



Australian
National
University

Young Adults Gambling Online in the ACT

February 2024

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CRICOS Provider

Suggested citation

Suomi, A., Kim, J., Culbong, H., Sollis, K., Bailey, M., Masters, A. (2024). Young adults gambling online in the ACT. ACT Commission for Gambling and Racing, Canberra.

The Centre for Gambling Research is co-funded by the ACT Gambling and Racing Commission and the Australian National University.

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1. Executive summary

1.1 Background

The uptake of online sports betting and other online gambling activities has grown exponentially in recent years, particularly in the younger age cohorts. Australian studies consistently show that 60 to 80% of adolescents have gambled, and that 40% of young people between 12-17 years of age report having played online video games with gambling components. Across Australian States and Territories, including the ACT, young men between 18 and 24 years of age are the largest group of sports bettors.

In Australia, only licenced lottery, sports, race, eSports, and Fantasy Sports betting operators are permitted to offer online gambling products. Despite this, illegal offshore gambling industry continue to operate within Australia. Typical illegal games include online poker, blackjack, and roulette. In addition, gambling features available in video games are not considered gambling from a regulatory perspective, and therefore are not subject to the same harm minimisation measures as licenced gambling products.

Our study focused on traditional types of gambling online (betting on sports, races, lottery casino table games, and 'pokies') but also included gambling-like features in videogames that meet most of the criteria for gambling. These gambling features were categorised into four overlapping but technically distinct categories: (1) loot boxes, (2) gacha, (3) eSports and Fantasy sports betting, and (4) skin betting.

The normalisation of gambling plays a key role in gambling experiences of Australian young people. Gambling advertising and other marketing strategies by the gambling industry, as well as family influences and peer relationships are an integral part of the normalisation process. Other factors contributing to reasons why young people take up online gambling include psychological, financial and social motivations, and lack of regulation of products available for children under the age of 18. Building on this, more information on the circumstances in which young people take up gambling, and their initial experiences of harm, is needed.

While gambling harms experienced from offline (in-venue) gambling are likely to be similar to online gambling harm, some elements of online gambling such as isolation, lack of interruption, and easy access may be exclusively associated with online gambling harm. The combination of vulnerable developmental age where risk behaviours peak, with the unlimited availability of gambling through mobile devices, makes younger populations particularly important to focus on. Given that a majority of research into online betting is focused on adult populations, or children under the 18 years of age, there is a critical knowledge gap around the experiences of young adults

between the ages of 18 and 25, representing the one of the largest group of individuals gambling online. More information is needed around the uptake and experiences of gambling, patterns of play, gambling motives, attitudes and expectations, and critically: experiences of gambling harm to better address gambling harm experienced by young people. The aim of the current project is to generate information about key areas where policy and public health interventions could intervene with youth online gambling by answering three broad questions:

- 2 What do young adults gamble on online?
- 3 How do young adults gamble online including pathways to gambling?
- 4 Why do young adults gamble online?

4.1 Method

Ethical approval for this study was obtained from the Australian National University Human Research Ethics Committee (protocol #2022/457).

1.1.1. Participants

We interviewed 38 young people (7 females, average age 21 years) between 18 and 24 years of age. Of them, 14 gambled on videogames only, and 16 gambled on traditional gambling activities online, and 8 gambled on both. We also interviewed 9 significant adults in the lives of young people including parents (n=4), service providers and other staff from youth serving organisations (n=5) in the ACT.

A key aspect of this study was an independent advisory group (n=15) that comprised of students, parents, school personnel, government representatives, and other adults who work with young people (i.e., through ACT sports clubs and schools).

1.1.2. Recruitment and interviews

Participants were recruited through the ACT community, using flyers, social media, local news media advertising and through research team's networks, and the study advisory group. The interviews were carried out between March and November 2023. The discussion topics of the interviews were addressed in the following order:

- Initial uptake of gambling (i.e., reasons, social context, age)
- Types of online gambling activity (i.e., specific mode and type of gambling)
- Online gambling motivations, attitudes, expectations
- Gambling in family and friends, peer group influences
- Views on gambling advertising

1.1.3. Analysis

The data were analysed using a dualistic technique of deductive and inductive thematic analysis to explore the ways in which participants contextually situated their experiences, perspectives and behaviours. The analysis was guided by broad research questions (deductive), enabling an initial organization of codes, allowing for the emergence of novel themes from participants' stories.

4.2 Findings

What do young adults gamble on in videogames?

The participants who engaged in gambling features through videogames predominantly started playing videogames in early-to-mid teenage years, generally after playing with the games without engaging in gambling for some time. The most common games participants reported as their first gaming experience were Counterstrike, Overwatch, League of Legends, Arknights, Fate and Grand Order. These videogames were also frequently reported as participant's first experience with gambling-like features, typically with loot boxes, 'gachas', and skins.

How do young adults gamble on videogames?

Participants gambling on video games typically used PCs for playing, they tended to be physically alone but interacting with friends through the social platforms attached to the games. Gaming was seen as an inherently social activity, similar to other in-person group activities such as sports. Participants described the videogaming community as a type of subculture, whereby 'in-groups' and 'out-groups' would form based on the type of games they were playing and the type of gambling features in these games.

A vast majority of participants had first engaged with gambling-like features before turning 18 years of age, given that games with gambling features are generally accessible to users of all ages. They reported that it was easy to hook up a parent's credit card if real money was required for gambling, or they would buy specific vouchers or giftcards that could be dispensed through the game launchers to obtain in-game currency.

Why do young adults gamble on videogames?

Gambling motivations

Main motivations to engage with gambling features in videogames were psychological/emotional, social, and financial. Social motivations included

experiences of peer pressure for opening loot boxes or enhancing the peer group connection. Some participants also reported that obtaining valuable in-game items through gambling also improved their social status and social desirability among the players. Psychological motivations included 'excitement' and 'enhancing the enjoyment' of playing the game. In some cases, gambling on videogames also served as emotional regulation: improving mood or managing stress. Financial motivations were mostly associated with obtaining skins, that could be sold on or used for betting on third party websites. Skins were seen as an investment similar to stock market, but they also could be used as currency on illegal betting sites for eSports that were readily available for underage players.

Gaming industry strategies

Other reasons why young people engaged in gambling features were the purposeful strategies that the gaming industry implemented through the game mechanics. These strategies involved financial and temporal strategies (providing financial incentives, or limiting time the gambling feature was available), but also game-play strategies whereby engaging in gambling enhanced the character's appearance or provided a competitive advantage in the game. Financial strategies involved the use of in-game currency, often multiple currencies in one game obscuring the value of the gambling features, and making it impossible to monitor expenditure over time. Third party sites, while acting as a platform to trade or buy in-game items, also provided a platform for gambling activities and in many instances 'behaved like an online casino'. Other industry strategies to encourage gambling involved 'pity' mechanics that provide the player with extremely inflated chances to win a rare item after spending enough money, as well as time limited events whereby certain in-game items are only available for a short amount of time. The industry strategies encouraging gambling through the game-play involved improving the character attractiveness, opening new 'storylines', and providing benefit or skill that allows progressing in the game.

Advertising

Advertising for gambling features was seen as a major reason to gamble on videogames. They were exposed to gambling advertising for new characters or skins through gambling mainly on social media platforms, and through social media 'influencers' or other known individuals were live streaming themselves gambling while playing video games. Influencers included professional gamers with a large following, who were likely sponsored by gambling or gaming companies with content specifically made to attract young people and children. These influencers were particularly common on YouTube, and previously on Twitch, that has recently been cracked down on its excessive promotion of gambling content. Those engaging in eSports betting also reported on increasing trend in traditional gambling advertising through eSports

tournaments, and promoting unregulated platforms that allow underage skin betting on the eSports events. In addition, the betting companies now sponsor eSports tournaments with significant visibility for the gambling operators similar to sports sponsorships.

1.1.4. Findings related to traditional online gambling

What do young adults gamble on online?

A majority of the participants endorsing online gambling engaged in sports betting online, mainly 'footy' (both NRL and AFL), races betting, and the World Cup or English Premier League soccer, but also cricket and NBA. eSports betting was common among participants who engaged in online sports betting but also gambled on videogames. Few participants engaged in other types of online gambling, including casino table games or 'pokies', that were accessible through illegal offshore sites.

How do young adults gamble online?

A majority of the participants gambled on mobile devices, normally during the sports season, around big 'decider' games and finals. Those experiencing more gambling harms tended to 'always find something to gamble on', given the accessibility to international sports across time zones online. Pathways to gambling included three mechanisms: exposure to (any) gambling as a child, heavy technology use, including videogaming, and involvement in organised sports.

Similar to videogaming, gambling online was seen as a social activity that the participants engaged in with their mates 'on a night out', either at a venue, or in live events. Those with more severe gambling problems tended to gamble on their phones any time of the week, or day, and mostly alone, or around others who were unaware they were gambling on their phones.

Why do young adults gamble online?

Motivations to gamble

Motivations to gamble were psychological/emotional, financial and social, comparable to gambling on videogames. Participants who described psychological motivations to gamble placed a strong value on gambling as entertainment. Participants taking part in sports and races betting supported a team, and thus gambling was used to enhance the enjoyment of watching the sporting events. Participants who gambled online and were motivated by the financial gains, commonly had an underlying assumption that the potential wins would provide financial stability into the future, with common hopes

for a 'big win'. One clear pattern that emerged from the data were social reasons to gamble, whereby they would only gamble when they 'had a social need'. These social motivations would also easily turn into social influence, or pressure, contributing to increased gambling, or difficulties stopping.

Advertising

Another factor contributing to gambling behaviours was the direct influence of gambling advertising on taking up, and continuing gambling. Generally, participants spent most of their time online on social media, including TikTok, Snapchat, YouTube, and Instagram. These platforms were also the most common platforms that the participants were exposed to gambling advertising on, including when they were under 18 years of age. In addition, gambling advertising through live games on TV or events were attached to most major sports including AFL and NRL footy, cricket, Australian Open, with promotions of odds and betting company sponsorships for major events. Particularly sports betting ads tended to minimise gambling harm, with a humorous spin to 'dilute' potential gambling harms.

Gambling industry strategies

Given that most participants engaged in legal types of online gambling where industry strategies are regulated, there were only two particular strategies mentioned to encourage gambling behaviours: spending money online, including in-game currency; and special offers and inducements offered by the betting companies. Overall, spending money online was perceived easier than spending 'real' currency with difficulty monitoring overall expenditure. In addition, the large amounts of virtual currency appearing in some games (online pokies, casino table games, simulated gambling) on the screen provided an illusion of large wins, although we did not find evidence that this strategy encouraged spending more money on gambling. Online promotions for sports betting with special offers and inducements were accessible through websites, apps, including social media. They ranged from special offers to individually targeting participants through SMS, WhatsApp and emails. Chasing special offers was also a common reason why participants had multiple sports betting apps, as they chased offers across different apps.

1.1.5. Findings related to gambling harms

According to the gambling harm scores as measured by the Short Gambling Harm Screen (SGHS), participants most commonly endorsed lower levels of financial harms and 'feelings of regret' after gambling. The qualitative data showed that gambling harms specifically related to videogaming included financial harms, 'spending money without realising', and 'spending too much time' that would translate into work, study,

and social impacts. A specific type of harm was ‘losing track of time’. These findings were consistent with the interview data from the parents, carers and service providers.

The qualitative interview data shows that financial consequences of gambling were not generally seen as a major source of harm in the current sample. In fact, financial consequences were perceived as ‘harms’, only when accompanied by psychological impacts, that were often triggered by large losses in a short space of time. Importantly, many of the participants were still living at home, or otherwise supported by family, with generally very little financial responsibilities. Similarly, few of the participants had significant relationships, thus relational impacts were perceived relatively minor. Generally, their closest reference group involved a group of friends who often gambled at similar intensity. Common social impacts therefore included issues with friends who were prioritising gambling over social interactions, or having an argument about receiving ‘bad tips’ resulting in significant monetary losses. When participants had access to more money, they also gambled more aggressively, a finding that exemplifies a major risk factor for gambling harm in this, but also in other age groups.

Interviews with parents, carers and service providers point to an urgent need of parents to obtain more information about children and young adults gambling online, particularly through videogames. Parents and carers agreed that access to gambling was easy for children under 18 years of age. They also outlined strategies by which their young person had gained access to credit cards to pay for gambling or other in-game purchases without full parental consent. Both service providers and parents called upon better regulation of online gambling products as well as advertising for children.

1.1 Conclusion

Given the scarcity of information about specific harms related to online gambling in youth, the study outputs have a critical role in guiding the development of new online support platforms, self-help tools, identification of early signs of gambling harm related to online gambling, and other programs relating to prevention of harm in young people. The outputs of the project can be used to significantly increase gambling harm prevention capacity in the ACT, as the study outputs are directly translatable to alleviate gambling harm.

1.2 Summary recommendations

The main findings are discussed in depth in Chapter 7. Based on the current research and that of others, we call for the development of a comprehensive public health strategy to address online gambling harm for young people that includes (but is not limited to) the following:

- Campaigns and/or education programs about gambling features in videogames and advertising online, particularly around social media, streaming and ‘influencers’ for primary school and high school students
- Student-led initiatives to address gambling harm in high schools, including gambling on videogames.
- Co-designed and accessible online resources for children and young people including online help platforms, self-help tools, identification of early signs of gambling harm in self and others; harm minimisation measures relating to gambling motives, attitudes and expectations of young people, particularly relating to financial motives and expectations
- Evidence-based guidelines around time and expenditure limits relating to online gambling including gambling features on videogames
- Evidence-based guidance, training and resources for parents including all of the above
- Evidence-based guidance, training and resources for service providers including all of the above
- Resources for sports clubs (and other relevant youth serving organisations) to develop a comprehensive public health approach to gambling harm

The data presented in this report can also be used to guide regulatory action to address gaps in the current regulatory frameworks including, but not limited to:

- A review of the current video game classification framework
- Age limits for videogames with loot boxes and gacha, including those available without real money.
- Tightened age verification protocols for video-games.
- Monitoring of third party sites attached to video games enabling skin betting and
- Review of the regulatory framework for online gambling advertising, specifically targeting social media

2 Introduction

Over the last decade, online platforms have been rapidly making gambling and gambling-like activities more accessible and attractive to younger age cohorts who have grown up in the digital age (King et al., 2010; Flayelle et al., 2023; Drummond et al., 2020; Drummond & Sauer, 2018). With the rapid decrease in venue-based gambling (Australian Institute of Health and Welfare, 2023), and the Australian online gambling market opening to international betting companies, both illegal and legal operators (i.e., O’Farrell, 2015; Podesta & Thomas, 2017), it is likely that online gambling will become the main platform for most gambling activities in the near future. While online gambling may serve as a relatively harmless recreational activity for many young people, some experience significant gambling harm (i.e., Greer et al., 2023). Australian and international research efforts have become increasingly focused on understanding the gambling behaviour of young people (Yalcin, 2022), yet relatively little is known about online gambling in these younger age cohorts. This section of the report will highlight the current knowledge base about online gambling of young people, as well as draw on current knowledge around young people and gambling more broadly.

2.1 What is online gambling?

Online gambling refers to a range of gambling activities offered through interactive media and technology, including computers or mobile/digital devices, through the internet (Gainsbury, 2015; Hing et al., 2014). These can encompass any form of gambling, betting or wagering service, whether through a website, a mobile app, or as a live-streaming service. Online gambling has also been referred to as interactive¹, internet, or remote gambling (we use the term online gambling for the ease of reference). Alongside traditional gambling activities that have become more accessible in an online format, many new forms of online gambling and gaming platforms have emerged. Indeed, nearly one-third of all individuals that gamble are now estimated to engage in gambling online, although many of these individuals also participate at venues (Hing, Russell, Black, et al., 2022). Recent Australian estimates for online gambling suggest that as of June 2021, 11% of Australian adults report they had gambled online in the last six months, up from 8% in 2020 (Commonwealth of Australia, 2022).

Given the popularity of mobile devices and 24/7 internet connectivity, the accessibility of online gambling has increased exponentially over the past decade compared to

¹ Interactive gambling is defined as gambling activities that take place on broadcasting, datacasting and online platforms (The Department of Infrastructure, Transport, Regional Development, Communications and the Arts, 2022).

land-based gambling products (Hing, Smith, et al., 2022). While some online gambling products mirror land-based products (such as race betting which can be done online or in-person on track), others are unique to the online environment (such as betting on eSports or Fantasy Sports). With the rapidly evolving technological advances in gaming and gambling platforms and service offerings, only few studies have explored what young people themselves consider to be gambling. However, there is considerable inconsistency between studies; definitions vary from free-to play online games, to video games that incorporate gambling-like features (Wardle, 2019). While some young people perceive these gambling-like functionalities within video games as analogous to gambling (Calado et al., 2014; Wilson & Ross, 2011), other young people make a clear distinction between these video game functions and gambling for 'real money' (Carran & Griffiths, 2015). In some instances, young people view gambling as an extension of bravado or dares (Skinner et al., 2004), or include informal betting that may not necessarily include financial risk (Korn et al., 2005; Pitt et al., 2017).

It should be noted that studies of online gambling and young people often include those aged under 18 years of age, whose experience is likely different to young adults who can gamble through traditional legal means. Additionally, the above studies are now somewhat dated, given that both online gaming and gambling technologies have progressed significantly in the past year or two. Thus, this study will provide an important contribution to the literature on how young people perceive and engage with online and traditional gambling. It will also provide a deeper insight into gambling products that are regulated and legal to people aged 18 years and over in Australia.

The different gambling (or gambling-like) platforms in use in Australia can be broadly separated into three categories: regulated (or legal), unregulated (or illegal), and gambling-like gaming. These will each be discussed in the following sections.

2.1.1 Regulated online gambling products in Australia

The Australian Communications and Media Authority (ACMA) is Australia's National interactive gambling regulator and takes action to enforce the Commonwealth Interactive Gambling Act 2001² (ACMA, 2022a, 2022b). In addition, most Australian States and Territories hold their own legislation governing the policy and regulation relating to online gambling. However, any inconsistency between Commonwealth and Territory law are overridden by the Interactive Gambling Act 2001. The Act stipulates that only certain wagering operates granted on Australian licences are permitted to

² While the current project is focused specifically on online gambling, we note that the interactive gambling legislation and industry codes of conduct also cover gambling facilitated through other offline broadcasting platforms (i.e. telephone, radio, and analogue TV) (Department of Infrastructure, Transport, Regional Development, Communications, and the Arts, 2022).

offer online gambling products to Australians ACMA, 2022c). This includes lotteries, sports betting and race wagering, eSports betting, and Fantasy Sports betting. Notably, the ACMA has recently requested that Australian Internet Service providers block multiple illegal offshore gambling and affiliate marketing sites, after they found 11 of these were operating in breach of the Act (ACMA, 2023).

Online lotteries allow individuals to purchase 'land based' lottery tickets online from approved websites (such as *OzLotteries* and *Tattersalls*), rather than needing to make this purchase at an in-person vendor. The exception to this is scratch lotto's ('scratchies') or any other type of instant lotto (Hing et al., 2014). Online lotteries available to ACT residents are consistent with the rest of Australia, in that residents have online access to all the large lottery syndicates offered around the country. ACT Lotteries operate under NSW Lotteries, and ACT residents can buy tickets to *Lotto*, *Oz Lotto*, *Powerball*, *Set for Life*, *Lucky Lotteries*, *The Pools* and *Lotto Strike*. The Monday, Wednesday and Saturday Lotto draws are popular for ACT players. Lotteries are the most popular form of online gambling to date, with 21% of Australian adults participating in lotteries as of June 2021 (Commonwealth of Australia, 2022).

Online sports betting and race wagering involves using the internet to place a bet (or wager) on the outcome of a sports game or race, or on a contingency within the event (for example which team will score first in a game) (Hing et al., 2014). Online sports betting is the fastest growing gambling activity in Australia. Sports betting rates have continued to increase over the past decade and the resurgence of sports betting following the COVID-19-related lockdowns contributed to a significant increase in online gambling in 2021 (ACMA, 2022d; Jenkinson et al., 2020). Online in-game betting, where wagers are placed after a game has commenced, is not allowed in Australia (ACMA, 2022e).

eSports (or Esports), short for *electronic sports*, describe a competition between groups or individuals through video games. eSports competitions are typically live-streamed online, or viewed by audiences at land-based venues (Jenny et al., 2017). Betting on eSports is now available through most Australian regulated wagering operators (Greer et al., 2019; Macey & Hamari, 2019). In Australia, adolescent eSports betting appears to be associated with at risk or problem gambling (Hing, Lole, et al., 2022), through cash but particularly betting with cosmetic videogame items (i.e., 'skins').

