with guardian(s)	474 (66)	354 (65)	120 (67)
Live with partner	35 (4.8)	21 (3.9)	14 (7.9)
Live alone	106 (15)	80 (15)	26 (15)
Live with someone other than guardians	107 (15)	89 (16)	18 (10)

[Table goes here]

Gambling participation

Gambling was common among the students, with 59.2% reporting gambling. Male students reported gambling to a greater extent than female students, 66.9% compared to 47%. Bingo, such as the national bingo lottery broadcast on television (34.8%) and lotteries (22.7%) were the most common gambling formats. Age differences were clear; students aged 18 and older (hereafter referred to as older students) gambled significantly more on commercial online gambling formats and stock trading. Students aged < 18 years (hereafter referred to as younger students), however, were slightly more likely to gamble with non-monetary stakes. Although older students show a clear shift towards high-risk online gambling, younger students also engage in multiple gambling formats, underlining that gambling involvement

already occurs before the legal gambling age. See Fig. 1 for full information on gambling formats by age group, and Supplementary Table 1 by gender.

[FIGURE goes here]

Gambling-related harms

Among past-year gamblers, 22.5% reported any gambling-related harm. Among the older students, 32.0% reported any harm compared to 15.1% among the younger students. Financial harms were the most reported (e.g. reduced spending money and savings), followed by feelings of regret related to gambling. See Fig. 2 for gambling-related harms by age group and Supplementary Table 2 for Gambling-related harms by gender.

[FIGURE 2 goes here]

Casino stream watching

Of the 711 students who answered the question, 127 (17.9%) reported having watched casino streams during the past 12 months. Casino stream watching was strongly gendered, with the vast majority of viewers being boys (96%). Of the 127 students reporting casino stream watching, 20 had incomplete gambling harm data; these did not differ meaningfully from completers on age or gender (mean age 16.8 vs. 17.2 years and 100% vs. 96% boys). Among students who reported any casino stream watching and had complete data on gambling harms (n = 107), 38.4% reported at least one gambling-related harm. In addition, 55 students (43.3%) reported having gambled at some point during the past year after watching a casino stream.

Casino stream watching was observed across age groups and was similarly prevalent among older and younger students (20.9% vs. 16.9%), indicating that exposure to gambling-related streaming content is not limited to those who have reached the legal gambling age. A stepwise increase in gambling-related harm was observed across categories of casino stream watching frequency, though this pattern should be interpreted cautiously given the cross-sectional design. (Supplementary Table x).

Gambling formats associated with harm

On a univariable level, most gambling formats were associated with higher prevalence of gambling-related harm. Prevalence ratios ranged from PR = 3.50, $p \leq .001$, for online sports betting to PR = 1.89, $p = .002$, for lottery-like gaming (i.e., purchasing loot boxes). In contrast, bingo, lotteries/number games, horse race betting, and stock trading were not associated with higher prevalence of gambling-related harm (see Table 2 and Fig. 3). Analyses were restricted to students who reported gambling and had complete data on all harm items (n = 373).

Table 2
Prevalence of gambling-related harm for each gambling format among exposed and unexposed students, and univariable prevalence ratios (PR).

Gambling format	Prevalence of gambling-related harm among exposed (%)	Prevalence of gambling-related harm among unexposed (%)	PR	95% CI	*p*-value
Online sports betting	39.8	11.4	3.50	[2.31, 5.29]	< 0.001
Land-based casino (in a restaurant)	55.6	17.8	3.12	[2.08, 4.69]	< 0.001
Online slots	40.2	13.0	3.10	[2.09, 4.59]	< 0.001
Online casino	39.8	13.0	3.06	[2.06, 4.53]	< 0.001
Online poker	40.9	16.1	2.54	[1.72, 3.75]	< 0.001
eSports betting	42.0	17.2	2.44	[1.63, 3.67]	< 0.001
Cryptocurrency trading	38.5	17.6	2.18	[1.43, 3.32]	< 0.001
Land-based sports betting	40.9	19.3	2.12	[1.23, 3.66]	0.007
Gambling with other stakes than money (e.g., skins and cryptocurrency)	32.6	16.5	1.97	[1.33, 2.93]	< 0.001
Lottery-like gaming (e.g., loot boxes)	32.9	17.4	1.89	[1.26, 2.85]	0.002
Stock trading	27.3	18.8	1.45	[0.94, 2.24]	0.096
Horse race betting	28.0	20.1	1.40	[0.72, 2.71]	0.325
Lotteries/number games	19.7	21.1	0.93	[0.61, 1.43]	0.747
Bingo	17.2	25.2	0.68	[0.46, 1.02]	0.065

