The Prevalence and Correlates of Gambling in Secondary School Students in New South Wales 2022/23

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Glossary of terms

Adolescent refers to a person aged between 10 and 19 years old.

ASSAD is the Australian Secondary School Alcohol and Drug survey, conducted triennially by the Centre for Behavioural Research in Cancer, Cancer Council Victoria.

At-risk gambling refers to students who indicated that they had gambled at some time in the past and responded 'yes' to items in 1 to 3 domains of the DSM-IV-[MR]-J.

DSM-IV-[MR]-J is the Diagnostic Statistical Manual-IV-MR-J (Adapted-Multiple Response format for Juveniles), a screening tool used to assess potential problematic gambling among young people across 9 domains, including preoccupation, withdrawal symptoms, chasing losses, lying, and illegal or antisocial acts.

eSports (short for electronic sports) refers to competitive video gaming. Professional gamers participate in organised tournaments, competing against each other for prizes or rewards.

Gambling was defined in the ASSAD survey as follows: "Gambling is when you pay in your own money knowing that you could lose all of it or, possibly, win back even more than you paid in. There are lots of ways to gamble, for example on the results of races, sports, card games, lotteries, raffles, on machines like "pokies", tipping competitions and sweepstakes."

Games with gambling components are digital or video games with embedded gambling games, such as wheel spinning or bingo, that are secondary to the main theme of the game. They provide opportunities to advance or gain lives in the game and obtain in-game items or currency.

Gaming refers to playing digital or video games, including through a gaming console, computer, tablet, smartphone, or other digital device.

Hard forms of gambling are defined as deliberate and consistent gambling activities, such as wagers made with bookmakers or gambling in casinos. In the current study, hard forms of gambling activities included betting on card, casino or sports games, fantasy sports competitions, poker machines, horse or dog races, personal skill games, and/or two-up.

Loot boxes are in-game digital containers containing a mystery item that gamers can purchase or win through in-game play. These items can have functional value, such as weapons and abilities that enhance in-game performance; aesthetic and prestige value, such as skins to decorate in-game characters or weapons; or material value where virtual currency is won and can be spent on in-game items or progression. Similar to a lucky dip, the loot box prize is not known in advance and is usually determined by chance.

Non-gamblers are students who indicated that they had never bet any money on any form of gambling.

Non-problem gambling refers to students who indicated that they had gambled at some time in the past, but did not respond 'yes' to any of the items on the DSM-IV-[MR]-J.

Problem gambling refers to students who indicated that they had gambled at some time in the past, and responded 'yes' to items in 4 or more domains of the DSM-IV-[MR]-J.

Simulated gambling are activities which imitate gambling but do not provide an opportunity to win real money. Simulated gambling includes purchasing loot boxes, as well as playing social casino games and video games with mini gambling components. Players can spend real money in many simulated gambling games to buy virtual credit, extend playing time, or purchase loot boxes, but cannot win real money. However, in-game items that can be won, such as skins, have real-world value since they can be sold for real money or used as a form of currency to gamble on third-party websites.

Skin gambling uses in-game items (skins) acquired in video games, to gamble on third-party websites such as esports, games of chance, or other competitive events, and to gamble privately with friends. In addition to their social value, skins can have financial value, ranging from a few cents to many thousands of dollars, although not all skins can be traded or used for gambling.

Social casino games directly replicate gambling activities, such as slots and other casino games. They can be downloaded as apps, played on social networking sites, or accessed as demo games on real-money gambling websites. Although players can win only in-game currency, many social casino games allow players to purchase virtual credits with real money to expedite continued play.

Soft forms of gambling are defined as being incidental or recreational in nature. In the current study, soft forms of gambling included betting on tipping competitions, sweeps, bingo, or buying lottery tickets, instant scratch cards, and/or raffle tickets.

Young people are those under the age of 18 years.

Youth gambling refers to gambling by a young person or young people under the age of 18 years.

Executive summary

1. Background

The social costs of gambling include financial, emotional, psychological, relationship and family impacts. Among young people under the age of 18, gambling is associated with various negative consequences, including school absenteeism or dropout and family disruptions, as well as substance use and mental health issues. Some adult gamblers attribute their current gambling behaviour to exposure to gambling during adolescence, and early exposure to gambling has been associated with an increased risk of developing gambling-related problems in adulthood. The growing pervasiveness of gambling advertising, rising accessibility of gambling through online devices, coupled with the emergence of new forms of gambling and gambling-like games, also raises concerns about young people's early exposure to gambling and gambling-like activities.

2. Aims

The current study aimed to examine the prevalence and correlates of gambling and problem gambling among a random sample of secondary school students aged between 12-17 years from Victoria (VIC) and New South Wales (NSW). The association of factors such as students' exposure to gambling advertisements, other people's gambling, venues where people were gambling, and tobacco and other drug use with young people's gambling and problem gambling was also examined.

3. Methods

A gambling module was included in the 2022/23 round of the triennial Australian Secondary School Alcohol and Drug (ASSAD) survey, conducted by the Centre for Behavioural Research in Cancer, Cancer Council VIC. Secondary schools from VIC and NSW were randomly selected for participation based on a 2-stage probability sample, stratified by education sector and year level. Students from selected classes completed the ASSAD survey in the 2022 and 2023 academic school years.

A total of n=2,752 students (n=1,430 from VIC and n=1,322 from NSW) aged between 12-17 years were included in analysis. Samples were weighted to align with state population distributions.

4. Key gambling prevalence and gambling exposure findings (NSW students only)[1]

Among all NSW students, 29% had ever gambled, 21% had gambled in the past year, 10% had gambled in the past month and 6% had gambled in the past week. Male students were more likely to have ever gambled and to have gambled in the past year and older students were more likely to have ever gambled.

The most common gambling activities in the last 12 months among NSW students who had ever gambled were raffle tickets (35%), personal skill games (34%), sports games (31%), instant scratchie cards (25%) and betting on card games (25%).

The most common gambling modalities among NSW students who had gambled in the past year were at home or at a friend's house (54%), online using a mobile phone (41%), online using a laptop or computer (35%), and online using a tablet or iPad (24%).

Among all NSW students, 3% were classified with problem gambling and 7% were classified with at-risk gambling using the DSM-IV-[MR]-J. Among NSW students who had gambled in the past year, this increased to 12% classified with problem gambling and 29% classified with at-risk gambling.

Exposure to gambling by NSW students was common. Twenty-eight percent of all NSW students had visited at least 1 venue where people were gambling in the last 4 weeks, with 15% having visited a pub and 17% having visited a club in the last 4 weeks. Twenty-two percent of all NSW students reported that someone in their household had gambled in the last 4 weeks, with 15% reporting that their father/caregiver and 11% reporting that another relative had gambled in the last 4 weeks. More than half of all NSW students recalled seeing or hearing at least 1 type of gambling advertisement in the last 4 weeks (58%), most commonly on TV (48%), websites (22%), social media (21%), and on the radio (18%).

Among all NSW students, 5% of students indicated that they will 'definitely' and 5% that they will 'likely' gamble in the next 12 months.

Over a quarter of NSW students indicated that they approve of people who gamble once a week or more, and around 1 in 5 students agreed that they think more positively about gambling because of gambling advertisements, and that knowing the betting odds makes watching sport more exciting.

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[1] Given that the prevalence results were similar for both VIC and NSW, the Executive Summary presents the prevalence results for the NSW sample only. Results for both the combined states sample and the NSW only sample are presented in the body of the report.

Twenty-eight percent of all NSW students had ever played a video game with gambling components and 15% had ever played gambling-themed apps from an app store. Almost half (47%) of all NSW students had ever opened a free loot box during a video game; 31% had ever used virtual currency purchased with real money to get a loot box; and 28% had ever paid real money for a loot box.

Among NSW students who had ever gambled, 21% had gambled online using a parent/guardians online account with their parent/guardian's permission and 16% had gambled online using an online account that they had set up themselves.

5. Key association findings (combined states sample)[2]

Factors associated with gambling prevalence

Students who knew other people that gambled in the last 4 weeks (including a parent/caregiver, best friend, or sibling), and students who had been inside a venue where people were gambling in the last 4 weeks, were more likely to have gambled than those who did not. Similarly, students who had seen or heard a greater number of different types of advertisements for gambling in the last 4 weeks were more likely to have ever gambled and to have gambled in the past year. There were also significant associations between student substance use and gambling participation. Students who had smoked tobacco, vaped or consumed alcohol in the past month, or who had ever used an illicit drug, were more likely to have gambled, compared to students who had not.

Factors associated with at-risk/problem gambling

Among students who had gambled in the past year, those from areas of higher sociodemographic disadvantage were more likely to be classified as at-risk/problem gamblers on the DSM-IV-[MR]-J, compared to students with lower levels of disadvantage. Students who gambled in the last year and had a best friend or a sibling that had gambled in the last 4 weeks, were significantly more likely to be classified with at-risk/problem gambling than those who did not, although student's exposure to gambling venues and advertising were not significantly associated with at-risk/problem gambling classifications. Student's substance use was also associated with being classified with at-risk/problem gambling for past year gamblers. Students who had smoked tobacco or consumed alcohol in the last month, or who had ever used an illicit drug, were more likely to be classified with at-risk/problem gambling than those who had not.

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[2] For all association analyses, the Executive Summary reports results for the combined states sample to capitalise on the greater statistical power provided by the larger sample size. Results for both the combined states sample and the NSW only sample are presented in the body of the report.

Factors associated with online and simulated gambling (all NSW students)

Students who had a parent or caregiver who had gambled in the last 4 weeks were significantly more likely to be currently gambling online compared to those whose parent/caregiver had not gambled recently. Male students, those who had a parent/caregiver or a sibling that had gambled in the last 4 weeks, and students who reported having seen or heard a greater number of different types of advertisements for gambling in the last 4 weeks were significantly more likely to have played games with gambling components in the last 12 months. Similarly, obtaining a loot box in the last 12 months was positively associated with male gender, having a parent/caregiver or a best friend who had gambled in the last 4 weeks, and exposure to a greater number of different types of advertisements for gambling in the last 4 weeks.

6. Implications

The current study provides up-to-date prevalence estimates of the gambling behaviours of 12-17 year old secondary school students from 2 Australian states (VIC and NSW), based on a relatively large sample. The findings represent the most recent Australian data on gambling behaviours of young people and are based on an arguably more representative sample than other recent Australian studies. However, the low school response rate suggests caution in generalising the findings to the wider secondary school population of each state.

Almost 1 in 3 students from NSW reported having ever gambled, and just over 1 in 5 students reported gambling in the past year. Three percent of NSW students were classified with problem gambling on the DSM-IV-[MR]-J, and 41% of NSW students who had gambled in the past year were classified with problem or at-risk gambling.

Although rates of gambling among students are lower than compared to adults, the percentage of students who gamble who are classified with problem or at-risk gambling is comparatively higher than for adults who gamble, despite gambling being illegal for the students in this study. This discrepancy may be due to young people interpreting the DSM-IV-[MR]-J screening questions differently from adults, and as such, rates of problem and at-risk gambling for students and adults may not be directly comparable.

The current study highlights the ubiquitous nature of gambling in students' lives, with a large proportion of students exposed to environmental and social conditions that may promote or support gambling, including via gambling advertisements, participation by family members, and/or attending venues where gambling is available. There were also important links between young people's gambling behaviours and engagement in other risky behaviours. Gambling participation was associated with past month smoking, vaping and alcohol consumption, and lifetime illicit drug use; and problem or at-risk gambling was associated with past month smoking and alcohol consumption, and lifetime illicit drug use.

Gambling-related problems among young people are recognised as an important public health issue, with particular concern around increases in youth online gambling participation and the significant proportion of young people meeting screening criteria for problem gambling. The results of the current study indicate that youth gambling continues to be a significant concern.

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Background

Interest and concern about youth gambling has grown substantially over the past 2 decades.(1, 2) This has been prompted by apprehension regarding the increasing pervasiveness of gambling promotion, including across digital channels;(3, 4) the growing accessibility of gambling through online devices;(5, 6) and the emergence of new forms of simulated gambling or gambling-like games (such as esports and loot boxes) which may particularly appeal to younger people.(7-10)

Youth gambling can be associated with a range of harms (11, 12) and problems such as missing or dropping out of school, family disruptions, depression, and alcohol and other drug use.(13) More than 2 thirds of adult gamblers have reported that exposure to gambling during adolescence was a key contributing factor to their current gambling.(14) There is also some evidence that early exposure to gambling is associated with an increased risk of problem gambling, as well as other physical and mental health problems in adulthood.(15, 16)

Youth gambling

Despite gambling being legally restricted to adults in most jurisdictions, many adolescents report having gambled at some point during their lifetime.(17) Studies report that children as young as 7 years old have engaged in some form of gambling,(18) with gambling initiation being most prevalent among young people aged 14-15 years.(19, 20) Recent data from Australia, the United States (US), United Kingdom (UK) and Canada, indicates that between 40 and 70% of young people (aged 12-19 years) report involvement in gambling activities in the past year, and between 5 to 15% of young people report engaging in online gambling.(21)

Simulated gambling

Simulated gambling is defined as 'non-monetary' gambling, or activities which imitate gambling but generally do not provide an opportunity to win or lose real money.(22, 23) As such, they provide players with the opportunity to practice or become familiar with gambling without necessarily spending money.(24) Simulated gambling activities include video games with in-game features such as loot boxes where a digital container which is secondary to the main gameplay offers players a chance of receiving desired items or progression in the game.(25-27) Simulated gambling can also include social casino games, and 'skin gambling',(9) where in-game items called skins are used to gamble on third-party websites or amongst friends.(28) Some games that include gambling-like features such as loot boxes can involve spending money, making the demarcation between monetary and simulated gambling difficult.(21) In Australia, simulated gambling and gambling-like activities (such as

social casinos and games containing loot box features), currently do not meet the criteria of a gambling service in the Interactive Gambling Act 2001, meaning they are not required to be regulated by the Australian Communications and Media Authority.(29)

Simulated gambling among young people is of concern for several reasons. Many video games are designed to appeal to young people and adolescents, (7, 8) and are easily accessible through smart devices such as tablets and mobile phones.(21) They are also often poorly regulated in terms of young peoples' access,(30) and young people's participation in simulated gambling tends to be unsupervised by parents.(31) Young people's participation in simulated gambling is recognised as a key gateway to youth online gambling and other forms of monetary gambling,(31) and has been linked to later problematic gambling habits.(32, 33) For example, adolescents who reported participating in simulated gambling were significantly more likely to also report participating in monetary gambling.(7, 33, 34) Participation in simulated gambling activities may also place young people at an increased risk for problem gambling.(9, 32) The rapid emergence and evolution of internet and digital media are a challenge for researchers to keep pace with these dynamic technologies and their impacts on young people.(30)

Youth problem gambling

Problem gambling is described as an uncontrollable urge to gamble despite negative consequences in a person's life.(35) Neal et al. (2005) recommended a broad Australian national definition of problem gambling as being "characterised by difficulties in limiting money and/or time spent on gambling which leads to adverse consequences for the gambler, others, or for the community".(36) However, they note the lack of existing measures which capture the critical elements of this broad definition of problem gambling and which are able to differentiate between harm and problematic behaviour.(36)

Screening tools used to measure problem gambling among young people generally assess signs and symptoms of problem gambling and/or its negative consequences,(37) such as preoccupation, withdrawal symptoms, chasing losses, lying, and illegal or antisocial acts.(38) Commonly used screening tools include the South Oaks Gambling Screen-Revised for Adolescents (SOGS-RA), Massachusetts Adolescent Gambling Screen (MAGS), and Diagnostic Statistical Manual-IV-MR-J (Adapted-Multiple Response format for Juveniles) (DSM-IV-MR-J).(39) Using such screening tools, between 1 and 6% of young people are reported to meet the criteria for problem gambling in countries including the US, UK and Canada.(21) However, a wide variability in rates of youth problem gambling has been noted, likely due to a range of measurement issues (including the use of different instruments and measures, and various cut-point scores associated with the different instruments).(40) Young people often report higher rates of problem gambling than adults,(1, 40-42) but there are concerns that children may not understand or comprehend some of the problem gambling screening questions in the same way as adults.(40) Given that these screening tools have

not been validated against clinical psychiatric assessment for young people, the prevalence of youth gambling may be inflated or overestimated when based on the available screening tools.(21, 40) However the DSM-IV-MR-J is currently recommended as one of the best available tools for evaluating adolescent gambling problems.(37, 43)

Gambling harm refers to any negative consequence or side effect that results from gambling, and the concept of gambling harm encompasses a person's finances, relationships, work, health, and overall well-being.(44) Gambling harm can be experienced on a spectrum, ranging from minor negative experiences to major crises.(44) As such, the concept of gambling harm is more broad than a classification of at-risk or problem gambling using a screening tool such as the DSM-IV-[MR]-J. The latter assesses risky or maladaptive gambling behaviours and whether young people meet specified screening criteria for at-risk or problem gambling.(45)

Prevalence of youth gambling, simulated gambling, and youth problem gambling in Australia

King et al. (2020) conducted a review of Australian adolescent gambling studies between 2000 and 2016.(21) They reported on 13 studies, primarily including students aged 12-17 years.(21) Across these studies, estimates of the prevalence of gambling for Australian adolescents in the last year ranged widely, between 15% to 81%.(21) The prevalence of internet gambling was approximately 5%.(21) The authors note that prevalence differences among studies are likely due to differences in sampling and items used to measure gambling, including in how gambling is defined and interpreted by respondents. Youth gambling most often involved scratch cards, lotteries, card games and sports betting.(21) Across the 13 studies in the review, between 1 and 4% of young Australians reported symptoms indicative of problem gambling.(21)

In 5 of the 13 studies in the King et al. (2020) review that measured simulated gambling (such as gambling-like apps or social casino games), it was more prevalent among young people than monetary internet gambling.(21) However, King et al. (2020) noted a range of issues regarding how simulated gambling activities were defined.(21) For example, simulated gambling activities often change with technological advances, have different implementations across games or platforms, and certain named products may only have short-term popularity. This makes it difficult to standardise questions about simulated gambling over time.(21)

The majority of Australian studies included in the King et al. (2020) review were based on samples drawn from secondary schools (9 of 13 studies), with the remaining studies using market research-based online panels. Sample sizes ranged widely from n=182 (46) to n=2,788,(47) and sampling varied from convenience sampling of 4 private schools in metropolitan Sydney, NSW, (48) to a large probability-based random sample of 26 schools

from metropolitan and non-metropolitan districts around Melbourne, VIC.(47) The majority of studies sampled students in grades 7-12, while others sampled students only in grades 10-12,(49), only grades 9 and 10,(46) and only grade 8.(48) The reviewed studies are also now several years or decades old, and many pre-date the widespread popularity of Facebook and similar social media platforms. Since the King et al. (2020) review was published, there have been several more recent Australian studies reporting on youth gambling rates. The Australian studies exploring youth gambling that have been published since 2016 are summarised in Table 1.

Across the more recent studies described in Table 1, the prevalence of past year gambling ranged from 16% to 30% of respondents, and the prevalence of problem gambling from 1.5% to 15%. The majority of the studies included in Table 1 also aimed to capture newer forms of non-monetary simulated gambling such as skins, eSports and loot box gambling activities. Findings suggest that simulated gambling is more prevalent among young people than monetary gambling.(22) Engagement in simulated forms of gambling was associated with greater engagement in monetary gambling, and also with meeting the criteria for problem gambling.(22, 50-54)

Limitations with the recruitment methods of several of the above studies should be noted. For example, the NSW Youth Gambling Study 2020 used letterbox sampling, wherein recruitment flyers, with a link to an online survey, were delivered to households in NSW.(22) The recruitment flyer was not delivered to all targeted households, and attained less coverage than planned, with the authors' acknowledging potential sample response bias as a result.(22) Other studies by Hing et al. (2021b, 2022a-c), and Rockloff et al. (2021) used a combination of email, online and social media advertising,(50-53) and an online panel aggregator (50-54) to recruit participants. The resulting samples were self-selecting, non-probability based, and thus potentially not representative of the broader youth population of NSW.(50, 53) In particular, the online panel and online advertising samples contained relatively large numbers of young people with problem and at-risk gambling and problematic gaming.(22)

Table 1: Review of Australian youth gambling studies published since 2016

Author, year	Sample size and description	Weighted probability sample?	Problem gambling tool	Prevalence of gambling and problem gambling	Factors associated with gambling
Freund et al. 2019 (55) [2017 ASSAD-VIC Report] [*]	N=3,746; Aged 12-17 years; students from a stratified random sample of 58 secondary schools in VIC.	Yes	DSM-IV-[MR]-J	**Ever**: 31% **Past month**: 6% **Problem gambling**: 1.4%	**Ever Gambling:** older age; male gender; knowing other people who gambled in last month (parent, best friend or sibling); visited a venue (TAB, pub or club, or racecourse) where people were gambling; saw or heard more different types of gambling advertisements; alcohol and illicit substance use. **Problem gambling**: older age; socioeconomic disadvantage; knowing other people who gambled in last month (parent or best friend); tobacco, alcohol and illicit drug use.
Warren and Yu, 2019 (56)	N=2,936; aged 16-17 years; national sample from the Longitudinal Study of Australian Children (Wave 7).	Yes	PGSI	**Past year**: 16% **Gambling-like games**[1]: 24% (males); 15% (females) **Problem gambling**: 2.8% (of past-year gamblers)	**Frequency**: Male gender; engaged in other risky behaviours (e.g. smoking and drinking); friends engage in other risky behaviours; engaged in gambling-like games; parental gambling
Hing et al. 2021a (22) [NSW Youth Gambling Study 2020]	N=551; aged 12-17 years; NSW households (mail out recruitment flyer to letter boxes with link to online survey).	Yes	DSM-IV-[MR]-J	**Ever:** 43% **Past year**: 30% **Past month**: 17% (of past-year gamblers) **Past week:** 17% (of past-year gamblers) **Problem gambling**: 1.5%	**Frequency:** Older age. **Online gambling:** male gender; older age.

				Online gambling: 25% (of past-year gamblers) **Simulated gambling**[2]: 40%	
Freund et al. 2022[*] (57) [2017 ASSAD VIC&QLD]	N=6,377; aged 12-17 years; students from a stratified random sample of 93 secondary schools in VIC and QLD.	Yes	DSM-IV-[MR]-J	**Ever**: 31% **Past month**: 6% **Problem gambling**: 2%	**Past month gambling**: male gender; more money available to spend on self; alcohol consumption in the last 7 days; greater number of types of gambling advertisements seen in the last month; and greater number of peer or family members who gambled in the last month. **Problem gambling**: male gender; older age; and greater number of types of gambling advertisements seen in the last month.
Hing et al. 2021b (53); Hing et al. 2022a (50); Hing et al. 2022b (52); Hing et al. 2022c (51)	N=1,669; aged 12-17 years; residing in NSW (email and online advertising, and online panels).	No	DSM-IV-[MR]-J	**Problem gambling**: 15.5% (online panel); 50% (advertised sample) **Skin-gambling**[3] **in past month**: 22% (online panel); 55% (advertised sample) **Simulated gambling**[4] **in past-month**: 14-18% across game types (online panel) to 23-37% across game types (advertised sample) **eSports**[5]: Prevalence not reported; associations between esports betting, video gaming	**Problem gambling**: past month skin-gambling; past month simulated gambling; past month loot box purchase. **Skin gambling**: lower wellbeing; have an internet gaming disorder; engage in more types of monetary gambling; and meet criteria for problem gambling. **Simulated gambling**: greater participation in monetary gambling. **eSports gambling**: engaging in esports gaming activities and monetary gambling activities; at-risk and problem gambling.

				activities, monetary gambling and problem gambling explored	
Rockloff et al. 2021 (54)	N=1,954; aged 12-24 years; residing in NSW (online panel). [N=911 young people aged 12-17 years].	No	DSM-IV-[MR]-J	**Loot box engagement[6]:** Prevalence not reported; associations between use of loot boxes and gambling frequency and gambling problems explored	**Loot box engagement (buying or selling)**: more positive attitude towards gambling (12-17 year females only); problem gambling (12-17 years).