Fantasy Sports are online structured competitions, in which human participants select avatars of 'real' (i.e., land-based) athletes to join their virtual sports team. Points are awarded to participants based on the 'real'/'land-based' performance of the human athlete associated with the avatars they selected to their Fantasy team. Some Fantasy Sports do not require a fee to enter (though many require purchase of the product). However, competitions that do require money wagers to enter are considered a

gambling product. Each participant deposits cash into a prize pool which is distributed to the winners at the end of the competition (Hing et al., 2021; King, 2018; Windholz, 2021). Traditionally, Fantasy Sports betting competitions mirrors the entire length of a land-based sports season. Daily Fantasy Sports are a faster-paced version of Fantasy Sports, where a competition mirrors just a single land-based sports game (Hing et al., 2021). Daily Fantasy Sports are regulated as a gambling product in Australia with operators (including *Draftstars* and *Moneyball*) generally licenced in the Northern Territory (Northern Territory Racing Commission, 2022), but accessible to ACT residents.

2.1.2 Unregulated online gambling products

While there are a number of legal, regulated gambling platforms, the use of unregulated/illegal platforms is widespread within Australia. This is due to the presence of offshore gambling operators, which are marketed online to Australian consumers. The ACMA is tasked with the responsibility to block illegal gambling websites so that Australians are unable to access them (ACMA, 2022e). During 2021-2022, ACMA investigated 20 affiliate marketing services that promoted and directed Australian consumers to illegal offshore gambling services. This resulted in the majority of the services either withdrawing from the Australian market or being blocked (ACMA, 2022b, 2022c). The ACMA also fields complaints and undertakes investigations into providers or advertisers of online gambling products suspected of breaching the Commonwealth Interactive Gambling Act 2001.

It is not legal to provide online casinos and online casino-style games involving real money wagers to Australians (ACMA, 2022b). Despite this, illegal offshore gambling services continue to operate within Australia. Typical illegal casino type games offered include online poker, blackjack, craps, and roulette. Online slot machines (pokies) and scratch tickets are also an unregulated product available to Australian consumers. While games such as online bingo, online keno, live dealer lotto and other lotto-based titles are generally legal to participate in in Australia, many of the games are offered by unlicensed internet casino platforms (such as *Bonus Keno*, *Electric Bingo*, and *Krazy Keno*) and are therefore considered illegal (for more detail see <https://onlinelotto.com.au/laws/>).

Further to this, online in-play sports betting and wagering, where wagers are placed after a game has commenced, is not allowed in Australia (ACMA, 2022d). However, Australians are able to access these products through unlicensed off-shore online providers. In Australia, those placing in-play bets are more likely to be younger adults and those experience problems with gambling (Gainsbury et al., 2020; Russell et al., 2019). Betting on eSports is also facilitated by unregulated offshore sites. Unregulated

sites commonly facilitate payments made in cryptocurrencies (Gainsbury & Blaszczynski, 2017) or in-game virtual items such as skins.

The National Consumer Protection Framework for Online Wagering was launched in 2018 (Department of Social Services, 2018). The Framework was developed in response to a 2015 Review of Illegal Offshore Wagering (O'Farrell, 2015), conducted on behalf of the Australian Government. Ten new consumer protection measures were identified by the Framework, which continue to be implemented. These protections include prohibiting online gambling services from providing lines of credit, advertising payday lenders, and offering inducements to open an account. The Framework stipulates tighter timeframes within which online gambling providers must verify customer identity, and requires online gambling services to provide customers with activity statements, a voluntary opt-out pre-commitment scheme, and to make account closure easier. Providers are required to use consistent responsible gambling messages within their advertising and staff need to undertake training in the responsible service of online wagering. The Framework laid the groundwork for a national self-exclusion register for all interactive gambling services (Department of Social Services, 2018).

2.1.3 Gambling features in videogames

Young adults are increasingly able to access these gambling-like activities via online games that feature simulated gambling (with no monetary cost involved), or through videogames that incorporate gambling-like features for money or through in-game currency (Delfabbro & King, 2021; Flayelle et al., 2023). The incorporation of gambling-like elements within online games in these ways are seen to blur the lines between gaming and gambling, and there is currently a lack of consensus whether some in-game features meet the criteria for online gambling (Drummond et al., 2020). Simulated gambling, also known as social casinos, are games in which individuals participate in realistic gambling simulations, for example, they may realistically mimic a poker game or a slot machine, but do not have any associated monetary cost or reward (Ross & Nieborg, 2021). Social casinos are regulated as games (not gambling) as participants are not necessarily required to use real money to play. Some products, however, may allow participants to pay small amounts, a form of *microtransaction*, to continue playing once the initial period of free play is consumed (Kim et al., 2022; Flayelle et al., 2023).

Microtransactions mean small transactions using real currency within the games, that can be used to pay money for gambling features such as loot box purchases and other similar gambling-like mechanism in so-called 'gacha' games, for example. They differ vastly across games with most common microtransactions including the following:

- **Subscriptions:** Either for access to the game or for in-game content, typically in *Massive Multiplayer Online Role-Playing Games* (MMORPGS).
- **In-game items:** Virtual items that can be purchased from a videogame or console storefront, typically for cosmetic items such as skins (i.e., a character or weapon's appearance in-game), but can also include consumables or time bypasses to augment core gameplay.
- **Season passes:** Typically feature larger content additions and updates to games, and are less frequent. These are conceptually similar to single-player downloadable content (DLC), that provide additional content such as maps, characters, or items. An example of a season pass is also shown in Figure 2.1a, where the *Fortnite* character *Peely* is only available by achieving a high-rank in a time-limited season.
- **Battle passes:** Similar to season passes but typically require more in-game playing time and investment, as components are usually locked behind 'levels' and need to be earned by the player, or through additional microtransactions.
- **Loot boxes, crates, cases, packs:** These are packs that contain a variety of in-game items, typically cosmetic items or items that provide the player with an in-game benefit. The item that the player receives is randomised, and thus is a gambling mechanic. The specific mechanics differ between games, with some games allowing players to directly purchase and open the pack or require a 'key'. Common examples of videogames that include loot boxes and loot keys to open for *Counterstrike*, for *League of Legends*.

Some games allow for trading of items between players, but other games require third-party markets (websites) to allow users to trade items or sell items for real currency (Cermak, 2020). These items can include cosmetic character or weapon skins, such as shown in the figure below, as well as actual unopened loot boxes that require a key.



- **In-game currency:** Most online videogames have a branded virtual currency that can be purchased with real-world money. This virtual currency/money can be exchanged for goods and services within the game storefront, such as subscriptions, season/battle passes, Loot boxes, or in-game items. Each videogame shown in Figure 2.1 below has its own virtual currency to purchase these items.

- **Gacha:** Gacha mechanics are more common in free-to-play games developed in Japan and China. Gacha mechanics are similar to loot boxes in that they require money to use, and provide random (or quasi-random) outcomes. However, gacha games operate on a more complex probabilistic model, that can take into account successive wins and adjust odds in real-time, and/or reward players after a number of unsuccessful pulls. Gacha games tend to have multiple currencies for engaging in the gambling-like mechanic, that typically requires purchasing at least one in-game currency with real money.

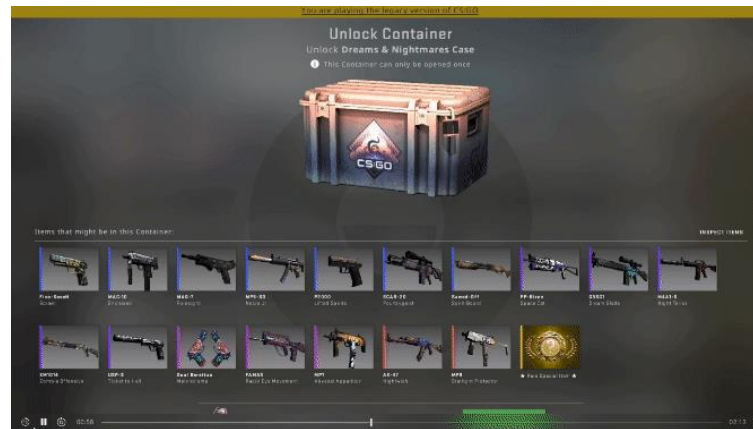
The above microtransactions are typically situated within game models that either require or encourage the purchasing of these items to continue playing or progress in the game. The models can be broadly categorised into four types:

1. **Free-to-play**, where players do not need to buy the game to start playing (i.e., a free initial download), but content within the game may be restricted without purchasing it, possibly through gambling mechanics.
2. **Pay-to-play**, where players must pay a subscription fee, typically used for online multiplayer videogames, or to access online matchmaking features on consoles (such as PlayStation Plus, Nintendo Switch Online, and Xbox Game Pass).
3. **Buy-to-Play**, where players make purchases for access to the game. This model is usually for online multiplayer games that receive consistent support, updates and new content.
4. **Freemium**, where components of the game are free but content and player progress is restricted until payment is made. This model is different from Free-to-Play.

Each game is attached to game 'launchers' or a platform, with multiple functions such as a shopfront, with the ability to directly purchase videogames or other downloadable content, or to purchase and redeem gift cards unique to that platform. Some launchers also had their own currency, for example, Steam gift cards can be used for PC and Mac; Xbox currency is used for Xbox; PlayStation Store gift cards are used for PlayStation; and Nintendo eShop Cards are used for Nintendo Switch). In addition there are different in-game currencies that only can be used within specific games; like V-Bucks, the in-game currency used in Fortnite, and the so-called Boins (Battlefield Coins), for the Battlefield Series. The storefront currency can be also used for in-game items, either directly or through the purchase of the associated in-game currency, often obscuring the value of these items.

Loot boxes

Loot boxes appear in all types of game models, including games that are seen as triple A releases (i.e., a full-price \$70-\$100 yearly instalment of a popular videogame franchise). Loot boxes typically provide the player with cosmetic items or other items that do not directly advantage or benefit one player over another. An example of opening a loot box in a game called Counterstrike is shown in the animation on this page.



This shows the possible items and the rarity associated with these items in the loot box; how a purchasable case key is required to open this loot box; the animation and display of possible random outcomes; followed by the eventual 'win'. The items that are won can be bought or traded amongst players across several affiliated, or third-party marketplaces.

Most games with loot boxes are featured within online multiplayer as opposed to single-player games, as single-player games tend to rely upon a DLC model of 'seasonal' content that only needs to be purchased once. 'Drop rates' for particular items (i.e., the likelihood of acquiring each item within a loot box) have historically been hidden from players, yet can include a guaranteed item of higher as opposed to common or uncommon rarity. Explicit drop rates for obtaining these items from loot boxes have become more transparent, yet this practice is not uniform across the industry. Examples of common titles that deploy loot box systems include Overwatch, Counterstrike, Battlefield (i.e., Battlepacks in BF4), and EA Sports (FIFA series, Madden series).

Loot boxes have gained popularity as a controversial and unregulated gambling feature in videogames. Loot boxes can be considered a virtual 'lucky dip' that provides players the chance to win valuable items determined through chance. They can be bought with real money or in-game currency earned through gameplay, and yield randomised outcomes of differing rarity that benefit the player to varying degrees (Zendle & Cairns, 2019; Drummond et al., 2020; Drummond & Sauer, 2018; Flayelle et al., 2023)

The evolution of loot boxes within videogames are part of a long-term trend of increased monetisation across the gaming industry. After the popularisation of home computers and game consoles in the 1980s, most videogames were sold through standard retail sales. In the 1990s, the first subscription-based online games, typically

of the *Massively Multiplayer Online Role-Playing Game* genre (MMORPGs) were created. These games required player subscriptions to cover the expense of operating servers to host players. As the game industry grew in the 2000s, concepts such as downloadable content (DLC), that provide additional content purchased after a game has been released, and microtransactions, such as small purchases of items and content (typically cosmetic in nature), became more commonplace.

A microtransaction in gaming refers to a system that allows players to spend real currency for an in-game item, benefit, ability or advantage (Neely, 2021; Gibson et al., 2022). A famous example of this is the '*Horse Armour Pack*' for Bethesda's *Oblivion* (2006), widely seen as the inflection point and impetus for aggressive microtransaction models within the videogame ecosystem (i.e., Antepencko et al., 2022). For just \$2.49 USD, players can purchase the Horse Armour Pack that provides their horse with sets of (purely cosmetic) armour, and is available for purchase in game from *Chestnut Handy Stables*. Novel revenue streams explored through business ventures such as Bethesda's Horse Armour have paved the way for ongoing consumer purchasing and engagement, beyond the traditional retail model that limits consumer purchasing to a single point of sale (Tomic, 2018).

Gacha



Gacha mechanisms are comparable to loot boxes. Loot boxes emerged in the Western gaming industry and are more specific to videogames, whereas gacha are based on physical toy machines and originated from real-life Japanese toys and collectables known as *Gashapon* that offer small toys from vending machines that are released as part of a set or theme (see inset Figure). These types of games are more popular in Asia, and tend to include characters licensed from official games or other mediums. To operate *Gashapon*, real money or tokens are inserted into the machine, cranking the handle manually to release a randomly selected toy (pictured on the left). These

mechanics have increasingly become popular within free-to-play videogames, and have more saturation in the mobile gaming market that is more popular in Asia. Just like *Gashapon*, gacha as implemented within videogames provide randomly selected items, typically cosmetic in nature, to players - but can include items that provide direct benefit to players and give them an advantage in gameplay.

One of the ways that gacha mechanics are integrated in modern videogames include "free gacha pulls". A common example of free gacha pulls are the beginner 'wish' and

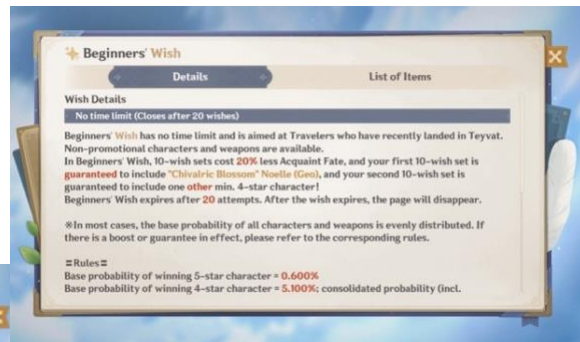
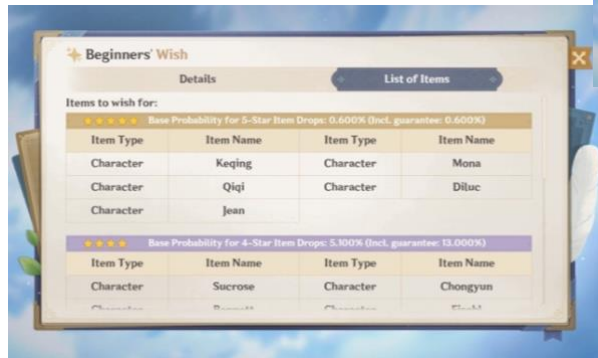
'banner' pools (available items) in Genshin Impact's gacha system, which are known as *Wishes*. Players unlock wishes very early in the game's story. The pool of items and characters available are known as a *Banner*. Wishes are split into standard Banners that are always available, and time-limited event Banners that require a separate currency to open. The Beginners' wish featured in the picture is exclusive to new players to familiarise them with the gacha system and to provide them with higher quality characters and equipment early in the game at a discounted price. The featured character, Noelle, is guaranteed to the player within the first 10 wishes that they make (see inset Figure below).



Gacha games such as Genshin Impact involve multiple currency types, that range from permanent currencies such as the common Mora currency (gold coin), or Special currencies

such as the Primogem (luminescent star), Genesis Crystal (blue triangle), Lucky Coin (bronze coin), or Realm Currency (silver coin). Also included in Genshin Impact are time-limited event currencies, such as the Glimmering Essence (red diamond). The Primogem currency is used to purchase Wishes that are used for gacha pulls and can be earned in-game, whereas the Genesis Crystal can only be purchased with real money, and can be converted to Primogems to purchase wishes (1 genesis crystal is worth 1 primogem). In Australia, 60 crystals can be purchased for \$1.49 AUD. These multiple different in-game currencies are earned different ways (some can be earned through progress, some can't), and require conversion across currencies. Thus, individuals typically do not know how much money they put in, the conversion rates, and the output.

The two figures depicted below describe the probability of obtaining 4-star or 5-star characters, and the individual drop rates for items. In gacha games, drop rates are usually displayed to the player, given the legal requirements for online gaming in China (i.e., “information displayed about random drawings shall be truthful and valid”) (Ministry of Culture and Tourism,



P.R. China, 2016). Genshin Impact uses a star system that indicates the quality and value of each item. A higher number of stars indicates a better quality item or character that will have increased attributes or abilities.

Similarities between loot boxes and gacha

Both loot boxes and gacha can include gambling elements such as exchange of money and an unknown future event with some level of randomness of that event involved. Each have their own unique ‘name’ for the loot box or gacha mechanic, showing the integration of named gambling mechanics with core storyline or world-building features (i.e., “Wishes” for Genshin Impact, or “Weapons Case” for Counterstrike). Other similarities between loot boxes and gacha include the capacity to earn currency either as a free reward or in-game achievement (Koeder et al., 2018). In addition, randomised items have different levels of rarity, and can be associated with in-game events or seasons (Koeder et al., 2018). Both gacha and loot box systems exist in order to provide revenue to game publishers (Chen & Fang, 2023; Koeder et al., 2018), as they require the exchange of money that cannot be cashed out.

Differences between Loot boxes and gacha

The vast majority of loot box systems do not offer the player a competitive advantage, with items providing purely cosmetic impact (Table 2.1). Furthermore, the odds for loot box systems are typically static (i.e., pre-specified). In contrast, gacha odds can operate in different ways across games and for example purchasing gacha in bulk can increase the overall probability of obtaining rare items, referred to as ‘Consecutive Gacha’ (Koeder et al., 2018). Most gacha games tend to disclose the probabilities of obtaining certain items (i.e., Koeder et al., 2018), but also utilize a pity system, where

players will either receive a valuable item after a certain number of ‘pulls’, after spending a certain amount of money. In other gacha games the players will have their odds for valuable items increase with each pull. Commonly, the initial free gacha pulls can increase the likelihood of continuing to pull until you win. This is known as the “whale property”, that describes both the behaviour of players who continue to spend money on gacha games, as well as the deliberate design of gacha games to facilitate this ongoing behavioural loop (Chen & Fang, 2023). This kind of reinforcement and reward that adapts to player engagement are not evident with static loot boxes, and are argued to motivate a player’s ‘grinding’ behaviour to continue to obtain items (i.e., Woods et al., 2022; Chen & Fang, 2023).

What makes in-game mechanisms gambling-like?

Six criteria for gambling features have been developed based on videogames released in 2016-2017 (Drummond & Sauer, 2018): 1) the exchange of money; 2) an unknown future event; 3) an element of chance or randomness; 4) losses can be avoided by not participating; 5) a competitive advantage gained by purchasing; and 6) the inability to cash out. We apply this taxonomy to videogames currently available that feature in the present study, that encompasses loot box (or gacha), and other microtransaction mechanics (Table 2.1).

As shown in Table 2.1, gacha games such as Arknights and Genshin Impact, as well as loot box systems included in FIFA 23/24 and League of Legends, exhibit all six gambling characteristics. The remaining videogames with loot box mechanics – Apex Legends, Counterstrike, DOTA 2, Elder Scrolls Online, and Rainbow Six Siege – contain five out of the six possible gambling characteristics, with the exception being a competitive advantage. By way of comparison, videogames that don’t include loot boxes but do include other mechanisms, such as microtransactions or battlepasses, all include the exchange of money with the inability to cash out. For the purposes of the current study we consider all gacha, loot box, skin betting, and simulated gambling as ‘gambling-features’ in videogames, even if they do not meet each 6 criteria in Drummond & Sauer (2018).

Table 2.1 Taxonomy of gambling-like features included in videogames that incorporate gacha, loot box and microtransaction features.