Note. Exposed refers to students reporting past-year participation in the specified gambling format. Gambling-related harm was defined as reporting at least one harm item (GHS-10 ≥ 1). Analyses are univariable

Because most students reported participation in multiple gambling formats, format-level associations should be interpreted as descriptive characteristics of the populations engaging in these formats rather

than as independent effects of isolated gambling products.

[Table 2 goes here]

[FIGURE 3 goes here]

Discussion

The present study highlights the extent to which gambling has become embedded in the digital environments surrounding upper secondary school students. Gambling participation was common, with the highest levels observed among students aged 18 years and older and among male students, underscoring late adolescence as a key risk period for gambling related harm and an important window for preventive intervention. Although gambling-related harms were reported across groups, they were most prevalent among the older students and boys, than among the younger students and girls. Emerging gambling formats were widespread among the younger students, and there was a shift towards legal high-risk gambling formats after reaching legal gambling age. Furthermore, the findings highlight that among students of this age group, gambling related harm was not confined only to traditional gambling, but also to emerging gambling formats and casino streaming content. We observed a high prevalence of gambling among the students, with bingo and lottery-type games emerging as the most reported formats. This pattern likely reflects widespread exposure to low-threshold gambling activities, such as club-based lottery sales that are common during e.g., seasonal fundraising activities. These products are often marketed as bingo, despite functioning as lotteries, which may partly explain the high reported participation in these formats. Consistent with previous research, boys were more involved in gambling than girls. A clear age-related pattern emerged: younger students more commonly engaged in gambling-like formats such as wagering in games, using cryptocurrencies or skins, whereas students aged 18 and older were substantially more likely to report high-risk online gambling formats available on the regulated market. These findings are in line with previous research showing a steep increase in gambling participation when reaching legal gambling age (Hollén et al., 2020).

Together, these findings raise important concerns. First, the steep increase in gambling participation and gambling-related harms when attaining legal age for gambling sends a signal to policymakers and responsible authorities to better protect youth when they turn 18 and are allowed to start gambling. Policy measures, such as clear loss and deposit limits linked to youths limited financial ability, could help protect them better from gambling-related harms. Typically, students have a limited finances and losing even a small share of their monthly disposable income (a Swedish student receives 1250 SEK per month, approximately 115 euros, as study loan) can be damaging, leading to financial stress or the need to borrow money. To illustrate the potential scale of protection needed: applying the low-risk gambling guidelines of 1% of net monthly income to the Swedish student grant of 115 euro would correspond to a loss limit of approximately 1 euro per month. Whether mandatory deposit or loss limits of this magnitude are feasible or viable, warrants further policy analysis beyond the scope of this study.

Second, the widespread engagement of younger students in emerging gambling formats and gambling-like activities (e.g., loot boxes, skins betting, and cryptocurrency trading) is problematic for several reasons. Previous research has shown that early engagement in gambling is associated with an increased risk of gambling-related harms later in life (Moreira et al., 2023). In addition, most of the platforms offering these activities lack regulatory oversight, age verification, and customer protection measures which *per se* means increased risk of gambling-related harms (cf. Fisher et al., 2025).