The 2017 ASSAD survey collected gambling data from students in VIC (n=3,746) and QLD (n=2743). A report was prepared for the Victorian Responsible Gambling Foundation(55) and reported outcomes for VIC students only. The Freund et al. (2022) study(57) reported outcomes for the sample of VIC and QLD students combined. DSM-IV-MR-J: Diagnostic Statistical Manual-IV-MR-J (Adapted-Multiple Response format for Juveniles). PG: Problem gambling. PGSI: Problem Gambling Severity Index. Prev: Prevalence. SOGS-RA: South Oaks Gambling Screen –Revised for Adolescents. [1]Gambling-like games were defined as free games such as Zynga Poker, Slottomania, Big Fish Casino, played on social network sites, smartphones or tablet devices, or gaming consoles (e.g. PlayStation, Xbox).(56) [2]Simulated gambling was defined as playing games with gambling components (video games with 'mini' gambling components, gambling-themed apps from an app store, free demo or practice games on real gambling websites, and games with gambling components on social networking websites).(22) [3]Skin-gambling was defined as in-game items (skins) acquired in video games, to gamble on esports, games of chance, other competitive events and privately with friends. Skins are most often obtained in video game loot boxes, which can be purchased with real money, in-game currency, or awarded for free.(53) [4]Simulated gambling was defined as games with gambling components, which look and play like normal gambling games, but where you cannot win real money.(50) [5]eSports events are professionally organised video game competitions between players or teams, and eSports betting can involve placing bets using cash, or alternative currencies including monetised 'skins'.(51) [6]Loot boxes are a feature in video games where players win, buy or are gifted a virtual box or other container that contains a random virtual prize, such as skins, weapons, in-game currency or special abilities.(54)

Factors associated with youth gambling and problem gambling

A wide range of factors have been associated with youth engagement in gambling and with problem gambling, encompassing individual, interpersonal and environmental factors. The majority of studies exploring risk factors associated with youth gambling and problem gambling included both adolescents and young adults (aged 10-25 years) from North American, European, and Australasian countries.(31, 58)

Individual level factors

One of the most frequently reported factors associated with youth gambling is male gender,(31) with males being more likely to gamble, and to gamble more frequently, compared to females.(1) Young males are also much more likely to be classified as displaying problematic gambling behaviours than females.(1) Age has also been associated with youth gambling, with gambling participation rates tending to increase with older age.(1)

Other individual level factors positively associated with higher gambling prevalence or problem gambling include minority ethnicity,(19, 59, 60) lower socio-economic status or family income,(31) poor academic performance,(31, 58) tobacco, alcohol and other drug use,(31, 58) as well as psychological and personality factors (e.g. greater sensation seeking, higher impulsivity, and anxiety).(19)

Interpersonal factors

Family and peer gambling attitudes and behaviours have also been identified as key influences on youth gambling.(19, 31) For example, young people are more likely to gamble if they have a parent, relative or friend who gambles or has a gambling problem.(31) Young people whose parents gamble tend to have significantly more positive attitudes towards gambling than those with non-gambling parents.(31) In addition, adolescents who perceive that their parents gamble excessively are more likely to have gambling problems.(19)

As well as the influence of family and peer gambling attitudes and behaviours, adolescents also report being directly assisted to gamble by family and friends.(31) For example, in 1 study more than a third of young people reported they had placed wagers via family and friends,(61) while another study found that youth gambling was usually facilitated by a parent, especially for scratch-it tickets and sports betting.(62)

Environmental factors

The 'Pathways Model' of gambling, proposed by Blaszczynski and Nower (2002), attempts to integrate the complex array of biological, personality, developmental, cognitive, learning theory and ecological determinants of problem and pathological gambling. The Pathways Model

recognises environmental factors such as ease of access to gambling venues, and social and cultural acceptability of gambling as "gateways" to gambling.(63) Many studies highlight factors related to the broader social context, such as gambling accessibility, availability, marketing, and cultural gambling norms, as having an important influence on youth gambling and problem gambling.(19, 64)

Physical venues where gambling is available such as casinos, pubs and clubs, and Totalisator Agency Boards (TABs) are subject to age-related access restrictions on gambling activities. For adults, greater physical accessibility to gambling venues is associated with higher rates of gambling involvement and problem gambling.(65) While young people may not generally be placing bets at such venues, a recent Australian qualitative study found that young people (aged 6-16 years) had strong recall of gambling activities associated with such venues, and indicated they would use the gambling activities in these venues as an adult.(66) The landscape of gambling has also evolved rapidly in the last few decades with the emergence of new non-venue based forms of gambling, notably through online platforms.(30). Together with technology such as smart phones, this presents opportunities for young people to engage in online gambling.(1, 31)

Another key environmental factor in youth gambling is media promotion and advertising.(67) In Australia, the amount of money spent by the gambling industry on gambling advertising more than tripled between 2011 and 2020 (excluding on social media, sponsorships and in-program content).(68) Young people are exposed to messages across diverse media platforms that not only endorse but also glamorise gambling activities.(69) Beyond conventional advertising methods like TV, radio, and print, the gambling industry extends its reach by sponsoring athletes, sports teams, celebrities, and high-profile events.(70) Moreover, the proliferation of smartphones, apps, and social media has exponentially widened the avenues for gambling marketing.(68)

Several recent reviews have explored the impact of gambling advertising on attitudes, behaviour, and related harms,(4, 71) including research focused on young people.(64, 72, 73) Children and adolescents report high levels of exposure and awareness of gambling advertisements.(4, 74) Findings suggest that while exposure to gambling advertising may not necessarily encourage children and adolescents to bet,(64, 73) young people report that awareness and exposure to advertising normalises gambling, leading to more positive attitudes.(4, 71) The impact of advertising seems to be more potent for young people currently experiencing problems with gambling. Studies found associations between increased exposure to advertising and stronger intention to bet and gambling behaviour among young people currently experiencing problems with gambling.(4, 71) In a review of qualitative research into youth gambling, Wardle et al. (2019) noted the influence of promotional advertising (e.g. bonus offers) on those already engaging in gambling, with some perceiving the incentives as 'luring me in' or 'free money'.(64) Adolescents who have previously engaged in gambling also had increased recall of, and familiarity with, gambling advertisements.(73) One recent review examined the methodological quality of research into gambling advertising,

highlighting issues with sampling, use of measures that rely on self-report, and paucity of research using experimental or longitudinal designs.(72) Current findings indicate that limiting exposure to gambling advertising for young people is likely warranted.(4) Further research is needed to examine the impact of advertising on gambling behaviour and related harms,(72) although significant methodological challenges remain in proving causality.(75)

Finally, all of these influences occur within a society and culture that accepts and enjoys gambling. Thomas and Lewis (2011) argue that gambling is seen as a fundamental part of Australian culture and tradition.(76) Gambling marketing tends to promote gambling as aligned with the Australian national identity;(77) and many social venues, such as pubs and clubs, offer gambling products alongside non-gambling leisure facilities, such as food and drinks, social activities, sporting facilities, and live entertainment. Such factors combine to contribute to the normalisation of gambling in Australia.(78)

The current study

The current study builds on research undertaken in 2017, led by the University of Newcastle who partnered with the Australian Secondary Students' Alcohol and Drug (ASSAD) survey (administered by the Centre for Behavioural Research in Cancer [CBRC], Cancer Council Victoria) to deliver one of the largest and most representative studies of gambling prevalence and correlates among secondary school students from VIC and Queensland (QLD).(55)

The current study sees the inclusion of gambling questions in the 2022/2023 ASSAD survey for students from VIC and NSW. It provides up to date prevalence estimates for gambling behaviours for secondary school students in VIC and NSW. For NSW students, the survey included items capturing the prevalence of some of the newer and emerging forms of gambling, such as use of online gambling accounts, and simulated gambling (including games with gambling components and loot boxes).

Aims of the current study

The current study aimed to examine the prevalence and correlates of gambling and problem gambling among a sample of secondary school students aged 12-17 years from VIC and NSW. The association of factors such as age, gender, students' exposure to gambling advertisements, other people's gambling, venues where people were gambling, and tobacco and other drug use with young people's gambling and problem gambling, was specifically examined.

For students from NSW only, this study also explored the prevalence of engagement in online gambling, games with gambling components and loot boxes, attitudes towards gambling and advertising, and associations with age, gender, students' exposure to gambling advertisements, other people's gambling, and venues where people were gambling.

Results are presented for both the combined states sample (NSW and VIC combined) and for the NSW only sample.

Study design and methods

Design and setting

The ASSAD survey is a comprehensive national survey conducted in every state and territory of Australia that primarily examines substance use among secondary school students in Australia. The triennial ASSAD survey has been conducted every 3 years since 1984 by the Centre for Behavioural Research in Cancer (CBRC), Cancer Council Victoria, using sampling and measures that have been standardised for over 30 years. The ASSAD survey includes different modules tailored to the specific needs and interests of the states and territories. Permission to conduct the survey was sought from State Education Departments for Government schools; from Catholic Diocesan education offices for Catholic schools; and directly from the principals of selected independent sector schools.

The latest round of the ASSAD survey was planned for 2020. However, due to the COVID-19 pandemic, and subsequent pandemic-related state education departments' restrictions on research in schools, the survey was delayed until 2022. Slow school recruitment resulted in the extension of data collection for the ASSAD survey to the end of term 2, 2023. The 2022/23 round of the ASSAD survey included a gambling module for completion by students from VIC and NSW.

Sample and recruitment

As for all states and territories, VIC and NSW schools were randomly selected for participation based on a stratified two-stage probability sample. The random sample of schools was stratified by education sector (government, independent, Catholic) and designated level for ASSAD (Lower-years 7-10; Upper-years 11-12) for each state to match their respective state-wide proportions. The ASSAD team also generated a list of 'replacement' schools (i.e., schools to be contacted for any original sampled school that declined to participate) matched to the original stratified sample.

The CBRC contracted McNair yellowSquares to recruit and undertake data collection for the 2022/23 ASSAD survey. Schools were contacted by email and telephone and invited to participate. Among consenting schools, classes of students in Years 7 to 12 were selected by schools, excluding classes based on students' ability or performance. Students completed the ASSAD survey in 2022 and the first half of the 2023 academic school year. In the 2022/23 ASSAD survey, schools were given the option for the online survey to be administered by classroom teachers during class time, or for an ASSAD researcher to attend the school to administer the online questionnaire. The majority of schools in 2022/23 opted for administration by classroom teachers. The items included in the gambling module within the 2022/23 ASSAD survey were approved by the University of Newcastle Human Research

Ethics Committee (Ref: H-2017-0102). The ASSAD survey also received ethical approval from Cancer Council VIC Human Research Ethics Committee (HREC 1013).

Measures

The items included in the gambling module were developed by the research team for the 2017 ASSAD survey, based on an extensive review of the literature, advice from experts in adolescent youth gambling, and pilot testing with a group of adolescents. Some items were revised for the 2022/23 gambling module. For example, in 2017, only the prevalence of ever and past month gambling was assessed. In the 2022/23 module, the prevalence of past year and past week gambling was also included. Modifications were also made to response options for online forms of gambling in the 2022/23 module. A series of additional items were included in the NSW gambling module to capture attitudes towards gambling and advertising, and student engagement with online gambling accounts and simulated gambling (including games with gambling components and loot boxes). These additional items were taken from the NSW Youth Gambling Study 2020,(22) and were originally adapted from the United Kingdom Gambling Commission.(79) A copy of the items included in the gambling module is provided in Appendix A.

Student characteristics

Students self-reported their: age, gender, postcode, main language spoken at home (response options: English only, English and another language, another language only), money available to spend on self per week (response options: none, $10 or less, $11-$20, $21-$40, $41-$60, etc., over $150), self-considered school achievement (response options: a lot above average, above average, average, below average, a lot below average), and attendance at school on the previous school day (yes/no).

Tobacco, alcohol and other drug use

Students completed modules asking them to self-report their tobacco, vaping, alcohol and other illicit drug use. Students were asked: have you smoked tobacco cigarettes in the last 4 weeks? (yes/no); have you used an e-cigarette or vaping device in the last 4 weeks? (yes/no); have you had an alcoholic drink in the last 4 weeks? (yes/no); and how many times, if ever, have you smoked/used/taken cannabis, meth/amphetamines, cocaine, heroin and 3,4-Methylenedioxymethamphetamine? (MDMA; response options: none, once or twice, 3-5 times, 6-9 times, 10-19 times, 20-39 times, 40 or more times).

Gambling prevalence

Students were provided with the following definition of gambling: "Gambling is when you pay in your own money knowing that you could lose all of it or, possibly, win back even more than

you paid in. There are lots of ways to gamble, for example on the results of races, sports, card games, lotteries, raffles, on machines like "pokies", tipping competitions and sweepstakes."

Students were asked the following questions regarding their gambling behaviour (yes/no response options):

- Have you ever bet any money on any form of gambling? **(Ever gambled)**
- In the last 12 months, have you bet any money on any form of gambling? (**Past year gambling)**
- In the last 4 weeks, have you bet any money on any form of gambling? (**Past month gambling)**
- In the last 7 days, have you bet any money on any form of gambling? (**Past week gambling)**

Types of gambling activities

Students who had ever gambled were asked to indicate, from a list of possible types of gambling activities (e.g. card games, sports games, lottery or raffle tickets), whether they had gambled on that activity ever, in the last 12 months, in the last 4 weeks, in the last 7 days, or never. Gambling activities were also categorised as either 'hard' or 'soft' forms of gambling. Griffith (1999) defined hard gambling as deliberate and consistent activities, and soft gambling as being more incidental or recreational in nature.(80) Hard forms of gambling included betting or gambling on card, casino or sports games, fantasy sports competitions, poker machines, horse or dog races, personal skill games, and/or two-up. Soft forms of gambling included betting or gambling on tipping competitions, sweeps, bingo, lottery tickets, instant scratch cards, and/or raffle tickets.

Modality of gambling activities

Students who had ever gambled were asked to indicate whether or not they had ever gambled using a range of modalities (e.g. online using a computer, online using a phone, at a TAB, at a racecourse). Response options included 'Yes, I gambled myself', 'Yes, someone else gambled for me', and 'No, I have not gambled this way'. Students who selected either of the 'yes' responses were combined as an overall 'yes' for each gambling modality.

Money spent on gambling

Students who had gambled in the past month were asked to indicate how much money they had bet on gambling in the last 4 weeks (response options: <$5, $5-$10, $11-$20, $21-$40, $41-$60, etc., over $150); and if they had won back more money than they bet (response options: yes I finished ahead, no I lost money, no I finished about even).

Likelihood of future gambling

All students were asked to complete a single item about how likely they were to gamble in the next 12 months (response options: I definitely will gamble; I'm likely to gamble; I'm not sure; I'm unlikely to gamble; and I definitely will not gamble).

Problem gambling

All students completed the validated 12-item Diagnostic Statistical Manual IV (Multiple Response format) adapted for Juveniles (DSM-IV-[MR]-J).(38) The DSM-IV-[MR]-J assesses 9 domains associated with problem gambling: preoccupation (1 item), escape (1 item), withdrawal (1 item), tolerance (1 item), loss of control (1 item), taken money (3 items), risked relationships (2 items), lying (1 item), and chasing losses (1 item). Consistent with previous Australian research,(49, 81, 82) response options were revised to a dichotomous yes/no scale for each of the 12 items. Scoring is based on the 9 domains on the DSM-IV-[MR]-J. A point is assigned for a positive response to the item in each domain, or for a positive response to at least 1 item in those domains assessed by multiple items (i.e. taken money and risked relationships). Consistent with the scoring system used by Purdie et al. (2011),(82) students were classified as follows: a) non-problem gambler (did not respond 'yes' to any of the items); (b) at-risk gambling (responded 'yes' to items in 1 to 3 domains); or (c) problem gambling (responded 'yes' to items in 4 or more domains). Students who were missing responses to items in any of the 9 domains were not given a score and were classified as missing. A non-gambling category included students who had never gambled. The DSM-IV-[MR]-J has demonstrated good psychometric properties including construct validity and internal consistency (Cronbach's alpha=0.75).(38)

Exposure to other people's gambling

All students were asked whether any people living in their household had gambled in the last 4 weeks (yes/no); and whether they knew any people who had gambled in the last 4 weeks (response options: mother/caregiver, father/caregiver, brother or sister, other relative, a best friend, someone else you know, I do not know anyone). A positive response to either mother or father or caregiver having gambled in the last 4 weeks was combined as a 'parent/caregiver'.

Exposure to venues where people were gambling

All students were asked whether they had been inside a range of venues where people were gambling (response options: TAB betting shop, pub where gambling occurs, club where gambling occurs, casino, racecourse, or none of these) in the last 4 weeks. Students who selected 1 or more venue/s were classified as having been inside a gambling venue.

Exposure to gambling advertising

All students were asked if they had seen or heard advertising or promotions for gambling on a range of mediums in the last 4 weeks (response options: TV, radio, billboards, convenience store or newsagency, scoreboards or signage at sporting events, live studio crosses during sports broadcasting, in pubs or clubs, celebrity promotions, websites or social media, or have not seen or heard any). Each type of gambling advertising exposure was summed, and students were classified as having seen 3 or less, or 4 or more different types of advertisements in the last 4 weeks.

Attitudes towards gambling and advertising (NSW students only)

Students were asked to respond to a series of statements assessing knowledge, awareness and reactions to gambling advertisements. For example, "I am more likely to gamble after seeing a gambling advertisement". A total of 9 items were completed on a 5-point response scale (from strongly disagree to strongly agree). Items were based on Hanss et al. (2015),(83) with additional items suggested by the NSW Office of Responsible Gambling.

Online gambling (NSW students only)

Students who had ever gambled were asked to respond to 6 items assessing online gambling: a) I have gambled online using my parents'/guardians' gambling account with their permission; b) I have gambled online using my parents'/guardians' gambling account without their permission; c) I have gambled online using another person's gambling account with their permission; d) I have gambled online using another person's gambling account without their permission; e) I have gambled online using a gambling account I set up myself; and f) I have gambled online another way; (response options: Yes currently, Yes, but not anymore, Never).

Games with gambling components (NSW students only)

Students were given the following definition of games with gambling components: "Games have gambling components, which look and play like normal gambling games – for example roulette, poker, pokies and bingo. They may be free to play, or you may pay to play, but you cannot win real money". Students were asked to indicate when they had last played any of these games with gambling components: a) Games with gambling components on social networking websites (such as Zynga games on Facebook); b) Video games with gambling components (such as Diamond Casino & Resort in the video game Grand Theft Auto V); c) Free demo or practice games on real gambling websites or apps, for example, Mobile Casinos; d) Gambling-themed apps from an app store (such as bingo, poker, pokies/slots, or roulette that you play on your phone, tablet or computer); (response options: in the last 7 days, in the last 4 weeks, in the last 12 months, more than 12 months ago, never).

Loot boxes (NSW students only)

Students were given the following definition of loot boxes: "Many video games offer loot boxes. Loot boxes are in-game items which can be purchased with real money, in-game currency, or awarded for free. When opened, loot boxes contain a random selection of virtual items (e.g. weapons, cosmetic items known as skins, or in-game currency)". Students were asked to indicate when they had last obtained a loot box in the following ways: a) Opened a free loot box during a game; b) Paid real money to get a loot box or key; c) Used virtual currency that was purchased with real money to get a loot box; (response options: in the last 7 days, in the last 4 weeks, in the last 12 months, more than 12 months ago, never).

Analysis

All analyses were adjusted for the clustering of students within each school and weighting to the population distribution. Comparison of weighted prevalences used the Rao-Scott second-order correction to Pearson's Chi-squared test. The p-values were computed with a Satterthwaite approximation to the distribution and with denominator degrees of freedom (84) using the R package survey.(85) Chi-squared tests were not conducted where the expected count was less than 5 in more than 20% of cells (footnoted in tables as required). Survey design adjusted Kruskal-Wallis were used to assess the differences in continuous variables. Statistical analyses were programmed using R version 4.3.3 (2024-02-29 ucrt) (R Foundation for Statistical Computing, Vienna, Austria. URL http://www.R-project.org/).

Sample weighting

All weighting was based on Australian Bureau of Statistics' (ABS) student enrolment data for 2022.

The NSW sample was weighted to align with population distributions of 12-17 year old students in NSW by sex, age and education sector. As no female students from Catholic schools were surveyed, the male students were taken to represent all students from this segment of the population for weighting purposes.

The VIC sample was weighted to align with population distributions of 12-17 year old students in VIC by sex, age and education sector. As no 12 year or 13 year old students from independent schools were surveyed, the Catholic students aged 12-13 years were taken as representatives of non-government (Catholic and independent) students for weighting purposes.

Weighting was applied to account for disproportionate sampling of age, sex and school denomination within each state. Post-stratification population weights were calculated according to each state's distribution across age, sex, and school denomination (Government, Catholic, Independent). Sample state weights were then calculated within each state by the

population weight divided by the mean population weight. Combined sample weights were calculated by the population weight divided by the combined states mean population weight.

Two different weightings were used:

- Sample state weights were used for within state comparisons. These represent a random sample (with n scaled to the sample size of each state) of each state population.
- Combined sample weights were used for comparisons including both states. These represent a random sample (with n scaled to the combined state sample size) of the combined NSW and VIC population. Note that for this reason, subsets for both states combined does not equal the individual state samples added together, as the combined data were reweighted so that the proportions in the data for each state are equal to the combined population of both states.

In the 2022/2023 ASSAD survey an 'other' gender response option was included for the first time. The ABS data only provides student enrolment data for males and females. Where a students' sex was reported as neither male nor female (or was not stated/inadequately described), the ABS randomly assigned them either a male or female status. To ensure that the ASSAD population weights accurately reflected the ABS student enrolment data for 2022, the ABS approach was replicated (i.e., students whose gender was reported as 'other' or was not stated were randomly assigned either a male or female status for weighting purposes). Prevalence estimates for the 'other' and 'not stated' gender categories are not presented in this report due to the small cell sizes; however, these students are included in total prevalence estimates.

Unless otherwise stated, all frequencies and proportions use either the state sample or combined sample weights.

Data cleaning

Students with no response to any of the substance use prevalence questions, who did not provide their age or year of birth, who were not aged between 12-17 years, or whose survey responses were consistently implausible or exaggerated, were removed from the dataset prior to analysis. Students who were missing a response for the first gambling question (i.e. they were missing a response to all 4 gambling behaviours including ever gambled, past year gambling, past month gambling, and past week gambling) were also removed from the analysis.