Game	Name of Mechanic	ESRB Rating	Exchange of Money	Unknown Future Event	Chance Involved	Avoid Losses if Opt Out	Competitive Advantage	Unable to Cash Out*	Fulfills all Gambling Criteria?
Arknights	Gacha: "Headhunting"	N/A	✓	✓	✓	✓	✓	✓	Yes
Genshin Impact	Gacha: "Wishes"	13+	✓	✓	✓	✓	✓	✓	Yes
Apex Legends	Loot box: "Apex Pack"	13+	✓	✓	✓	✓	X	✓	No (5/6)
Counterstrike	Loot box: "Weapons Case"	17+	✓	✓	✓	✓	X	✓	No (5/6)
DOTA 2	Loot box: "Treasure"	N/A	✓	✓	✓	✓	X	✓	No (5/6)
Elder Scrolls Online	Loot box: "Crown Crate"	17+	✓	✓	✓	✓	X	✓	No (5/6)
FIFA 23/24	Loot box: "Packs"	Everyone	✓	✓	✓	✓	✓	✓	Yes
League of Legends	Loot box: "Hex Chest"	13+	✓	✓	✓	✓	✓	✓	Yes
Rainbow Six Siege	Loot box: "Alpha Pack"	17+	✓	✓	✓	✓	X	✓	No (5/6)
Call of Duty	Microtransactions/Battlepass	17+	✓	X	X	-	X	✓	No (2/5)
Fortnite	Microtransactions/Battlepass	13+	✓	X	X	-	X	✓	No (2/5)
Overwatch 2	Microtransactions/Battlepass	13+	✓	X	X	-	X	✓	No (2/5)
Rocket League	Microtransactions/"Rocket Pass"	Everyone	✓	X	X	-	X	✓	No (2/5)
Valorant	Microtransactions/Battlepass	13+	✓	X	X	-	X	✓	No (2/5)

Note: Tick indicates the presence of a gambling feature, and a cross indicates the absence of a gambling feature. Hyphen indicates not applicable, and applies only to microtransaction games with no loot boxes. The ESRB is the Entertainment Software Rating Board that provides information and ratings for consumers and parents (<https://www.esrb.org>). Arknights is not currently rated by the ESRB, and nor is DOTA 2, potentially due to the multiplayer online interactive features. *While these videogames don't provide a mechanism to cash out in game, third-party marketplaces typically provide the ability to convert in-game currency or items to real currency (i.e., <https://dmarket.com/ingame-items/item-list/csgo-skins>).

Convergence between video game gambling and traditional gambling

A gateway hypothesis suggests that ‘gambling-like’ features in videogames, such as social casinos and loot boxes, may encourage gamers to progress to using online gambling products (Molde et al., 2019; Spicer et al., 2022). Overall, evidence for the gateway hypothesis within the general population of gamers is limited (for recent reviews see: Delfabbro & King, 2020; Montiel et al., 2022) but data suggests that individuals who gamble at problematic levels may also be at risk of problematic engagement with social casino games (Gainsbury et al., 2017). There is also a reasonably strong association between purchasing loot boxes, problem gambling and problem videogaming (Spicer et al., 2022; Greer, Boyle, & Jenkinson, 2022). Young people tend to transition from gambling-like online videogames to more traditional gambling where real money is involved (Dussault et al., 2017; Kim et al., 2016; Wardle, 2019). While causality and directionality of these associations is not entirely clear, better regulation of videogames and simulated gambling has been called upon (Kolandai-Matchett & Wenden, & Abbott, 2022; Spicer et al., 2022; Zendle & Cairns, 2019).

2.2 Prevalence of young people gambling

Including both online and venue based gambling, Australian studies consistently show that 60 to 80% of adolescents have gambled (Miller, 2017). Furthermore, 40% of young people report having played online video games with gambling components (Hing et al., 2020). Dowling et al. (2018) recruited Australian tertiary education students aged 18 to 25 years and found that 23% of the sample were gambling at low risk, 18% were gambling at moderate risk, and 5% were gambling at problem levels. Armstrong and Carroll (2017) reported that in 2015-16, although young adults aged 18 to 29 years old made up 23% of the Australian adult population, they accounted for 27% of all problem gambling, and only 11% of non-problem gambling. These figures estimate the prevalence of youth gambling across all modes and are not specific to online gambling, however.

Freund et al.’s more recent 2022 study of Australian high school students aged 12 to 17 years old classified 18% of participants as gambling at non-problematic levels, 8% as at-risk, and 2% as gambling at problematic levels. Of those who had gambled in the last month, 34% were classified as at-risk, and 15% reported gambling at problematic levels. 28% of students reported gambling online using a laptop or computer, and 23% reported gambling using a tablet or mobile app (Freund et al., 2022).

The second national study of interactive gambling in Australia estimated that in 2019, 5% of 18-19 year old's, 12% of 20-24 year old's, and 11% of 25-29 year old's participated in gambling online (Hing et al., 2021). For this study, online gambling included all forms of gambling using money or cryptocurrency conducted via the internet. The prevalence of online gambling in each of these age groups was greater than the prevalence of venue-based (not online) gambling (Hing et al., 2021). The study (Hing et al., 2021) estimated that approximately one in three individuals who gamble online also experience gambling harm. While the problem gambling prevalence for Australian adults who gamble online is not yet established, recent estimates from the National Gambling Trends Study suggest a high prevalence of at-risk gambling among younger individuals (aged 18-34) who regularly bet online (Greer, Jenkinson, Vandenberg, & Sakata, 2023).

The 2019 ACT Gambling Survey was the first ACT gambling prevalence study to report online gambling participation for young adults. It found that 27% of respondents aged 18 to 29 years had gambled online within the last 12 months. Of those young people that gambled, 11% did so exclusively online (Paterson et al., 2019). Past gambling prevalence studies provide information about the extent of broader (combined land-based and online) gambling participation by young adults aged 18 to 29 years in the ACT (Davidson et al., 2015; Davidson & Rodgers, 2010; Paterson et al., 2019; Tremayne et al., 2001). Rate of gambling participation and the frequency of gambling in the previous 12 months for the youngest age segment in 2009, 2014, and 2019 are displayed in Table 2.2³.

Table 2.2 Gambling participation and frequency in the ACT for 18–29-year-old adults (previous 12 months)

Year	Age group	Gambling Participation (%)	Gambling Frequency (%)			
			Never	Low	Medium	High
2019	18–29	57.5	43.0	37.8	11.6	7.6
2014	18–29	54.7	45.3	38.0	12.3	4.4
2009	18–29	69.7	30.4	43.8	16.3	9.6

Notes: for gambling frequency: low frequency = occasionally, less than once per month, medium frequency = 1–3 times per month, and high frequency = 4+ times per month.

³ When interpreting these findings, it is important to note that cross-study comparisons should be made tentatively due to different methods being applied (e.g. sample size, sampling frame, and conducting surveys in a language other than English).

In addition in the 2019 ACT Gambling Survey, 16% of the ACT population aged 18 to 29 years were found to be gambling 'at risk' and 1% engaged in 'problem gambling', based on the Problem Gambling Severity Index (Holtgraves, 2009). As measured by the Short Gambling Harm Screen (Browne et al., 2017), 14% of young adults in the ACT experienced harm (over the preceding 12 months) as a result of their own gambling. However, only 1.4% of young adults who gambled ever sought help for their gambling. 27% of the ACT young adult population were adversely affected by another person's gambling in the preceding 12 months. It is not possible to say from these studies to what extent (if any) online gambling contributes to gambling harm experienced by young adults. Other Australian evidence suggests that 68% of individuals that regularly bet on sports/races online were at risk of gambling harm, with younger age groups (18-34 years of age) being classified at the highest level of risk (82%) (Greer et al., 2023).

2.3 Factors associated with gambling in young people

2.3.1 Social normalisation of gambling

A recent qualitative rapid review of research examining gambling by young people (including 8 online gambling studies out of the total 16 studies) found that published research tends to focus on two related areas: (1) young people's perceptions of gambling, and (2) the factors that influence gambling behaviour (Wardle, 2019). Across these studies, participants considered gambling as a normal part of life (Deans, Thomas, Daube, et al., 2017; Pitt et al., 2017). For some, gambling was a rite of passage (Carran & Griffiths, 2015; Kristiansen & Trabjerg, 2017) and for others, it was embedded within their regular daily routines (Nekich & Ohtsuka, 2016). In a Swedish study, young people gambled not as part of their everyday lives, but on specific socially sanctioned occasions (e.g. when partying or on holiday) (Spångberg et al., 2022). There is general ambiguity in the literature around what young people consider online gambling, with perceptions ranging from online social media gambling to free-to-play games (Wardle, 2019).

Australian qualitative studies highlight the normalisation of gambling in sports, particularly for young men (Deans, Thomas, Daube, et al., 2017; Deans, Thomas, Derevensky, et al., 2017; Gordon et al., 2015; Jenkinson et al., 2019; Lamont & Hing, 2020; Nyemcsok et al., 2021; Pitt et al., 2022). The mechanisms involved in the normalisation of gambling in Australia include the alignment of gambling with culturally valued agencies, such as sporting codes, that are likely to influence the social acceptance of gambling amongst certain population sub-groups (Thomas, 2018). The three most common factors contributing to the normalisation of online sports gambling

include (1) access and availability of online gambling options, (2) the perception that gambling is a socially accepted and regular activity in which most people engage, and (3) the volume and content of online gambling advertising (Nyemcsok et al., 2021).

In addition to gambling and gaming platforms, the internet offers social environments for individuals who gamble, and gamers to interact and engage with one another (such as discussion forums and in-game interaction tools). Online communities involve groups of people with a shared interest or purpose who use the internet to communicate with each other, and research is emerging into the identification with virtual communities and their influences on gambling behaviour. Sirola et al. (2018) found an association between at risk gambling (online and/or land-based) and visitation of gambling-related online communities within a sample of 15 to 25 year old Finnish young people. A strong identification with online peer relationships, and conforming to perceived gambling norms online, as opposed to in-person peer relationships, may also be associated with a greater likelihood of gambling harm in young people (Savolainen et al., 2019, 2021). However, belonging to online gambling communities is also found to be associated with greater life satisfaction for younger people, particularly for those with gambling problems and poorer offline relationships (Koivula et al., 2022).

2.3.2 Intergenerational transmission of gambling

Young adults and adolescents in Australia are more likely to experience problems with gambling if their parents, particularly fathers, also report problem gambling. Children of parents who engage in problem gambling are between two and ten times more likely to engage in problem gambling themselves (Dowling et al., 2016, 2017, 2018). This body of literature shows that parental gambling status is predictive of offspring gambling status. A young person's positive expectations of financial gain and self-enhancement (i.e., feeling in control and accepted by peers), as well as negative expectancies such as becoming preoccupied with gambling and feeling shame and guilt as a result of gambling, have all been found to strengthen the relationship between parent-and-offspring problem gambling (Dowling et al., 2018). Furthermore, when a parent uses gambling to enhance positive emotions or to cope with negative emotions, this can also strengthen the intergenerational transmission of problem gambling (Dowling et al., 2018). Comorbid parental alcohol and other drugs also contribute to the transmission of gambling problems to their offspring (Dowling et al., 2016).

Evidence across Australia and internationally strongly suggest that gambling is normalised in some families, through using gambling as an intergenerational bonding activity (Kristiansen et al., 2015, 2017; Lamont & Hing, 2020; Nekich & Ohtsuka, 2016; Pitt et al., 2017; Wood & Griffiths, 2002). However, it should be noted that Australian

and international evidence of intergenerational transmission of gambling are based on studies that investigate gambling more broadly, and are not specifically focused on the transmission of gambling behaviour in the online context.

2.3.3 Gambling motives

Motivations for young adults to engage in online gambling range from social media advertisements, encouragement from peers, accessibility of online gambling, and incentives offered by online gambling operators (Kim et al., 2017). Other factors that may increase engagement with online gambling include the attractiveness of gambling-related online communities (Sirola et al., 2018); online identities and social media (Sirola et al., 2021); and socialisation and immersion motives (Khan & Muqtadir, 2016). Research that has explored young people's motives to gamble have examined aspects such as the social context of gambling (Quinlan et al., 2014); attachment and addictive behaviours (Jauregui & Estevez, 2020; Macía et al., 2022); cognitive distortions and materialism (Estévez et al., 2021); and impulsivity traits and emotion regulation (Canale et al., 2015). A meta-analysis found that financial gambling motives are reliably and positively associated with both gambling frequency and the level of problem gambling (Tabri et al., 2022). While some young people use gambling to manage difficult emotions, gambling and associated losses in the longer term are likely to exacerbate deterioration in mood and emotional wellbeing (Spångberg et al., 2022). The hope of winning is a commonly cited motivation to gamble within the qualitative literature (Calado et al., 2014; Carran & Griffiths, 2015; Wilson & Ross, 2011; Wood & Griffiths, 2002; Zaman et al., 2014). Particularly for men, gambling is also linked to the desire to compete, with the chance to demonstrate skill and competence (Svensson et al., 2011).

The social importance of gambling is perhaps the key factor that motivate young adults to gamble (Korn et al., 2005; Kristiansen et al., 2015, 2017; Lamont & Hing, 2020; Nekich & Ohtsuka, 2016; Skinner et al., 2004). Indeed, gambling may be an activity that enhances the experience of social gatherings (Petheram, 2017), yet young people may also gamble to 'fit in' with social groups (Kristiansen et al., 2015) or in response to fear of being ostracised if they do not gamble (Deans, Thomas, Daube, et al., 2017). Again, this literature largely focuses on the gambling of young people more broadly and does not specifically focus on online gambling. Regardless, the implications of this research suggest that gambling has a wider value proposition than simply the risk and reward of money, through its value within a broader social context.

2.4 Young people and gambling harm

Gambling harm from venue-based gambling is not likely to be dissimilar to harms caused by online gambling (AIHW, 2023; Hetherington & Phillips, 2023). Some elements of internet gambling, however, such as isolation, lack of interruption, and constant, easy access may be particularly relevant to harms associated with online gambling (Gainsbury, 2015). Gambling-related harm (or gambling harm) refers to a range of negative consequences arising from engagement in gambling activities. The seven main categories of gambling harm include financial, social, psychological, physical, occupational, cultural, and other harms (i.e., illegal behaviours, child neglect) (Langham et al., 2016). The concept of gambling harm acknowledges that substantial harm from gambling can be experienced by all individuals who gamble, including those who report gambling at either moderate- or lower-levels of risk. Notably, harm as a result of an individuals' gambling can be experienced by their (non-gambling) family members and friends (referred to as affected others), as well as their broader community (Delfabbro & King, 2017, 2019; Hare, 2015). This highlights the need for a broader public health approach to prevent gambling harm, with a clear focus on reducing the prevalence of problem gambling, as well as the broader health and wellbeing impacts of gambling (Hare, 2015). Understanding how gambling harms relate to young people and online gambling is important for developing appropriate interventions and measuring their effectiveness in future.

Investigating the trajectories of individuals that gamble from early adulthood through to later life may inform earlier intervention and prevention initiatives targeting young people, regardless of whether they are gambling in venues or online. Overall, Australian research has found little stability in gambling patterns between adolescence and adulthood (Delfabbro et al., 2009, 2014). Delfabbro et al. (2014) followed 256 young people from the age of 16-19 years to 20-23 years of age, and found gambling at younger years was generally not associated with gambling four years later. In a similar Australian longitudinal study, Delfabbro et al. (2009) tracked 578 young people from age 15 to 18-19 years. Only one in four young people who gambled in the first year of data collection continued to gamble every year. However, it should be noted that gambling participation patterns in later adolescence were more predictive of adult gambling compared to earlier adolescent gambling.

A Canadian study undertaken by Carbonneau et al. (2015) found evidence to support three different longitudinal trajectories in the variety of gambling products used between the ages of 15 to 30 years. An early onset low trajectory group (65% of the sample) participated in an average of 2 gambling activities at age 15 year which decreased slightly to 1.5 activities at 30 years. A late-onset low trajectory group (27% of the sample) who reported no gambling at age 15 years and subsequently one

gambling activity at age 30 years. A smaller group (8% of the sample) followed an early onset high trajectory. This group reported, on average, 4.6 gambling activities at age 15, and 3.2 activities at 30 years. Importantly, membership to the early onset high trajectory group was significantly associated with problem gambling at age 30. When controlling for confounders, the early onset high trajectory group was 3 and 2 times more likely to experience problems compared to the late-low and early-low trajectories respectively. A large population-based UK cohort study found that although gambling increased between the ages of 17 and 20 years, there was little variation between 20 and 24 years, with the exception of online gambling and horse betting which increased significantly in that period, particularly for males (Hollén et al., 2020). Overall, the current literature suggests that for most, gambling during adolescence or earlier adulthood does not appear to be associated with later problems with gambling (Delfabbro & King, 2021). However, this may not be the case for young people who take up gambling at a very early age, including gambling online and other forms of interactive gambling/gaming.

2.5 Gambling advertising

2.5.1 Regulation of gambling advertising

Advertising for all gambling products is subject to a co-regulatory scheme established by the Commonwealth Broadcasting Services Act 1992. The Act requires the broadcasting industry to develop codes or practice and submit them to the ACMA. The Commercial Television Industry Code of Practice was most recently amended in 2018 following community consultation on the regulation of gambling advertising. However, a more recent major review of the Code was undertaken in 2015 (*Commercial Television Industry Code of Practice*, 2018; Free TV Australia, 2022). In 2018, the ACMA also developed the Broadcasting Services (Online Content Services Provider Rules) as an instrument under the Broadcasting Services Act 1992. The Online Content Services Provider Rules stipulate how gambling promotional and advertising content can be delivered during the live sports coverage online.

The Code of practice and the Online Content Services Provider Rules provide a range of rules that apply to the advertising of gambling services, including online gambling services (ACMA, 2022f). The code stipulates the following:

- It is illegal to target the advertising of interactive gambling products that are unlicensed in Australia, to an Australian audience.
- During live sports on TV, radio, and streamed online, content providers must not advertise or promote odds during play, must not promote odds during breaks in play, and must not promote odds by commentators and representatives of gambling services 30 minutes before or after play.

- Between 5:00am and 8:30pm, times in which it is assumed that children are more likely to be watching sports, content providers must not advertise or promote odds 5 minutes before or after play (ACMA, 2022f) (however, these rules do not apply to live horse, harness, or greyhound racing).
- Programs on free-to-air television that are principally directed to children are not permitted to include gambling ads between 5am and 8:30pm.
- Gambling advertisements on other free-to-air TV programs with child-friendly classifications are not permitted from 6am to 8:30am and 4pm to 7pm.

2.5.2 Implications of gambling advertising for young Australians

O'Brien and Iqbal (2019) found that The Commercial Television Industry Code of Practice, implemented in 2015, was not effective in protecting children and young people from exposure to gambling advertising when watching free to air TV. They found that gambling advertisers place significantly more advertisements during sport TV compared to non-sport TV, which accounted for the significant exposure of young people to these advertisements as they view sports programming in large numbers (O'Brien & Iqbal, 2019). However, ACMA 2019 study focusing on rule changes implemented in 2018, found that gambling advertising during live sports broadcasting on television and radio was reduced between the hours of 5.00 am and 8.30 pm, and increased during later timeslots. Further to this, despite online gambling advertisements appearing to not have been influenced by the change in regulations from 2018, overall volumes of gambling advertisements have been shown to decrease between 2016 and 2017 (ACMA, 2019).

Analysis of Australian sports betting advertising highlights a male-oriented focus and use of positive themes including mateship, patriotism, adventure, and social status (Deans, Thomas, Daube, Derevensky, et al., 2016). Gambling advertising appears to make it seem 'harmless' or 'fun' (Korn et al., 2005) or 'more okay' (Deans, Thomas, Derevensky, et al., 2017). Indeed, a UK study that focused specifically on young adult male online sports gambling identified the ubiquitous visibility of gambling advertising contributed to the normalisation of sports betting (McGee, 2020).

Most Australian high school students report having seen gambling advertising and promotion of gambling (Noble et al., 2022). Exposure to online advertising for gambling may be associated with at risk and problem gambling for Australian school students (Noble et al., 2022). International studies have found similar relationships whereby young peoples' self-reported exposure to gambling advertising are associated with at risk or problematic gambling behaviour (Clemens et al., 2017; Kristiansen & Severin-Nielsen, 2022; Parrado-González & León-Jariego, 2020).