Students aged 18 and above reported a higher prevalence of gambling-related harms compared to younger students. This probably coincides with the increased involvement in high-risk online gambling formats after reaching the legal gambling age. Financial harms, together with feeling guilty or sorry about gambling, were the most reported harms. Study grants sare meant to cover personal costs such as leisure activities, travel, and other living costs.. Because of their limited financial assets, gambling losses can quickly lead to financial strain. Harms that often come later in the progression, such as selling personal belongings to finance gambling or increased credit card debt, were reported less frequently. This may be due to the type of sample, mainly late adolescents between 16 and 19 years old, who may not yet have progressed that far in their gambling. The GHS-10 item regarding credit card debt does not apply very well to this target population, since they were not eligible for credit cards, and gambling on credit is not allowed on the Swedish regulated gambling market. This can also explain the low endorsement of that item. This raises the question of whether the harm items developed for adult populations adequately capture gambling-related harms among late adolescents, highlighting the need for future research to validate existing measures and adapt harm-related items to ensure developmental appropriateness for this target age group.

Students, who reported watching casino streams, also reported high levels of gambling-related harm. Boys were more prone to watching this type of content compared to girls. It was also common to have gambled at some point after watching casino streams, which is consistent with a potential triggering role, though the cross-sectional design cannot establish temporal or causal ordering. Influencer-driven gambling marketing is also problematic for several reasons. Youth are especially susceptible to persuasive messages, for instance promises of financial gain made by successful public figures (Bolat et al., 2025; Smith et al., 2020). These casino streams represent a very personal form of marketing, with influencers interacting with their audiences and modelling gambling behaviors in real time. Taken together, our results indicate that casino streaming may both normalize and trigger gambling among viewers. This highlights a regulatory blind spot: late adolescents, including those under legal age for gambling, are targeted by gambling promotions often by gambling companies outside the regulated market, without age verification or customer protection measures.

Regarding gambling-related harms across gambling formats, most gambling formats and gambling-like activities were associated with a higher prevalence of harm among students who engaged in these activities. However, these findings do not indicate that specific gambling formats exert independent or stronger effects than others. Rather, the results should be interpreted as descriptive indicators of broader patterns of gambling involvement, where participation in one format typically occurs alongside

engagement in several others. For example, students who engaged in sports betting were also more likely to participate in fast-paced online formats such as online slots and poker, whereas those engaging in bingo more commonly participated in lotteries and number games and less frequently in high-intensity online gambling.

In this context, gambling-related harm appears to be embedded within a broader gambling portfolio rather than attributable to isolated products. Nonetheless, the observed pattern aligns with previous research suggesting that fast-paced online gambling formats are consistently linked to higher levels of harm. Such formats share structural characteristics known to increase risk, including high accessibility, short intervals between wagers, rapid feedback, and intermittent reinforcement schedules (Newall et al., 2021; cf. Wall et al., 2025).

Taken together, a clear pattern emerges; late adolescents are exposed to gambling and gambling-like activities early, often before reaching the legal gambling age. Younger students were drawn to gambling formats with non-monetary staking, while there was a dramatic shift towards engagement in high-risk online gambling formats available on the regulated market after reaching legal age. This could explain the concentration of harm among older students, even if younger students also experienced harm. Our findings also show that exposure to gambling goes beyond the specific gambling products. Casino streams work as a form of personalized marketing, both normalizing and sometimes triggering gambling, especially among boys. Older adolescents are exposed to a digital world, where the boundaries between gambling, gaming, and marketing are blurred, and where current safeguards are not enough to protect them from harm. Policies at both national and, for example, EU level must be adapted to this new and constantly evolving digital landscape, to better protect late adolescents from gambling-related harm now and later in life.

Strengths and limitations

The present study has several strengths. Notably, the high response rate reduces the likelihood of selection bias and supports the robustness of the findings. Another strength, is the detailed assessment of a broad range of traditional and emerging gambling formats, including loot boxes, non-monetary staking, and cryptocurrency trading activities which, to our knowledge, remain insufficiently captured in surveys within gambling and gaming research with a focus on of late adolescents.. By focussing on gambling-related harms instead of problem gambling, we were able to get an understanding of early harms, which is especially important in this population. Lastly, stratifying the analyses by legal gambling age, clarifies which preventive measures are most relevant for reducing gambling-related harms for each age group.