Risk factors associated with gambling prevalence and problem gambling classifications

Examination of risk factors associated with student gambling behaviours was undertaken using univariate analyses. Dependent variables included ever, past year, past month and past

week gambling, and problem gambling categories for students who reported gambling in the past year based on the DSM-IV-[MR]-J. The at-risk and problem gambling categories were combined for this analysis (categories included non-problem gambling and at-risk/problem gambling). Problematic gambling among past year gamblers was selected for analysis in light of international research which predominantly assesses or reports past-year prevalence of problematic gambling.(17) Independent risk factor variables included: rurality (major city vs other); level of socioeconomic disadvantage (high vs low); exposure to family/peer gambling in the last 4 weeks (parent/caregiver, best friend, or sibling); visited a venue where people were gambling in the last 4 weeks (yes/no); exposure to gambling advertising in the last 4 weeks (3 or less types of advertising, 4 or more types of advertising seen in the last 4 weeks); tobacco smoking, alcohol and other drug use (past month smoking [yes or no]; past month drinking [yes or no]; past month vaping [yes or no]; and any lifetime use of illicit drugs [including cannabis, hallucinogens, methamphetamines, cocaine, heroin and MDMA]). Rurality was based on student postcode and classified according to the 2021 Accessibility and Remoteness Index of Australia (ARIA+), as either major city or other (Inner regional, Outer regional, Remote, Very remote).(86) Level of socioeconomic disadvantage was based on student postcode and using the 2021 Socio-Economic Indexes for Areas (SEIFA) Index of Relative Socio-economic Disadvantage (IRSD) decile classifications.(87) Deciles 1-6 (higher disadvantage) were compared to Deciles 7-10 (lower disadvantage).

These association analyses were conducted on the **combined sample** of students from NSW and VIC. The larger size of the combined dataset provided greater power to detect significant associations.

Risk factors associated with attitudes towards gambling and advertising, online gambling, and simulated gambling (NSW students only)

Examination of factors associated with students' attitudes towards gambling and advertising and engagement in online and simulated gambling (playing games with gambling components and obtaining a loot box) was undertaken using univariate analyses. Dependent variables included: a) agreement with statements regarding gambling and advertising (agree/strongly agree); b) any current online gambling (combined across any type of online account, with or without permission of the account holder; yes/no); c) playing any type of game with gambling components in the last 12 months (combined across all types of games; yes/no); and d) obtained a loot box in the last 12 months (combined across all response categories; yes/no). Independent risk factor variables included age (categories from 12 to 17 years), gender (male/female), exposure to other people's gambling in the last 4 weeks (parent/caregiver, sibling, and best friend; yes/no), and exposure to gambling advertising in the last 4 weeks (3 or less types of advertisements/4 or more types of advertisements).

These association analyses were only conducted on the **NSW state sample** (as these variables were not collected for VIC students).

Results

Sample information

Impacts of COVID-19

The COVID-19 pandemic significantly impacted on schools' ability to accommodate requests to participate in the ASSAD survey. The delayed 2022/23 ASSAD survey round was affected by ongoing staff shortages due to COVID as well as influenza. As a result, the target sample of schools in VIC and NSW was not able to be reached. This resulted in a smaller than anticipated sample of students completing the 2022/23 ASSAD survey round.

School sample

A total of 12 schools from VIC and 11 schools from NSW participated. In VIC, the distribution of schools included: 7 Government Schools (58%); 3 Catholic Schools (25%); and 2 Independent schools (17%). In NSW, the distribution of schools included: 8 Government Schools (73%); 2 Catholic Schools (18%); and 1 Independent school (9%).

Student sample

A total of 2,260 students from VIC and 1,716 students from NSW participated in the 2022/23 ASSAD. Students missing a response to all the substance use prevalence questions (n=81 VIC; n=60 NSW), who did not provide their age or year of birth (n=35 VIC; n=33 NSW), were not aged between 12-17 years (n=119 VIC; n=26 NSW), or who provided consistently implausible or exaggerated responses (n=23 VIC; n=25 NSW) were removed from the dataset. This resulted in a final sample of 3,574 students (2,002 from VIC and 1,572 from NSW). Sample state and combined sample weighting was based on this sample. Unless otherwise stated, subsequent tables present weighted frequencies and proportions using either the state sample or combined sample weights. The sample state weighting was equal to the sample size, n=2,002 for VIC and n=1,572 for NSW. For the combined weighted sample, the weighting was n=1,599 (45%) for VIC and n=1,975 (55%) for NSW.

A total of n=822 students (23%) in the unweighted sample did not respond to the first gambling question (i.e. they were missing a response to all 4 gambling behaviours including ever gambling, past year, past month and past week gambling), and were excluded from analysis (n=572 [29%] for VIC and n=250 [16%] for NSW). This resulted in a final unweighted sample of n=2,752 available for analysis. In the combined weighted sample, this was equivalent to n=701 students (20%) missing a response to the first gambling question, when adjusted using the state sample weights. After removal of these students, the combined weighted sample size was n=2,873.

The characteristics of the unweighted student sample are shown in Table 2. For the overall sample, the majority were male (53%), and the largest age category was 14 years (25%). The

majority of students were located in major cities (87%) and spoke English only at home (72%). The number of students with a non-missing response for subsequent gambling variables is included in the following tables or figures. All proportions are reported as a proportion of non-missing values.

Table 2: Student characteristics (unweighted), by State, N=2,752

Characteristic	VIC N = 1,430 n (%)	NSW N = 1,322 n (%)	Total N = 2,752 n (%)
Gender			
Male	748 (52%)	712 (54%)	1,460 (53%)
Female	651 (46%)	579 (44%)	1,230 (45%)
Other	29 (2.0%)	28 (2.1%)	57 (2.1%)
Missing	2 (0.1%)	3 (0.2%)	5 (0.2%)
Age (years)			
12	156 (11%)	148 (11%)	304 (11%)
13	287 (20%)	199 (15%)	486 (18%)
14	369 (26%)	309 (23%)	678 (25%)
15	204 (14%)	322 (24%)	526 (19%)
16	207 (14%)	255 (19%)	462 (17%)
17	207 (14%)	89 (6.7%)	296 (11%)
Socioeconomic disadvantage			
Deciles 1-2	154 (11%)	325 (25%)	479 (17%)
Deciles 3-4	83 (5.8%)	91 (6.9%)	174 (6.3%)
Deciles 5-6	141 (9.9%)	294 (22%)	435 (16%)
Deciles 7-8	228 (16%)	98 (7.4%)	326 (12%)
Deciles 9-10	824 (58%)	514 (39%)	1,338 (49%)
ARIA			
Major Cities of Australia	1,238 (87%)	1,144 (87%)	2,382 (87%)
Inner Regional Australia	3 (0.2%)	143 (11%)	146 (5.3%)
Outer Regional Australia	188 (13%)	35 (2.6%)	223 (8.1%)
Remote/very remote	1 (<0.1%)	0 (0%)	1 (<0.1%)
Main language spoken at home			
English only	1,021 (72%)	965 (73%)	1,986 (72%)
Another language only	55 (3.9%)	58 (4.4%)	113 (4.1%)
English and another language	349 (24%)	295 (22%)	644 (23%)
Missing	5	4	9
Money to spend on self per week			
None	227 (16%)	194 (15%)	421 (15%)
$10 or less	189 (13%)	137 (10%)	326 (12%)
$11 - $20	230 (16%)	172 (13%)	402 (15%)
$21 - $60	372 (26%)	368 (28%)	740 (27%)
$61 - $100	146 (10%)	160 (12%)	306 (11%)

Characteristic	VIC N = 1,430 n (%)	NSW N = 1,322 n (%)	Total N = 2,752 n (%)
Over $100	253 (18%)	282 (21%)	535 (20%)
Missing	13	9	22
At schoolwork do you consider yourself:			
A lot above average?	88 (6.2%)	104 (7.9%)	192 (7.0%)
Above average?	538 (38%)	508 (39%)	1,046 (38%)
Average?	665 (47%)	578 (44%)	1,243 (45%)
Below average?	111 (7.8%)	118 (9.0%)	229 (8.3%)
A lot below average?	25 (1.8%)	9 (0.7%)	34 (1.2%)
Missing	3	5	8

Comparison of the sociodemographic characteristics of the 822 students who were excluded (due to missing a response to the first gambling question) against the final included sample are shown in Table 3. Excluded students did not differ significantly in terms of age, gender, main language spoken at home, or money to spend on self. However, excluded students were more likely to be from a major city, less likely to consider themselves as above average or average at schoolwork, and showed some differences in socioeconomic disadvantage (more likely to be from Deciles 1-2, and less likely to be from Deciles 5-6), compared to the final included sample (p's<0.05).

Table 3: Comparison of sociodemographic characteristics of students who were excluded from analysis and the final sample (weighted), N=3574

Characteristic	Excluded, N = 701[1]	Included, N = 2,873[1]	p-value[2]
Gender			0.772
Male	406 (58%)	1,599 (56%)	
Female	277 (40%)	1,206 (42%)	
Other/Not stated	17 (2.5%)	69 (2.4%)	
Age (years)			0.293
12	85 (12%)	394 (14%)	
13	116 (17%)	554 (19%)	
14	97 (14%)	575 (20%)	
15	117 (17%)	547 (19%)	
16	144 (21%)	447 (16%)	
17	141 (20%)	357 (12%)	
Socioeconomic disadvantage			0.007
Deciles 1-2	67 (9.6%)	606 (21%)	
Deciles 3-4	40 (5.8%)	182 (6.3%)	
Deciles 5-6	218 (31%)	418 (15%)	
Deciles 7-8	113 (16%)	344 (12%)	
Deciles 9-10	262 (37%)	1,323 (46%)	
ARIA			0.032

Characteristic	Excluded, N = 701[1]	Included, N = 2,873[1]	p-value[2]
Major city	654 (93%)	2,497 (87%)	
Other	46 (6.6%)	376 (13%)	
Main language spoken at home			0.685
English only	467 (67%)	2,046 (71%)	
Another language only (please specify which language):	37 (5.4%)	144 (5.0%)	
English and another language (please specify the other language):	189 (27%)	674 (24%)	
Unknown	7	10	
Money to spend on self per week			0.163
None	116 (17%)	417 (15%)	
$10 or less	57 (8.2%)	363 (13%)	
$11 - $20	83 (12%)	424 (15%)	
$21 - $60	190 (27%)	786 (28%)	
$61 - $100	96 (14%)	323 (11%)	
Over $100	153 (22%)	539 (19%)	
Unknown	6	21	
At schoolwork do you consider yourself:			0.008
A lot above average?	35 (5.0%)	216 (7.5%)	
Above average?	205 (29%)	1,101 (38%)	
Average?	377 (54%)	1,276 (45%)	
Below average?	68 (9.8%)	241 (8.4%)	
A lot below average?	10 (1.4%)	31 (1.1%)	
Unknown	6	9	
[1]n (%)			
[2]chi-squared test with Rao & Scott's second-order correction			

Gambling behaviours

Gambling prevalence

Combined sample (all students). The overall prevalence of gambling for students from both states combined (n=2,873) was: 29% had ever gambled; 20% had gambled in the past year; 9% had gambled in the past month; and 5% had gambled in the past week (Table 4). There were no significant differences in the prevalence of gambling by age in the combined sample. However, male students were significantly more likely to have ever gambled (p=0.024), to have gambled in the past year (p<0.001), to have gambled in the past month (p=0.01), and to have gambled in the past week (p=0.004) compared to female students (Table 4).

Table 4: Prevalence of ever, past year, past month, past week gambling (all students) by age and gender N=2873

Gambling prevalence	Age in years							Gender			Total
	12	13	14	15	16	17	p-value[1]	Male	Female	p-value[1]	
Ever gambled	82 (21%)	155 (28%)	160 (28%)	175 (32%)	163 (36%)	102 (28%)	0.122	515 (32%)	293 (24%)	0.024	836 (29%)
Gambled in the past year	58 (15%)	104 (19%)	120 (21%)	120 (22%)	106 (24%)	67 (19%)	0.523	374 (24%)	183 (15%)	<0.001	574 (20%)
Gambled in the past 4 weeks	30 (7.8%)	53 (9.8%)	38 (6.7%)	49 (9.0%)	45 (10%)	35 (9.8%)	0.664	166 (10%)	74 (6.2%)	0.010	251 (8.8%)
Gambled in the past 7 days	15 (3.8%)	29 (5.3%)	21 (3.7%)	32 (5.8%)	31 (6.9%)	24 (6.6%)	0.509	100 (6.3%)	42 (3.5%)	0.004	151 (5.3%)
Total	394	554	575	547	447	357		1,599	1,206		2,873
[1]chi-squared test with Rao & Scott's second-order correction											

Missing responses ranged from n=0 to 12

Figure 1 shows the overall prevalence of ever, past year, past month, and past week gambling by state.

Figure 1: Prevalence of gambling (ever, past year, past month, past week) for students from VIC (N=1,431) and NSW (N=1,377)

NSW sample (all students). The prevalence of gambling by age and gender for NSW students only is shown in Table 5. The prevalence of gambling among students from NSW was: 29% had ever gambled; 21% had gambled in the past year; 10% had gambled in the past month; and 6% had gambled in the past week (Table 5).

Table 5: Prevalence of ever, past year, past month, past week gambling, all NSW students, by age and gender, N=1,377

Gambling prevalence	Age in years							Gender			Total
	12	13	14	15	16	17	p-value[1]	Male	Female	p-value[1]	
Ever gambled	32 (15%)	77 (29%)	72 (29%)	78 (31%)	89 (40%)	53 (30%)	0.024	275 (33%)	115 (22%)	0.021	402 (29%)
Gambled in the past year	24 (12%)	58 (22%)	57 (23%)	57 (22%)	62 (28%)	37 (21%)	0.128	206 (25%)	78 (15%)	0.004	295 (21%)
Gambled in the past month	11 (5.3%)	33 (13%)	20 (7.8%)	24 (9.6%)	29 (13%)	19 (10%)	0.139	94 (12%)	35 (6.7%)	0.059	136 (9.9%)
Gambled in the past week	5 (2.4%)	18 (7.1%)	11 (4.5%)	15 (6.0%)	22 (9.9%)	14 (8.0%)	0.137	56 (6.9%)	24 (4.5%)	0.158	86 (6.3%)
Total	209	264	251	254	220	179		821	525		1,377*

[1]chi-squared test with Rao & Scott's second-order correction

*Missing responses ranged from n=0 to 7

Gambling activities

The prevalence of participation in gambling activities for all students in the combined states sample is presented in Appendix B (Table B1).

Combined sample (ever gamblers). Among students who had ever gambled, for both states combined, the most common gambling activities in the last 12 months are shown in Table 6. The most common activities were buying raffle tickets (34%), betting on personal skill games (33%) and sports games (31%), buying instant scratchie cards (25%), and betting on horse or dog races (24%). There were no significant differences in participation in gambling activities with age, except that students aged 17 years were more likely than other age categories to have gambled on poker machines in the last 12 months (p=0.029). Male students were significantly more likely than female students to have gambled on casino games (p=0.008) and fantasy sports competitions (p<0.001), while female students were significantly more likely to have gambled by buying instant scratchie cards (p=0.043) and raffle tickets (p<0.001; Table 6).

Table 6: Participation in gambling activities in the last 12 months (students who had ever gambled), both states combined, by age and gender, N=836

Gambling activity	Age in years							Gender			Total
	12	13	14	15	16	17	p-value[1]	**Male**	Female	p-value[1]	
Card games (e.g. poker, blackjack, 21)	11 (13%)	29 (20%)	37 (24%)	38 (21%)	40 (25%)	36 (36%)	0.140	112 (22%)	73 (26%)	0.490	191 (23%)
Casino games (e.g. roulette, craps or dice)	5 (5.8%)	16 (11%)	16 (10.0%)	16 (9.0%)	14 (8.8%)	14 (13%)	0.616	62 (12%)	12 (4.3%)	0.008	80 (9.8%)
Sports games (e.g. football, rugby, cricket)	37 (45%)	41 (28%)	39 (25%)	47 (27%)	54 (34%)	35 (35%)	0.330	176 (35%)	67 (24%)	0.070	253 (31%)
Fantasy sports competitions	13 (16%)	24 (16%)	15 (9.7%)	23 (13%)	25 (16%)	24 (24%)	0.348	96 (19%)	24 (8.5%)	<0.001	124 (15%)
Poker machines (pokies)	1 (0.6%)	10 (7.0%)	11 (7.2%)	15 (8.4%)	11 (6.7%)	19 (19%)	0.029	47 (9.3%)	14 (5.0%)	0.164	66 (8.1%)
Horse or dog races	37 (45%)	18 (13%)	36 (23%)	43 (25%)	38 (24%)	24 (24%)	0.062	117 (23%)	71 (25%)	0.676	196 (24%)
Personal skill games (e.g. pool, darts, video games)	27 (33%)	52 (37%)	56 (36%)	47 (27%)	54 (34%)	33 (33%)	0.747	169 (33%)	87 (31%)	0.603	268 (33%)
two-up	1 (1.3%)	4 (3.0%)	11 (7.4%)	10 (5.9%)	11 (7.1%)	10 (10%)	0.290	34 (6.7%)	10 (3.6%)	0.207	49 (6.0%)
Tipping competitions (e.g. picked football teams each week)	35 (43%)	26 (17%)	28 (19%)	35 (20%)	32 (21%)	29 (29%)	0.130	124 (24%)	55 (19%)	0.360	186 (23%)
Sweeps (e.g. you are given the name of a horse and if they win so do you)	18 (23%)	8 (5.5%)	18 (12%)	20 (11%)	19 (12%)	17 (17%)	0.325	52 (10%)	41 (15%)	0.351	100 (12%)
Bingo for prizes/money	17 (20%)	13 (8.8%)	25 (16%)	21 (12%)	22 (14%)	26 (25%)	0.074	70 (14%)	46 (16%)	0.399	122 (15%)
Lottery ticket (e.g. Keno,	14 (17%)	26 (18%)	35 (23%)	37 (21%)	36 (22%)	28 (27%)	0.752	116 (23%)	54 (19%)	0.551	176 (21%)

	Age in years							Gender			Total
Gambling activity	12	13	14	15	16	17	p-value[1]	**Male**	Female	p-value[1]	
Tattslotto, Powerball)											
Instant scratchie card (that you rub or scratch to see if there is a prize)	23 (28%)	29 (20%)	42 (27%)	40 (23%)	43 (27%)	30 (29%)	0.748	113 (22%)	86 (30%)	0.043	206 (25%)
Bought raffle tickets	39 (48%)	45 (31%)	47 (30%)	55 (32%)	57 (36%)	35 (34%)	0.591	147 (29%)	123 (43%)	<0.001	278 (34%)
Other	10 (14%)	14 (10%)	17 (11%)	14 (8.4%)	8 (5.5%)	11 (11%)	0.499	44 (9.0%)	27 (10%)	0.683	75 (9.5%)
Total	82	155	160	175	163	102		515	293		836

[1]chi-squared test with Rao & Scott's second-order correction

Missing responses ranged from n=0 to 27

Participation in gambling activities in the past 12 months for students who had ever gambled are shown by state in Figure 2.
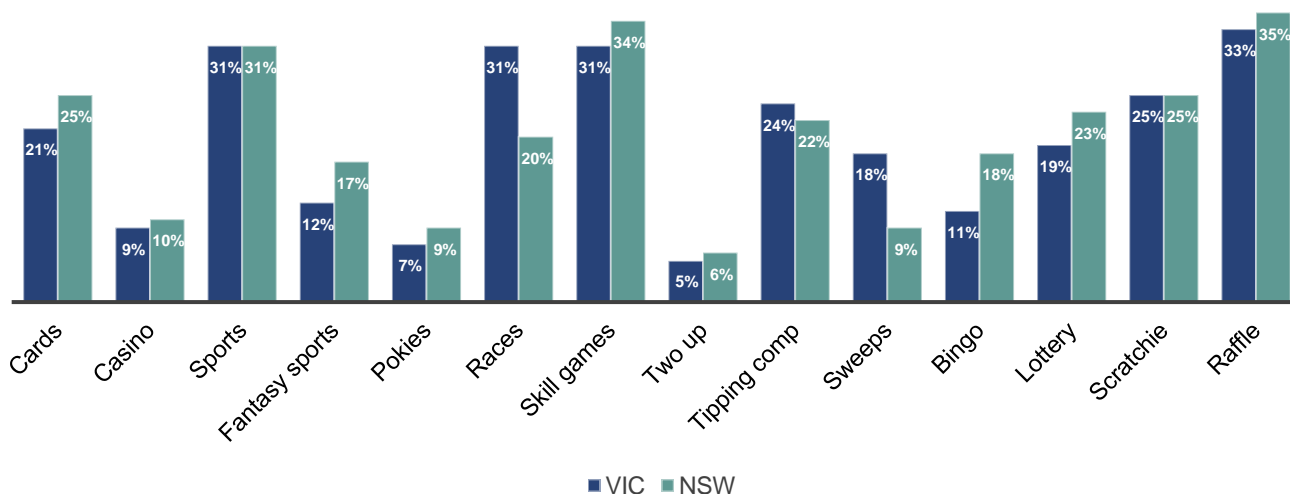
Figure 2: Types of gambling activities in the last 12 months (students who had ever gambled) for students from VIC (N=414) and NSW (N=402) **NSW sample (ever gamblers).**

Participation in gambling activities in the last 12 months by age and gender for NSW students is shown in Table 7. Among students who had ever gambled, the most frequent gambling activities in the last 12 months were: buying raffle tickets (35%), betting on personal skill

games (34%), betting on sports games (31%), buying instant scratchie cards (25%), and betting on card games (25%; Table 7).