2.5.3 Online marketing, sports and gambling-related websites

Young people are increasingly targeted by the gambling industry through the *symbolic content* of sports betting advertising (Brevers, 2022). There is mounting literature on the specific strategies for the advertisement and promotion of sports betting in Australia and internationally (Hing et al., 2017; Deans et al. 2017; Gordon et al. 2015; Lopez-Gonzalez et al. 2018). The underlying observation is that sports betting advertising relies on narrative themes that (a) exaggerate perceived control over betting, and (b) emphasise the connection between betting and social/peer acceptance. It has also been shown that high levels of recall of sports betting advertisements, and positive attitudes towards such marketing, are linked to greater betting intentions in young people, and therefore, constitute risk factors for problem gambling in young people engaging in sports betting (Glozah et al. 2019; Hing et al. 2017; Newall et al. 2019).

There are significant gaps in knowledge around the impact technology plays in shaping young people's gambling behaviour (Wardle, 2019). Recent research into the influence of social media on gambling exposure reveals how interacting with gambling content increases the visibility of such content due to *algorithmic filtering technologies*, which can fuel gambling-related intentions and behaviours and normalise gambling (Sirola et al., 2021). A more comprehensive understanding of the so-called *techno-ecosystem* in which gambling exists (and young people's relationship with it) is needed as a matter of priority (Wardle, 2019). Establishing a clearer picture of youth online gambling will inevitably assist in addressing the harms that lurk therein.

2.5.4 Gambling advertising in sports: a not-so hidden agenda

Generally, sports betting is moving online as it is the main legal online gambling product available in Australia (Brevers et al. 2020). Citing the changing landscape of sports betting as an emerging public health issue, Brevers et al. (2022) describe the potential impact and consequences of sports betting on young people. Based on the available evidence, one conclusion they report is that hyper-exposure and easy access to sports betting indicates young male adults are at an increased risk for developing gambling problems (Brevers, Vögele & Billieux, 2022).

2.6 Young people, gambling, and governance in the ACT context

Interactive gambling is regulated under both ACT and Commonwealth Law (ACT Government Gambling and Racing Commission, 2022). At the time of writing (December 2023), ACMA lists only one interactive gambling provider – *Tabcorp ACT* - as being licensed in the ACT by the ACT Gambling and Racing Commission⁴ (ACMA, 2022c). The ACT Government taxes all Australian licenced betting operators on bets placed by a person located in the ACT, regardless of which state or territory jurisdiction they are licenced in (ACT Revenue Office, 2022).

The ACT government has generally adopted a public health approach to gambling and addressing gambling harms, consistent with commitments made by other Australian (NSW The Office of Responsible Gambling, 2021; Queensland Government, 2021; Victorian Responsible Gambling Foundation, 2022; ACT Gambling and Racing Commission, 2019) and international jurisdictions (Gambling Research Exchange Ontario, 2019). Essential public health functions include health promotion, health protection, disease and injury prevention, population health assessment, and health surveillance (Martin-Moreno et al., 2016).

In a relatively old qualitative study of gambling in young people in the ACT, Petheram et al. (2017) found that while participants generally viewed sports betting was the most common form of gambling among young adults, a majority of the young participants who gambled did so on the Electronic Gaming Machines (EGMs) or ‘pokies’. In line with the broader literature, the study found that social pressures contributed to participants’ EGM gambling. The young participants tended to underestimate the impact that gambling had on their lives, and were confident in their ability to stop gambling at a later date without relapse. Petheram et al. (2017) concluded there was little recognition in the ACT of the ways gambling can negatively impact young people, highlighting a need for a nuanced public conversation to address this topic. Even older study in the ACT (Marshall et al., 2005) focused on young men, and found that the availability of gambling opportunities in spaces (i.e., clubs) as well as socialising were important factors in their decision to gamble. Specifically, participants reported that they did not attend these venues with the primary purpose of gambling, but rather to ‘add value’ to other social activities.

⁴ The ACT Gambling and Racing Commission, established by the ACT Gambling and Racing Control Act 1998, is the independent body responsible for regulating gambling within the ACT (ACT Gambling and Racing Commission, 2022; Australasian Gaming Council, 2021).

2.7 Key objectives of the current study

Based on the literature reviewed in this section, the broad objective of the research project was to generate information about key areas where gambling regulation, policy and public health interventions could intervene with youth online gambling. Specifically, the literature identifies current gaps in understanding of:

- The circumstances in which young people take up gambling
- Impacts of gambling advertising
- Patterns of play
- Gambling motives, attitudes and expectations, and critically:
- Experiences and management of gambling harm

The current research examined the above by answering the following three broad research questions:

1. What do young adults gamble on online?
2. How do young adults gamble online including pathways to gambling?
3. Why do young adults gamble online?

3 Method

3.1 Advisory group

A key aspect of this study involved the establishment of an independent advisory group. A substantial time investment was committed to engage with relevant stakeholders and the final group comprised of students, parents, school personnel, government representatives, and other adults who work with young people (i.e., through ACT sports clubs and schools). Ethical approval for this study was obtained from the Australian National University Human Research Ethics Committee (protocol #2022/457).

3.2 Participants

The study involved two participant groups: (1) young adults between 18 and 25 years of age with personal experience of online gambling in the past 12 months; and (2) other adults who interacted in the past 12 months with young people who engaged in online gambling. Additional inclusion criteria for both participant groups were that they currently lived, studied or worked (either paid work or volunteering) in the Australian Capital Territory.

We interviewed 38 young adults (7 females, average age 21 years) and their demographic and gambling profiles are shown in Table 1. We also interviewed 9 other adults who interacted with young people engaging in online gambling. They were parents, counsellors, sports club volunteers, and staff from other youth serving organisations in the ACT (breakdown of n's not reported due to small sample).

Table 3.1 Demographic and gambling profiles of young adults.

Characteristic		Young People (%)
Age Group	18-19	21
	20-21	39
	22-23	29
	24	11
Gender Category	Female	18
Type of Play	Gaming	37
	Gambling	42
	Gambling & Gaming	21
Harm Score	0	18
	1-2	34
	3-4	29
	5+	18

3.3 Recruitment

Participants were recruited through the ACT community, using flyers, social media, local news media advertising and through research team's networks including the study advisory group. The young person participants who were 18-25 years of age signed up to the study through a website or QR code with a Qualtrics link where they provided their contact details for the research team to contact them directly. In total 87 eligible participants signed up for the study. Young person participants who were not interviewed were either not deemed eligible after the first contact (n=25) or they were unresponsive to research team's contact efforts (n=24). Parents and service provider participants were recruited directly through the research teams networks.

3.4 Interviews

The interviews were carried out between March and September 2023, and they ranged from 25 minutes to 130 minutes (average length 47 minutes). Participants were offered a \$50 digital debit card as a small acknowledgment of their contribution to the study. The in-depth qualitative interviews with the young people included prompt questions about their gambling participation and experiences. Interviews with parents, school and sports club staff asked questions in relation to young people. Interviews with school, sports club and other youth serving organisations staff also included questions about potential gambling harm minimisation strategies that they had used or were aware of.

At the start of the interview, the interviewer introduced the study and the aims of the research study (see Appendix for the Introduction script). Participants were considered as experts on young people and online gambling, and invited to share their lived experiences about online gambling in the level of detail and depth they were comfortable with, using relevant and strategic prompts to facilitate responses where needed (see Appendix). The interviewer carefully adjusted their language and terminology around gambling and gaming to language that was familiar to the participant at the start of the interview, given the need for language to reflect the true nature of things, such as participants' contextually situated unique realities or truths (Braun & Clarke, 2013).

The interview topics were addressed approximately in the following order:

- Initial uptake of gambling (i.e., reasons, social context, age)
- Types of online gambling activity (i.e., specific mode and type of gambling)
- Online gambling motivations, attitudes, expectations
- Gambling in family and friends, peer group influences
- Views on gambling advertising

Participants were also asked basic demographic information, such as age, gender, and occupation, and were provided the Short Gambling Harm Screen (Browne, Goodwin & Rockloff, 2017). This measure consists of 10 items that are designed to capture unique financial, emotional or psychological, and relationship harms due to gambling. Each item is scored in a binary yes or no format, with the sum total of these responses ranging up to 10. With the exception of three interviews in which handwritten notes were taken, the interviews were recorded (with the permission of the participants), transcribed and imported into NVivo v12 for qualitative analysis.

3.5 Analysis

The data were analysed using a dualistic technique of deductive and inductive thematic analysis (Saldana, 2016; Fereday & Muir-Cochrane, 2006; Roberts, Dowell, & Nie, 2019). Deductive approaches are based on the assumption that there are some principles that can be applied to the phenomenon in focus (e.g., online gambling in young adults). We applied a deductive model to the set of information provided by the participants, and searched for consistencies and anomalies across participants' responses, with minimal interpretation of what the participants said (Sandelowski, 2010; Fereday & Muir-Cochrane, 2019). The interviews were guided by broad research questions, enabling an initial organization of codes, yet allowing for the emergence of novel themes from participants' stories using an inductive approach, with the analytic steps for this process outlined by Braun and Clarke (2006): 1) familiarisation, 2) re-reading and coding the transcripts through generating initial codes, and 3) developing and modifying them in the context of the entire dataset. This procedure for data analysis allows themes to emerge from the interview data.

The study used an experiential approach to thematic analysis (Braun & Clarke, 2012, 2019, 2021, 2022), to explore the ways in which participants contextually situated their experiences, perspectives and behaviours. Central to this is the researchers' reflective work on personal and research-specific values relating to data processing. Awareness of researchers' active role in theme generation is a key part of the reflective analysis, and the themes are considered as analytic outputs and not merely 'topic summaries'. This involved building upon identified themes through a detailed unpacking of how themes were spoken about in the interviews across different participants. This iterative process involved a revision and review of the categorisation of information, until it was determined that the themes and categories used to summarise and describe the findings were a truthful and accurate reflection of the information obtained.

Consistent with participatory approaches, we ensured that the findings and interpretations of data were consistent with the views of people with an experience of gambling-related harm. In order to achieve this, we consulted with the study advisory group to ensure the interpretations of these data were relevant to young people who

gamble. Participants were also provided with the opportunity to review their own interview transcripts.

4. Findings related to videogame gambling

The empirical findings of this study are presented in three chapters. The first chapter (Chapter 4, this chapter) includes data relating to participants whose main activity was engaging with gambling-like features through videogames, and the second findings chapter (Chapter 5) includes data relating to traditional gambling online. Both parts are structured according to the following structure: (1) What do young adults gamble on? (2) How do they gamble? and (3) Why do they gamble? The third findings chapter (Chapter 6) presents data on gambling harms relating to both video game and traditional online gambling. We use direct quotes for the participants through the findings sections and indicate their participant ID number, gender age and their gambling harm score (a score out of ten) as measured by the Short Gambling Harm Screen (Browne et al., 2018). For parents, carers and service providers we separate the identifiers between parents/carers and service providers given the small sample size.

4.1. What do young adults gamble on in videogames?

Table 4.1 shows the videogames participants used to engage with gambling features in, outlining the wide variety of popular videogame franchises that include these mechanics. Games included in Table 4.1 were typically free-to-play multiplayer first- or third-person shooter games. Participants reported engaging in gambling features such as loot boxes and gacha mechanics in these games. Most items received from in-game microtransactions (purchasing or gambling) were cosmetic in nature and engaging in these mechanisms typically required using real-money. Most gambling features could also be earned through play or engaged with for free, but some loot boxes required the purchasing of a key to open. Player trading systems to swap, buy or sell items were available in some but not all games, and most PC games (i.e., counterstrike) have third-party marketplaces to buy, sell, or cash out items for real money. Participants frequently reported engaging with these third-party marketplaces to either gamble, trade, sell, or cash out their in-game items for real-money, a feature not available in the native game. A poignant illustration of one participant's experience with navigating these mechanisms is provided in the textbox following Table 4.1.

Table 4.1 Videogame details and their gambling-like features in the present study

Game	Platform	Game Model	Game genre	Name of gambling feature	Gambling mechanic; a gameplay benefit	Gambling with real currency	Gambling for free ^a	\$ for lowest cost gambling	Player trading
<i>Overwatch</i>	PC, PS4, PS5, Xbox	Full-price; <i>Overwatch 2</i> Free-to-Play	Team-Based First-Person Shooter	Loot box	Cosmetic items No	Yes	Yes	\$2.95	No
<i>Counter Strike – Global Offensive</i>	PC, PS3, Xbox 360	Free-to-Play	Team-Based First-Person Shooter	Case	Cosmetic items No	Yes	No	\$2.50	Yes
<i>League of Legends</i>	PC	Free-to-Play	Multiplayer Online Battle Arena	Hextech Chest	Cosmetic items, characters No	Yes	Yes	\$5.99	Yes
<i>Genshin Impact</i>	PC, Mobile, PS4, PS5	Free-to-Play	Action Role-Playing Single w/ multiplayer component	Wishes	Characters, items Yes	Yes	No	Varies >\$4	No
<i>Valorant</i>	PC	Free-to-play	Team-Based First-Person Shooter	N/A	Cosmetic items No	N/A	Yes	N/A	No
<i>Rocket League</i>	PC, PS4, PS5, Xbox	Previously full price, now Free-to-Play	Vehicular Football; Sports game	Crates	Cosmetic items Yes	Yes	Yes	\$2.10	Yes
<i>FIFA</i>	PC, consoles	Full price release	Sports Simulation; football	Ultimate Team Packs	Players, items, uniforms, stadiums	Yes	Yes	\$9.20	No
<i>Rainbow Six Siege</i>	PC, consoles	Previously full price – now Free-to-Play.	Tactical Team-Based First-Person Shooter	Alpha Packs	Cosmetic items No	Yes	Yes	\$60.40	No
<i>DOTA 2</i>	PC	Free-to-Play	Multiplayer Online Battle Arena	Treasures	Cosmetic items No	Yes.	Yes	Varies	Yes
<i>Arknights</i>	Mobile	Free-to-Play	Tactical Role-Playing Tower Defence	Headhunt	Characters, items and resources. Yes	Yes	No	\$3.96	No
<i>Elder Scrolls Online</i>	PC, consoles	Buy-to-Play	Massively Multiplayer Online Role-Playing Game	Crown Crates	Cosmetic items, Yes	Yes	Only with subscription.	\$10.45	Yes
<i>Fortnite Battle Royale</i>	PC, consoles	Free-to-Play	Third-Person Shooter Battle Royale	Llama	Cosmetic items Yes	Yes	Yes	N/A	No
<i>Call of Duty Series</i>	PC consoles	Full price release	First-Person Shooter	Supply drop*	Cosmetic items, weapons Yes	Yes	Yes.	Varies	No
<i>Apex Legends</i>	PC, Mobile consoles	Free-to-Play	First-Person Shooter	Apex Pack	Cosmetic items n/a	Yes	Yes	\$6.45	No

Note: ^aEven though participants might have to purchase or access gambling features with real-money, loot boxes can be earned 'for free' by progression in certain games, as shown in this column.

^bThird-party marketplaces for buying and selling items tend to exist for every possible game. These marketplaces can range from buying or selling pre-made accounts, loot boxes, or items. In this column we refer to both trading in-game, as well as third-party markets to buy, sell, trade, or gamble on in-game items.

On Dota, when they released a Battle Pass, that was the first time I spent significant money on the game at all. And at first it didn't feel like significant money because it was just like buy the Battle Pass for \$10 and then, "now I want to buy a couple extra levels for another \$5," or "Now I want to buy this extra crate that's going on concurrently somewhere else for \$3 each. And I want to get 15 of them because then I want to guarantee that I get every single skin." But then that buildup from those smaller amounts in the many years that I played it turned into this Battle Pass in 2021. I knew from the start that I wanted to get the Battle Pass to level 1,000, which is where you get a real life physical metal shield thing. And of course there's no value in that for somebody who doesn't play or doesn't care for it. But for me, that just is a really cool thing that I can probably hang on a wall or just have a sitting there in a container, in a glass container or something. During that Battle Pass, I leveled up a whole bunch over the time. And in each Battle Pass there are four or five different crates that you just get. Each time you go up a level, you might get a random skin just directly because it's built into the Battle Pass. Or you might get access to other form of event currency, which you can then buy other things with. Basically every level you're getting something, but it might not always be valuable. I very quickly got all those common crates that are guaranteed when you open as many as there are. I kept re-rolling, and got a couple of the rarer ones, and then that turned into me going, "I think by the time I get this to level 1,000, I'm going to have all of the skins, including all the rare ones." By level 1,000, you would've opened about 40, 50 of each type of crate, and getting into those much higher chances because they increase as you open more. I got basically every rare skin within my first 30, 40 openings. And what helped me is if you have doubles of the common skins, you can recycle them and turns them into a token, and with five tokens, you get another copy of that crate for "free". There was one skin that I was taking forever to get, and it was my 60th opening of one of the crates, and I wanted it because it was a freaking cool skin. So toward the end of the Battle Pass period, I was at level 900-ish. And I knew if I just kept playing consistently, I will be able to get to the end. In an addiction kind of way, I loved opening the crates and rolling and getting the chances, hoping for the rarer skin, I just bought a few levels to get a few more of those crates and opened those and got the skin. (ID19, male, 20, gaming, 3/10)

eSports

A majority of the games described in Table 4.1 were also the games that the participants played as 'eSports', as well as betting on the outcomes of the eSport game . Participants who competed in these games (whether or not they were betting money on them) described the competitive nature of eSports:

I'm a very competitive person. I'm a very sporty person, and I also happen to be somewhat okay at video games. So, eSports was the perfect cross section for me between my competitive nature, being able to pursue my love of video games, and competing. (ID23, female, 20, gaming, 3/10)

The existence of a ranking system and public leaderboards, as well as the capacity to get better with practice, allowed participants to demonstrate skill:

If you do a particular level at a particular speed, there'll be a leaderboard. So right now, one of my friends is 13th in one of the. I think on that leaderboard, I was at like 200 something. (ID11, male, 22, gambling & gaming, 2/10)

You get what you put in. There's not going to be some person that has 10 hours playing, and they can just buy whatever they want and beat you. You actually have to practice. (ID13, male, 20, gaming, 2/10)

Another participant referenced competitiveness in relation to betting with friends:

I think that having that somebody, even if it's just in a friendly way, competing with me, getting a high level, even though it's a completely ridiculous competition, but it is still something that exists, incentivized more purchasing, going higher. (ID19, male, 20, gaming, 3/10)

One participant was interested in watching eSports, namely due to inspiration of the skills of professional eSports players:

I really like seeing people having those really professional skills and they can do what I can't do. So that's my first interest and my first step in into eSports area that's my inspiration. I just want to see how well their skills are and then put some money on it. (ID5, female, 23, gaming, 3/10)

Online Gaming Platforms

Participants used multiple platforms to facilitate their online gaming and/or gambling but also interacting socially while gaming using Reddit, Instagram, Facebook, Twitch and Discord. Discord was the most popular social platform, allowing for the creation of participant communities focused on specific games or interests.

Of the videogames played by participants, Table 4.2 describes the Title/Operating System of the Platform (i.e., Computer, Console, Mobile Device); The Owner/Publisher (i.e., Valve, Blizzard Entertainment, Epic Games), and the purpose/features included in each platform.

In regard to purpose and features, a game launcher refers to a specific application that runs videogames, and typically also includes a storefront for users to purchase games or other in-game items. Note that platforms built for Windows and Mac typically include community functions and player marketplaces, in conjunction with game launchers and storefronts, whereas console and mobile platforms are typically limited to storefront features only (i.e., PlayStation, Xbox, Nintendo Switch, App Store, Android Store). Not included in this table are the social platforms that participants engaged with. These facilitate communication and interaction either during videogame play, or as part of a

broader community function. These can include Discord, a platform for instant messaging, voice and videocalls, and the capacity to form shared ‘servers’ based upon videogames and other interests. Discord was referenced very heavily by participants in our study as crucial for facilitating team and community interactions. In addition to Discord , Twitch was mentioned as a popular platform for streaming and/or broadcasting videogame play, as well as Reddit, that functions as an online forum with less emphasis on direct communication as in Discord.

Table 4.2 Game launchers across platforms for gambling-like videogames.