This study also has limitations which are relevant to mention. The sample was recruited from two sports-oriented schools and was skewed toward male students. This may limit the generalizability of the findings to the wider population of Swedish late adolescents. The cross-sectional design precludes any conclusions about causality or temporal ordering between gambling exposure and harm. Given the

descriptive intent of the analyses, no correction for multiple comparisons was applied; findings should be interpreted accordingly. Since all measures were self-reported, there may be cases of under-reporting of gambling behaviours and harm, especially among students below legal gambling age. Finally, although we used a validated harm measure, some items may have been less applicable to late adolescents, highlighting the need for further developments of scales to better capture the age specific parameters, in this population.

Conclusion

Gambling was common among upper secondary school students, and gambling-related harms were already evident at this young age. Engagement in gambling was characterized by involvement in multiple gambling formats, including emerging gambling-like activities operating outside the regulated gambling market. Gambling-related harms were more prevalent among students engaged in fast-paced online gambling and among those exposed to casino streams.

The observed age-related patterns suggest that turning 18, may represent a critical transition point, marked by a sharp increase in engagement in high-risk online gambling formats and elevated levels of reported gambling-related harm. From a policy perspective, these findings underscore the need for preventive strategies that address the broader digital gambling ecosystem rather than isolated products. Stronger consumer protection measures for late adolescents entering the legal gambling market, alongside improved regulation of gambling-like activities and gambling-related media accessible to minors, are essential to reduce gambling-related harm among late adolescents.

Abbreviations

GHS-10
Gambling Harms Scale- 10 items

Declarations

Ethics approval and consent to participate

All participants provided their informed consent prior to participation. The study was approved by the Regional Ethics Committee in Gothenburg (Dnr 2024-04862-01).

Consent for publication

Not applicable

Competing interests

None.

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Author Contribution

H.W: conceptualization, writing original draft, review and editing, data curation, statistical analysis. V.M: conceptualization, review and editing, data curation. K.M: conceptualization, review and editing. A.N: conceptualization, review and editing. A.H: conceptualization, review and editing. N.Y-L: funding acquisition, review and editing.

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Data Availability

Due to ethical and privacy considerations related to the study population, the datasets are not publicly available but can be obtained from the corresponding author upon reasonable request.