Table 7: Prevalence of gambling activities in the last 12 months (students who had ever gambled), NSW students only, by age and gender, N=402

| Gambling activity[1] | Age in years | | | | | | | Gender | | | Total |
	12	13	14	15	16	17	p-value[2]	Male	Female	p-value[2]	
Card games (e.g. poker, blackjack, 21)	3 (7.9%)	16 (21%)	18 (26%)	16 (21%)	24 (28%)	21 (41%)	0.174	58 (22%)	37 (34%)	0.165	98 (25%)
Casino games (e.g. roulette, craps or dice)	1 (3.5%)	12 (15%)	6 (8.4%)	7 (9.2%)	9 (10%)	6 (11%)	0.531	32 (12%)	5 (4.7%)	0.079	40 (10%)
Sports games (e.g. football, rugby, cricket)	12 (38%)	27 (36%)	18 (26%)	17 (22%)	31 (36%)	17 (32%)	0.597	97 (36%)	20 (18%)	0.009	122 (31%)
Fantasy sports competitions	5 (16%)	16 (22%)	9 (13%)	12 (15%)	17 (20%)	10 (18%)	0.779	54 (20%)	12 (10%)	0.029	68 (17%)
Poker machines (pokies)	0 (0%)	6 (7.8%)	6 (8.4%)	6 (7.8%)	6 (7.1%)	12 (22%)	0.178	25 (9.3%)	8 (7.0%)	0.625	35 (9.0%)
Horse or dog races	11 (36%)	10 (14%)	12 (17%)	13 (17%)	19 (22%)	11 (21%)	0.563	56 (21%)	16 (15%)	0.365	77 (20%)
Personal skill games	4 (11%)	32 (43%)	28 (39%)	23 (29%)	30 (35%)	19 (36%)	0.164	92 (34%)	35 (32%)	0.646	134 (34%)
Two-up	0 (0%)	3 (4.7%)	6 (8.6%)	5 (6.8%)	6 (7.0%)	4 (7.6%)	**	16 (6.0%)	6 (5.5%)	0.869	25 (6.3%)
Tipping competition	11 (36%)	17 (22%)	14 (21%)	10 (13%)	22 (25%)	13 (25%)	0.539	69 (25%)	15 (13%)	0.052	87 (22%)
Sweeps	0 (0%)	5 (6.4%)	7 (9.3%)	6 (7.6%)	10 (12%)	6 (12%)	0.542	25 (9.3%)	6 (5.3%)	0.246	34 (8.7%)
Bingo	8 (25%)	8 (11%)	13 (19%)	10 (12%)	15 (17%)	15 (29%)	0.304	43 (16%)	22 (20%)	0.481	69 (18%)
Lottery ticket	8 (25%)	18 (23%)	15 (22%)	17 (22%)	19 (22%)	14 (27%)	0.978	64 (23%)	24 (21%)	0.692	91 (23%)

Gambling activity[1]	Age in years						p-value[2]	Gender		p-value[2]	Total
	12	13	14	15	16	17		Male	Female		
Instant scratchie card	5 (14%)	19 (26%)	22 (32%)	15 (19%)	22 (25%)	17 (32%)	0.457	62 (23%)	33 (30%)	0.137	100 (25%)
Bought raffle tickets	9 (27%)	27 (36%)	21 (30%)	25 (32%)	34 (39%)	21 (40%)	0.768	82 (30%)	51 (45%)	0.016	137 (35%)
Other	3 (7.9%)	9 (12%)	9 (13%)	7 (8.7%)	4 (4.7%)	5 (9.4%)	0.523	24 (9.1%)	11 (9.7%)	0.895	36 (9.3%)
Total	32	77	72	78	89	53		275	115		402
[1]**Chi-squared approximation may be incorrect due to low numbers											
[2]chi-squared test with Rao & Scott's second-order correction											

Missing responses ranged from n=0 to 13

Hard versus soft gambling activities (combined sample)

The prevalence of gambling was further explored when based on either 'hard' or 'soft' forms of gambling activities. Hard forms of gambling included betting on card, casino or sports games, fantasy sports competitions, poker machines, betting on horse or dog races, personal skill games, and/or two-up. Soft forms of gambling included betting on tipping competitions, sweeps, bingo, or buying lottery tickets, instant scratch cards, and/or raffle tickets.

Combined sample (all students). For students from both states combined, Table 8 shows the overall prevalence of gambling based on the gambling activities question (27% ever gambled; 21% had gambled in the past year; and 10% had gambled in the past month). Table 8 also shows the prevalence of gambling on hard and soft forms of gambling for the combined sample. After removal of students who only reported gambling on 1 or more soft forms of activities, the prevalence of gambling on hard forms of gambling for both states combined was: 24% ever gambled; 18% had gambled in the past year; and 8% had gambled in the past month, on hard gambling activities. There were no significant differences in the prevalence of gambling on hard activities by age, however male students were significantly more likely than female students to have gambled on a hard gambling activity ever (p=0.009), in the past year (p=0.014), and in the past month (p<0.001).

Table 8: Prevalence of ever, past year, past month, and past week gambling on hard versus soft gambling activities, both states combined, by age and gender, N=2,873

Gambling prevalence	Age in years							Gender			Total
	12	13	14	15	16	17	p-value[1]	Male	Female	p-value[1]	
Any gambling activities											
Ever	74 (19%)	137 (25%)	149 (26%)	164 (30%)	150 (34%)	96 (27%)	0.165	477 (30%)	271 (23%)	0.025	770 (27%)
Gambled in the past year	62 (16%)	104 (19%)	118 (21%)	124 (23%)	121 (27%)	76 (21%)	0.350	369 (23%)	221 (19%)	0.037	604 (21%)
Gambled in the past month	36 (9.2%)	66 (12%)	44 (7.8%)	56 (10%)	63 (14%)	27 (7.6%)	0.412	194 (12%)	89 (7.5%)	0.016	292 (10%)
Hard gambling activities											
Ever	62 (16%)	117 (21%)	134 (23%)	141 (26%)	138 (31%)	89 (25%)	0.078	428 (27%)	231 (19%)	0.009	680 (24%)
Gambled in the past year	47 (12%)	87 (16%)	100 (18%)	101 (19%)	104 (23%)	69 (19%)	0.247	322 (20%)	173 (15%)	0.014	509 (18%)
Gambled in the past month	26 (6.7%)	53 (9.8%)	36 (6.4%)	39 (7.2%)	50 (11%)	20 (5.7%)	0.391	157 (9.9%)	59 (5.0%)	<0.001	225 (7.9%)
Soft gambling activities											
Ever	67 (17%)	107 (20%)	126 (22%)	132 (24%)	116 (26%)	65 (18%)	0.434	374 (24%)	226 (19%)	0.103	614 (22%)
Gambled in the past year	57 (15%)	68 (12%)	84 (15%)	90 (17%)	87 (20%)	52 (15%)	0.621	256 (16%)	172 (14%)	0.374	438 (15%)
Gambled in the past month	25 (6.4%)	35 (6.5%)	29 (5.2%)	42 (7.8%)	42 (9.4%)	16 (4.5%)	0.588	118 (7.5%)	64 (5.4%)	0.180	189 (6.7%)
Total	394	554	575	547	447	357		1,599	1,206		2,873

[1]chi-squared test with Rao & Scott's second-order correction

*Missing responses ranged from n=0 to 21

Gambling modalities

The prevalence of participation in gambling modalities for all students in the combined states sample is presented in Appendix B (Table B2).

Combined sample (past year gamblers). Among students that had gambled in the past year for both states combined the most common gambling modalities were at home or at a friend's house (55%), online using a mobile phone (42%), online using a laptop or computer (34%), and online using a tablet or iPad (24%; Table 9). There were no significant differences in gambling modality by age. However, male students were significantly more likely than females to have gambled online using a laptop or computer (p=0.003; Table 9).

Table 9: Participation in gambling modalities (students who had gambled in the past year), both states combined, by age and gender, N=574

| Gambling modality | Age in years | | | | | | p-value[1] | Gender | | p-value[1] | Total |
	12	13	14	15	16	17		Male	Female		
Online using a laptop or computer	12 (21%)	36 (36%)	37 (32%)	36 (30%)	40 (40%)	29 (44%)	0.384	138 (38%)	41 (23%)	0.003	190 (34%)
Online using a computer tablet	15 (26%)	25 (25%)	19 (16%)	26 (22%)	30 (30%)	17 (25%)	0.530	93 (25%)	30 (17%)	0.075	131 (24%)
Online using a mobile phone	28 (49%)	37 (37%)	36 (31%)	44 (37%)	50 (50%)	39 (58%)	0.265	160 (43%)	68 (38%)	0.576	234 (42%)
Over the phone (i.e. calling up to place a bet)	4 (6.4%)	10 (9.8%)	10 (8.2%)	15 (13%)	12 (11%)	14 (21%)	0.389	45 (12%)	13 (7.1%)	0.215	63 (11%)
At a TAB betting shop	0 (0.8%)	11 (12%)	13 (11%)	22 (18%)	22 (21%)	12 (18%)	0.126	58 (16%)	16 (9.3%)	0.064	80 (14%)
At a news agent	4 (7.6%)	12 (12%)	21 (18%)	27 (23%)	26 (26%)	17 (26%)	0.165	67 (18%)	33 (19%)	0.903	107 (19%)
At a pub or club	8 (13%)	16 (16%)	28 (24%)	22 (18%)	31 (30%)	22 (32%)	0.370	88 (24%)	31 (17%)	0.186	126 (22%)
At a casino	0 (0%)	8 (8.2%)	7 (6.0%)	10 (8.6%)	11 (11%)	10 (14%)	0.450	33 (9.0%)	7 (4.2%)	0.117	46 (8.2%)
At home or the home of a friend	35 (60%)	43 (43%)	70 (60%)	56 (46%)	62 (62%)	45 (68%)	0.385	186 (50%)	114 (64%)	0.081	312 (55%)
At a racecourse	22 (39%)	15 (15%)	12 (11%)	30 (25%)	22 (22%)	19 (29%)	0.231	82 (22%)	33 (19%)	0.360	121 (22%)
Other	8 (18%)	14 (15%)	12 (10%)	15 (13%)	11 (11%)	8 (14%)	0.852	49 (14%)	14 (8.7%)	0.248	68 (13%)
Total	58	104	120	120	106	67		374	183		574

[1]chi-squared test with Rao & Scott's second-order correction

*Missing responses ranged from n=0 to 22

Participation in gambling modalities for students who had gambled in the last year are shown by state in Figure 3.

Figure 3: Types of gambling modalities (students who had gambled in the last year) for students from VIC (N=256) and NSW (N=295)

NSW sample (past year gamblers). Participation in gambling modalities for NSW students who had gambled in the past year, by age and gender, are shown in Table 10. The pattern of the most common gambling modalities was the same as for the combined sample. The most common gambling modalities for NSW students were at home or at a friend's house (54%), online using a mobile phone (41%), online using a laptop or computer (35%), and online using a tablet or iPad (24%; Table 10).

Table 10: Participation in gambling modalities (students who had gambled in the last year), NSW students only, by age and gender, N=295

Gambling modality	Age in years							Gender			Total
	12	13	14	15	16	17	p-value[12]	Male	Female	p-value[1]	
Online using a laptop or computer	3 (10%)	23 (42%)	20 (36%)	17 (30%)	21 (36%)	17 (46%)	0.269	80 (39%)	15 (20%)	0.006	101 (35%)
Online using a computer tablet	5 (21%)	17 (30%)	7 (14%)	13 (23%)	18 (30%)	10 (27%)	0.563	54 (27%)	11 (15%)	0.165	70 (24%)
Online using a mobile phone	6 (27%)	25 (44%)	19 (34%)	18 (31%)	29 (49%)	22 (59%)	0.252	93 (46%)	21 (28%)	0.060	118 (41%)
Over the phone (i.e. calling up to place a bet)	1 (2.9%)	7 (12%)	5 (8.6%)	9 (17%)	7 (13%)	8 (21%)	0.553	25 (13%)	8 (11%)	0.743	37 (13%)
At a TAB betting shop	0 (0%)	7 (13%)	5 (8.8%)	13 (22%)	13 (23%)	6 (17%)	0.363	35 (17%)	6 (8.0%)	0.073	44 (15%)
At a news agent	3 (13%)	8 (15%)	10 (20%)	15 (27%)	16 (27%)	9 (25%)	0.571	43 (21%)	15 (21%)	0.982	62 (22%)
At a pub or club	6 (24%)	11 (19%)	17 (30%)	10 (18%)	21 (35%)	13 (35%)	0.533	59 (29%)	15 (20%)	0.199	78 (27%)
At a casino	0 (0%)	6 (11%)	3 (6.3%)	6 (11%)	7 (12%)	5 (13%)	**	20 (10%)	4 (5.0%)	0.256	27 (9.5%)

Gambling modality	Age in years							Gender			Total
	12	13	14	15	16	17	p-value[12]	Male	Female	p-value[1]	
At home or the home of a friend	8 (33%)	22 (40%)	34 (61%)	28 (49%)	38 (64%)	26 (69%)	0.272	103 (51%)	46 (61%)	0.360	156 (54%)
At a racecourse	13 (53%)	9 (17%)	6 (11%)	11 (19%)	16 (27%)	10 (28%)	0.294	49 (24%)	12 (16%)	0.151	65 (23%)
Other	6 (24%)	9 (17%)	8 (14%)	9 (16%)	7 (12%)	4 (12%)	0.824	31 (16%)	9 (12%)	0.477	42 (15%)
Total	24	58	57	57	62	37		206	78		295
[1]chi-squared test with Rao & Scott's second-order correction											
[2]**Chi-squared approximation may be incorrect due to low numbers											

Missing responses ranged from n=0 to 13

Money spent on gambling

Combined sample (past month gamblers). The median amount of money students who had gambled in the past month reported spending on gambling in the last 4 weeks was $11-$20 (n=251). Table 11 shows median spending on gambling by age and gender. There were no significant differences by age or gender.

Table 11: Median amount bet on gambling in the last 4 weeks (students who had gambled in the past month), both states combined, by age and gender, n=251

Characteristic	N	Median $	p-value
Age			0.814
12	30	<$5	
13	50	$11-$20	
14	37	$5-$10	
15	49	$5-$10	
16	42	$21-$40	
17	35	$21-$40	
Gender			0.462
Male	162	$11-$20	
Female	71	<$5	

Likelihood of future gambling

Combined sample (all students). The majority of students from both states combined (62%) indicated that they would definitely not gamble in the next 12 months (Table 12). There was a significant difference in the likelihood of future gambling by age and gender. Older students, and male students, were more likely to report that they will definitely, or were likely to, gamble

in the next 12 months, compared to younger and female students (p=0.012 and p=0.03 respectively; Table 12).

Table 12: Students' likelihood of gambling in the next 12 months, both states combined, by age, N=2,743.

Intention to gamble in the next year	Age in years							Gender			Total
	12	13	14	15	16	17	p-value[1]	Male	Female	p-value[1]	
Definitely will	8 (2.0%)	13 (2.4%)	15 (2.6%)	15 (2.9%)	13 (3.0%)	34 (10.0%)	0.012	78 (5.1%)	14 (1.2%)	0.003	98 (3.5%)
Likely	9 (2.5%)	23 (4.4%)	16 (2.9%)	21 (3.9%)	31 (7.3%)	28 (8.1%)		81 (5.2%)	41 (3.5%)		128 (4.6%)
Not sure	34 (8.8%)	33 (6.4%)	42 (7.4%)	53 (9.9%)	39 (9.1%)	27 (7.8%)		139 (9.0%)	86 (7.3%)		227 (8.2%)
Unlikely	47 (12%)	138 (27%)	107 (19%)	123 (23%)	103 (24%)	72 (21%)		326 (21%)	250 (21%)		591 (21%)
Definitely not	285 (74%)	313 (60%)	378 (68%)	325 (60%)	240 (56%)	184 (53%)		912 (59%)	775 (66%)		1,724 (62%)
Total	394	554	575	547	447	357		1,599	1,206		2,873
[1]chi-squared test with Rao & Scott's second-order correction											

*Missing responses ranged from n=9 to 63

Student responses to the likelihood of gambling in the next 12 months are shown in Figure 4, by state.
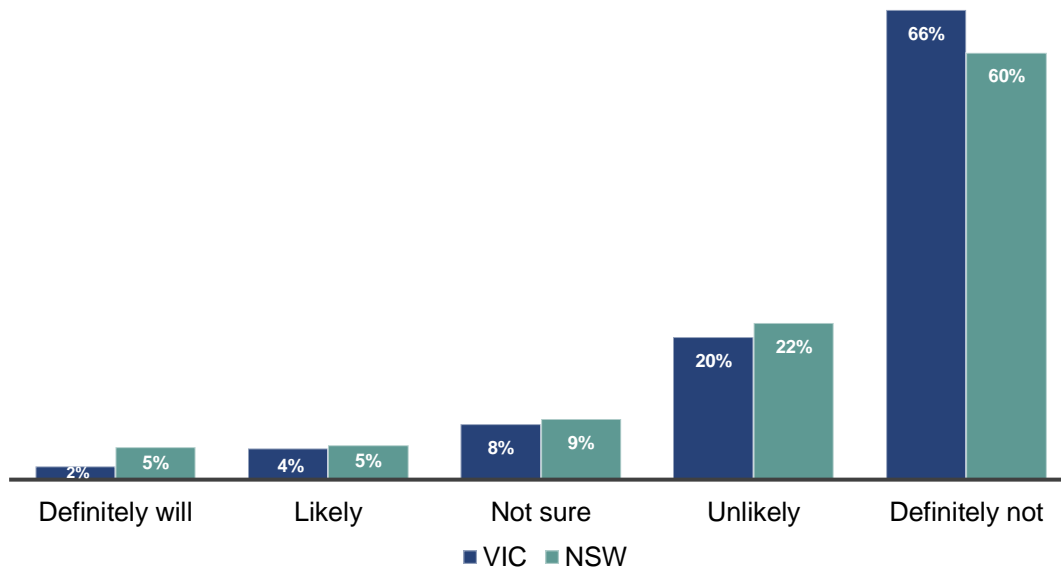
Figure 4: Student likelihood of gambling in the next 12 months, for students from VIC (N=1,431) and NSW (N=1,377)

NSW sample (all students). Among NSW students, 5% reported that they would definitely gamble in the next 12 months, and 5% said they were likely to gamble in the next 12 months.

Problem gambling

Students who had ever gambled were given a problem classification based on their responses to the DSM-IV-MR-J, while students who had never gambled were classified as non-gamblers. Thirty-eight students did not provide a response to 1 or more items across the 9 domains of the DSM-IV-MR-J and could not be given a problem gambling classification score.

Combined sample (all students). The problem gambling classifications for the whole sample of students from both states combined are shown in Table 13. The majority of students were non-gamblers (72%; i.e. they responded 'no' to the ever gambled question). A further 20% were classified with non-problem gambling, 6% were classified with at-risk gambling, and 2% were classified with problem gambling. There was a significant difference in problem gambling classifications based on age (p=0.023) and gender (p=0.019). Older students, and males, were more likely to be classified with problem gambling on the DSM-IV-[MR]-J, compared to younger students and females (Table 13).

Table 13: Problem gambling classification (all students) using the DSM-IV-[MR]-J, both states combined, by age and gender, N=2,835

Characteristic**	Non-gambling	Non-problem gambling	At-risk gambling	Problem gambling	p-value[1]
Age					0.023
12	312 (81%)	64 (17%)	11 (2.7%)	1 (0.1%)	
13	398 (73%)	107 (20%)	23 (4.2%)	15 (2.8%)	
14	414 (73%)	108 (19%)	41 (7.1%)	6 (1.0%)	
15	370 (68%)	120 (22%)	42 (7.8%)	11 (2.0%)	
16	284 (65%)	101 (23%)	44 (10.0%)	11 (2.4%)	
17	256 (72%)	60 (17%)	18 (5.2%)	18 (5.2%)	
Gender					0.019
Male	1,081 (68%)	334 (21%)	122 (7.7%)	43 (2.7%)	
Female	911 (77%)	209 (18%)	52 (4.3%)	14 (1.2%)	
Total	2,034 (72%)	561 (20%)	179 (6%)	62 (2%)	
[1]chi-squared test with Rao & Scott's second-order correction					

*Missing responses ranged from n=5 to 42; **Row percentages shown*

Combined sample (past year gamblers). When restricted to students who reported gambling the past year, across the combined states sample (n=550), the problem gambling classifications were: 62% non-problem gambling; 28% at-risk gambling; and 10% problem gambling based on the DSM-IV-[MR]-J.

Figure 5 shows the problem gambling classifications for students who reported gambling in the past year, by state.

Figure 5: Problem gambling classifications for students who had gambled in the past year, for students from VIC (N=239) and NSW (N=285)

NSW sample (past year gamblers). Problem gambling classifications for NSW students who had gambled in the past year, by age and gender are shown in Table 14. For NSW students, problem gambling classifications for those who had gambled in the past year were: 59% non-problem gamblers; 29% at-risk gambling; and 12% problem gambling based on the DSM-IV-[MR]-J (Table 14).

Table 14: Problem gambling classifications for students who had gambled in the past year, by age and gender, NSW students only (N=285)

Characteristic	Non-problem gambling	At-risk gambling	Problem gambling	p-value[1]
Age				0.257
12	21 (85%)	4 (15%)	0 (0%)	
13	34 (62%)	11 (20%)	10 (18%)	
14	34 (61%)	19 (34%)	2 (4.4%)	
15	33 (58%)	17 (31%)	6 (11%)	
16	31 (52%)	23 (39%)	5 (8.8%)	
17	17 (48%)	10 (27%)	9 (25%)	
Gender				0.960
Male	119 (59%)	59 (29%)	23 (11%)	
Female	46 (61%)	21 (29%)	7 (10%)	
Total[*]	169 (59.3%)	83 (29.1%)	33 (11.6%)	
[1]chi-squared test with Rao & Scott's second-order correction				

Missing responses ranged from n=0 to 4 [Row percentages shown]

Money spent on gambling by problem gambling classifications

Combined sample (past month gamblers). Table 15 shows the median amount of money spent on gambling in the last 4 weeks (for students who reported gambling in the past month), by problem gambling classifications according to the DSM-IV-[MR]-J. As shown, the median amount of money spent on gambling increased significantly across problem gambling classifications (p<0.001).

Table 15: Median amount bet on gambling in the last 4 weeks (students who had gambled in the past month), by problem gambling classifications on the DSM-IV-[MR]-J, both states combined, N=231

Gambling Classification based on DSM-IV-[MR]-J	N	Median $	p-value
Non-problem gambling	112	<$5	<0.001
At-risk gambling	79	$11-$20	
Problem gambling	40	Over $150	

Risk factors for gambling

Exposure to other people's gambling

Combined sample (all students). Across both states combined, 19% of students reported that someone in their household had gambled in the last 4 weeks (n=2,873; Table 16). Older students (those aged 15 and 16 years) were more likely to report that someone in their household had gambled in the last 4 weeks, compared to other age groups (p=0.023). There were also some differences in the people known that had gambled based on age. Male students were significantly more likely than females to report that a best friend/s had gambled in the last 4 weeks (p=0.001; Table 16).