Title and Operating System	Owner/Operator	Purpose/features
Steam (Windows, Mac, Linux)	Valve	Game launcher (i.e., Counterstrike) Storefront Facilitates community functions Player marketplace
Ubisoft Connect (Windows)	Ubisoft Entertainment	Game launcher Storefront Facilitates community functions
Riot Client (unique download for each game) (Windows, Mac)	Riot Games	Game launcher (i.e., League of Legends, Valorant, Rocket League)
Battle.net (Windows, Mac)	Blizzard Entertainment	Game launcher (i.e., Call of Duty, World of Warcraft, Overwatch, Diablo) Storefront
The EA app (Windows), Origin (Mac)	Electronic Arts	Game launcher (i.e., Apex Legends, Battlefield 2042) Storefront Facilitates community functions
Bethesda Launcher (note: Bethesda.net libraries were migrated to Steam from 2022)	Bethesda Softworks	Game launcher (i.e., The Elder Scrolls Online, Fallout 76) Storefront Facilitates community functions
Epic Games Launcher (PC, Mac)	Epic Games	Game launcher (i.e., Fortnite, Rocket League) Storefront Facilitates community functions
PlayStation Store (PlayStation)	Sony Interactive Entertainment	Storefront (i.e., Fortnite, Genshin Impact)
Xbox Games Store (Xbox)	Microsoft	Storefront (i.e., FIFA)
Nintendo eShop (Nintendo Switch)	Nintendo	Storefront (i.e., Super Dragon Ball Heroes)
App Store (Apple)	Apple Inc.	Storefront (i.e., Genshin Impact)
Google Play (Android)	Google	Storefront (i.e., Genshin Impact)

4.2. How do young adults gamble?

This section describes the environment the participants played video and mobile games, laying the context in which they also engaged in gambling-like features. The environment for gaming includes the devices they used as well as physical and social environment in which they played the games.

4.2.1. Pathways to gambling through videogames

Table 4.2.1 outlines the age participants recalled their initial commencement of playing videogames online. It also shows the age they first gambled online, the game they gambled on, and the specific gambling features they first engaged in. Participants predominantly started playing videogames in early-to-mid teenage years, and generally started gaming well before engaging in gambling -features through the games. The most common games participants reported as their first gaming experience were Counterstrike, Overwatch, League of Legends, and Gacha games (such as Arknights and Fate/Grand Order). These videogames were also frequently reported as participant's first experience with gambling-like features, typically with loot boxes and skins. A vast majority of participants had first engaged with gambling-like features before turning 18 years of age.

Table 4.2.1. Distribution of age first started gaming and/or gambling online by game and gambling feature.

ID	Gaming	Gambling in Videogames		
	Age Started	Age Started	Which Game	Which gambling feature
ID2	5	20	Blue Archive	Gacha
ID4	14	15	Counterstrike	Loot boxes
ID5	11	18	League of Legends	eSports Betting
ID6	17	17	Counterstrike	Skins Betting
ID7	14	14	Overwatch/Counterstrike	Loot boxes
ID8	12	19	Counterstrike	Skins Betting*
ID9	13	17	Counterstrike	Online Casino, Skins Betting*
ID10	12	16	Overwatch	Loot boxes
ID11	13	14	League of Legends	Loot boxes
ID12	15	15	Genshin Impact/Counterstrike/Overwatch	Loot boxes
ID13	13	16	Counterstrike	Skins Betting*
ID14	16	16	Fate/Grand Order	Gacha
ID15	14	14	Counterstrike	Skins Betting*
ID17	n/a	16	Genshin Impact/Valorant	Gacha, Loot boxes
ID18	13	13	Arknights	Gacha
ID19	10	14	Dota 2	Skins
ID21	15	15	Counterstrike	Loot boxes, Skins Betting*
ID22	10	18	Elder Scrolls Online/EA Sports	Loot boxes
ID23	14	14	Overwatch/Fortnite/Call of Duty	Loot boxes
ID24	7	18	Unknown	eSports Betting
ID25	n/a	24	League of Legends	Loot boxes
ID27	n/a	16	Counterstrike	Loot boxes
ID28	n/a	18	Unknown	eSports Betting
ID29	n/a	19	League of Legends	eSports Betting

Note: *third party websites. Counterstrike is used to refer collectively to CS:GO and CS2.

Underage gambling on video games

Multiple participants reported engaging in gambling features in videogames before they turned 18 years of age. The majority of participants mentioned they did this in the context of friends or peer groups:

Obviously being a teenager, the incentive is you see this new shiny thing that other people have, and you're like, "Oh, I really want to get it as well." Because you're a young teenager, you get easily, not pressured, but influenced with that. (ID23, female, 20, gaming, 3/10)

It was easy to engage with loot boxes and gacha in videogames, even underage, given most game launchers (e.g. Steam) enable linking player accounts to gambling websites or access gacha games with no age or ID restrictions. Participants described their first exposure to gambling typically happened by chance, 'stumbling across' these mechanics while playing videogames:

I was scrolling through the game and that I noticed that they have those kind of gacha, loot box thing and I was curious. I played for a bit and then just after realizing that I kind of needed money for it, but I could get rare stuff out of it, so that's how I got into it. (ID17, female, 20, gaming, 5/10)

eSports betting was associated with underage gambling through unregulated third party websites, with tokenistic or non-existent age verification. Participants also referenced the lack of ID checks on external gambling websites. These third party sites often took advantage of using skins or in-game currency for betting, instead of real money.

In high school, I had friends who would gamble Counter-Strike skins on websites on professional eSports games. And if their team won, they would get back skins equal to the value of the odds. So, if they put in skins and their team won and they were on two X odds, \$50 worth of skins and get a hundred dollars worth of skins back. Those sites still exist for specific games and there's obviously underground and deregulated gambling sites that offer eSports. (ID24, male, 24, gambling & gaming, 0/10)

Access to money for underage gambling in videogames was facilitated by using own or parent's credit cards, or steam giftcards. Steam giftcards were popular among participants who spent money on games or items accessible through the Steam launcher, and could be easily purchased through physical shopfronts in Canberra:

My parents would give me some money to go and buy lunch or something and then I'd spend... They'd give me enough that I could go get proper lunch and instead I'd go get Maccas and then spend the rest on a Steam gift voucher. (ID15, male, 20, gambling & gaming, 3/10)

The unregulated environment for videogames made it particularly easy for children to put money in using their parents' cards or devices linked to payment options, as one participant reflects:

... There was no regulation around it. I could just log on and if I had a Visa or a debit MasterCard or something like that, I could just basically go on there and (deposit money or skins for currency/loot box gambling). And as for other types of gambling, I also was doing it on some third party websites that I don't believe were operating legally. (ID21, male, 21, gaming, 4/10)

Particularly the content of and experience of many of the games was seen as a major attraction to children, the games themselves frequently depicting young people and children within the games for easily relatable content.

The content of game(s) do matter ... the story and characters are basically young people, (and are what) really young people around me are looking for. (ID2, male, 23, gaming, 3/10)

4.2.2. Devices used for videogaming

A majority of participants that gamed used their Personal Computers (PC), and only few used mobile devices, such as phones and tablets, for gaming and/or gambling online. Some participants reported using or having owned multiple devices for gaming and/or gambling online, such as PCs and laptops, or consoles and mobile devices, either currently or historically. Participants who commenced gaming as younger adolescents had often transitioned from consoles to PC. Transition from gaming on mobile devices (i.e., phones, tablets, consoles) to PC gaming often coincided with other developmental, and educational milestones, such as from school to university or other tertiary training. Receiving a PC during adolescence was more often associated with gaming purposes exclusively, whereas receiving a PC during university or tertiary training was more likely to be intended for educational purposes alongside gaming.

PCs were seen as the ultimate gaming device. Some participants reported being constrained to using other devices, given financial considerations or other practicalities. As an example, one participant reported gaming on their mobile phone and iPad as they were an exchange student, and thus *"don't have the luxury to set up a whole gaming PC"* Having specific equipment such as a gaming mouse for online play, extra monitors, or furniture was important:

I have everything. So, I've got the chair ... three monitors, nice special keyboard, built the PC myself. So, I have the full shebang. Yes. (ID24, male, 24, gambling & gaming, 0/10)

4.2.3. Physical environment for videogaming

The vast majority of participants reported gaming online at home, in their own rooms, or 'dorms' (dormitories). Participants who only played at home did so as they needed their own computers to play particular games. Most participants described a specific gaming set-up that would be difficult to move around, including physical desktop computers, a specific gaming chair, and multiple monitors.

Games that travelled well on mobile devices or laptop PCs allowed for continuous play. Participants were able to leave the game open while engaged in other activities in 'real-life', for example, a lecture:

If I'm at uni, you don't actively have to play (arknights), you can just turn it on and leave it. So I'll turn it on and leave it while I'm in a lecture, and keep paying attention to the lecture and then every five minutes just tell it what to do and then go back to the lecture. (ID18, male, 20, gaming, 0/10)

It's nice to do when I'm listening to something, for example, like a lecture, and I could just multitask at the same time or get my hands occupied while I'm listening. (ID23, female, 20, gaming, 3/10)

Specific locations were also mentioned mostly in reference to the past, where participants used to go to game arcades or internet cafes to play online. Given that most young adults now have mobile devices connected to the internet, there was no need to attend specific locations with internet connections or specific devices.

In high school, me and my friends would go to the internet cafe after school, maybe once or twice every week. And we stay there for three or four hours for some games. Now we just do that on Discord from our own homes. (ID6, male, 20, gaming, 3/10)

4.2.4. Social environment of videogaming

Nearly all participants engaged in gaming online with a group who they either knew from real life, online only, or both. A handful of participants only played online games with 'randoms'.

Gaming as a social outlet

The majority of participants described online gaming and/or gambling as an inherently social outlet. Using social platforms like Discord allowed participants to meet new friends and play with 'randoms' This social environment allowed participants to connect with friends and others, whether locally, interstate, or overseas. Given the ACT has a large student population, gaming served the purpose of maintaining friendships for those who had moved from interstate or overseas:

My best friend, he is currently in Singapore, and we have been on this long distance friendship for almost three years or four years now. I haven't seen him, but we play every day for minimum of one hour ... and it kind of strengthens our bond. (ID14, female, 20, gaming, 3/10)

I recently moved to the ACT and it has been very handy in my move being able to communicate with friends from interstate. Its comparable to just a social sport. So, if you go and play social football or social hockey or netball, gaming is just an online version of that. (ID24, male, 24, gambling & gaming, 0/10)

For others, gaming was just another way of interacting with friends they mainly engaged with in person, similar to playing sports:

The people I play with, the people I see in person, like, I went to school with every day. I still talk to them, I still see them regularly. We do a lot of stuff together, but yeah, at night-time when we have time we'll just play some games and stuff. (ID8, male, 21, gambling & gaming, 0/10)

Everyone in our Discord ... (are) all ... high school friends ... (we physically) hang out, do sports or play physical tabletop games or something. (ID11, male, 22, gambling & gaming, 2/10).

Participants engaging in eSports referenced attending organised in-person gaming events, such as local area network (LAN) events and specific eSports event. The global presence of eSport events in Australia and internationally became apparent in the interviews:

I think gaming is a pretty universal language. It's how people say football is the world game, like soccer is the world game. eSports has that same kind of feel where it's just no matter really what the language you speak, everyone can understand what's happening in the game if they're all fans of the game. And you get that feel at an event no matter where you go. (ID24, male, 24, gambling & gaming, 0/10)

The interviews also revealed complexities in navigating subcultures within the gaming community. One participant noted their non-gaming friends do not understand online gaming and are not interested in games, hence this participant “*just refrain(s) from talking about that*”, and that they had become “*quite adept in separating games and friendships and also mixing them to make a better bonds between friendships and games*”. Another participant referenced an ‘inner circle’ based upon gacha games:

You are either in the circle and you do play them (gacha games), or you know about them, or you prefer to not touch them with a 10-foot pole. (ID18, male, 20, gaming, 0/10)

One participant even reported significant friendships based upon a shared interest in a videogame's characters and universe:

It's really more of a friends over an interest deal where we talk about it and we talk about the universe and the characters, but we don't really play the game together just because it doesn't have that capacity. (ID18, male, 20, gaming, 0/10)

4.2.5. Patterns of play

The majority of participants reported playing at night-time or on weekends, commonly due to work or study commitments during the day, free time at night, and availability of friends to play with. As an exception, one participant reported playing games during early mornings before work. Some reported playing online games overnight, and until the next day, or spending the “*whole day minus eating and sleeping*” (ID5, female, 23, gaming, 3/10). Others described they focused on playing a greater frequency on the weekends, including ‘all-dayers/nighters’:

I couldn't say the exact hours, but I'm sure that there's been days where it's been all day pretty much. Obviously, time to eat and shower and everything ... but I could go the whole day. (ID11, male, 22, gambling & gaming, 2/10)

Certain game mechanics were also shown to drive patterns of engagement with videogames. Genshin Impact, among some other games featured a server refresh, that led one participant to check in with the game every 10-12 hours or so: *Usually I play it at home but because I play it on a 12 hourly cycle, so I'll play it at 10:00 AM and 10:00 PM. (ID14, female, 20, gaming, 3/10)*

The frequency and length of time spent gaming ranged substantially across participants, but typically occurred daily, with the most common response a couple of hours per day. Participant responses ranged from “*every day... for 10 minutes*” and “*one hour minimum*” to “*two to three*” or “*five hours a day*”. Apocryphal accounts emerged of young adults who knew people that had “*grinded games for close to 12, 13 hours*” and patterns of play emerged with social groups (i.e., “*I'll always play if I've got my mates playing*”). Some participants had lifetime estimates of participation, with more intense play when they were first introduced to the game.

If I averaged it out from every single day, I put in half an hour a day every day since 2011 and now. But obviously that's the average, but it was a lot at the start. It was hours a day. (ID22, male, 23, gambling & gaming, 7/10)

I think it's at the start, at the beginning of when I tried it, because there's a lot of new stages for me to beat through. I think I spent maybe a lot of times, probably five hours a day. (ID2, male, 23, gaming, 3/10)

4.3. Why do young adults gamble on videogames?

4.3.1. Gambling motivations

Participants elaborated on the reasons why they engaged with gambling features in videogames and these reasons broadly fell into psychological, social and financial motivation categories. Multiple motivations for engaging in online gaming and gambling for young people emerged from the data.

Psychological

The main motivation within the current sample to engage with gambling features in games was psychological and/or emotional. These include the provision of *entertainment* or *excitement*, followed by a *relief of boredom* or *stress*, as well as for *interest* and *inspiration*. Participants identified that engaging with the gambling-features in videogames provided additional entertainment to their gaming experience.

It became a lot more entertaining than just watching it, because there were actually stakes involved. (ID15, male, 20, gambling & gaming, 3/10)

Other participants referenced a sense of excitement, particularly in relation to the chance to win items through loot boxes, or other mechanisms. For many participants the excitement stemmed from the rarity or unexpectedness of random outcomes:

I think that real excitement comes from when you're still expecting that the chances are ridiculously low and then somehow magically you do get the really cool thing. Like "Wow, I got that. That was a really low chance". It was more of a long-winded excitement in the sense of the whole period of the Battle Pass, I was like, "Yes, I'm getting cool skins. I'm playing the game. I'm really enjoying the game". (ID5, female, 23, gaming, 3/10)

When you're opening them, even though the chances are minuscule, like 0.25%, of getting a rare special item that can be upwards of thousands of dollars, it's like that's in your back of the mind when you're opening it. Like, oh, what if I do get it? (ID9, male, 20, gaming, 1/10)

Online gaming was also seen as a way to relieve stress, or to elevate mood:

It is a good stress relief. Yeah, definitely. But if you've just had a bad fit of work or something, you'd come play a game and win a rare item or something, you'll feel a lot better normally. (ID7, male, 19, gaming, 1/10)

It makes me feel good. I've gambled a couple times at the pokies or something, but I always feel more, I don't know, happy when I win a skin, because I guess it's more tangible to me. (ID9, male, 20, gaming, 1/10)

The need for emotional regulation increased during stressful events, and some participants referenced the COVID-19 pandemic in particular, like this participant:

In 2020 when COVID hit, and it hit Australia more where I was, got me playing a whole lot more games ... I was in Canberra alone in my uni room, locked in there. I started playing more games, just playing a lot of Dota. A couple months after that, they released a Battle Pass and that was the first time I spent significant money on the game at all. (ID19, male, 20, gaming, 3/10)

Social

Another key reason for young people to engage with gambling features in videogames was social, including connection with friends, or team-building. Particularly loot box opening was seen as a way of connecting with friends who played the same games:

It's the idea of getting more rare items in-game, so I could talk to my friends about it because they've done something similar as well, so we can just talk about what we got from pulling things or opening loot crates and stuff. (ID17, female, 20, gaming, 5/10)

Opening loot boxes was seen as an inherently social activity, whereby some participants referenced 'opening parties' "streaming their screens into open the loot boxes", online. Through these online interactions the peer pressure played a key role in driving online gambling behaviour:

I've ever opened a case when I'm not showing my friends. I'm in a chat party and I'll be streaming me opening the case. I think most people will stream them, because there's no point to open it by themselves. (ID9, male, 20, gaming, 1/10)

Yeah, so if we're all playing a game together, the drops are up the top at the end of the game. And then if you get a case, your friends are like, "Oh, open it. You won't," that sort of thing, sort of egging you on. (ID13, male, 20, gaming, 2/10)

Another type of social motivation was related to increased social desirability obtained through in-game items available through loot boxes and gacha. The social desirability was directly positively associated with lower probability for obtaining items obtained through gambling: "the more rare ones look cooler", adding to the to the perceived 'social ranking' of the player. The more expensive and rare a skin was, for example, the higher the social desirability attached to it:

It feels like in a sense you are showing off your skins. Obviously this is all in your mind as you're playing. You're just trying to play it. But then the reason you would buy that is because you're aware, "Yeah, when I play those games

and I have those cool skins, people are going to think I look cool and they're going to be jealous," sort of thing. (ID19, male, 20, gaming, 3/10)

Financial

Another major motivation for gaming participants was the monetary aspect of skins obtained from loot boxes and other gambling-like mechanisms. Skins were seen as an “investment, an “incentive, that held “intrinsic value”, and could be used to “flex” (i.e., to show-off, boast, or brag).

One participant described the mechanism through which third party websites enabled betting on some of the more desirable and valuable skins to obtain even better skins:

It was one of the coin flip sites. You either double your money or you lose it. I was with this guy and we pooled together a relatively expensive skin. We won the coin flip, and were like, "Oh cool. Let's try again.". And then we won and won another four in a row. Because every single time was doubled, it was 16 times what was already a pretty decent amount, and then we got cocky and lost it all in the next one. (ID15, male, 20, gambling & gaming, 3/10)

Third party marketplaces, while not formally linked to gaming platforms, played a key role in the fluctuating price of skins and other items, based on rarity and demand. This also meant that knowledge of the broader skins marketplace, that behaved much like a stock market, appeared a viable strategy for financial gain for some:

I think the player account or the overall demand of the items that they have can affect the price of it, and they could theoretically make a lot of money owning them. (ID4, male, 18, gaming, 1/10)

eSports also provided a lucrative platform through prize pools but also through being listed on online gambling websites. One participant explained how they were able to financially benefit from playing eSports through various mechanisms:

Once you get up to the higher level prize pools, you can win like a thousand dollars if you come first, that sort of thing ... So if the tournament is public enough, then betting companies will have odds and stuff like that, and you can definitely bet on them. (ID13, male, 20, gaming, 2/10)

4.3.2. Gaming industry strategies

Other reasons why young people engage in gambling features in videogames are due to deliberate design choices by game developers and publishers. Participants outlined multiple ways in which gacha games are designed to attract participation, maintain engagement, and extract money from young people. These design choices make

continued purchasing either attractive or necessary to engage with the in-game gambling mechanisms in order to progress in or enjoy the game. As one participant succinctly puts it:

Let's say that if there's a game that you like, but the only way that you can get items is through loot box or gachas or something, and the only way you can get those is by paying actual money. There's no other way to get around it. So I have to pay money, but I don't really want to pay money, if that makes sense. (ID17, female, 20, gaming, 5/10)

Financial and temporal strategies

In-game currency

Participants described numerous industry strategies that encouraged or 'enforced' spending money on gaming and/or gambling online. Many of these strategies also obscured the value of money or the total expenditure over time. Participants noted how in-game currency, whether used in online gaming or gambling, feels qualitatively different to real-world monetary transactions.