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Figures

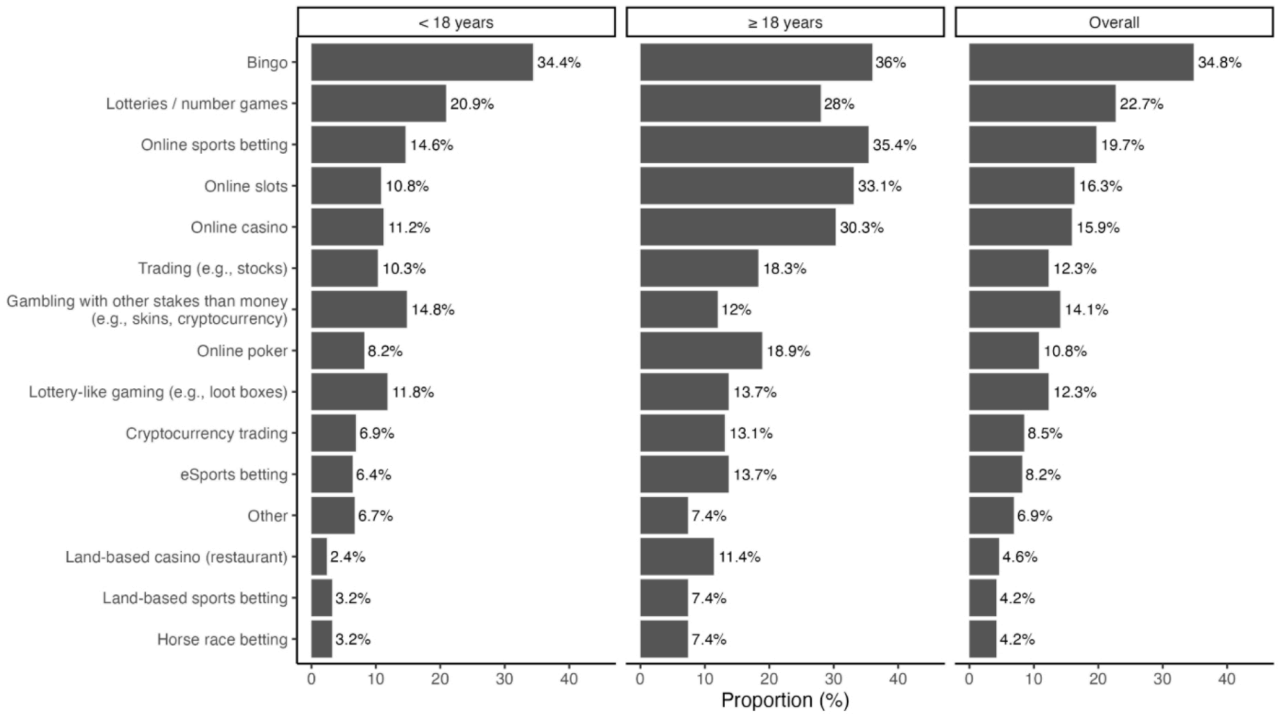


Figure 1

Gambling formats by age group.

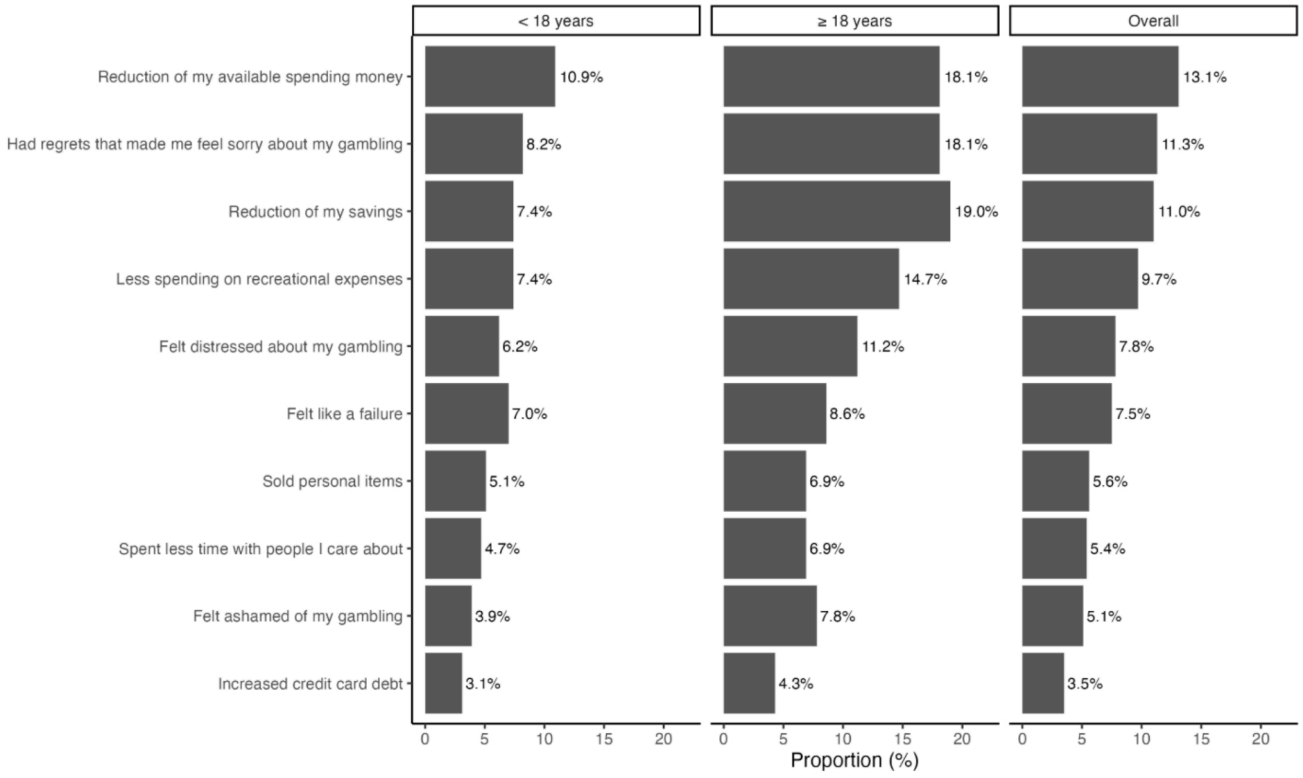


Figure 2

Reported gambling-related harms by age group among past-year gamblers, n=373.