Table 16: Student exposure to other people's gambling in the last 4 weeks, both states combined, by age and gender, N=2,873

Other people who gambled in last 4 weeks	Age in years							Gender			Total
	12	13	14	15	16	17	p-value[1]	Male	Female	p-value[1]	
Anyone from the household	55 (14%)	91 (17%)	101 (18%)	133 (24%)	112 (26%)	52 (15%)	0.023	314 (20%)	214 (18%)	0.415	544 (19%)
Mother/ caregiver	21 (5.8%)	37 (7.1%)	27 (4.8%)	40 (7.5%)	24 (5.7%)	25 (7.1%)	0.697	108 (7.1%)	56 (4.8%)	0.107	173 (6.3%)
Father/ caregiver	32 (8.9%)	60 (12%)	83 (15%)	96 (18%)	62 (15%)	37 (11%)	0.036	215 (14%)	143 (12%)	0.412	370 (13%)

Other people who gambled in last 4 weeks	Age in years						p-value[1]	Gender		p-value[1]	Total
	12	13	14	15	16	17		Male	Female		
Brother or sister	3 (0.9%)	23 (4.5%)	20 (3.6%)	34 (6.3%)	50 (12%)	23 (6.6%)	0.005	79 (5.2%)	72 (6.2%)	0.483	154 (5.6%)
Other relative	28 (7.7%)	57 (11%)	61 (11%)	77 (14%)	42 (9.9%)	31 (8.8%)	0.371	142 (9.4%)	145 (12%)	0.117	296 (11%)
Best friend/s	17 (4.7%)	15 (2.8%)	7 (1.2%)	18 (3.3%)	8 (1.9%)	42 (12%)	0.001	80 (5.3%)	21 (1.8%)	0.001	106 (3.8%)
Someone else	22 (6.2%)	18 (3.5%)	40 (7.2%)	38 (7.0%)	36 (8.5%)	48 (14%)	0.003	106 (7.0%)	90 (7.8%)	0.596	202 (7.4%)
Do not know anyone	262 (73%)	371 (72%)	395 (70%)	337 (63%)	260 (62%)	216 (62%)	0.034	1,011 (66%)	792 (68%)	0.494	1,840 (67%)
Total	394	554	575	547	447	357		1,599	1,206		2,873

[1]Chi-squared test with Rao & Scott's second-order correction; Kruskal-Wallis rank-sum test for complex survey samples

[*]*Missing responses ranged from n=2 to 78*

Figure 6 shows which people students know that had gambled in the last 4 weeks, by state.
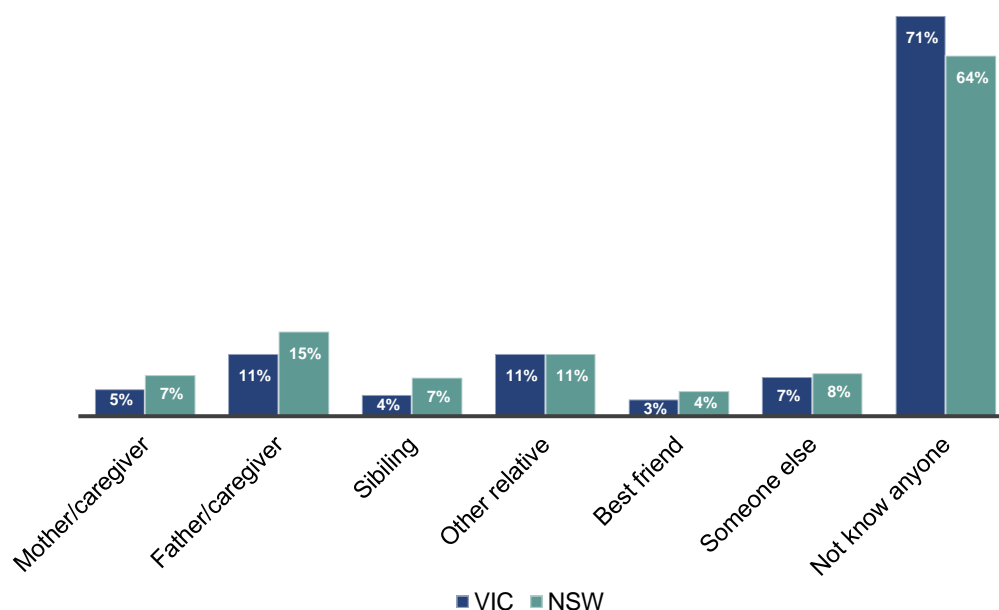
Figure 6: Student exposure to other people's gambling in the last 4 weeks, for students from VIC (N=1,431) and NSW (N=1,377)

NSW sample (all students). The majority of students indicated that they did not know anyone that had gambled in the last 4 weeks (64% of students). Students were most likely to report that either a father or caregiver (15%), or another relative (11%), had gambled in the last 4 weeks.

Associations between exposure to other people's gambling and prevalence of gambling (combined sample)

Combined sample (all students). There were significant associations between students' exposure to other people's gambling (i.e. having a parent, best friend, or sibling who had gambled in the last 4 weeks) and the prevalence of gambling behaviours (Table 17). Students who had a parent, best friend, or sibling that had gambled in the last 4 weeks were significantly more likely to have ever gambled (all p's<0.001,; to have gambled in the past year (all p's<0.001), to have gambled in the past month (p's between <0.001 and 0.002), and to have gambled in the last 7 days (p's between <0.001 and 0.009; Table 17).

Table 17: Association between student exposure to other people's gambling in the last 4 weeks (parent, best friend, or sibling: yes/no) and gambling behaviours, both states combined, N=2,873

Gambling prevalence	People you know who gambled in the last 4 weeks								
	Parent/caregiver			Best Friend			Sibling		
	No	Yes	p-value[1]	No	Yes	p-value[1]	No	Yes	p-value[1]
Ever gambled (n=2,744)			<0.001			<0.001			<0.001
Yes	516 (22%)	251 (56%)		706 (27%)	60 (57%)		686 (26%)	81 (53%)	
No	1,782 (78%)	196 (44%)		1,932 (73%)	46 (43%)		1,905 (74%)	73 (47%)	
Gambled in the past year (n=2,740)			<0.001			<0.001			<0.001
Yes	349 (15%)	180 (41%)		476 (18%)	53 (50%)		474 (18%)	55 (36%)	
No	1,949 (85%)	262 (59%)		2,159 (82%)	53 (50%)		2,113 (82%)	98 (64%)	
Gambled in the past month (n=2,736)			<0.001			<0.001			0.002
Yes	131 (5.7%)	93 (21%)		191 (7.3%)	32 (30%)		198 (7.7%)	26 (17%)	
No	2,164 (94%)	348 (79%)		2,439 (93%)	74 (70%)		2,384 (92%)	128 (83%)	
Gambled in past week (n=2,738)			<0.001			0.004			0.009
Yes	77 (3.4%)	49 (11%)		110 (4.2%)	16 (15%)		110 (4.2%)	16 (11%)	
No	2,219 (97%)	392 (89%)		2,522 (96%)	90 (85%)		2,475 (96%)	137 (89%)	
Total[*]	2,301	446		2,642	106		2,594	154	
[1]chi-squared test with Rao & Scott's second-order correction									

[*]*Missing responses ranged from n=0 to 12*

Associations between exposure to other people's gambling and at-risk/problem gambling classifications (combined sample)

Combined sample (past year gamblers). There were significant associations between students' exposure to other people's gambling in the last 4 weeks and problem gambling classifications (Table 18). Students who had a best friend that gambled in the last 4 weeks (p=0.013), and who had a sibling that gambled in the last 4 weeks (p=0.019), were significantly more likely to be classified with at-risk/problem gambling compared to students who did not have a best friend or sibling that gambled (Table 18).

Table 18: Association between student exposure to other people's gambling in the last 4 weeks (parent, best friend, or sibling) and at-risk/problem gambling classification (students who had gambled in the last year), both states combined, N=574

Problem gambling classification on DSM-IV-[MR]-J	People you know who gambled in the last 4 weeks								
	Parent/caregiver			Best Friend			Sibling		
	No	Yes	p-value[1]	No	Yes	p-value[1]	No	Yes	p-value[1]
Non-problem gambling	223 (64%)	97 (54%)	0.052	302 (64%)	17 (33%)	0.013	297 (63%)	23 (41%)	0.019
At-risk/problem gambling	123 (36%)	81 (46%)		170 (36%)	34 (67%)		171 (37%)	33 (59%)	
Total[*]	349	180		476	53		474	55	
[1]chi-squared test with Rao & Scott's second-order correction									

[*]*Missing responses ranged from n=2 to 5*

Exposure to venues where people were gambling

Combined sample (all students). Table 19 presents a summary of the number of venues where people were gambling that students had visited in the last 4 weeks, across both states combined by age and gender. The majority of students across both states combined had not visited a venue where people were gambling in the last 4 weeks (72%). Slightly over a quarter of students had been inside one or more venues where people were gambling in the last 4 weeks (28%), with no significant difference in exposure to these venues based on age or gender. However, there was a significant difference in the mean number of venues that students had visited in the last 4 weeks based on age (p=0.016), with 17 year olds having visited fewer venues where people were gambling, compared to the other age groups (Table 19).

Table 19: Student exposure to venues where people were gambling in the last 4 weeks, both states combined, by age and gender, N=2,743

Been inside a venue where people were gambling in the last 4 weeks	Age in years							Gender			Total
	12	13	14	15	16	17	p-value[1]	Male	Female	p-value[1]	
Any venue in last 4 weeks	76 (22%)	152 (30%)	179 (32%)	165 (31%)	118 (27%)	70 (20%)	0.133	401 (26%)	339 (29%)	0.461	760 (28%)
Mean number of venues in the last 4 weeks (SD)	0.35 (0.78)	0.42 (0.77)	0.47 (0.82)	0.46 (0.85)	0.42 (0.78)	0.29 (0.71)	0.016	0.40 (0.78)	0.43 (0.79)	0.492	0.41 (0.79)
[1]Chi-squared test with Rao & Scott's second-order correction; Kruskal-Wallis rank-sum test for complex survey samples											

The types of venues where people were gambling that student's reported visiting in the last 4 weeks are shown in Figure 7, by state.
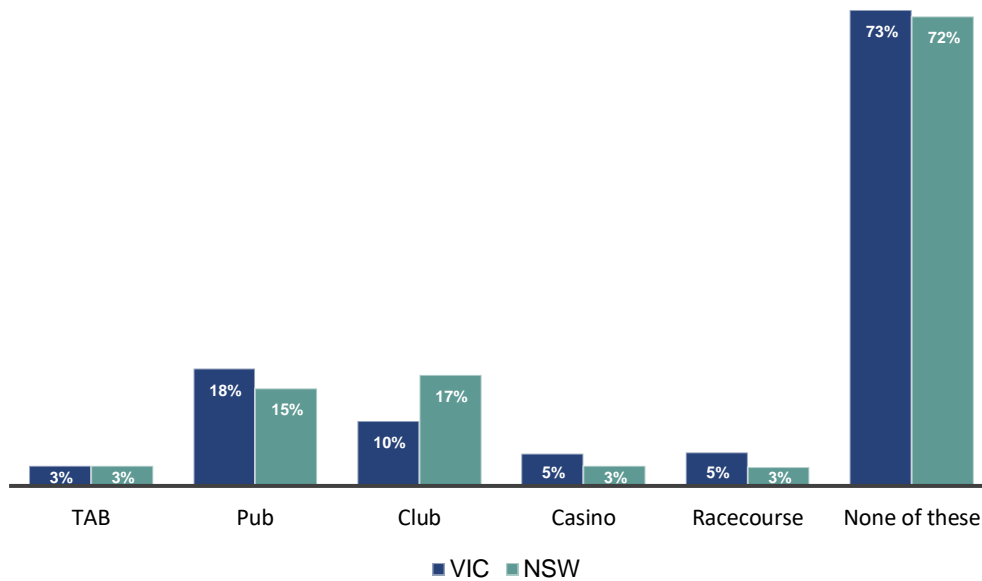

Figure 7: Student exposure to venues where people were gambling in the last 4 weeks, for students from VIC (N=1,431) and NSW (N=1,377)

NSW sample (all students). The most common venue that students had visited in the last 4 weeks was either a club (17% of students) or a pub (15% of students), followed by a TAB, casino, or racecourse (3% of students).

Associations between exposure to venues where people were gambling and prevalence of gambling (combined sample)

Combined sample (all students). There was a significant association between exposure to venues where people were gambling (i.e. having been inside a venue where people were gambling in the last 4 weeks) and the prevalence of gambling (Table 20). Students who had been inside a venue where people were gambling in the last 4 weeks were significantly more likely to have: ever gambled (p=0.005), gambled in the past year (p=0.001), gambled in the past month (p=0.006), and gambled in past week (p=0.017; Table 20).

Table 20: Association between student exposure to venues where people were gambling in the last 4 weeks and gambling behaviours, both states combined, N=2,743

Gambling prevalence	Been inside a venue where people were gambling in the last 4 weeks		
	No	Yes	p-value[1]
Ever gambled (n=2,740)			0.005
Yes	496 (25%)	282 (37%)	
No	1,487 (75%)	475 (63%)	
Gambled in the past year (n=2,738)			0.001
Yes	328 (17%)	213 (28%)	
No	1,653 (83%)	544 (72%)	
Gambled in the past month (n=2,733)			0.006
Yes	140 (7.1%)	90 (12%)	
No	1,840 (93%)	663 (88%)	
Gambled in the past week (n=2,735)			0.017
Yes	83 (4.2%)	52 (6.8%)	
No	1,898 (96%)	704 (93%)	
Total[*]	1,984	760	
[1]chi-squared test with Rao & Scott's second-order correction			

[*]*Missing responses ranged from n=1 to 6*

Associations between exposure to venues where people were gambling and at-risk/problem gambling classifications (combined sample)

Combined sample (past year gamblers). There was no significant association between student exposure to venues where people were gambling in the last 4 weeks and problem gambling classifications for students who had gambled in the past year (Table 21).

Table 21: Associations between exposure to venues where people were gambling in the last 4 weeks and at-risk/problem gambling (students who had gambled in the past year), both states combined, N=541

Problem gambling classification on DSM-IV-[MR]-J	Been inside a venue where people were gambling in the last 4 weeks		
	No	Yes	p-value[1]
Non-problem gambling	202 (62%)	122 (59%)	0.574
At-risk/problem gambling	123 (38%)	87 (41%)	
Total	328	213	
[1]chi-squared test with Rao & Scott's second-order correction			

Missing responses ranged from n=2 to 4

Exposure to gambling advertising

Combined sample (all students). Across both states combined, the majority of students (59%) recalled having seen or heard at least one type of gambling ad or promotion in the last 4 weeks (n=2,873; Table 22). Students reported seeing or hearing an average of 2 different types of gambling advertisements in the last 4 weeks. Older students were more likely to recall having seen advertisements for gambling on scoreboards (p=0.028), on social media or as pop-ups on websites (both p's<0.001). Male students were more likely to recall seeing gambling advertisements via live studio crosses during sport (p=0.036), and celebrities promoting gambling (p=0.005; Table 22).

Table 22: Exposure to gambling advertising in the last 4 weeks, by age and gender, both states combined, N=2,873

Aware of gambling advertising in last 4 weeks:	Age in years							Gender			Total
	12	13	14	15	16	17	p-value[1]	**Male**	**Female**	p-value[1]	
On TV	159 (45%)	236 (47%)	271 (50%)	266 (50%)	207 (50%)	157 (48%)	0.830	709 (48%)	560 (49%)	0.615	1,297 (48%)
On radio	48 (14%)	80 (16%)	104 (19%)	115 (22%)	92 (22%)	69 (21%)	0.145	259 (17%)	235 (21%)	0.215	509 (19%)
On billboards	37 (10%)	74 (15%)	82 (15%)	85 (16%)	71 (17%)	58 (18%)	0.370	243 (16%)	154 (14%)	0.286	407 (15%)
At convenience store	44 (12%)	82 (16%)	91 (17%)	108 (20%)	75 (18%)	40 (12%)	0.180	226 (15%)	204 (18%)	0.133	440 (16%)
On scoreboards	38 (11%)	58 (12%)	96 (18%)	100 (19%)	85 (20%)	59 (18%)	0.028	249 (17%)	171 (15%)	0.464	436 (16%)
Live studio crosses during sport	19 (5.3%)	26 (5.2%)	39 (7.1%)	47 (8.8%)	37 (8.8%)	22 (6.6%)	0.309	121 (8.2%)	62 (5.5%)	0.036	189 (7.1%)
Celebrities promoting gambling	27 (7.4%)	39 (7.7%)	60 (11%)	80 (15%)	54 (13%)	50 (15%)	0.095	205 (14%)	95 (8.4%)	0.005	309 (12%)

Aware of gambling advertising in last 4 weeks:	Age in years						p-value[1]	Gender		p-value[1]	Total
	12	13	14	15	16	17		Male	Female		
In pubs/clubs	34 (9.4%)	70 (14%)	94 (17%)	99 (19%)	80 (19%)	50 (15%)	0.076	226 (15%)	185 (16%)	0.585	427 (16%)
On websites	57 (16%)	86 (17%)	122 (22%)	139 (26%)	95 (23%)	86 (26%)	0.096	343 (23%)	225 (20%)	0.221	583 (22%)
Pop-ups on websites	26 (7.2%)	39 (7.8%)	68 (12%)	97 (18%)	69 (16%)	49 (15%)	<0.001	193 (13%)	145 (13%)	0.932	348 (13%)
On social media	47 (13%)	78 (16%)	108 (20%)	140 (26%)	102 (24%)	84 (26%)	<0.001	331 (22%)	214 (19%)	0.149	559 (21%)
Not seen or heard any	178 (50%)	219 (44%)	218 (40%)	200 (38%)	163 (39%)	132 (40%)	0.177	612 (41%)	472 (42%)	0.893	1,110 (41%)
Number of ad types in last 4 weeks [mean (sd)]	1.50 (2.34)	1.73 (2.36)	2.09 (2.78)	2.40 (2.98)	2.31 (2.91)	2.21 (2.81)	0.096	2.09 (2.84)	1.99 (2.58)	0.902	2.05 (2.73)
Total	394	554	575	547	447	357		1,599	1,206		2,873

[1]Chi-squared test with Rao & Scott's second-order correction; Kruskal-Wallis rank-sum test for complex survey samples

*Missing responses ranged from n=16 to 116

Student's exposure to different types of gambling advertising in the past 4 weeks, by state, is shown in Figure 8.
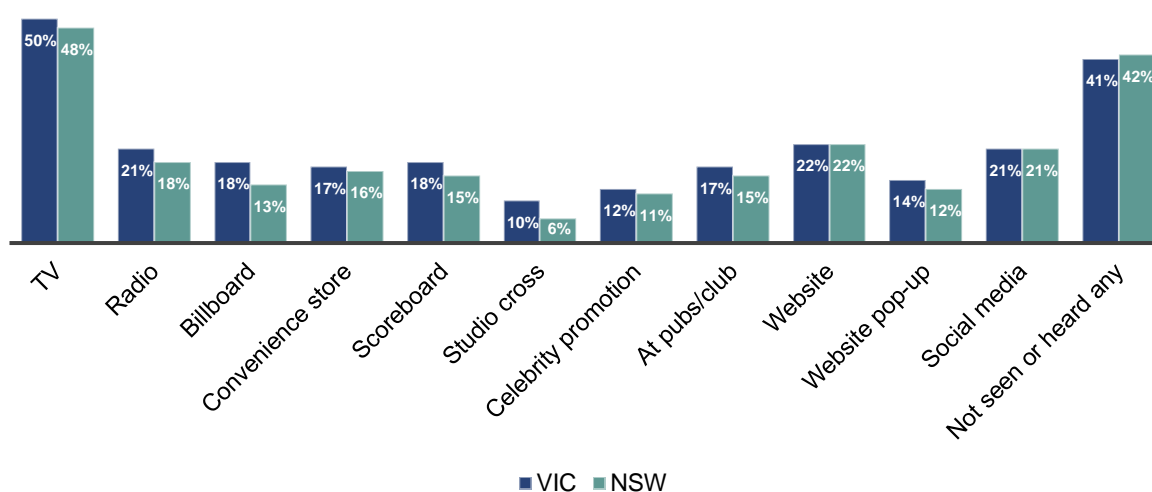

Figure 8: Student exposure to gambling advertising in the last 4 weeks, for students from VIC (N=1,431) and NSW (N=1,377)

NSW sample (all students). The majority of students from NSW (58%) recalled having seen or heard at least one type of gambling advertisement in the last 4 weeks. These were most

commonly on TV (48% for NSW), followed by advertisements on websites (22%), social media (21%), and on the radio (18%).

Associations between exposure to gambling advertising and prevalence of gambling (combined sample)

Combined sample (all students). There were significant associations between students' exposure to gambling advertising and their gambling behaviours (Table 23). Students who reported having seen or heard 4 or more different types of advertisements for gambling (e.g. on TV, on the radio, on websites) in the last 4 weeks were significantly more likely to have ever gambled (p<0.001), and to have gambled in the past year (p=0.001), compared to students who had seen or heard 3 or less types of advertisements (Table 23).

Table 23: Association between student exposure to gambling advertising in the last 4 weeks and gambling behaviours, both states combined, N=2,680

Gambling prevalence	Number of types of advertisements seen in last 4 weeks		
	3 or less	4 or more	p-value[1]
Ever gambled (n=2,677)			<0.001
Yes	503 (25%)	252 (39%)	
No	1,526 (75%)	396 (61%)	
Gambled in the past year (n=2,671)			0.001
Yes	344 (17%)	174 (27%)	
No	1,679 (83%)	473 (73%)	
Gambled in the past month (n=2,666)			0.266
Yes	147 (7.3%)	62 (9.6%)	
No	1,874 (93%)	582 (90%)	
Gambled in the past week (n=2,668)			0.525
Yes	89 (4.4%)	34 (5.2%)	
No	1,932 (96%)	613 (95%)	
Total[*]	2,032	648	
[1]chi-squared test with Rao & Scott's second-order correction			

[*]*Missing responses ranged from n=11 to 14*

Associations between exposure to gambling advertising and at-risk/problem gambling classifications (combined sample)

Combined sample (past year gamblers). There was no significant association between students' exposure to gambling advertising in the last 4 weeks and at-risk/problem gambling classification for students who had gambled in the past year (Table 24).

Table 24: Association between student exposure to gambling advertising in the last 4 weeks and at-risk/problem gambling classifications (students who had gambled in the past year), both states combined, N=519

Problem gambling classification on DSM-IV-[MR]-J	Number of types of advertisements seen in last 4 weeks		
	3 or less	4 or more	p-value[1]
Non-problem gambling	210 (62%)	102 (59%)	0.594
At-risk/problem gambling	127 (38%)	71 (41%)	
Total	344	174	
[1]chi-squared test with Rao & Scott's second-order correction			

Missing responses ranged from n=0 to 8

Substance use: tobacco, alcohol, vaping and illicit drugs

Associations between substance use and prevalence of gambling (combined sample)

Combined sample (all students). There were significant associations between student's substance use (including past month tobacco smoking, alcohol consumption and vaping, and any lifetime use of illicit drugs) and gambling behaviours (Table 25). Students who reported past month smoking were more likely than those who did not, to have ever gambled (p<0.001) and to have gambled in the past year (p=0.005). Students who reported past month vaping were more likely than those who did not, to have ever gambled (p<0.001), to have gambled in the past year (p=0.002) and to have gambled in the past month (p=0.047). Students who reported past month alcohol consumption, or who reported any lifetime use of illicit drugs, were more likely than those who did not, to have ever gambled (p's<0.001), to have gambled in the past year (p<0.001 and p=0.005 respectively), to have gambled in the past month (p<0.001 and p=0.003 respectively), and to have gambled in the past week (p<0.001 and p=0.003 respectively; Table 25).