I think the main difference is just how easy it is because online obviously you just click a couple buttons and then, Oh, my money's gone. (ID19, male, 20, gaming, 3/10)

Skins and in-game currency did not hold the same monetary value as in real life currency. It was easy to lose track of spending when all transactions were undertaken in virtual reality with no specific mechanism monitor expenditure. As one participant compared the use of virtual money to currency used at casinos:

The same way that casinos use the chips, to make it not feel like real money, the skins do not feel like real money. It's pixels on a screen. (ID15, male, 20, gambling & gaming, 3/10)

When I spend my cash, I can see how much that I actually spend out. But using virtual applications, I don't have this idea in mind how much I spend. So that's why I thought after spending it, I think I could give that money to a better use. (ID5, female, 23, gaming, 3/10)

Many participants outlined that once they had put real money to purchase skins or virtual currency, they perceived that the money had already 'been spent' and it did not have the same value in their minds as the real currency.

It definitely does feel once you've bought the in-game currency, and maybe if you don't use it straight away and then use it later, it's not like you're using real money. (ID22, male, 23, gambling & gaming, 7/10)

Specific type of currency, the use of which has been rapidly increasing in gambling is cryptocurrency. A few participants described the use of cryptocurrency in eSports as an emerging, and unregulated, area of interest:

People are talking about crypto because there's a lot of crypto betting agencies that are unregulated ... the whole emerging area of it is an interesting space, just because eSports are so new. (ID28, male, 24, gambling & gaming, 1/10)

An interesting new thing with eSports (are) a lot of new crypto gambling sites ... a lot of new international gambling sites use cryptocurrency. (ID29, male, 24, gambling & gaming, 1/10)

Third-party markets

A common mechanism that added to the attractiveness of skin betting and loot box opening was the presence of third party sites that provide a semi-legal and largely unregulated platform to buy, sell, trade, and gamble on in-game items, and to withdraw cash for skins that in many cases behaved like online casinos:

If I wanted to get cold hard cash for my skin, then I would go to third party site. If my skin's worth 650, I'd probably sell it for 500, 550, and then I would could cash out, and that's 500 bucks in my account. It's essentially an online casino... In some websites, you can just withdraw straight cash ... obviously it's a casino, so the chances of that are iffy. (ID9, male, 20, gaming, 1/10)

It depends what the website offers ... back when I was doing it in 2017, I was doing roulette, and crash, and those sort, I think casino style ways of playing the game, really. (ID21, male, 21, gaming, 4/10)

Rookie gambling pools

Participants elaborated on the concept of 'rookie gambling' pools, to draw new players to a gambling mechanic with a guaranteed rare item:

When you create an account, there's a rookie banner, so it's a gambling pool ... that's limited only to new players, and you are guaranteed to win ... it gives new players that dopamine of, oh, I got a top rarity right at the start. But it's not a secret that it does that. It very much says, "Oh, you will get a top rarity in your first 10 rolls". (ID18, male, 20, gaming, 0/10)

I was trying to get this really rare item and then I couldn't get it from the free pools because you can get free pools at first so I spent some money in that. I forgot how much I spent, but then after spending the money and then getting the in-game currency and using it to pull the rare item, I got

it eventually and I guess I was really excited and happy, so I just took a screenshot and sent it to my friends and stuff. (ID17, female, 20, gaming, 5/10)

Pity mechanics

Multiple participants mentioned pity mechanics, that provide a player with either guaranteed or extremely inflated chances to win a rare item, following a successive streak of 'losing' (i.e., failing to obtain a rare item), as many participants described it: getting a 'guaranteed win after spending a lot of money:

(The) new character on it, you really want, and so you spend \$100 to get 90 pulls, you get to 90 pulls, you get the 5-star, but you lost the 50/50, you didn't get the character on the banner. You get the standard character and you're like, "Oh my God, I'm so close." So you spend another \$100 to get that guaranteed 180 pull. I've never done that, but that's a very compelling thing to do for some people. (ID12, male, 18, gaming, 2/10)

You have this other percent chance of getting a pity if you get over, let's say 100 tries on that one character. So for example, if the pity is 100 and even after 100 pulls, you still haven't gotten on your character, they'll just give you the character, but by then you have to spend a lot of money already. (ID17, female, 20, gaming, 5/10)

There's never really a situation where I'm under the impression that I won't have a win because there's a pity system, so after 300 goes, you can just pick which one you want. (ID18, male, 20, gaming, 0/10)

Time limited events

Other participants referenced time limited features of gacha games, that can include the pressure to obtain characters shown for a limited amount of time:

We would just pay a huge amount of money to get that gaming gacha currency, and the guarantee is really, really small to actually get that limited character. It's not worth all that money, but I do enjoy that feeling, anticipation, because they'll never be available again. (ID14, female, 20, gaming, 3/10)

Part of this strategy was for the game publishers to intentionally reveal the 'cast' as late as possible, ensuring a constant drip-feed of desirable characters to players:

They reveal it as late as possible so you don't know what is coming up next. So for example, you gambled everything on this one banner, you got what you wanted, but the next one they revealed suddenly to have a

character that you also very like, but you didn't save up at all on the previous one, so now you will be compelled to spend money on the next banner. (ID12, male, 18, gaming, 2/10)

Game-play strategies

Character attractiveness

The game developers for certain games (mainly gacha) involved immersive worlds, attractive characters, and compelling storylines, particularly in relation that participants perceived as intentional strategy to spend more money on gacha that added on the character development and more complicated

(Game developers) intentionally design the character to be as attractive as possible. And that's one of the big draws of gacha games, they make the characters attractive both physically and personality wise. They design the characters to be as appealing as possible and hype them up with promotional materials. The fans do a lot of the work too, because they draw fan arts, and basically help the developer advertise the game. (ID12, male, 18, gaming, 2/10)

So for me, it's going to sound really, really simplistic, but I just like the way it looks, kind of like a magpie, when they see something shiny. And I want it to have to myself, always forever. And that's what happens. So, if I see something that I deem attractive, I will want it. So, that's it. (ID23, female, 20, gaming, 3/10)

One participant reported satisfaction from nurturing their character, and knew of people who were romantically attracted to their avatars:

And I guess the personal satisfaction comes from that grinding, that "nurturing". You've helped this character grow so much, that you've gambled for, which already adds a personal sense of attachment, and personal attachment, basically. I've seen people romantically attracted to them. You get obsessed. That's like one of the main goal, for you to get obsessed with them and doing whatever it takes to have them in your inventory or something. (ID12, male, 18, gaming, 2/10)

Another participant referenced a gacha game designed to be marketed as a romance simulator:

It's a romance game made for girls. So you have these four guys, and then for these four guys, you will get one of these four guys and there would be banners... So to play a certain storyline with a certain character you would have to gacha. And then to gacha, you would need to finish certain amount of daily commissions, for example. So you have to log in every single day to get that gacha currency and you would pay it to get more storyline from the characters

that you like. But then again, it's a very difficult process and you can't stop once you start. (ID14, female, 20, gaming, 3/10)

Storyline progression

Specifically gacha games tend to include compelling storylines that often does not progress without gambling or other in-game purchases. This was perceived as an intentional strategy to increase expenditure, that involved a complicated currency system:

To play a certain storyline with a certain character you would have to gacha. And then to gacha, you would need to finish certain amount of daily commissions ... you have to log in every single day to get that gacha currency and you would pay it to get more storyline from the characters that you like ... it's a very difficult process and you can't stop once you start. (ID14, female, 20, gaming, 3/10)

And that in order to earn in-game currency, one participant reports:

In order to get the gacha currency, we have to do a lot of storylines. And I think in one sitting I probably spent the whole day minus eating and sleeping. And that went on for a few days as well, so I don't know how to generalize it into hours. (ID14, female, 20, gaming, 3/10)

One participant noted the advertisements by game publishers to promote the purchasable characters:

"Oh, look how appealing this character is. Why don't you spend some money on them?" But they're also insidious in the sense that they're like legit art. They're like, art used to promote a character, to promote gambling, but there's still art. So even without all the gambling aspect associated to it, there's still entertainment basically. Basically just media that you can enjoy without all the gambling stuff associated with it. (ID12, male, 18, gaming, 2/10)

Character performance

Multiple participants report how some games encourage spending money to strengthen your character, or to obtain desired characters to improve player abilities and skill. Particularly in the gacha games players could spend large sums of money in a matter of minutes:

(In) Genshin Impact, if you get the same character twice, they'll get stronger ... there's people who spend a lot of money on a single banner to get this character multiple times to further strengthen it ... the highest you can get costs 180 pulls multiplied by six. That's like almost \$800.

... And you can do it quite quickly, get rid of \$800 in a couple of minutes (ID12, male, 18, gaming, 2/10)

In Call of Duty, you can buy gun loadouts that are like pre-made, and can be more efficient when you're fighting other players. And that's like pay to win because you're paying to have something to be better in game rather than actually working through it. (ID23, female, 20, gaming, 3/10)

4.3.3. Advertising for gambling features in videogames

Final aspect of the data addressing the research question: 'Why do young adults engage in gambling-features in videogames?' is gambling advertising that is specifically designed to draw the players in taking part in gambling activities. Participants who played videogames were exposed to advertisements to engage in gacha or loot box elements on multiple platforms, including YouTube, Google Play, Facebook, Steam, and in-game. One participant discussed advertisements in the context of *game promotion*, whereby gacha games were advertised as attractive, while not drawing explicit attention to the gambling-like features within:

The game [Genshin Impact] has had very good promotional materials. So on the game's YouTube channel, they release character trailers that promotes a new release characters or something. That's like an indirectly gambling advertisement, because they're just basically telling you, "Oh, look how appealing this character is. Why don't you spend some money on them?". (ID12, male, 18, gaming, 2/10)

There were mixed messages about the impacts of videogame gambling advertising, some participants citing them as "*insidious*" given they hide inherent gambling-mechanics behind "*appealing characters*" and "*legit art*" thus being "*a waste of money*" and "*harmful*" to individuals. Others saw advertising as annoying, with little influence on their gambling behaviours, but also as 'part of the gaming experience'. One participant expressed that gambling advertisements, particularly as promoted by YouTube content creators, as:

It's very, very harmful. It's not a good thing at all. It should stop right now ... I don't think there's ever been any talk about stopping this thing. And it's really, we're wasting time, people are wasting money and kids are going to end up in trouble because of this. Something needs to happen now. (ID21, male, 21, gaming, 4/10)

Influencers

A particular type of social media advertising that promoted engaging in gambling features in video games were social media ‘influencers’. These included professional YouTubers or gamers on other platforms with a large following, who were likely sponsored by gambling or gaming companies with content specifically made to attract young people and children. This type of advertising was seen as “*an inevitable part of the online ecosystem, especially as it comes to eSports and game streaming, Twitch streaming and other social media influencers*” (ID24, male, 24, gambling & gaming, 0/10).

These are people who focus their entire career on this sort of thing ... they stream themselves actually rolling these boxes. They discuss the ways to engage with the market and the right things to buy and what not to buy ... it just shows how big this market is and how financially dependent the game is on people gambling in it. (ID10, male, 19, gambling & gaming, 5/10).

Participants discussed how individual content creators can be paid by gambling companies to promote gambling to their userbase. It was broadly known how the influencers ‘*are putting those ads on because the gambling companies are giving them massive amounts of money to put it up there*’, although the financial relationships were not formally disclosed in the videos. The largest streaming services that aired gambling advertising were YouTube and Twitch.

YouTube

YouTube was currently seen as the largest platform where influencers were streaming gambling promotions, including those targeting children. There were multiple ways that online gaming and/or gambling might be seen as attractive/promoted to children. One participant mentioned how popular YouTubers could advertise directly to children:

I’ve seen YouTubers that I watch sometimes promote CS:GO gambling, which half of the time are shady stuff that prey on young children ... they’re very scripted, like they’re reading from a sponsor script or something. And promoting gambling. (ID12, male, 18, gaming, 2/10)

The non-disclosure of financial interests in the YouTube videos were seen as a particular issue allowing individual people promoting gambling products often through false advertising. These included effective tactics to draw players in to use gambling features.

These YouTubers are endorsed by the third-party, and they’ll have a 15-second clip at the start of the video, advertising it. I don’t know how big the third-party websites are, but it’s clearly made by them. (ID13, male, 20, gaming, 2/10)

These influencers would sign deals with some of these online crypto casinos and people would get sign up bonuses, sign up with 'X' affiliate code, and you'll get a \$50 bonus back, you'll get a \$300 bonus back. So, there would be a funnel from people watching the streams, getting the affiliate code. (ID24, male, 24, gambling & gaming, 0/10)

The fact that the streamers did not disclose their financial relationship with the companies, who were able to manipulate odds and betting outcomes on the activities making it seem an easy way to make money. One participant also recalled a particular scandal that engulfed a few prominent content creators:

There was a huge scandal because streamers would gamble. But what they didn't tell was that they had a partnership with the gambling site where they would've increased statistics of winning things. It was like a pyramid scheme. And obviously, the viewers that would get into that website, well, they wouldn't get those stats and they would lose more money than they would actually get from it. (ID23, female, 20, gaming, 3/10)

Twitch

Participants also reported being exposed to gambling promotion through Twitch. While Twitch as a streaming service has now cracked down on their promotion of gambling, participants could recall a time when gambling streams were some of the most popular content on Twitch:

Its banned now on Twitch, but there used to be gambling streams. I would watch a group of people just do online pokies, a lot of people streaming the gambling sites were all partnered with the gambling sites themselves. They'd give them a fair bit of money to promote it, they had sign up codes: sign up, get a hundred dollars the first time you put 50 on or something. So obviously that's trying to draw in people. (ID11, male, 22, gambling & gaming, 2/10)

One participant illustrated the extent of both popularity and coverage of the Twitch platform

It got to the point where slots and the gambling, peaked at the fifth most popular Twitch category, which is no small feat. I think it peaked at nearly 300 million hours watch per month across the world. The biggest streamers were pulling in a hundred thousand plus viewers at any one time, which is the rating of a mid to big sized TV show in Australia. (ID24, male, 24, gambling & gaming, 0/10)

Despite this recent change in gambling content by Twitch, another participant mentioned it is still possible to gamble using 'fake internet points' to avoid the regulatory obligations attached to gambling activity:

You can gamble theoretically, it's these internet points you get given by the Twitch company and you can - at the start of an eSports match - place a theoretical bet. Moving away from real gambling was interesting because it wouldn't be regulated, and it encourages gambling at an early age. (ID28, male, 24, gambling & gaming, 1/10).

eSports sponsorship

Participants discussed how eSports betting is now a substantial part of the eSports industry and the gaming community, exemplifying how betting companies sponsor eSports tournaments and show odds on a big screen, akin to NRL or AFL halftime sports betting advertising:

Those ads are very visible, built into eSports broadcast and something that have grown tremendously in the last three years. There has been a noted increase in gambling partnerships in eSports. This raises questions about the integrity in eSports, especially as it comes to match fixing. So, that's the online sports betting on eSports. (ID24, male, 24, gambling & gaming, 0/10)

Sometimes during tournaments and stuff, during the broadcast, the company that broadcasts it plays ads about the likely outcomes and how much people are winning from betting these against or for a team during a competition. I think there's an aspect where sometimes I want to put in a little bit of money so that it feels more exciting to watch a certain match with my favourite team or something. (ID4, male, 18, gaming, 1/10)

5. Findings related to online gambling

5.1. What do young adults gamble on online?

5.1.1. Betting on sports through apps

A majority of participants endorsing online gambling engaged in sports betting online, mainly ‘footy’ (both NRL and AFL) and the World Cup or English Premier League soccer – that many participants described getting into after the soccer World Cup 2022 that was heavily promoted in Australia. Betting on American professional basketball (NBA) also featured in the interviews. Sports betting also overlapped with novelty betting that was accessible through the majority of sports betting apps, including betting on elections or the Academy Awards. Similarly, eSports betting (betting on live videogames) was highly popular among participants engaging in sports betting online, but also with those who engaged in videogames. For some, engaging in videogames and eSports provided a gateway to sports betting through the same app:

I used to do a lot of video gaming but don't really anymore, unless it's a big competition [on eSports]. I had a little bit of money on the League Worlds Champions, like the League World, and then other than that other big sporting events, like World Cup. (ID15, male, 20, gambling & gaming, 3/10)

5.1.2. Casino table games and ‘pokies’ online

Few participants engaged in other types of online gambling, including casino table games or pokies, that were accessible through illegal offshore sites. Participants described what it was like to access these illegal gambling sites as similar to “*rocking up to a casino but it’s just online and simpler*” (i.e., ID10, male, 19, gambling & gaming, 5/10).

Some licenced gambling venues also made online gambling available through interactive technology, mimicking online casino-type table games, but also some virtual elements similar to simulated gambling.

The Club we go to has a digital roulette table. Same with blackjack. And then they have the big screen where it has the virtual dealer. So not an actual person, but just a virtual dealer. It feels less real, but easier to spend money because you can do smaller bets. So I think at the casino it’s like \$15 minimum every single round. With the digital ones, you can do it from 50 cents. (ID22, male, 23, gambling & gaming, 7/10)

5.1.3. Simulated gambling

Some participants described their engagement in simulated gambling that are generally free-to-play, at least initially, with some games it became possible to put in real money after a period of time, and sometimes payment was required to progress in a game. Simulated gambling games tended to be fast-paced and highly stimulating, where a player is suddenly unable to keep playing or progressing in the game without using real money:

And they also have the online version of roulette, if you want to, you can put some money in to get virtual credit and use it for the game. It's just on your phone and each game can be done really quick, maybe one minute. This game has gold beans, you will get some free beans when you start. And if you run out, you have to put some money in. It's just like Candy Crush. (ID26, female, 23, gambling, 0/10)

5.2. How do young adults gamble?

Devices and apps

As opposed to gaming that was mainly engaged through PCs, online gambling was predominantly accessed with mobile devices, through phones and tablets using dedicated gambling apps. The most popular apps were Sportsbet, Ladbrokes, bet 365, PointsBet and Neds. All participants who used these apps described having at least two, and up to 10 accounts across different apps.

I would use Ladbrokes, PointsBet and Neds. The reason for that is because they give out the bonus bets: if you're putting \$50, we'll match that with 100% bonus bet. So if it's 100%, then you get a \$50 bonus bet if you put in 50. And that's not free cash, but a free bet. And I think all the apps do that. (ID22, male, 23, gambling & gaming, 7/10)

Patterns of play

Given that most participants engaged in sports betting, the patterns of play were consistent with the game schedules, seasons and events.