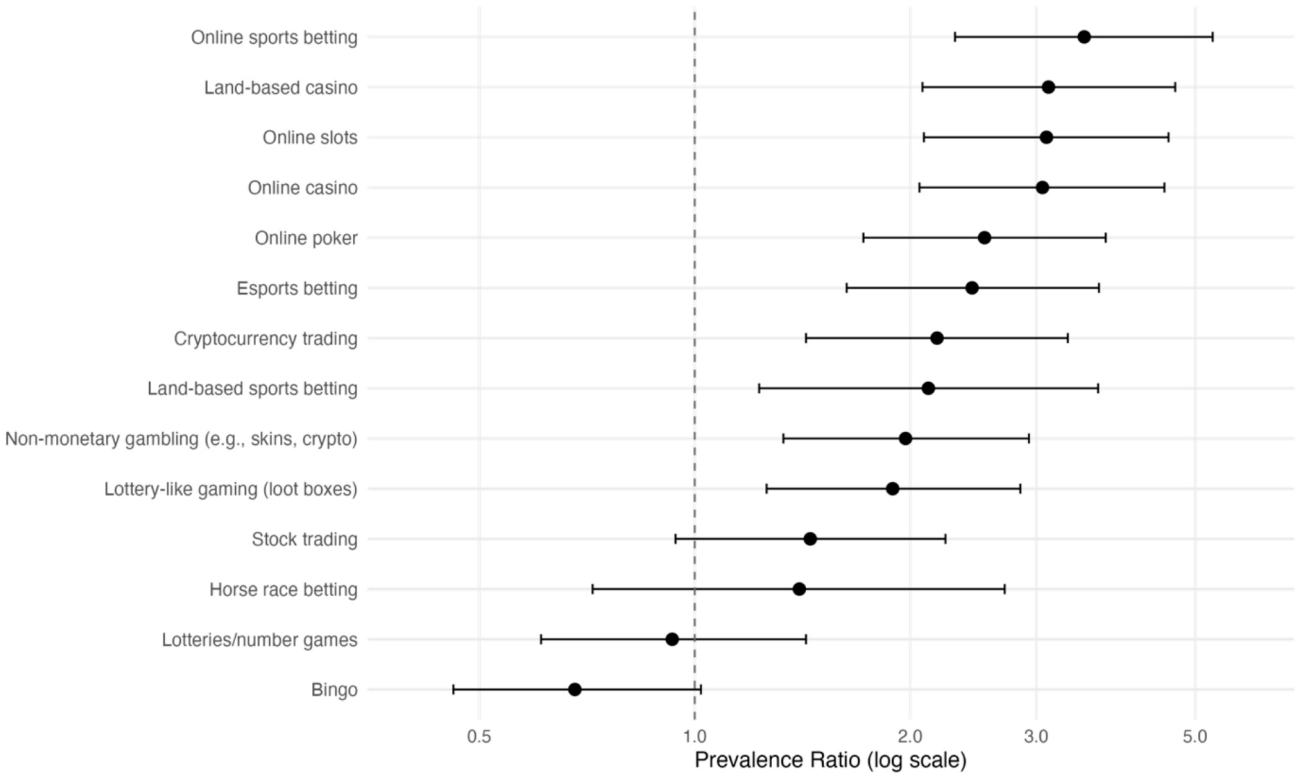


Figure 3

Prevalence ratios with 95% CI for gambling-related harm for each gambling format, x-axis on log scale.

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- Supplementemerginggambling.docx