Table 25: Association between student's tobacco, alcohol and drug use and gambling behaviours, both states combined N=2,873

Gambling prevalence	Smoking (past month)			Vaping (past month)			Alcohol (past month)			Illicit drugs (lifetime)		
	No	Yes	p-value	No	Yes	p-value	No	Yes	p-value	No	Yes	p-value
Ever gambled (N=2870)												
Yes	805 (29%)	28 (46%)	<0.001	702 (28%)	127 (38%)	<0.001	596 (26%)	237 (42%)	<0.001	692 (28%)	140 (41%)	<0.001
No	1999 (71%)	32 (54%)		1821 (72%)	210 (62%)		1701 (74%)	326 (58%)		1821 (72%)	200 (59%)	
Gambled in the past year (N=2859)												
Yes	551 (20%)	19 (32%)	0.005	488 (19%)	84 (25%)	0.002	396 (17%)	176 (31%)	<0.001	480 (19%)	91 (27%)	0.005

Gambling prevalence	Smoking (past month)			Vaping (past month)			Alcohol (past month)			Illicit drugs (lifetime)		
	No	Yes	p-value	No	Yes	p-value	No	Yes	p-value	No	Yes	p-value
No	2241 (80%)	41 (68%)		2031 (81%)	246 (75%)		1890 (83%)	387 (69%)		2022 (81%)	248 (73%)	
Gambled in the past month (N=2854)												
Yes	240 (8.6%)	8 (14%)	0.240	209 (8.3%)	40 (12%)	0.047	162 (7.1%)	89 (16%)	<0.001	198 (7.9%)	50 (15%)	0.003
No	2547 (91%)	52 (86%)		2307 (92%)	290 (88%)		2121 (93%)	472 (84%)		2302 (92%)	287 (85%)	
Gambled in the past week (N=2856)												
Yes	144 (5.2%)	5 (8.2%)	0.353	130 (5.2%)	19 (5.9%)	0.481	89 (3.9%)	63 (11%)	<0.001	116 (4.6%)	33 (9.7%)	0.003
No	2645 (95%)	54 (92%)		2388 (95%)	310 (94%)		2196 (96%)	497 (89%)		2386 (95%)	304 (90%)	

Associations between substance use and at-risk/problem gambling classifications (combined sample)

Combined sample (past year gamblers). Among past year gamblers, students who reported smoking and alcohol consumption in the past month, as well as any lifetime use of illicit drugs, were significantly more likely than those who did not to be classified with at-risk/problem gambling on the DSM-IV-[MR]-J (p=0.004, p=0.037 and p=0.022 respectively, Table 26).

Table 26: Association between student's tobacco, alcohol and drug use and at-risk/problem gambling classifications (past year gamblers), both states combined, N=574

Problem gambling classification on DSM-IV-[MR]-J	Smoking (past month)			Vaping (past month)			Alcohol (past month)			Illicit drugs (lifetime)		
	No	Yes	p-value[1][2]	No	Yes	p-value[2]	No	Yes	p-value[2]	No	Yes	p-value[2]
Non-problem gambling	334 (63%)	4 (20%)	0.004	294 (63%)	43 (53%)	0.177	251 (65%)	86 (54%)	0.037	297 (65%)	41 (47%)	0.022
At-risk/problem gambling	194 (37%)	16 (80%)		174 (37%)	38 (47%)		136 (35%)	74 (46%)		163 (35%)	47 (53%)	
[1]**Chi-squared approximation may be incorrect due to low numbers												
[2]**chi-squared test with Rao & Scott's second-order correction												

Geographical location and level of disadvantage (combined sample)

Associations between geographical location, level of disadvantage, and prevalence of gambling (combined sample)

Combined sample (all students). There were no significant associations between geographical location (major city versus other) or level of disadvantage (SEIFA deciles 1-6 versus deciles 7-10) and the prevalence of gambling (ever, past year, past month, or past week; Table 27).

Table 27: Associations between geographic location and SEIFA level of disadvantage and gambling behaviours (ever, past 12 months, last 4 weeks, last week), both states combined, N=2,873

Gambling prevalence	Geographic location			SEIFA level of disadvantage		
	Major city	Other	p-value[1]	Deciles 1-6	Deciles 7-10	p-value[1]
Ever gambled (n=2,870)			0.462			0.778
Yes	719 (29%)	117 (31%)		356 (30%)	479 (29%)	
No	1,777 (71%)	258 (69%)		847 (70%)	1,188 (71%)	
Gambled in the last year (n=2,859)			0.664			0.605
Yes	495 (20%)	80 (21%)		251 (21%)	324 (20%)	
No	1,990 (80%)	295 (79%)		953 (79%)	1,332 (80%)	
Gambled in the last 4 weeks (n=2,854)			0.726			0.580
Yes	220 (8.8%)	31 (8.3%)		111 (9.3%)	139 (8.4%)	
No	2,261 (91%)	342 (92%)		1,086 (91%)	1,517 (92%)	
Gambled in the last 7 days (n=2,856)			0.493			0.544
Yes	135 (5.4%)	17 (4.5%)		68 (5.6%)	84 (5.0%)	
No	2,348 (95%)	357 (96%)		1,132 (94%)	1,572 (95%)	
Total	2,497	376		1,205	1,668	
[1]chi-squared test with Rao & Scott's second-order correction						

Missing responses ranged from n=1 to 17

Associations between geographical location, level of disadvantage, and at-risk/problem gambling classifications (combined sample)

Combined sample (past year gamblers). There was no significant association between geographical location and the prevalence of at-risk/problem gambling for students who had gambled in the past year (Table 28). However, students with higher levels of disadvantage

(SEIFA deciles 1-6) who had gambled in the past year were more likely to be classified with at-risk/problem gambling on the DSM-IV-[MR]-J, compared to students with lower levels of disadvantage (p=0.012; Table 28).

Table 28: Association between geographic location, SEFIA level of disadvantage, and at-risk/problem gambling classification (students who gambled in the past year), both states combined, N=574

Problem gambling classification on DSM-IV-[MR]-J	Geographic location			SEIFA level of disadvantage		
	Major city	Other	p-value[1]	Deciles 1-6	Deciles 7-10	p-value[1]
Non-problem gambling	294 (62%)	44 (56%)	0.568	127 (53%)	211 (68%)	0.012
At-risk/problem gambling	178 (38%)	34 (44%)		113 (47%)	99 (32%)	
Total[*]	495	80		251	324	
[1]chi-squared test with Rao & Scott's second-order correction						

[*]*Missing responses ranged from n=2 to 23*

Attitudes towards gambling and advertising (NSW students only)

NSW sample (all students). The highest levels of agreement were for the statements: 'I approve of people who gamble once a week or more' (28% agreed or strongly agreed); 'I think more positively about gambling because of gambling advertisements' (21% agreed or strongly agreed); and 'Knowing the betting odds makes watching sport more exciting' (18% agreed or strongly agreed; Table 29).

Associations between attitudes towards gambling and advertising, age, and gender (NSW students only)

NSW sample (all students). There were no significant differences in levels of agreement with any of the statements by age (Table 29). However, male students were significantly more likely than female students to agree that: 'Gambling advertisements make me think about gambling in the future' (p=0.037); 'Gambling advertisements have increased my knowledge of gambling options' (p=0.037); 'Knowing the betting odds is part of following sport' (p=0.034); 'Knowing the betting odds makes watching sport more exciting' (p=0.026); and 'Betting on sport is normal' (p=0.038; Table 29).

Table 29: NSW student responses to attitudinal statements regarding gambling and advertising, N=1,377

Strongly agree/ agree:	Age in years							Gender			Total
	12	13	14	15	16	17	p-value[1]	Male	Female	p-value[1]	
I am more likely to gamble after seeing a gambling advertisement	29 (14%)	36 (15%)	36 (15%)	31 (13%)	37 (18%)	35 (20%)	0.404	127 (16%)	72 (14%)	0.276	204 (16%)
Gambling advertisements make me think about gambling in the future	27 (13%)	27 (11%)	37 (15%)	25 (10%)	27 (13%)	19 (11%)	0.622	106 (14%)	50 (9.9%)	0.037	161 (12%)
I pay attention to gambling advertisements	29 (14%)	31 (13%)	29 (12%)	25 (10%)	27 (13%)	22 (13%)	0.694	104 (13%)	53 (11%)	0.222	163 (13%)
Gambling advertisements have increased my knowledge of gambling options	27 (13%)	32 (13%)	33 (14%)	26 (11%)	29 (14%)	20 (12%)	0.715	109 (14%)	53 (11%)	0.037	167 (13%)
I think more positively about gambling because of gambling advertisements	35 (17%)	44 (18%)	50 (21%)	43 (18%)	48 (23%)	50 (29%)	0.080	163 (21%)	100 (20%)	0.795	270 (21%)
Knowing the betting odds is part of following sport	23 (11%)	29 (12%)	24 (10%)	23 (9.4%)	22 (10%)	8 (4.4%)	0.252	88 (11%)	37 (7.4%)	0.034	129 (9.9%)
Knowing the betting odds makes watching sport more exciting	37 (18%)	31 (13%)	40 (17%)	46 (19%)	51 (24%)	29 (17%)	0.355	160 (20%)	67 (13%)	0.026	233 (18%)
Betting on sport is normal	39 (19%)	37 (16%)	46 (19%)	42 (18%)	39 (19%)	24 (14%)	0.598	155 (20%)	66 (13%)	0.038	228 (17%)
I approve of people who gamble once a week or more	58 (28%)	53 (22%)	62 (26%)	75 (31%)	56 (27%)	66 (38%)	0.166	241 (31%)	119 (24%)	0.109	370 (28%)
Total*	209	264	251	254	220	179		821	525		1,377*
[1]chi-squared test with Rao & Scott's second-order correction											

Missing responses ranged from n=1 to 49

Associations between attitudes towards gambling and advertising, exposure to other people's gambling, and exposure to gambling advertising (NSW students only)

NSW sample (all students). There were significant associations between exposure to other people's gambling and agreement with a number of statements regarding gambling and advertising (Table 30). Students whose parent/caregiver had gambled in the last 4 weeks were more likely to agree with 6 of the 9 statements including: 'Gambling advertisements make me think about gambling in the future' (p=0.003); 'I pay attention to gambling advertisements' (p=0.022); 'Gambling advertisements have increased my knowledge of gambling options'

(p=0.035); 'Knowing the betting odds makes watching sport more exciting' (p=0.007); 'Betting on sport is normal' (p=0.002); and 'I approve of people who gamble once a week or more' (p=0.028); compared to students whose parent/caregiver had not gambled in the last 4 weeks. There were some similar associations for students whose best friend had gambled in the last 4 weeks (these students were significantly more likely to agree with 3 of 9 statements) or sibling had gambled in the last 4 weeks (these students were significantly more likely to agree with 5 of 9 statements; Table 30).

Table 30: Associations between exposure to other people's gambling in the last 4 weeks and responses to statements regarding gambling and advertising, NSW students only, N=1,377

| Gambling advertisement statements | People you know who gambled in the last 4 weeks | | | | | | | | |
| | Parent/caregiver | | | Best Friend | | | Sibling | | |
	No	Yes	p-value[1]	No	Yes	p-value[1]	No	Yes	p-value[1]
I am more likely to gamble after seeing a gambling advertisement			0.117			0.278			0.010
Strongly/Disagree or Neutral	889 (85%)	178 (80%)		1,021 (84%)	45 (78%)		1,005 (85%)	62 (70%)	
Strongly/Agree	159 (15%)	45 (20%)		190 (16%)	13 (22%)		177 (15%)	26 (30%)	
Gambling advertisements make me think about gambling in the future			0.003			0.006			0.032
Strongly/Disagree or Neutral	935 (89%)	174 (78%)		1,066 (88%)	43 (73%)		1,043 (88%)	66 (75%)	
Strongly/Agree	112 (11%)	48 (22%)		144 (12%)	16 (27%)		138 (12%)	22 (25%)	
I pay attention to gambling advertisements			0.022			0.135			0.155
Strongly/Disagree or Neutral	929 (89%)	175 (80%)		1,058 (88%)	46 (78%)		1,035 (88%)	69 (78%)	
Strongly/Agree	115 (11%)	44 (20%)		146 (12%)	13 (22%)		140 (12%)	19 (22%)	
Gambling advertisements have increased my knowledge of gambling options			0.035			0.028			0.041
Strongly/Disagree or Neutral	924 (88%)	180 (81%)		1,060 (88%)	44 (75%)		1,039 (88%)	65 (74%)	
Strongly/Agree	120 (12%)	43 (19%)		149 (12%)	15 (25%)		140 (12%)	23 (26%)	
I think more positively about gambling because of gambling advertisements			0.078			0.089			0.295

| Gambling advertisement statements | People you know who gambled in the last 4 weeks | | | | | | | | |
| | Parent/caregiver | | | Best Friend | | | Sibling | | |
	No	Yes	p-value[1]	No	Yes	p-value[1]	No	Yes	p-value[1]
Strongly/Disagree or Neutral	838 (80%)	163 (73%)		962 (80%)	39 (68%)		939 (80%)	62 (71%)	
Strongly/Agree	207 (20%)	60 (27%)		247 (20%)	19 (32%)		240 (20%)	26 (29%)	
Knowing the betting odds is part of following sport			0.406			0.282			0.291
Strongly/Disagree or Neutral	942 (90%)	194 (88%)		1,088 (90%)	49 (84%)		1,062 (90%)	75 (85%)	
Strongly/Agree	101 (9.7%)	27 (12%)		119 (9.9%)	9 (16%)		115 (9.8%)	13 (15%)	
Knowing the betting odds makes watching sport more exciting			0.007			0.188			0.021
Strongly/Disagree or Neutral	878 (84%)	158 (72%)		994 (82%)	43 (73%)		979 (83%)	57 (66%)	
Strongly/Agree	168 (16%)	63 (28%)		215 (18%)	16 (27%)		201 (17%)	29 (34%)	
Betting on sport is normal			0.002			0.122			0.028
Strongly/Disagree or Neutral	880 (84%)	159 (72%)		996 (83%)	43 (73%)		978 (83%)	61 (70%)	
Strongly/Agree	163 (16%)	62 (28%)		209 (17%)	16 (27%)		199 (17%)	26 (30%)	
I approve of people who gamble once a week or more			0.028			<0.001			0.726
Strongly/Disagree or Neutral	763 (73%)	136 (61%)		869 (72%)	30 (51%)		839 (71%)	60 (68%)	
Strongly/Agree	280 (27%)	87 (39%)		339 (28%)	29 (49%)		340 (29%)	28 (32%)	
Total[*]	1,079	235		1,256	58		1,226	89	
[1]chi-squared test with Rao & Scott's second-order correction									

Missing responses ranged from n=0 to 51

There were also significant associations between exposure to gambling advertising and agreement with 3 of the 8 statements regarding gambling and advertising (Table 31). Students who had seen or heard 4 or more types of gambling advertisements in the last month were more likely to agree that: 'I think more positively about gambling because of gambling advertisements' (p=0.002); and 'I approve of people who gamble once a week or more' (p=0.003); compared to students who had seen 3 or less types of gambling advertisements in the last month. However, students who had seen 4 or more different types of gambling advertisements in the last month were less likely to agree that: 'Knowing the betting odds is

part of following sport' (p=0.028), compared to students who had seen 3 or less types of gambling advertisements (Table 31).

Table 31: Associations between exposure to gambling advertising in the last 4 weeks and responses to statements regarding gambling and advertising, NSW students only, N=1,377

Gambling advertisement statements	Number of types of advertisements seen in last 4 weeks:		
	3 or less	4 or more	p-value[1]
I am more likely to gamble after seeing a gambling advertisement			0.269
Strongly/Disagree or Neutral	797 (84%)	258 (87%)	
Strongly/Agree	151 (16%)	40 (13%)	
Gambling advertisements make me think about gambling in the future			0.135
Strongly/Disagree or Neutral	820 (86%)	276 (93%)	
Strongly/Agree	128 (14%)	22 (7.4%)	
I pay attention to gambling advertisements			0.205
Strongly/Disagree or Neutral	822 (87%)	270 (91%)	
Strongly/Agree	123 (13%)	27 (9.1%)	
Gambling advertisements have increased my knowledge of gambling options			0.390
Strongly/Disagree or Neutral	822 (87%)	265 (89%)	
Strongly/Agree	124 (13%)	32 (11%)	
I think more positively about gambling because of gambling advertisements			0.002
Strongly/Disagree or Neutral	785 (83%)	201 (68%)	
Strongly/Agree	161 (17%)	97 (32%)	
Knowing the betting odds is part of following sport			0.028
Strongly/Disagree or Neutral	840 (89%)	282 (95%)	
Strongly/Agree	104 (11%)	15 (5.2%)	
Knowing the betting odds makes watching sport more exciting			0.660
Strongly/Disagree or Neutral	785 (83%)	240 (81%)	
Strongly/Agree	166 (17%)	57 (19%)	
Betting on sport is normal			0.453
Strongly/Disagree or Neutral	773 (82%)	250 (84%)	
Strongly/Agree	171 (18%)	46 (16%)	
I approve of people who gamble once a week or more			0.003
Strongly/Disagree or Neutral	703 (74%)	186 (62%)	
Strongly/Agree	241 (26%)	112 (38%)	
Total[*]	979	302	
[1]chi-squared test with Rao & Scott's second-order correction			

[*]*Missing responses ranged from n=5 to 35*

Online gambling (NSW students only)

NSW sample (ever gamblers). Engagement with online gambling among NSW students who had ever gambled is shown in Table 32. The most common types of previous or current online gambling were using a parent's/guardian's online account with their parent's/guardian's permission (10% currently and 11% previously gambled online this way); and using an online account that they had set up themselves (10% currently and 6% previously gambled online this way).

Table 32: Online gambling (students who had ever gambled), NSW students only, N=402

Type of online gambling	Currently	Previously	Never
Gambled online using my parents' / guardians' gambling account with their permission	40 (10%)	40 (11%)	301 (79%)
Gambled online using my parents' / guardians' gambling account without their permission	10 (2.7%)	19 (5.1%)	349 (92%)
Gambled online using another person's gambling account with their permission	14 (3.6%)	28 (7.4%)	339 (89%)
Gambled online using another person's gambling account without their permission	9 (2.4%)	14 (3.6%)	358 (94%)
Gambled online using a gambling account I set up myself	37 (9.6%)	21 (5.6%)	323 (85%)
Gambled online another way	28 (7.3%)	22 (5.7%)	332 (87%)

Missing responses ranged from n=20 to 24

Associations between current online gambling, age, and gender (NSW students only)

NSW sample (ever gamblers). Any current online gambling (combined across all types of online accounts, with or without permission), was examined by age and gender (Table 33). Approximately 1 in 5 (17%) students who had ever gambled reported that they were currently gambling online. There were no significant differences in current online gambling by age or gender.

Table 33: Current use of online gambling accounts among ever gamblers, by age and gender, NSW students only, N=402

Current online gambling using a gambling account	Age in years							Gender			Total
	12	13	14	15	16	17	p-value[1]	Male	Female	p-value[1]	
Yes	1 (2.2%)	11 (15%)	14 (21%)	16 (22%)	12 (15%)	12 (23%)	0.307	49 (19%)	12 (12%)	0.294	66 (17%)

Current online gambling using a gambling account	Age in years							Gender			Total
	12	13	14	15	16	17	p-value[1]	Male	Female	p-value[1]	
No	31 (98%)	62 (85%)	54 (79%)	59 (78%)	67 (85%)	38 (77%)		211 (81%)	94 (88%)		311 (83%)
Total	32	77	72	78	89	53		275	115		402
[1]chi-squared test with Rao & Scott's second-order correction											

Missing responses ranged from n=0 to 15

Associations between current online gambling, other people's gambling, and exposure to gambling advertising (NSW students only)

NSW sample (ever gamblers). There was a significant association between any current online gambling (combined across all types of online accounts) and students who had a parent/caregiver that had gambled in the last 4 weeks (Table 34). Students whose parent or caregiver had gambled in the last 4 weeks were significantly more likely to be currently gambling online than those whose parents had not gambled in the last 4 weeks (p=0.002). Exposure to gambling advertising was not significantly associated with current online gambling (Table 34).

Table 34: Associations between exposure to other people's gambling, exposure to gambling advertising, and current online gambling, NSW students only, N=402

Current online gambling using a gambling account	People you know who gambled in the last 4 weeks									Number of types of advertisements seen in last 4 weeks		
	Parent/caregiver			Best Friend			Sibling					
	No	Yes	p-value[1]	No	Yes	p-value[1]	No	Yes	p-value[1]	3 or less	4 or more	p-value[1]
Yes	22 (9.7%)	41 (31%)	0.002	51 (16%)	12 (40%)	0.051	57 (18%)	5 (12%)	0.381	41 (16%)	22 (22%)	0.318
No	204 (90%)	90 (69%)		276 (84%)	18 (60%)		254 (82%)	39 (88%)		212 (84%)	79 (78%)	
Total*	238	132		340	30		324	46		262	103	
[1]chi-squared test with Rao & Scott's second-order correction												

Missing responses ranged from n=11 to 14

Games with gambling components (NSW students only)

NSW sample (all students). The most common type of game with gambling components played by students are shown in Table 35. Almost 10% of students reported they had played a video game with gambling components within the last 7 days, and 28% of students had ever played a video game with gambling components.

Table 35: Engagement with games with gambling components, NSW students only, N=1,377[*]

Played games with gambling components:	In the last 7 days	In the last 4 weeks	In the last 12 months	More than 12 months ago	Never
Games with gambling components on social networking websites	43 (3.3%)	19 (1.5%)	22 (1.6%)	25 (1.9%)	1,203 (92%)
Video games with gambling components	127 (9.7%)	63 (4.8%)	93 (7.1%)	87 (6.6%)	943 (72%)
Free demo or practice games on real gambling websites or apps	48 (3.6%)	29 (2.2%)	41 (3.2%)	35 (2.7%)	1,160 (88%)
Gambling-themed apps from an app store	58 (4.4%)	30 (2.3%)	53 (4.1%)	55 (4.2%)	1,116 (85%)

[*]*Missing responses ranged from n=64 to 65*

Associations between playing games with gambling components in the last 12 months, age, and gender (NSW students only)

NSW sample (all students). The prevalence of playing any type of game with gambling components (combined across all categories of games) in the last 12 months by age and gender is shown in Table 36. One quarter of NSW students had played games with gambling components in the last 12 months. Older students, and male students, were significantly more likely to have played games with gambling components in the last 12 months, compared to younger and female students (p=0.01 and p=0.002 respectively; Table 36).

Table 36: Playing games with gambling components in the last 12 months, by age and gender, NSW students only, N=1,377

Played games with gambling components in the last 12 months	Age in years							Gender			Total
	12	13	14	15	16	17	p-value[1]	Male	Female	p-value[1]	
Yes	24 (12%)	59 (24%)	57 (24%)	63 (25%)	71 (34%)	61 (36%)	0.010	250 (32%)	76 (15%)	0.002	334 (25%)
No	181 (88%)	188 (76%)	183 (76%)	184 (75%)	135 (66%)	109 (64%)		532 (68%)	426 (85%)		980 (75%)
Total[*]	209	264	251	254	220	179		821	525		1,377
[1]chi-squared test with Rao & Scott's second-order correction											

[*]*Missing responses ranged from n=5 to 39*

Associations between playing games with gambling components in the last 12 months, exposure to other people's gambling, and exposure to gambling advertising (NSW students only)

NSW sample (all students). There were significant associations between the prevalence of playing games with gambling components (combined across all categories of games) in the last 12 months and exposure to other people's gambling and exposure to gambling advertising

(Table 37). Students who had a parent or caregiver, or a sibling, that had gambled in the last 4 weeks were significantly more likely to have played a game with gambling components in the last 12 months, than those who did not (p=0.002 and p=0.011 respectively). Students who had seen or heard 4 or more types of gambling advertisements in the last 4 weeks were also significantly more likely to have played games with gambling components in the last 12 months compared to students who had seen or heard 3 or less types of advertisements (p<0.001; Table 37).