Most games on Friday, Saturday, Sunday, so maybe three or four bets a day on those, depending on what I'm confident on. And then, on other sports throughout the week, maybe, again, three or four just on other ... mostly your Formula 1 or other sports I'm interested in. (ID28, male, 24, gambling & gaming, 1/10)

Coming off of the NRL and AFL season, I won't be betting as much, but we're moving into the races in November. (ID35, male, 19, gambling, 1/10)

Another common pattern was that participants prioritised betting on sports they were able to follow, with a sub-pattern emerging whereby it was also common that 'following the game' did not necessarily mean sitting down and watching the game from start to finish:

Sometimes the NBA games can happen in the morning, typically early in the morning. Might not be able to watch it, but I can pay attention to it. I can keep updated with the scores and everything else. I don't necessarily have to sit there and go, "oh, I am watching the game from start to finish". (ID31, male, 22, gambling, 0/10)

Gambling frequency and expenditure

The amount of money gambled and the frequency of gambling varied substantially. Most participants would play on a weekly or monthly basis, with more or less periods of intense gambling. A typical amount of money spent per bet ranged from \$5-20 AUD, and bigger events or games, as well as large jackpots on lottery, were shown to attract larger gambling expenditure. Seasonal variation was also evident:

I spent about 500 bucks over a year. And yes, I can see the value attached to it. But when you spread it up month by month, honestly, in the month of November it might be \$100 on the Melbourne Club plus two or three tickets in the lottery if the numbers were that high in that particular month, and whereas I could go two months without placing a bet on anything, especially once the AFL finishes. (ID34, male, 24, gambling, 2/10)

There were also bigger spenders who regularly bet over \$100 at a time, accumulating a greater expenditure over time:

I usually go for a 50. I feel like that's sort of my main sort of thing. I feel like the highest that I've gone is 250. I try to... I don't know, it just seems like in the moment I sort of just figure out. I definitely feel like I haven't really... As far as I know, I wouldn't go anywhere over 250 unless I was 100% sure that I'm going to not lose everything. (ID35, male, 19, gambling, 1/10)

Spending large was also directly related to higher disposable income, as one participant described:

I was working a lot, full-time at the time, 40 to 60 hours a week, so I was just working 12-hour shifts most days. It could have been like 300, 400 on that's a big day. And then also the bets were a lot bigger. Those would've been like \$300 bets. If I did it now or the few months late last year, it was like \$10, \$5. But back then it was \$100. (ID22, male, 23, gambling & gaming, 7/10)

Environment of gambling

Participants who engaged in sports betting were often physically at a pub or other venue where live games were on display. Participants typically watched sports on one big screen with their mates, and gambling was one of the many activities that they engaged in during the evening out. Gambling was seen as partly social, but also an activity that you could do by yourself while doing other things. While participants saw gambling as a social activity, their bets were placed individually using their own devices and money:

Generally I'll go TAB. They've got all the big screens with the horses on and the dogs, or the footy's on mainly. And everyone's putting on Sportsbets. You can do the multis. So everyone's always talking about that for two hours. (ID22, male, 23, gambling & gaming, 7/10)

Others also engaged online while they were putting their bets on, like this participant:

We might be on a voice call or even just on the group chat, just sort of texting about it. It's not really a serious thing like, "Oh, we need to win," that sort of thing. It's more just for fun. (ID35, male, 19, gambling, 1/10)

A specific pattern of betting on sports involved gambling with mates that participants had met through playing sports:

Before uni I played semi-professional basketball. And we do watch a lot of games, and analyse that, and we know when they will win because we know a lot about the game. (ID25, male, 24, gambling, 4/10)

I met most of my mates through school, through basketball and we all are pretty passionate about it and we support it quite a lot. There's a few betting groups we have between our mates and stuff. But the interest grew out of the sport rather than out of the gambling activity itself. (ID8, male, 21, gambling & gaming, 0/10)

5.3. Why do young adults gamble online?

5.3.1. Pathways to gambling

Exposure to gambling as a child

Most participants who engaged in online gambling did not start before the age of 18, given the highly regulated age identification system, that appears to be an efficient deterrent to underage gambling online. While they were not able to create an online gambling account, many participants described being exposed to offline gambling

through friends or parents as a child. The data shows clearly that any exposure to underage gambling was facilitated by, parents, schools, but also other significant adults:

I have this close friend, and her parents are huge gamblers... they do online gambling as well and sometimes I would just overhear their conversations and the name of the sites that they do it on. So I did go into online gambling with my friend, but we were only doing that based on what we were overhearing from her parents. (ID14, female, 20, gaming, 3/10)

A substantial group of participants specifically mentioned Melbourne Cup as part of their gambling journey:

At (primary) school Melbourne Cup was played. I have no idea if that would be allowed now, When I won the sweep one year I remember feeling like the coolest kid in school. Things like that throughout my childhood definitely would've contributed to my gambling. And even just things like World Cup, like potlucks when you're in Year 4, and whoever chooses the right team gets a special prize. (ID32, male, 18, gambling, 4/10)

I was 10, being the Melbourne Cup, it costs you \$2 and you draw a number out of a hat and that's your horse number for the race. And then you go home and Mom and Dad let you pick one horse for \$5 and they'll put a bet on each way for you as per se. The lotto side of things, the hysteria that often gets run through the community once it gets to that 60, 80, \$100 million mark, half of Australia is putting a ticket in at that stage, I do remember that as a kid vividly. (ID34, male, 24, gambling, 2/10)

The age verification system online acted as a powerful barrier and deterrent to underage online gambling, but a handful of participants who had engaged in online gambling under the age of 18 described how they obtained the documents needed for age verification:

I signed up at 16. ... I might've used one of my parents' licenses and cards, but that's the first memory I have betting on horse races, on a weekend or during school holidays, it wasn't that much money. (ID33, male, 23, gambling, 4/10)

Similarly, those who turned 18 before the rest of their friends had felt pressured to open online gambling accounts by their underage friends:

When you hit that 18, it's like people want to participate in that alongside you because they can't do it themselves. I definitely felt like at that time that was a massive contributing factor for me getting... What I would call getting a kick up the ass at that time and doing it, because it was like everyone else wanted me to do it. (ID31, male, 22, gambling, 0/10)

Heavy technology usage

Another common pathway to gambling involved heavy technology usage as a child, including videogames. Being exposed to simulated gambling, or eSports as a child was also considered to contribute to the transition to more traditional online gambling using real money:

Over time, I started getting an interest in eSports through playing video games ... and gambling mostly on eSports because I was winning more in it because I knew more about it and at least felt like I was winning more. I really only do online gambling through channels like Bet365 and Sportsbet And they have other sports I have interest in, like Formula 1 that I like to gamble on. (ID28, male, 24, gambling & gaming, 1/10)

On Discord there were these little bots that emulate gambling and placing bets on not real things. That's where I developed the interest and then having all the ads shoved in your face on TV and stuff, I just was interested from there and it just progressed. (ID35, male, 19, gambling, 1/10)

Similarly, heavy technology use also meant that participants were more likely to be exposed to gambling advertising at a young age:

I've always known that betting was a thing since childhood, and I guess probably through advertising. I couldn't pinpoint a day where I saw an ad and then decided to go bet but I've been exposed to advertising that has made me aware that SportsBet had a website where you could bet on elections, and I guess by looking at their website I found all the other things that you can bet on, as well. (ID20, male, 20, gambling, 3/10)

I started sports betting at 16. There's lots of ads and stuff. When you're 16, you're sitting there and you're finding out about this, and there's casino, movies. And it's like, "Ooh," bright flashing lights. Money, money. So that's when I sort of started doing it. (ID32, male, 18, gambling, 4/10)

Sports engagement

Many participants who engaged in online betting on sports had a history of participating in playing sports as a child or young person (i.e., "growing up around sporting clubs and stuff, we all got sucked into it") (ID30, male, 20, gambling, 10/10). A common pathway to gambling was revealed where playing sports led to watching sports, exposure to gambling advertising, and subsequent uptake of gambling:

I play footy. Especially when I was younger, a lot of the bookmakers could get away with inflated odds, special offers, et cetera, I'll call it an inducement, that's probably more likely when I'll be willing to put a bet on. Whereas if it's just the standard odds, I know that the bookmakers are taking 8% or something out of

the pot, so it doesn't excite me as much in that situation. (ID34, male, 24, gambling, 2/10)

In high school I played basketball every day from 8 to 4pm with my coach. So we got more time to know each other, we didn't practice during the whole time, but chat. And he would tell me about his betting. He also bet on the NBA games, and I watched NBA during that time, so we got a lot of things to talk about. And when it was raining we would watch NBA together. (ID25, male, 24, gambling, 4/10)

Sometimes sports betting started purely from an interest in watching sports, either with mates or alone. Some gambling websites also streamed live games online for free as part of their membership:

I'm a very big NBA fan and a very big NRL fan, and you sit there and you can watch the events but also want to participate on your own micro level (betting). I think if I can throw back to when I was 18, what got me into gambling was the NBA finals, it just correlated time-wise with that. (ID31, male, 22, gambling, 0/10)

When I came to Canberra, I just go to uni, have the class and after class I go back to home and watch games. It's quite boring. And I watched a lot of NBA during that time, and realized the Bet365 stream the game for you, all you need to do is bet a little bit. Then you can watch the games for free. (ID25, male, 24, gambling, 4/10)

Although being part of a sports club also served as a protective factor for some (i.e., “I actually don't gamble too much because of my sporting background”), it seemed to vary by how much individual sports clubs had invested in talking about gambling harm, and how they sought to increase gambling harm literacy amongst athletes engaged in competitive sports.

5.3.2. Motivations to gamble

Psychological motivations

Participants who described psychological motivations to gamble placed a strong value on gambling as entertainment. Notably, this entertainment factor was only a vehicle to feel less bored, more excited, and in some cases more ‘alive’:

I work part-time at night, so I put on some bets and listen on my headphones to the game to make it more exciting. (ID25, male, 24, gambling, 4/10)

It's definitely excitement, engagement. Anticipation is the word. It gives you entertainment for however long the game is, two hours, that otherwise it

might've been other awkward conversation in a pub or sitting in your room doing something else. And it definitely makes your heart beat a bit faster watching it. (ID32, male, 18, gambling, 4/10)

One participant who attached the emotional response to gambling to 'feeling more energetic', described the fine line of feeling excited and then angry if the outcome was different to what they put money on:

I'm feeling more energetic watching the game, and put more emotion into when, for example, in the first half they lose one goal, at first half you were feel pretty angry, but if they did, you are pretty happy. That kind of increase your emotion drive for the game. (ID25, male, 24, gambling, 4/10)

I'll often attach my emotions to however the outcome looks like near the end. And then often, if it's [win] looking likely, then I can get quite excited and quite engaged, and almost longing for that to come to fruition. (ID31, male, 22, gambling, 0/10)

Specific psychological motivations to gamble included the capacity to 'elevate' the experience of following a team to the next level. Indeed, many participants taking part in sports and races betting supported a team, and thus gambling was used to enhance the enjoyment of watching sports: "It can create a sense of involvement... gets you more into it", including betting against own team:

Honestly, I'd bet against mine's team, if anything. It's more like a win-win situation. So if we lose, I get money, if I lose the bet, then we won the game. (ID8, male, 21, gambling & gaming, 0/10)

I feel more interested in the game. There's more anticipation, more nervousness. I think I wouldn't have cared as much because the loss amount wasn't that high again, so that makes it easier. It's like whenever you gamble on any sport it just makes it more exciting especially if you're not super interested in the outcome. (ID28, male, 24, gambling & gaming, 1/10)

You feel more involved in the result, like you actually care. I was watching the football at Manuka Oval on Sunday. I didn't place a bet that day, but I know if I had of it would've made for a more interesting I didn't follow either of the two sides who were playing. That sense of apprehension and involvement, especially for the horseracing as well. (ID34, male, 24, gambling, 2/10)

Social motivations

One clear pattern that emerged from the data were social reasons for gambling: "I only participate in gambling when I have social need - supporting the team with friends", or "The only reason I play it is because my friend asked me to", and "You get a more of

a high when you do it with your friends". Some participants talked about how social motivations could easily turn into social influence, or pressure, contributing to increased gambling, particularly in some professional contexts. A person working for a specific organisation described this dynamic:

We all live together in a dorms type of situation. And when you're living with so many blokes, there's always sports, there's always rugby on the TV, there's always these things. It sort of starts off as a joke, like, "Oh, place a bet. This will be good fun. We'll have a laugh." And then slowly it progresses to... Certain people have a bit more of an addictive personality; start to take that too far, and then it creates almost a negative culture within a team of people. (ID32, male, 18, gambling, 4/10)

A difference between professional groups were also exemplified by these participants:

It's a culture thing, a lot of the boys who gamble are tradies, so they'll all go down to the pub on a Friday night at three o'clock and start figuring out what they're going to do. Whereas in my field it's not very common for people to do that. I feel like we're more likely to talk about stocks or something like that. (ID34, male, 24, gambling, 2/10)

I work in hospitality and I feel like there's a lot more people in hospitality that do gamble. And some of my bosses will occasionally be like, "Oh yeah, look at this sports bet I just put on", or whatever. And so yeah, I'm kind of still surrounded, to a certain extent, with people that are gambling. (ID15, male, 20, gambling & gaming, 3/10)

A social motivation or influence to engage in footy tipping with or without money was particularly strong in work environments, where gambling was normalised as a social activity:

... World Cup event for when the office sweepstakes for those kinds of sporting events, or footy tipping ... Typically those kinds of competitions where you're thrown in a tunnel and it's into an office party pool. (ID24, male, 24, gambling & gaming, 0/10)

Participants also described the social dynamics involved in the pre-game discussions about which bets to place on, including 'showing off' their knowledge about the game:

I have a few friends who I talk to about betting, and if they follow other sports and have things they're super confident about and they're like, "Put money on this," I'm like, "Okay, sure. I'll give it a go." And if they lose, I'm not angry about it. It's just they were confident and tried to help me out. They get enjoyment out of potentially winning and being like, "Nice, I got you some money". (ID28, male, 24, gambling & gaming, 1/10)

Social motivations to gamble could also turn problematic in the context of trying to quit or reduce gambling, as described by one participant who had been trying to quit sports betting:

It was just every Friday, going into the TAB and be like, "I might not put anything on." But then everyone's doing it all together, so I'm like, "Oh, no, I'll put something on. What if tonight I win?" one time, I was just an hour and a half of just sitting there just before the game starts. And I see another person's got a multi on. So I'm like, "Oh, I want that multi". (ID22, male, 23, gambling & gaming, 7/10)

A handful of participants, mostly students from interstate (Sydney, Melbourne) also talked about the influence of particular social groups on their gambling behaviours between their home town and Canberra:

I believe that there's a personal taboo that I place on going out of my way to overtly gamble in Canberra compared to what I do in Sydney. Which, born and raised Sydney, I know my circles and I'm more comfortable gambling there, they're more willing to judge me here. (ID31, male, 22, gambling, 0/10)

I grew in Melbourne, some people I was friends with, I'm going to call them gambling addicts ... on pokies and online gambling. A lot of those friends are from the sporting context, back in Melbourne, really prolific around AFL clubs, from 12, 13 years old through high school through, you can see that change as they grow up and played AFL, to where they are now. (ID34, male, 24, gambling, 2/10)

Financial motivations

About half of the participants who gambled online were motivated to gamble because of financial gains, with the underlying assumption that the potential wins would provide financial stability, with common hopes for a 'big win'. Financial motivations were strongly associated with sports betting, but also on lottery whereby the potential for large jackpots were about a promise of something better, potentially lifechanging:

There'll be the running joke about, spend \$10 and then you can retire and don't have to come to work on Friday, just that sort of thing. (ID34, male, 24, gambling, 2/10)

I was already really heavily using technology, like playing video games on my phone and doing all this other stuff and this seemed like something I could do on my phone that had a real world impact when it came to money and was a way I could earn money without working. (ID33, male, 23, gambling, 4/10)

Participants engaging in sports betting and placing group bets, multibets, or 'multis' were comparably more financially motivated than others, because these "provided a broader chance of getting something in return". As another participants shared:

Depending on how I was feeling at the time was the feeling of getting the big win. And I think that comes in with the multis a lot ... you just keep making your multi a lot bigger and the multiplier gets bigger and you see the number get bigger and you're just like, "Oh, this could be big." But the odds get exponentially smaller that you get that. (ID22, male, 23, gambling & gaming, 7/10)

I'm mainly slapping on stupid multis. So it'd be a 20 leg multi, like a dollar with a \$2,000 payout. So I haven't really won that. I hope to win the money. Because it's a dollar into a thousand. So it's like, it's obviously insane. (ID8, male, 21, gambling & gaming, 0/10)

Arbitrage betting, the ability to make multiple opposing bets, was seen as a 'guaranteed way to make money':

My mate was like "Oh do you want to make some easy money betting?" So he just showed me how to do it. I'm just betting money that I've already won and I'm just going down to a comfortable point of which I'll... I think this is probably the best one because this has very large bets. (ID8, male, 21, gambling & gaming, 0/10)

Arbitrage betting

- Arbitrage betting typically involves placing bets on all possible outcomes of an event, potentially across multiple bookmakers, giving an 'unfair' advantage to the player (Podesta & Thomas, 2017). This exploits price discrepancies in betting markets, to try and guarantee a win regardless of the actual outcome (Constantinou & Fenton, 2013).
- Different bookmakers offering different odds for the same event creates an opportunity for individuals to try and to secure a profit by strategically placing opposing bets.
- While arbitrage betting is technically legal, this practice is generally frowned upon, and bookmakers often restrict or sanction the accounts of individuals who they suspect engage in arbitrage betting (Podesta & Thomas, 2017).
- Australians are also warned that arbitrage betting schemes are associated with investment scams, and thus warn consumers of the need to be vigilant (Australian Securities & Investments Commission, 2016).

5.3.3. Advertising

Another factor contributing to gambling behaviours was the direct influence of gambling advertising on the initial take up, and also continuing gambling behaviours. There was a clear consensus among participants that TV and sports were plagued by gambling advertising. Many participants also discussed 'new' types of advertising and promotion of gambling through social media, either in the form of actual ads, or individuals streaming their gambling activities. Some high profile social media 'influencers' also provided winning 'tips' through their blogs or videos. While few participants mentioned gambling ads on TV, not many of them watched regular free-to-air TV, with the exception of live sports.

Social media advertising

Of all activities available online, participants spent most of their time on social media, including TikTok, Snapchat, YouTube, and Instagram. These platforms were also the most common platforms participants reported being exposed to gambling advertising on, including when they were under 18 years of age. Due to how the algorithms for online advertisements operate, watching one gambling advertisement or promotion led to being continuously targeted with similar content:

TikTok has live videos that come up and it's someone actually playing the real pokie, it's just like a video game. I've had stories come up of live people just playing it and they're putting \$1,000 bets in. And then if you watch one, because of how the algorithms work, it'll definitely come up again. And then if you pause on it for too long, more and more keep coming up. (ID22, male, 23, gambling & gaming, 7/10)

A majority of gambling advertising on social media was for sports betting, that appears to be the largest gambling advertising market across all platforms. Sports betting advertisements were particularly geared towards influencers putting on bets using particular apps on videos that clearly target young adults and children:

The ads are increasingly targeted towards kids in the mirroring TikTok trends, and getting a Shaquille O'Neal at PointsBet. It absolutely feels like it's got the wrong intentions there. Kids is the big one. As much as it's the case as to how I started sports betting, I really dislike the whole culture that when you hit 18 you get a betting account. And I think how saturated it is across the board is just building up anticipation. (ID31, male, 22, gambling, 0/10)

I mainly get ads on YouTube videos, which sucks because they're so hard to skip now and you can't skip them on your phone and it's always super unrelated to why I'm even on YouTube. I'll be trying to watch something for uni and it'll

come up with a betting ad, so that's super frustrating. But I don't like them. I think they should be banned. (ID33, male, 23, gambling, 4/10)

Sports betting ads

Gambling advertising through live games on TV or events were attached to most major sports including AFL and NRL footy, cricket, Australian Open, with “*mid-game or half-time updates on odds*” and “*gambling industry promotions*”. Sponsorships for major events were also mentioned by the participants: “*I'm disgusted that stadiums are named after betting companies, or Manly have PointsBet on the front of their jumper*”. Particularly sports betting ads tend to minimise gambling harm, with humorous spin to ‘dilute’ any gambling harm that the advertisements now need to refer to, since March 2023:

We all see the sports, their ads, and they're funny. They're good ads, and they make you laugh, and it really sort of entices, especially young men. There's a lot of blokey, "Oh yeah, be a man, place a bet," sort of thing. I think that's where it becomes an issue. And it's appealing to younger and younger people every day. (ID32, male, 18, gambling, 4/10)

It's shoved in your face every ad break, basically. I think also at the end of the day it is sort of more of a light humour type vibe. It's not really serious, like, "Oh, be careful." It's more of just a hanging with mates type thing and sort of putting the humour into it. There's a turban one (advertisement) where he's meditating and then there's the barbecue one as well. I definitely feel like they lean towards the humour and turn a blind eye to the gambling issues that come with it. (ID35, male, 19, gambling, 1/10)

Although for some participants, these ads during games had a huge influence; depending on the level of aggressiveness of the advertisements, but also the ‘slowness’ of the game where they needed some extra excitement to maximise enjoyment:

The ads during the Australian Open were huge, and actually really changed my behaviour on either betting on the next game or going on and checking the odds and seeing how to live bet. Cricket as well, I think because it's pretty slow. It's like if I see an ad it's like, oh, that's something I do in the meantime between overs or something like that. (ID34, male, 24, gambling, 2/10)

5.3.4. Gambling company strategies

Given that online gambling the current participants regularly played mainly involved highly regulated legal online gambling, there were only few gambling industry strategies that would be available for the operators as to comply with the licencing

rules. This is opposed to the range of industry strategies used in the gambling features in videogames, that is not regulated in a similar manner. Most of the strategies industry used to lure patrons in were financial, including spending money online (rather than in-person) including in game currency, as well as special offers and inducements that have a substantial overlap with the gambling advertising and promotions described in the previous section.