Table 37: Associations between exposure to other people's gambling, and exposure to gambling advertising, and playing games with gambling components in the last 12 months, NSW students only, N=1,377

Played games with gambling components in the last 12 months	People you know who gambled in the last 4 weeks									Number of types of advertisements seen in last 4 weeks		
	Parent/caregiver			Best Friend			Sibling					
	No	Yes	p-value[1]	No	Yes	p-value[1]	No	Yes	p-value[1]	3 or less	4 or more	p-value[1]
Yes	222 (21%)	101 (45%)	0.002	296 (24%)	27 (47%)	0.056	284 (24%)	39 (45%)	0.011	204 (21%)	118 (40%)	<0.001
No	823 (79%)	125 (55%)		917 (76%)	31 (53%)		900 (76%)	49 (55%)		746 (79%)	180 (60%)	
Total*	1,079	235		1,256	58		1,226	89		979	302	
[1]chi-squared test with Rao & Scott's second-order correction												

Missing responses ranged from n=33 to 44

Loot boxes (NSW students only)

NSW sample (all students). The most common way of obtaining a loot box was opening one for free during a video game (Table 38). Twenty-three percent of students had opened a loot box for free in the last 7 days, and 47% had ever opened a free loot box during a video game. Twenty-eight percent of students had ever paid real money for a loot box, and 31% had ever used virtual currency purchased with real money to get a loot box.

Table 38: NSW student's engagement with loot boxes within video games, N=1,377*

Obtained a loot box:	In the last 7 days	In the last 4 weeks	In the last 12 months	More than 12 months ago	Never
Opened for free during a video game	304 (23%)	90 (6.9%)	139 (11%)	88 (6.7%)	690 (53%)
Paid real money during a video game	68 (5.2%)	53 (4.1%)	121 (9.3%)	117 (9.0%)	942 (72%)
Used virtual currency purchased with real money during a video game	109 (8.3%)	50 (3.9%)	106 (8.2%)	133 (10%)	905 (69%)

Missing responses ranged from n=67 to 77

Associations between obtaining a loot box in the last 12 months, age and gender (NSW students only)

NSW sample (all students). The prevalence of obtaining a loot box (combined across all response categories) in the last 12 months by age and gender is shown in Table 39. Forty-two percent of all students had obtained a loot box in the last 12 months. There was a significant association between the prevalence of obtaining a loot box in the last 12 months and gender. Male students were more likely than females to have obtained a loot box in the last 12 months (p<0.001; Table 39).

Table 39: Obtaining a loot box in the last 12 months, by age and gender, NSW students only, N=1,377

Obtained a loot box in the last 12 months	Age in years							Gender			Total
	12	13	14	15	16	17	p-value[1]	Male	Female	p-value[1]	
Yes	88 (43%)	100 (42%)	106 (44%)	107 (44%)	85 (40%)	68 (39%)	0.933	433 (56%)	107 (21%)	<0.001	554 (42%)
No	116 (57%)	139 (58%)	133 (56%)	137 (56%)	124 (60%)	105 (61%)		347 (44%)	391 (79%)		754 (58%)
Total[*]	209	264	251	254	220	179		821	525		1,377
[1]chi-squared test with Rao & Scott's second-order correction											

[*]*Missing responses ranged from n=5 to 41*

Associations between obtaining a loot box in the last 12 months, exposure to other people's gambling, and exposure to gambling advertising (NSW students only)

NSW sample (all students). There were significant associations between prevalence of obtaining a loot box (combined across all response categories) in the last 12 months and exposure to other people's gambling and exposure to gambling advertising (Table 40). Students who had a parent/caregiver or best friend who had gambled in the last 4 weeks were more likely to have obtained a loot box (p=0.021 and p<0.001 respectively). Similarly, students who had seen or heard 4 or more different types of gambling advertisements in the last month were more likely to have obtained a loot box in the last 12 months, compared to those who had seen 3 or less types of gambling advertisements (p<0.001; Table 40).

Table 40: Associations between exposure to other people's gambling, exposure to gambling advertising, and obtaining a loot box in the last 12 months, NSW students only, N=1,377

Obtained a loot box in the last 12 months	People you know who gambled in the last 4 weeks									Number of types of advertisements seen in last 4 weeks		
	Parent/caregiver			Best Friend			Sibling					
	No	Yes	p-value[1]	No	Yes	p-value[1]	No	Yes	p-value[1]	3 or less	4 or more	p-value[1]
Yes	416 (40%)	126 (57%)	0.021	492 (41%)	50 (86%)	<0.001	508 (43%)	34 (38%)	0.374	361 (38%)	176 (60%)	<0.001

Obtained a loot box in the last 12 months	People you know who gambled in the last 4 weeks									Number of types of advertisements seen in last 4 weeks		
	Parent/caregiver			Best Friend			Sibling					
	No	Yes	p-value[1]	No	Yes	p-value[1]	No	Yes	p-value[1]	3 or less	4 or more	p-value[1]
No	630 (60%)	94 (43%)		716 (59%)	8 (14%)		670 (57%)	54 (62%)		585 (62%)	119 (40%)	
Total[*]	1,079	235		1,256	58		1,226	89		979	302	
[1]chi-squared test with Rao & Scott's second-order correction												

[*]*Missing responses ranged from n=0 to 48*

Discussion

The current study provides up-to-date prevalence estimates of the gambling behaviours of 12-17 year old secondary school students from VIC and NSW, based on a relatively large and randomised sample. The current findings represent the most recent Australian data on gambling behaviours of young people, and are based on an arguably more representative sample than other recent Australian studies, which were recruited via email, online advertising, household delivered flyers with limited distribution, and/or online panels of young people;(22, 50-53) or sampled only 16 and 17 year olds.(56) For NSW, the current study is the first time that gambling has been examined in a representative, randomised, school-based sample. Given that the findings were broadly consistent for both the NSW and VIC student samples, the following discussion focuses on findings from the larger combined states sample (except where data were only collected from NSW students), as the larger sample size provides more confidence in the reliability of the results.

Gambling behaviours (combined sample)

Among students from VIC and NSW combined, 29% had ever gambled, 20% had gambled in the past year, 9% had gambled in the past month, and 5% had gambled in the past week. The prevalence rates reported in the current study are consistent with the recent (2016 onwards) Australian research, in which the prevalence of young people's past year gambling generally ranged between 16% (56) and 30%.(22) Current rates are also similar to the findings of the previous 2017 ASSAD (n=6,377 students from VIC and QLD; aged 12-17 years), where 31% of students reported ever gambling and 6% reported gambling in the past month.(57) In the NSW Youth Gambling Study 2020 (n=551; aged 12-17 years), which used sampling and recruitment approaches that were likely less representative than those used in the current study, 43% of young people reported ever gambling, and 30% had gambled in the past year.(22) In terms of spending on gambling, past month gamblers reported spending a relatively small amount of money on gambling in the last 4 weeks (a median amount of $11-20, equivalent to less than $1 per day). This compares to a median amount of $9.30 spent on gambling in the past month reported by VIC students in the 2017 ASSAD VIC Report,(55) suggesting a possible increase in individual student expenditure on gambling. Alternatively, the higher median amount of money spent on gambling in 2022/23 could reflect inflationary increases in prices since 2017. Encouragingly, only 4% of students in the current study (combined sample) indicated that they would definitely gamble in the next year, and 5% of students indicated they were likely to. It is also noted that future gambling intention also includes young people who may want to try gambling as a novelty experience, rather than as a regular or frequent activity.(22)

Consistent with previous research,(31) the prevalence of gambling in the combined sample was more common among male than female students. Male students were significantly more likely to have engaged in gambling (ever, and in the past year, past month, and past week)

than females. Contrary to previous findings,(1, 22, 57) there were no significant differences in gambling prevalence with age in the combined sample. In the current study, the prevalence of gambling generally increased with increasing age up to the 15/16 year old age groups but was lower for the 17 year old age category. It is not clear why gambling participation was relatively lower among the 17 year olds, although this may have been related to sampling issues (see Limitations section) and the low school response rate for the 2022/23 ASSAD survey. The most common gambling activities in the past year in the current study, for both states combined, included buying raffle tickets (34% of students who had ever gambled), betting on personal skill games (33%) and sports games (31%), buying instant scratchie cards (25%), and betting on horse or dog races (24% of students who had ever gambled). A similar pattern of gambling activities was observed in the 2017 ASSAD VIC Report survey,(55) where the most frequent activities were betting on horse or dog races, buying raffle tickets, betting on card games, buying scratchies, and betting on personal skill games. There were no significant differences in participation in gambling activities across the combined states sample with age, except that students aged 17 years were more likely than other age categories to have gambled on poker machines in the last 12 months. Male students were significantly more likely than female students to have gambled on casino games and fantasy sports competitions, while female students were significantly more likely to have gambled by buying instant scratchie cards and raffle tickets. The most common gambling activities in the current study are broadly consistent with previous Australian research. For example, King et al. (2020) reported that the most common gambling activities for young people aged 12-19 years in Australia were scratch cards, lotteries, card games and sports betting.(21) The NSW Youth Gambling Study 2020 also found that the most popular gambling activities in the past year included informal private betting and scratchies/lotteries.(22)

Several of the most common gambling activities for students in the combined sample included hard gambling activities. Hard gambling has been defined as deliberate and consistent gambling activities, such as bets made with bookmakers or gambling in casinos.(80, 88) In the combined sample, 3 of the top 5 most common gambling activities were hard forms of gambling, including gambling on personal skills games, sports games and horse or dog races. Also of note, 10% of students from the combined sample who had ever gambled had gambled on casino games, and 8% on poker machines in the past year. This is despite strict age restrictions on gambling activities such as on races or pokies, where venues are required to check identification credentials and limit access to people aged 18 years or over.(89)

Soft gambling has been defined as being incidental or recreational in nature, and includes activities such as buying raffle tickets or taking part in sweeps or tipping competitions.(80, 88). In the combined sample, 2 of the most common gambling activities can be considered as soft gambling activities (buying raffle tickets and instant scratchie cards). The prevalence of gambling on hard activities (combined sample) was higher than for gambling on soft activities. This demonstrates that students are not only gambling on incidental or recreational forms of gambling such as raffle tickets or instant scratchie cards. Furthermore, while soft forms of gambling may be seen as benign, the consideration of soft forms of gambling is important for

a few reasons. These include that soft gambling activities are among the most widespread and accessible forms of gambling for young people,(90) and that people who engage in soft gambling activities often find themselves drawn to harder forms of gambling.(88) While many young people reported gambling on informal activities such as betting with family and friends or on personal skill games, they were also engaged in gambling activities that are legally restricted to adults, including soft forms of gambling such as buying raffle tickets or instant scratchies, as well as activities such as betting on horse or dog races or sports games. It is likely that access to some gambling activities is facilitated by parents or other adults in the young person's life. The NSW Youth Gambling 2020 study reported that young people's land-based gambling generally occurred with parents, although some older respondents reported gambling by using someone else's ID or going to venues where their ID is not checked.(22). Further research is needed to better understand how young people are accessing legally restricted forms of gambling.

In terms of modalities of gambling for the combined states sample, students most frequently reported gambling at home or at a friend's house (although how young people were gambling while at home or a friend's house was not specified). This was followed by forms of online gambling, including via mobile phone, laptop, or other smart devices. Approximately 40% of students who had gambled in the past year reported having gambled online. Although the rates are not directly comparable (as the survey response options varied somewhat), it appears likely that the prevalence of youth online gambling has increased since the 2017 ASSAD, where 15% of ever gamblers from VIC and QLD, and 28% of past-month gamblers, reported gambling online via a website.(57) The current prevalence of online gambling is also higher than reported in the NSW Youth Gambling Study 2020, where 25% of past-year gamblers had gambled online. It is likely that the apparent increase in online gambling in 2022/23 corresponds with the rapid increase in engagement in online activities following on from the COVID-19 pandemic,(91) although further research is needed to confirm this.

Problem gambling (combined sample)

In the current study, 6% of all students were classified with at-risk gambling (i.e. they endorsed at least one item but less than 4 items across the domains of the DSM-IV-[MR]-J), and 2% were classified with problem gambling based on scores on the DSM-IV-[MR]-J. Older students and males were more likely to be classified with problem gambling compared to younger students and females. The prevalence of problem gambling in the current study is similar to previous Australian research on young people, where estimates range between 1 and 5%.(22) It is also consistent with the 2017 ASSAD VIC & QLD, where 2% of students were classified with problem gambling on the DSM-IV-[MR]-J.(57) The recent NSW Youth Gambling Study 2020 similarly reported an estimated 1.5% of young people were classified with problem gambling.(22) Of note, the prevalence of problem gambling in the current study was substantially higher among students who reported gambling in the past year. Ten percent of students from the combined sample who had gambled in the past year were classified with

problem gambling. This highlights that students who have more recently engaged in gambling activities are much more likely to report potential problems or risks around their gambling (or vice versa). Also of note is the significantly greater expenditure on gambling among students who gambled in the past month and were classified with problem gambling on the DSM-IV-[MR]-J. These students reported spending a median amount of over $150 on gambling in the last month, compared to a median amount of $11-20 for all past month gamblers. In 2022/23, Gambling Help Online reported a 16% increase in the number of young people aged 24 and under contacting the help service(92). This highlights the seriousness of problem gambling for young people and the potential for gambling-related harm.

Exposure to other people's gambling, gambling venues, and gambling advertising (combined sample)

Student's environmental and social exposure to gambling was relatively substantial, encompassing exposure through knowing people who gambled, visiting venues where people were gambling, and seeing or hearing advertising for gambling. Almost 1 in 5 students (19%) indicated that someone in their household had gambled in the last 4 weeks. This is like findings from 2017 ASSAD, where 21% of VIC and QLD students reported that a household member had gambled in the last month. In the NSW Youth Gambling Study 2020, over half of the sample (58%) reported being present when adults in their household gambled.(22) However, the latter study used a longer time frame (i.e. an adult in the young person's household gambling at any time during their childhood), compared to the last 4 weeks timeframe in the current study.

Across the combined states sample, over a quarter of students (28%) had been inside one or more venues where people were gambling in the last 4 weeks (including a pub or club, TAB, casino, or racecourse). Of note, exposure to venues where people were gambling was substantially lower than was reported in 2017 ASSAD, where 39% of students had visited a venue where gambling was available in the last month.(57) Over half of all students (59%) reported seeing or hearing at least one type of gambling ad or promotion in the last 4 weeks, most commonly on TV, websites, social media, and on the radio. This is in line with previous reviews which indicate the majority of adolescents and young people are exposed to gambling advertising on TV, the internet and at sports events.(73) It also echoes the findings of the NSW Youth Gambling Study 2020, where more than half of respondents reported seeing gambling advertisements in the last 12 months. However, compared to the 2017 ASSAD VIC Report,(55) current student exposure or recall of different types of gambling advertisements appears to have declined, from a mean of 3.8 in 2017,(55) to a mean of 2 in 2022/23.

Attitudes towards gambling and advertising and online and simulated gambling engagement (NSW sample only)

Over a quarter of NSW students indicated that they approve of people who gamble once a week or more, and around one in 5 students agreed that they think more positively about gambling because of gambling advertisements, and that knowing the betting odds makes watching sport more exciting. Male students were more likely than female students to agree with several attitudinal statements related to sport, including that knowing the betting odds is part of following sport, knowing the betting odds makes watching sport more exciting, and that betting on sport is normal. Relationships between attitudes towards gambling and advertising and student's environmental and social exposure to gambling are discussed in more detail below.

Just over 1 in 5 students from NSW who had ever gambled (21%) were currently or had previously gambled online using a parent/guardians online account with permission. The NSW Youth Gambling Study 2020 similarly reported young peoples' access to online gambling accounts was most often facilitated by parents.(22) A further 16% of students who had ever gambled currently or had previously gambled online using an account that they had set up themselves. The NSW Youth Gambling study 2020 noted that young people were able to gamble online by entering a false date of birth or age.(22)

A quarter of NSW students reported playing any type of game or games with gambling components in the last 12 months. Rates of engagement in games with gambling components in the current study were slightly higher than for traditional forms of monetary gambling. The NSW Youth Gambling Study 2020 found that 40% of young people had ever engaged in games with gambling components and concluded that simulated gambling involvement was more prevalent among young people than monetary gambling.(22). Less than half of all NSW students (42%) had obtained a loot box in the last 12 months, a rate which is somewhat lower than reported in other Australian studies. In the NSW Youth Gambling Study 2020, and the Rockloff et al. (2020) study, 72% and 69% of young people reported engaging in loot boxes in the past year respectively.(22, 54) These differences in prevalence could be due to the varying sampling and recruitment methods used between studies. The earlier studies were more likely to recruit digitally engaged young people, as they recruited participants via an online survey link (22) or online panels.(54) The prevalence of loot box engagement reported in the current study are more similar to international research based on representative samples from the US and Demark, where up to 25% of young people, and 43% of young 'gamers' (adolescents who had played a PC or video game in the last 12 months), reported obtaining a loot box in the past 12 months.(32, 93)

Risk factors associated with gambling behaviours (combined sample)

A range of potential risk factors were examined in association with student's gambling behaviours (including ever, past year, past month, and past week gambling) using the combined states sample. While rurality and socioeconomic disadvantage were not significantly associated with gambling prevalence, there were significant positive associations between gambling prevalence and students' environmental and social exposure to gambling. Close others' gambling (including by a parent/caregiver, best friend, or sibling), and exposure to venues where people were gambling were positively associated with the likelihood of gambling (ever, and in the past year, month, and week). This is consistent with findings from the 2017 ASSAD.[55, 57, 94] It is also supported by previous research indicating that youth gambling frequency and youth problem gambling is positively associated with parental involvement in gambling and parental problems with gambling, [95-98] and highlights the importance of peer gambling behaviours for young peoples' gambling behaviours.[22, 94]

A similar pattern was seen in the current study for exposure to gambling advertising. Students who had recently seen or heard more different types of gambling advertisements were more likely to have ever gambled and to have gambled in the past year. Previous research, including findings from the 2017 ASSAD survey, also reported that higher exposure to gambling advertising is related to multiple gambling outcomes, including youth gambling frequency and problem gambling.[55, 57, 67, 99, 100]

There were also significant associations between student substance use and gambling behaviours. Students who had smoked tobacco, vaped, or consumed alcohol in the past month, or had ever used an illicit drug, were more likely to have gambled, compared to students who had not. This is consistent with past research which has shown strong correlations between youth engagement in gambling activities and other risky behaviours such as smoking, alcohol and drug use.[101] Similar associations were seen in the 2017 ASSAD survey.[55, 57]

Risk factors associated with problem gambling classifications (combined sample)

Among students who had gambled in the past year, students from areas of higher disadvantage were more likely to be classified with at-risk/problem gambling compared to students with lower levels of disadvantage. This is consistent with the 2017 ASSAD VIC Report,[55] and aligns with evidence suggesting a higher socioeconomic status is protective against problem gambling for young people.[58] An at-risk/problem gambling classification was not associated with students' recent exposure to venues where people were gambling, or exposure to gambling advertising in the last 4 weeks. The same absence of association was seen in univariate analysis in the 2017 ASSAD VIC Report,[55] although in multivariate

analysis of the 2017 ASSAD VIC & QLD data, exposure to more types of gambling advertisements was a significant predictor of students being classified with at-risk/problem gambling. In the current study, there was an association between having a best friend or a sibling that had gambled in the last 4 weeks and being classified with at-risk/problem gambling, but the same association did not reach significance for having a parent/caregiver that had gambled recently. In contrast, univariate analysis of the 2017 ASSAD VIC Report indicated that having both a parent, and/or a best friend that had gambled in the last 30 days, were both significantly positively associated with being classified as at-risk or problem gambling.(55) In addition, further analysis of the 2017 ASSAD VIC & QLD to specifically examine associations between exposure to other people's gambling and at-risk/problem gambling, found that having a parent, a sibling, a best friend, another relative, and/or knowing someone else who gambled in the last month, were each significant predictors of an at-risk/problem gambling classification.(94) It is likely that the relatively small sample size and corresponding small number of students classified with problem gambling impacted on statistical power to detect some significant associations in relation to problem gambling in the current study. While the current study did not find the expected relationship between parental gambling and young people's problem gambling,(95) it does reinforce the important potential role of family and peers' gambling behaviours on young peoples' own gambling behaviours and problem gambling.(22, 94)

Of the substance use variables examined in the current study, past month smoking and alcohol consumption, and lifetime illicit drug use were each positively associated with an at-risk/problem gambling classification for students who had gambled in the past year. This aligns with previous findings of a relationship between gambling related problems and substance use.(58, 102) Dowling et al. (2017) reported that tobacco, alcohol, cannabis and other illicit drug use in childhood, adolescence or young adulthood, were longitudinal risk factors for the subsequent development of gambling problems.(58) The 2017 ASSAD VIC Report also found regular use of tobacco, drinking alcohol in the previous week, and using a greater number of different types of illicit drugs, were positively related to problem gambling.(55)

Factors associated with attitudes towards gambling, and online and simulated gambling engagement (NSW sample only)

There were several factors associated with attitudes towards gambling and advertising, gambling online and simulated gambling in the NSW sample. For example, students with exposure to parental gambling in the last 4 weeks, and recall of more types of gambling advertisements, were significantly more likely to agree with a number of the attitudinal statements about gambling and advertising. Students whose parents/caregivers had gambled recently were significantly more likely to be currently gambling online, compared to those whose parents had not gambled recently. Exposure to other people's gambling (including by parents, a sibling, or best friend), and recall of a greater number of types of gambling advertisements were both positively associated with engagement in simulated gambling in the

last 12 months. Although the findings are cross-sectional in nature, they suggest the potential for exposure to gambling (via other people's gambling and advertising) to encourage young people's engagement with simulated gambling. Further research using longitudinal designs is needed to explore these relationships and establish causal pathways.

Limitations of the current study

The 2022/23 ASSAD survey was planned for 2020 but was delayed due the COVID-19 pandemic and subsequent education department restrictions on school research. Schools were subsequently affected by staff shortages caused by COVID-19 and influenza, which substantially impacted the school recruitment rate for the survey. As a result, the 2022/23 ASSAD survey did not meet its planned school sample size, with the final sample drawn from 12 schools in VIC and 11 schools in NSW. The final student sample was smaller than for previous rounds of the ASSAD survey and is unlikely to be truly representative of the secondary school population of each state. For example, in NSW, no female students from Catholic schools were surveyed, hence the male students were taken to represent all students from this segment of the population for weighting purposes. Similarly in VIC, no 12 or 13 year old students from independent schools were surveyed, hence the Catholic students aged 12 and 13 years were taken as representatives of non-government (Catholic and independent) students for weighting purposes. Due to the smaller than expected final student sample size, some comparisons (for example, age comparisons for some gambling activities and modalities) were based on low numbers. As such they may not be reliable, or in some cases comparisons could not be statistically approximated. The possibility of Type 1 errors due to the multiple statistical comparisons conducted should also be considered. Also of note was the relatively lower prevalence of gambling among 17 year olds compared to 15/16 year olds. This suggests a possible sampling issue for the 17 year age category, potentially related to the low school response rate.

There were 822 students in the combined states sample (23% of all students) that did not respond to the first gambling question and were removed from the analysis. In NSW, this represented 16% of the student sample, while in VIC, it represented 29% of the student sample. These students may have had reduced interest or limited engagement with gambling (which could potentially influence the gambling prevalence rates reported), or they may have been unable to complete the survey within the allocated time. The latter is more likely. The VIC supplementary survey was considerably longer than the NSW supplementary survey (the median length of time for students to complete the VIC supplementary survey was 17.5 minutes, compared to 9.5 minutes for NSW), and the higher proportion of VIC students not responding to the first gambling question suggests that these students may have run out of time to complete the supplementary survey. However, sociodemographic comparisons did not indicate a consistent pattern of bias for excluded versus included students.

Data were self-reported, meaning they are subject to potential recall and social desirability bias, although the anonymous nature of the survey was designed to minimise the latter. While students were given a definition of gambling that involved paying or spending your own money, it is possible that some students included participation in gambling activities facilitated by adults (for example, scratching the numbers off a parents' scratchie card, or picking numbers for a lottery ticket) when responding to the survey items. This may mean an overestimation of gambling prevalence rates in the current study. The gambling modalities examined included gambling 'at home or at a friend's house'. This modality did not specify how young people were gambling, so may have been confounded with other gambling modalities- for example, students may have gambled online or using a phone while at home or at a friend's house. The measure used to explore students' exposure to venues where people were gambling should also be interpreted with caution, given that students could visit some of these venues without necessarily seeing people gambling, for example attending a pub or club with their family for dinner. Students' exposure to other people's gambling in the last 4 weeks did not include the types of activities or frequency of gambling among those they knew. Students' exposure to gambling advertising was based upon recall of the different types of advertisements seen. The measure did not assess young people's level or frequency of exposure to advertisements. It is also possible that students who are more engaged with gambling were more likely to recall seeing or hearing gambling advertisements. In addition, in the association analyses, responses for having a mother/caregiver and father/caregiver who had gambled in the last 4 weeks were combined into a single 'parent' category. Previous research has suggested a cross-gendered transmission of problem gambling from parents to their children (i.e. from fathers to their daughters and from mothers to their sons).(103) Finally, it is important to consider some of the situational and measurement issues associated with previous youth gambling prevalence studies (40) when comparing the current study findings with other research. Taking factors into account such as variations in sampling procedures, differences in instruments, measures and timeframes, will facilitate a more meaningful comparison with earlier research results.

Conclusions

Youth gambling is increasingly being recognised as a public health problem, and concerted efforts are required to help address the issue.(92) The current study indicates that approximately 30% of young people aged 12-17 years (from NSW and VIC combined) have gambled at some time in the past, with 20% having gambled in the past year. Young people are accessing legally restricted forms of gambling such as betting on horse or dog races, buying instant scratchies, and online gambling, suggesting that parents or other adults are actively facilitating young people's access to gambling activities. Two percent of young people in the current study were classified with problem gambling (2%), with this increasing to 10% of students who reported gambling the past year. Increases in youth online gambling, as well as the modest but persistent proportion of young people meeting screening criteria for problem gambling are particular areas for concern.(104)

The current findings further highlight the ubiquitous nature of gambling exposure in young people's lives. Consistent with a socio-ecological model of gambling, there is a convergence of individual, social, and environmental factors that potentially impact on youth gambling behaviours. These encompass gambling availability, marketing, cultural norms, and worldwide trends such as online gambling and gambling-like games.(9, 19, 31, 64) Male students, in particular, exhibit heightened vulnerability to engaging in gambling activities and experiencing at-risk or problem gambling. Males also appear to be more susceptible to gambling advertising related to betting on sport (measured among NSW students only). Students' exposure to gambling through venues where people were gambling, gambling among family and peers, and gambling advertising, were associated with a higher prevalence of past gambling behaviours. Those classified with at-risk, or problem gambling were also more likely have a sibling or best friend that gambled, highlighting the important potential impacts of friends' or peers' gambling behaviours on young people. These students also appear to be spending a significantly larger amount of money on gambling as compared to students not classified with problem gambling. Young people's gambling behaviours also appear to be associated with engagement in other risky behaviours, such as smoking, vaping, drinking alcohol, and using illicit drugs. The pervasiveness of gambling in young people's lives is also no doubt reflected in young people's simulated and online gambling behaviours. For example, online gambling appeared to be supported or facilitated by parents with some students using a parent's account with their permission. Other people's gambling (including parents, a sibling, or best friend) was positively associated with playing games with gambling components and obtaining loot boxes. Exposure to parents' or caregivers' gambling and a greater number of gambling advertisements were also positively associated with increased agreement with several positive attitude statements about gambling.

A large proportion of students from NSW had engaged in simulated gambling including games with gambling components and loot boxes. The rising popularity of simulated gambling is of concern, given its widespread availability to minors,(50) and suggestions that early exposure to these activities may normalise future monetary gambling behaviour.(105) While research in this field is still emerging, early evidence indicates that young people who play gambling-like games are more likely to have spent money on gambling.(50, 56) Young peoples' participation, time, and expenditure on simulated gambling has also been positively associated with the risk of problematic gambling.(50) Further evidence suggests links between adolescents' engagement with loot boxes, problem gaming and problem gambling.(32, 93) Researchers have suggested that loot boxes "are structurally and psychologically akin to gambling".(106) The convergence of gaming and gambling, along with the rise in simulated gambling products and their popularity among young people, underscores a growing risk of gambling-related harm for this population that demands ongoing attention.(22)

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Appendices

Appendix A: Items included in the 2022/23 ASSAD survey gambling module

THE NEXT FEW QUESTIONS ARE ABOUT GAMBLING.

Gambling is when you pay in your own money knowing that you could lose all of it or, possibly, win back even more than you paid in. There are lots of ways to gamble, for example on the results of races, sports, card games, lotteries, raffles, on machines like "pokies", tipping competitions and sweepstakes.

77. a)

	Yes	No
Have you <u>ever</u> bet any money on any form of gambling?	1☐	2☐

77. b)

	Yes	No
<u>In the last 12 months,</u> have you bet any money on any form of gambling?	1☐	2☐

77. c)

	Yes	No
<u>In the last four weeks</u>, have you bet any money on any form of gambling?	1☐	2☐

77. d)

	Yes	No
<u>In the last 7 days</u>, have you bet any money on any form of gambling?	1☐	2☐

<Ever gamblers>

78. What type of gambling have you bet on? For each gambling type, please select the response that shows how recently, if ever, you have gambled this way.

	Last four weeks	Last twelve months	Ever	Never gambled on this activity
(a) Card games (e.g. poker, blackjack, 21, etc.)	1☐	2☐	3☐	4☐
(b) Casino games (e.g. roulette, craps or dice)	1☐	2☐	3☐	4☐
(c) Sports games (e.g. football, rugby or cricket)	1☐	2☐	3☐	4☐
(d) Fantasy sports competitions	1☐	2☐	3☐	4☐
(e) Poker machines (pokies)	1☐	2☐	3☐	4☐
(f) Horse or dog races	1☐	2☐	3☐	4☐

(g) Personal skill games (e.g. pool, darts, video games)	1☐	2☐	3☐	4☐
(h) Two up	1☐	2☐	3☐	4☐
(i) Tipping competitions (e.g. picked football teams each week)	1☐	2☐	3☐	4☐
(j) Sweeps (e.g. you are given the name of a horse and if they win so do you)	1☐	2☐	3☐	4☐
(k) Bingo for prizes or money	1☐	2☐	3☐	4☐
(l) Lottery ticket (e.g. Keno, Tattslotto, Powerball)	1☐	2☐	3☐	4☐
(m) Instant scratchie card (that you rub or scratch to see if there is a prize)	1☐	2☐	3☐	4☐
(n) Bought raffle tickets	1☐	2☐	3☐	4☐
(o) Other (please specify) _____	1☐	2☐	3☐	4☐

<Ever gamblers>

79. Have you ever gambled in any of these ways?

	Yes, I gambled myself	Yes, someone else gambled for me	No, have not gambled this way
(a) Online using a laptop or computer	1☐	2☐	3☐
(b) Online using a computer tablet (e.g. an iPad)	1☐	2☐	3☐
(c) Online using a mobile phone	1☐	2☐	3☐
(d) Over the phone (i.e. calling up to place a bet)	1☐	2☐	3☐
(e) At a TAB betting shop	1☐	2☐	3☐
(f) At a newsagent	1☐	2☐	3☐
(g) At a pub or club	1☐	2☐	3☐
(h) At a casino	1☐	2☐	3☐
(i) At home or the home of a friend	1☐	2☐	3☐
(j) At a racecourse	1☐	2☐	3☐
(k) Other (please specify) _____	1☐	2☐	3☐

80. Have any of the following people ever gambled for you?

	Yes	No
(a) My parent/legal guardian gambled for me	1☐	2☐
(b) My brother or sister older than 18 gambled for me	1☐	2☐
(c) My brother or sister under 18 gambled for me	1☐	2☐
(d) Another relative gambled for me	1☐	2☐
(e) A friend over 18 gambled for me	1☐	2☐
(f) A friend under 18 gambled for me	1☐	2☐
(g) Someone else gambled for me	1☐	2☐

81. How much money did you bet on gambling in the last four weeks? (provide your best estimate)

1☐ <$5	4☐ $21-$40	7☐ $81-$100	10☐ $131-$140
2☐ $5-$10	5☐ $41-$60	8☐ $101-$120	11☐ $141-$150
3☐ $11-$20	6☐ $61-$80	9☐ $121-$130	12☐ Over $150

82. Overall, did you win back more money than you bet on gambling in the last four weeks?

1☐ Yes, I finished ahead
2☐ No, I lost money
3☐ No, I finished about even

83. We would like to understand a little bit more about your experience of gambling.
In the *last 12 months* have you…..

	Yes	No
(a) Found yourself thinking about gambling or planning to gamble	1☐	2☐
(b) Needed to gamble with more and more money to get the same amount of excitement	1☐	2☐
(c) Spent much more than you planned to on gambling	1☐	2☐
(d) Tried to cut down or stop gambling	1☐	2☐
(e) Gambled to help you to escape from problems or when you are feeling bad	1☐	2☐
(f) After losing money gambling returned another day to try and win back the money you lost	1☐	2☐
(g) Lied to your family about your gambling	1☐	2☐
(h) Used your school lunch money or transport fare money to spend on gambling	1☐	2☐
(i) Taken money without permission from your family to gamble	1☐	2☐
(j) Taken money from someone outside your family to gamble with	1☐	2☐
(k) Argued with your family, friends or other people about you having gambled	1☐	2☐
(l) Missed school to gamble	1☐	2☐

84. In the last four weeks, have you been inside the following places where people were gambling?

*Select **all** that apply.*

1☐ TAB betting shops

2☐ Pub where gambling occurs

3☐ Club where gambling occurs (e.g. football social club, bowling club, RSL)

4☐ Casino

5☐ Racecourse

6☐ I have not been inside any of these places

85. Thinking about the people living at your house, did anyone who lives at your house gamble in the last four weeks?

1☐ Yes   2☐ No

86. In the last four weeks, did any of the following people you know gamble?

*Select **all** that apply*

1☐ Mother/caregiver 1

2☐ Father/caregiver 2

3☐ Brother or sister

4☐ Other relative

5☐ One of your best friends

6☐ Someone else you know

7☐ I do not know anyone who gambled in the last month

87. In the last four weeks, have you seen or heard of the following advertising or promotions for gambling?

Select all that apply

1☐ Ads for gambling on TV

2☐ Ads for gambling on radio

3☐ Ads for gambling on billboards (e.g. at the train station)

4☐ Ads for gambling at a convenience store or newsagency

5☐ Ads for gambling on scoreboards or signage at sporting events that you have attended or watched on TV

6☐ Live studio crosses to gambling operators during sports broadcasting (e.g. crosses to betting odds)

7☐ Celebrities promoting gambling (e.g. sports person or TV personality)

8☐ Ads for gambling in pubs or clubs that you have visited

9☐ Ads for gambling on websites

10☐ Pop-ups on websites about gambling (e.g. new windows opening automatically)

11☐ Ads for gambling on social media (e.g. Facebook, YouTube, Twitter, Instagram)

12☐ I have not seen or heard of any ads or promotions for gambling

88. How likely are you to gamble in the next 12 months?

I definitely WILL gamble	I'm likely to gamble	I'm not sure if I will gamble or not	I'm unlikely to gamble	I definitely will NOT gamble
1☐	2☐	3☐	4☐	5☐

<Ever gamblers>

89. Please read all the sentences below and select one response on each line.

	Yes, currently	Yes, but not anymore	Never
(a) I have gambled online using my parents' / guardians' gambling account **with** their permission	1☐	2☐	3☐
(b) I have gambled online using my parents' / guardians' gambling account **without** their permission	1☐	2☐	3☐
(c) I have gambled online using another person's gambling account **with** their permission	1☐	2☐	3☐
(d) I have gambled online using another person's gambling account **without** their permission	1☐	2☐	3☐

(e) I have gambled online using a gambling account I set
up myself   1⌡   2⌞   3⌟

(f) I have gambled online another way   1⌐   2⌒   3⌒

90.   Games have gambling components, which look and play like normal gambling games – for
      example roulette, poker, pokies and bingo. They may be free to play, or you may pay to play, but
      you cannot win real money.

      When, if ever, did you last play any of these games with gambling components?

      (Please select one response on each line)

	In the last 7 days	In the last 4 weeks	In the last 12 months	More than 12 months ago	Never
(a) **Games with gambling components on social networking websites** (such as Zynga games on Facebook)	1⌡	2⌞	3⌞	4⌞	5⌞
(b) **Video games with gambling components** (such as Diamond Casino & Resort in the video game Grand Theft Auto V)	1⌐	2⌐	3⌐	4⌒	5⌐
(c) **Free demo or practice games** on real gambling websites or apps, for example, Mobile Casinos'	1⌡	2⌞	3⌞	4⌞	5⌞
(d) **Gambling-themed apps from an app store** (such as bingo, poker, pokies/slots, or roulette that you play on your phone, tablet or computer)	1⌐	2⌐	3⌐	4⌒	5⌐

91.   Many video games offer loot boxes. Loot boxes are in-game items which can be purchased with real money, in-game currency, or awarded for free. When opened, loot boxes contain a random selection of virtual items (e.g. weapons, cosmetic items known as skins, or in-game currency).

When, if ever, did you last obtain a loot box in the following ways?

	In the last 7 days	In the last 4 weeks	In the last 12 months	More than 12 months ago	Never
(a) Opened a free loot box during a game	1▢	2▢	3▢	4▢	5▢
(b) Paid real money to get a loot box or key	1▢	2▢	3▢	4▢	5▢
(c) Used virtual currency that was purchased with real money to get a loot box	1▢	2▢	3▢	4▢	5▢

92.   How strongly do you agree or disagree with each of the following statements?

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
(a) I am more likely to gamble after seeing a gambling advertisement	1▢	2▢	3▢	4▢	5▢
(b) Gambling advertisements make me think about gambling in the future	1▢	2▢	3▢	4▢	5▢
(c) I pay attention to gambling advertisements	1▢	2▢	3▢	4▢	5▢
(d) Gambling advertisements have increased my knowledge of gambling options	1▢	2▢	3▢	4▢	5▢
(e) I think more positively about gambling because of gambling advertisements	1▢	2▢	3▢	4▢	5▢
(f) Knowing the betting odds is part of following sport	1▢	2▢	3▢	4▢	5▢
(g) Knowing the betting odds makes watching sport more exciting	1▢	2▢	3▢	4▢	5▢
(h) Betting on sport is normal	1▢	2▢	3▢	4▢	5▢
(i) I approve of people who gamble once a week or more	1▢	2▢	3▢	4▢	5▢

Appendix B: Prevalence of gambling activities and modalities based on the combined states sample for all students (including never gamblers)

Table B1: Participation in gambling activities (all students, both states combined), by age and gender, N=2,873

| Characteristic | Age in years | | | | | | | Gender | | | Total |
	12	13	14	15	16	17	p-value[1]	Male	Female	p-value[1]	
Card games (e.g. poker, blackjack, 21)	11 (2.9%)	36 (6.7%)	54 (9.5%)	58 (11%)	65 (15%)	41 (11%)	0.005	163 (10%)	96 (8.1%)	0.295	266 (9.3%)
Casino games (e.g. roulette, craps or dice)	5 (1.3%)	21 (3.8%)	17 (3.1%)	23 (4.2%)	28 (6.3%)	14 (3.9%)	0.162	81 (5.1%)	22 (1.8%)	0.001	108 (3.8%)
Sports games (e.g. football, rugby, cricket)	42 (11%)	55 (10%)	63 (11%)	70 (13%)	71 (16%)	49 (14%)	0.512	243 (15%)	96 (8.0%)	0.036	349 (12%)
Fantasy sports competitions	16 (4.0%)	25 (4.7%)	23 (4.0%)	38 (7.0%)	34 (7.7%)	28 (7.9%)	0.275	131 (8.2%)	28 (2.4%)	<0.001	164 (5.8%)
Poker machines (pokies)	1 (0.3%)	12 (2.2%)	14 (2.4%)	19 (3.5%)	18 (4.0%)	19 (5.3%)	0.026	60 (3.8%)	18 (1.5%)	0.020	83 (2.9%)
Horse or dog races	42 (11%)	43 (7.8%)	61 (11%)	56 (10%)	53 (12%)	33 (9.2%)	0.673	169 (11%)	108 (9.0%)	0.562	288 (10%)
Personal skill games (e.g. pool, darts, video games)	40 (10%)	70 (13%)	76 (13%)	82 (15%)	74 (17%)	42 (12%)	0.565	240 (15%)	129 (11%)	0.038	384 (13%)
Two up	2 (0.6%)	6 (1.1%)	13 (2.3%)	17 (3.2%)	18 (4.1%)	16 (4.6%)	0.044	54 (3.4%)	14 (1.2%)	0.003	73 (2.6%)
Tipping competitions (e.g. picked football teams each week)	38 (9.5%)	32 (5.9%)	45 (8.0%)	47 (8.7%)	51 (11%)	33 (9.3%)	0.558	172 (11%)	66 (5.6%)	0.060	246 (8.6%)
Sweeps (e.g. you are given the name of a horse and if	19 (4.9%)	13 (2.4%)	31 (5.5%)	26 (4.9%)	30 (6.7%)	22 (6.0%)	0.517	79 (5.0%)	56 (4.7%)	0.883	142 (5.0%)

Characteristic	Age in years						p-value[1]	Gender		p-value[1]	Total
	12	13	14	15	16	17		Male	Female		
they win so do you)											
Bingo for prizes/money	18 (4.7%)	36 (6.7%)	44 (7.7%)	39 (7.1%)	39 (8.7%)	42 (12%)	0.187	132 (8.3%)	78 (6.6%)	0.279	217 (7.6%)
Lottery ticket (e.g. Keno, Tattslotto, Powerball)	21 (5.4%)	44 (8.1%)	57 (10.0%)	54 (9.9%)	58 (13%)	34 (9.4%)	0.219	182 (11%)	80 (6.7%)	0.021	268 (9.4%)
Instant scratchie card (that you rub or scratch to see if there is a prize)	33 (8.3%)	53 (9.9%)	64 (11%)	65 (12%)	65 (15%)	41 (11%)	0.601	182 (11%)	131 (11%)	0.806	322 (11%)
Bought raffle tickets	54 (14%)	84 (15%)	91 (16%)	101 (18%)	86 (19%)	53 (15%)	0.768	283 (18%)	174 (15%)	0.120	468 (16%)
Other	22 (5.7%)	21 (4.0%)	27 (4.7%)	22 (4.0%)	14 (3.3%)	12 (3.4%)	0.632	74 (4.7%)	40 (3.3%)	0.133	118 (4.2%)
Total	394	554	575	547	447	357		1,599	1,206		2,873

[1]chi-squared test with Rao & Scott's second-order correction

*Missing responses ranged from n=0 to 29

Table B2: Participation in gambling modalities (all students, both states combined), by age and gender, N=2,873

Gambling modality	Age in years						p-value[1]	Gender		p-value[1]	Total
	12	13	14	15	16	17		Male	Female		
Online using a laptop or computer	13 (3.2%)	42 (7.7%)	39 (6.9%)	39 (7.2%)	51 (11%)	31 (8.6%)	0.217	161 (10%)	43 (3.6%)	<0.001	214 (7.5%)
Online using a computer tablet	15 (3.9%)	31 (5.6%)	19 (3.4%)	30 (5.6%)	37 (8.4%)	20 (5.6%)	0.251	107 (6.7%)	37 (3.1%)	0.011	153 (5.4%)
Online using a mobile phone	28 (7.2%)	48 (8.8%)	39 (6.8%)	50 (9.2%)	62 (14%)	42 (12%)	0.369	187 (12%)	77 (6.4%)	0.029	270 (9.5%)
Over the phone (i.e. calling up to place a bet)	4 (0.9%)	10 (1.8%)	10 (1.7%)	15 (2.7%)	14 (3.1%)	14 (3.9%)	0.304	45 (2.8%)	14 (1.2%)	0.059	65 (2.3%)
At a TAB betting shop	0 (0.1%)	12 (2.2%)	15 (2.7%)	29 (5.3%)	27 (6.0%)	15 (4.2%)	0.005	70 (4.4%)	22 (1.8%)	0.007	98 (3.5%)

Gambling modality	Age in years							Gender			Total
	12	13	14	15	16	17	p-value[1]	Male	Female	p-value[1]	
At a news agent	6 (1.5%)	16 (3.0%)	28 (5.0%)	37 (6.7%)	34 (7.7%)	21 (5.8%)	0.015	85 (5.4%)	50 (4.2%)	0.392	142 (5.0%)
At a pub or club	8 (1.9%)	19 (3.5%)	33 (5.7%)	28 (5.2%)	38 (8.5%)	28 (7.8%)	0.105	107 (6.7%)	38 (3.2%)	0.008	153 (5.4%)
At a casino	0 (0%)	8 (1.5%)	7 (1.2%)	12 (2.2%)	11 (2.5%)	10 (2.7%)	0.274	35 (2.2%)	7 (0.6%)	0.008	48 (1.7%)
At home or the home of a friend	41 (10%)	54 (10.0%)	82 (14%)	76 (14%)	74 (17%)	54 (15%)	0.571	223 (14%)	143 (12%)	0.451	382 (13%)
At a racecourse	22 (5.7%)	17 (3.1%)	17 (3.1%)	40 (7.4%)	26 (6.0%)	20 (5.6%)	0.328	88 (5.5%)	45 (3.8%)	0.242	143 (5.0%)
Other	11 (3.0%)	17 (3.2%)	12 (2.1%)	19 (3.5%)	13 (3.0%)	8 (2.4%)	0.812	58 (3.7%)	18 (1.6%)	0.035	81 (2.9%)
Total	394	554	575	547	447	357		1,599	1,206		2,873

[1]chi-squared test with Rao & Scott's second-order correction

Missing responses ranged from n=0 to 55