Spending money online and in-game currency

Participants consistently reported the ease of spending money online by clicking a button and not being easily able to track expenditure. Simulated gambling with or without in-game currency used the tactics of large numbers appearing on the screen.

You don't put money into that at all. I felt weird too, just seeing the jackpot come up and going, "I'll press it again." And the games use big numbers, like a million, \$2 million, a billion, oh, \$100 billion. Instead of \$500, \$10 bets, they use those big numbers. (ID22, male, 23, gambling & gaming, 7/10)

Special offers and inducements

Online promotions for sports betting with special offers and inducements were accessible through websites, apps, including social media. They ranged from special offers online to specific targeting on phones and emails from online betting companies. Chasing special offers was also a common reason why participants had multiple sports betting apps, as they all offered special inducements at different times. Some even went chasing for them to reduce their gambling costs:

My mate would find promotionals off different websites and then just tell me and I'd just sign up to them and get \$300 for free in bonus bets. I feel like yeah, maybe gambling is definitely not something that should be promoted. People are going to do it. I mean, if you stopped for a while and you see a gambling site with a promo and it's like, "Oh, I'm going to get back into it", it's not really healthy. (ID8, male, 21, gambling & gaming, 0/10)

Sports betting apps also functioned to target individuals who newly joined, with direct text messages or phone calls about special offers:

I don't know if this is paranoia, but I feel like with PointsBet and Ladbrokes, I'd get on it. I'd put a bet on for the bonus bet, and then two weeks later I would get another bonus bet. But now that I haven't used that app for six months, I don't get any texts. I feel like it's targeted because I've only ever got those texts right after using it. (ID22, male, 23, gambling & gaming, 7/10)

Sometimes it was impossible to get rid of gambling promotions that popped up on the screen:

After you saw it, it is quite annoying, because sometimes they will set a, how to say, invisible? Invisible link, not link, invisible something, like you cannot directly close it, and when you click that X, it will pop up to another tab, and directly send you to the bad website. (ID25, male, 24, gambling, 4/10)

6. Gambling harms

This chapter focuses on gambling harms reported by the participants in relation to their experiences of online gambling. At the end of the chapter we also report data on the interviews with parents and service providers, who mainly focused on concerns about potential and existing harms for young people, as well as support needs to address these harms.

Each young adult participant was asked to complete a 10-item questionnaire asking about consequences of their online gambling using the Short Gambling Harm Screen (SGHS; Browne et al., 2018). The average SGHS score for the sample was 2.7 (out of 10) overall, with a median of 2, that ranged from 0 to 10. For participants who engaged in gambling on videogames only, their mean SGHS score was 2.4 (with a median of 2.5), and for participants who engaged in traditional type of gambling online only, their mean SGHS score was 3.1 (with a median of 2.5). For individuals who engaged in both videogame and traditional online gambling, their mean SGHS score was 2.4 (with a median of 1.5). The distribution of individual SGHS item responses are shown in Table 6.1. The most common consequence was having regrets about online gambling, with more than half of the sample endorsing this item. Other common consequences were financial: reduction of available spending money and savings. Those who only gambled on traditional type gambling online also tended to report less spending on recreational activities.

Table 6.1 Distribution of SGHS item response.

SGHS Item	Item Name	Gaming Only (%)	Gambling Only (%)	Gambling & Gaming (%)	Overall (%)
1	<i>Reduction of available spending money</i>	43	44	38	46
2	<i>Reduction of your savings</i>	29	44	25	37
3	<i>Less spending on recreational expenses</i>	14	56	13	34
4	<i>Had regrets...about your gambling</i>	57	50	63	60
5	<i>Felt ashamed of your gambling</i>	7	31	38	26
6	<i>Sold personal items</i>	14	6	13	11
7	<i>Increased credit card debt</i>	0	13	0	6
8	<i>Spent less time with people you care</i>	21	31	13	26
9	<i>Felt distressed about your gambling</i>	7	25	25	20
10	<i>Felt like a failure</i>	0	13	13	9

6.1. Harms related to videogame gambling

This section reports on harms related to engaging with gambling features in videogames. Sometimes it was difficult to decipher whether the harms were mainly attributed to the video games, and playing in general, or the gambling specific elements accessible through the games.

Spending money without realising

Engaging with loot boxes and gachas were related to spending more than intended, that was mostly to do with the small incremental amounts that accumulated to large sums over time:

On Overwatch, mine totals to around 700 AUD. It's a lot. I'm just obviously thinking, I really had a huge problem, a gambling addiction as a young teenager. I had such a big problem with gambling that two of my accounts got banned for monetary fraud. (ID23, female, 20, gaming, 3/10)

For some, the realisation of the amount of money they had spent on a game also meant that they started better monitoring and curbing their expenditure on skins through loot boxes:

After spending about \$250 plus, I felt really lost and empty. And then I look at the skin and I felt like that I could have used this \$250 for something else. That \$250 is actually a shock, that I could spend so much money on the game. So, after spending so much, I began to calculate and realized I spent about \$600 to \$800 in total in the game itself. (ID5, female, 23, gaming, 3/10)

Notwithstanding that the amount spent on single transactions on loot boxes or other microtransactions were generally small, as many participants were not yet earning a full-time income, spending money on games including gambling features meant that participants had no money to engage in other age-appropriate activities:

I basically had no money to hang out with my friends because I'd spent it on loot boxes in CS:GO. I Didn't really ask my parents for money because I knew they probably weren't going to give it to me. But I just said to myself, "Well I can either go downtown and buy some food with my friends and we can eat that, or I can waste it on loot boxes in CS:GO and get nothing". (ID21, male, 21, gaming, 4/10)

Spending too much time

While the financial and social impacts of spending money on gambling features featured in the interviews regularly, even more common were mentions of spending

too much time on gaming, and prioritising games over other activities. Some reported grappling with time-intensive periods of play:

I've definitely had a problem with that, where I've actually allowed myself to rather prioritize video games over the more important things, like being on top of work, being on top of social relationships, that sort of thing. (ID10, male, 19, gambling & gaming, 5/10)

The way some of the videogames operated were directly related to spending long periods of time engaged, without taking breaks. In addition, few games required constant concentration while being engaged, that also allowed multitasking with other activities:

It feels good to get higher on the leaderboard, which you can only do through playing the game, getting better stuff - it's a real time sink. It's not the most fun while you're doing it, but getting the progression and the odds is good. Sometimes, it's a bit hard to stop. Usually I'll have something in the background as well, Netflix on the other monitor, I can do both at the same time. (ID11, male, 22, gambling & gaming, 2/10)

Sometimes the games participants had invested money on would occupy them mentally when they were trying to sleep, or focus on school, occupational or social activities, including at times when they were not physically playing or following the event:

I would just put a bet on eSports game before I go to sleep and then think about ... Because they'd be at two in the morning and I'd have school the next day. And then wake up, first thing, I go and check it ... I wouldn't miss school, but at recess or lunch occasionally, this was not an often thing, but occasionally I'd be watching a game. (ID15, male, 20, gambling & gaming, 3/10)

The time spent on playing games would increase stress in particularly stressful periods:

Sometimes during periods where I have exams it would get really stressful and as a stress (reducer) I would just play games. But then that further worsens it, because the time needs to be spent on revising work. (ID4, male, 18, gaming, 1/10)

Losing track of time

Losing track of time often featured in relation to time-intense periods of videogaming, although this time perception varied across participants and some of them made a conscious effort to take breaks between games 'to do other stuff'. Others were not able to stop during really intense periods of gaming, and some participants sat for a

long time and “*didn’t move for hours*”, “*feeling horrible*”. This included neglecting self-care and eating:

I’m sure that there’s been days where it’s been all day pretty much. Obviously, time to eat and shower and everything ... I could go the whole day. (ID11, male, 22, gambling & gaming, 2/10)

12 hours a day during the holidays. And I also forgot to eat as well. Once you get there, you don’t realize how much time you had spent. (ID6, male, 20, gaming, 3/10)

Participants spent more consecutive hours playing videogames, as well as prioritized gaming to a greater degree, when they were younger teenagers. Most participants also associated high school and university periods with a greater frequency of participation in online games, as opposed to time periods where individuals had more regular schedules or other responsibilities:

It was not uncommon for me through my university days to have 24 hour gaming sessions. Not typically much longer than that. And I definitely don’t have that level (anymore). I value my eight hours of sleep nowadays. (ID24, male, 24, gambling & gaming, 0/10)

The importance of eSports as a community ritual also emerged, with the timing of these events shown to influence participant’s patterns of behaviour:

In eSport, it’s actually the longest. So since there’s five games in it, between each match, normally there’s like a 20-minute break or so. So during that time you can just do whatever you want or if I’m at a social setting, we just do something else or chat or get some food or whatever and then come back to it. (ID29, male, 24, gambling & gaming, 1/10)

6.2. Harms related to online gambling

Harms related to traditional online gambling - mainly sports betting - included financial, and relational impacts, that also reflect the distribution of SGHS harm items. While few participants mentioned feeling embarrassed, distressed as a consequence of spending too much money or time on gambling, psychological harms from gambling did not appear to stand alone as a type of harm for the current sample.

Financial impact

While the participants who gambled commonly reported low levels financial harms on the SGHS (Table 6.1), financial consequences gambling was not seen as a major source of harm in the overall sample. However, financial consequences were

perceived as 'harms', when they were accompanied by psychological impacts. This is exemplified by a handful of participants who spent very large sums on gambling, that almost always resulted in psychological harms.

I deposited about a thousand and over the weekend I got to about 5,000 I think, and I lost it all. the winning was obviously a big high. And then yeah, the down low, once it lost a little bit, just couldn't stop. It was a pretty bad feeling once I lost it all, but because it was such a big sum I'd go chasing it. I'm always trying to chase losses. (ID30, male, 20, gambling, 10/10)

I think my worst time maybe was about \$600. Oh, no, maybe \$700 to \$800. I think that would've been my worst. And that would've been really ashamed and then distressed and would've been like, "That was a stupid thing for me to do. Why would I do that?" (ID22, male, 23, gambling & gaming, 7/10)

The gravity of the financial impacts also reflected the life stage and living circumstances of most participants: many of them were still living at home, or otherwise supported by family, with generally very little financial responsibilities:

I'm quite young, as are a lot of friends who [gamble]. I haven't seen them be evicted or lose their car or their house, sort of thing. But that's 'cause at this age you don't have it, I know at 40 years old someone can gamble away their house without anyone else knowing, because it's a bit of a silent thing. At my age it's more so just the joke about they won't have another two drinks at the pub. (ID34, male, 24, gambling, 2/10).

These comments were echoed by others describing that losing money did not translate into significant impacts in circumstances where it is easy to reduce living costs:

Sometimes I've pulled money out of eating out budget and just for that week I've not eaten out and just cooked at home. It hasn't had a negative impact, just has eaten into other aspects of my budget occasionally. (ID28, male, 24, gambling & gaming, 1/10)

Others had witnessed large financial losses by their friends who they gambled with, that served as a deterrent to engage in similar gambling behaviours, or even made them feel nervous about spending too much money:

I very much don't want to become a problem gambler, I've felt very nervous making bets about whether or not it's a stupid decision, whether or not I'm going to develop a problem without being able to realize it. And then I'll have a little burst of confidence or think, "You know what? It'll be fine," and then make the bet. And then I feel a little bit guilty, mainly just nervousness whether or not I should be doing it. (ID20, male, 20, gambling, 3/10)

Relationship impact

Some participants reported issues with friends who were prioritising gambling over social interactions:

I see the impact, because he'll come into the pub and the first thing he'll want to do is go put a bet on the phone, as opposed to sit down and have a conversation. Then you'll notice a few of the people will be on their phones, placing bets as well, as opposed to engaging in the conversation. (ID34, male, 24, gambling, 2/10)

Others were describing relationship dynamics whereby the person who gambled, particularly after big losses, would become agitated changing the group dynamics and individual friendships:

People can get a bit hostile if you've got one friend whose going like, "Oh, place this bet to someone else. This bet will definitely hit." Of course, it doesn't hit, and then they're mad at that person. It does sometimes affect close friend relationships. (ID32, male, 18, gambling, 4/10)

Access to money facilitating harm

Those who engaged in sports or eSports betting also described more aggressive and harmful play by themselves or their friends, at times when they had more access to money either through their own or their parent's income. This rendered having more disposable income as a risk rather than a protective factor for the current demographic, who generally did not have many financial responsibilities:

My mates work full-time and have a hell of a lot of disposable income. They're not paying rent yet, so as a result they bet much more aggressively than what I ever would consider. And that often comes down to capital more than anything else, how much money you're actually putting on the bet more than the bet itself. (ID31, male, 22, gambling, 0/10)

So when he first started doing that, he was putting a lot in and he was messaging us, telling us how much he's putting in. It was pretty bad. And right now he's just deleted everything (sports betting apps) for the third time. (ID22, male, 23, gambling & gaming, 7/10)

A lot of people that I was friends with, and doing eSports betting were worse than I was, substantially, because I know some of them had way too much money to be burning for someone of that age. I think because their parents just sort of handed them money and were like, "Do with it as you wish", and didn't really care. And then that's just what they spent it on. (ID15, male, 20, gambling & gaming, 3/10)

6.3. Interviews with significant adults

The final section of this chapter outlines the content of the interviews with parents/carers and service providers who we included in the study to offer an additional perspective to young adults gambling online. These data is intended to be used in conjunction with the main data from the young people and not a stand-alone piece of research. The parents/carers and service providers mainly focused on the problematic side of gambling, harms, and support needs, due to their roles in the young person's lives a parents and support service professionals.

6.3.1. Parents and carers' experiences

We interviewed four parents and carers for the study who looked after children and young people between 13 and 25 years of age. Parents in the study were generally nervous about their young people spending long periods of time online, and having access to a range of inappropriate content, of which gambling features was one of many. There was a clear consensus that online gambling through videogames or gambling apps was easy for underage children:

They started gambling before they were 18. So, it makes me wonder, how is that possible? Because you wouldn't think that... They're not supposed to be doing that, but it seems to be very easy to do (Parent 2)

Parents and carers had the experience of discovering credit card charges by the young person, although in the statements did not clearly itemise what the expenditure was for. In addition, the small gradual amounts went easily unnoticed but would accumulate to significant amounts over time.

I've looked at my transactions on my bank statement and it was almost thousand dollars, I've seen purchases going, "Oh, how did this happen? I didn't expect this," and when I spoke to the young person, they couldn't deny it because it was on my bank statement (Parent 3)

For one of my kids I helped paying for a subscription without realising the account then was then used for the in-game purchases, and I didn't give permission for that. And trying to stop that subscription was very difficult (Parent 1).

They felt inept guiding children through the online platforms, or limiting the time young people spent online, or even knowing the names of the features that were available online.

I wouldn't feel too comfortable to discuss it [gambling/gaming]. I've never done it myself. I don't know the language, I wouldn't have any experience and don't really understand it. It's obviously a space that makes a lot of money and moves very fast. I'm concerned about the things that are coming (Parent 2)

Despite these concerns parents had about their young person, they found it challenging to set certain boundaries given that interacting online is a pre-requisite for social interaction for most young people and therefore highly normalised:

It's a way of connecting with their friends, and it's something to do. When my kids developed an interest in videogames I talked to the school about my concerns, they just said they all did that, and they said if they didn't play video games, then it would be isolating. (Parent 2)

6.3.2. Service providers' experiences

Service providers in general had the view that more young people suffered from gaming addiction, compared to gambling addiction. For the young people they supported, gambling was only one of the many issues they were experiencing: “*they are struggling with isolation, people with depression, people with anxiety's very high, and bullying issues*”.

Gaming in particular seemed to cause sleep problems, that would exacerbate other problems the young people were experiencing, including social isolation, and educational disruption. Given the lack of sleep and feeling tired in the morning, it was also acknowledged that school refusal is commonly one of the first signs of gambling or gaming issues. Other reasons young people with gambling or gaming issues would seek help for were financial difficulties, relationship or friendship issues, or they had been self medicating with alcohol or other drugs. In these instances gambling would be disclosed after some time they had been to treatment, but was often recognised as a key issue contributing to the other co-existing problems. Gambling online was a way of dealing with the co-occurring issues for many young people:

So for with anxiety, if they're feeling uncomfortable, it's like, "I'll just engage with my phone because that way I feel better in this space." So they're using it more as a coping strategy because it's there. You've just got to pull your phone out of your pocket and it's right there. You haven't got to go to the club, you haven't got to make an effort to go and do it. It's just like, "Oh, I don't feel comfortable here. What can I do? (Service provider 4)

Other issues the service providers outlined were associated with the excessive time the young person would spend on the games, with one extreme example:

We know kids are playing games, and they're peeing in a bottle, and they're not leaving their game. Or they're not leaving the room. They don't eat, or drink, or

go to the toilet for how many hours. And it's pretty full on, and a bit scary.
(Service provider 1)

Those adults who were more familiar with the games and the way young people engaged with them talked about the multitude of mechanisms that make the young person stay on the game and contribute to the excessive time spent 'grinding' the game.

There's a bit of pressure like, "If I don't access it by this time, I won't get the big reward." So it actually just pulls people in to spend more time on the games, or in those sections as well. Which is obviously very clever. And it's very difficult for some younger people to navigate, especially because if they don't have a lot of other balancing things or commitments, its hard to disengage (Service provider 2)

A clear age delineation was identified between younger and older adolescents whereby younger cohorts were playing games with gambling features and older cohorts betting on sports after the turned 18, but also that there was a longitudinal association between the two:

The younger people are playing more in-game gambling stuff, Gran Turismo or Roblox, finding those other things that you can do, it's preparing you to gamble later on. (Service Provider 1)

6.3.3. Risk factors for gambling harm

The most common risk factor for gambling and gaming harm the carers/parents and service providers identified were social isolation, and not having fulfilling activities to engage during the vulnerable years when risk taking behaviours peak. Modelling of the parents' mobile use was also cited as an important contributing factor:

Other risk factors were parents using devices and modelling it to young people.
(Service provider 3)

we do know that parents with young people, they're using the phones. We're all using the phones. We saw the spike in mental health issues as using the smartphones went up. I think that evidence is just so clear. But the role modelling of time on social media and stuff is an issue for families. (Service provider 2)

Age related risk factor for gambling harm – also mentioned in the young person interviews – was the lack of financial and other responsibilities, coupled with increasing independence and potentially earning own income that was common for the target demographic:

I see with the biggest issues are young people who might used to be living at home, so they haven't got any expenses, but they may have big incomes. (Service provider 5)

Some participants also mentioned the expectation of “*young people always have to have something to do*”, and low tolerance for boredom that was a contributing factor to access mobile games and gambling, gambling or at least make it difficult to stop once they had started:

So if they're sitting and they're bored, even in a family gathering, they're on the phone, "Ah, what am I going to do? Okay, I'll just gamble" because that keeps me entertained. Because this is not enough fun happening in other things because they reached that they're getting all their excitement in gambling, (Parent 2)

With young people we see, its either stress or excitement or boredom and less so the financial gain. It's more likely for those emotional reasons they gamble. And there are some who still feel that they can make money from gambling, which they're horrified when they realize that actually they can't (Service provider 1)

6.3.4. What is needed to mitigate gambling harm

Both parents and service providers perceived schools as key institutions educating children about gambling harms and ways in which to navigate the online environment safely. They agreed this education should take place early on – as early as primary schools when they first start interacting with devices connected to the internet. Participants were of the view that education campaigns should take a grass-roots approach, letting the young people to drive the approach and conversations in the form of ‘social campaigns’, for example. They also agreed that fear campaigns around gambling harms did not work for this demographic, and would be counterproductive in reducing stigma around gambling harm.

Service providers were particularly concerned about the convergence of gaming and gambling, and were calling for more educational materials and training on “*what gambling addiction in video games looks like*”, how it can be identified as well as treated. They acknowledged the lack of specific service for gaming addiction in the ACT, and that younger people did not tend to access the gambling-specific services that may have some capacity and expertise to treat gaming addictions than generalist mental health or community services.

Importantly, participants were in consensus about the urgent need for more resources for parents and carers to understand the online environment young people were interacting with, as well as the first signs of problematic behaviours online and how to

address these behaviours. According to the parents themselves, even basic level knowledge about gambling and gaming was needed, but also how to talk to young people about potential harms, as one parent summarised eloquently:

I guess how to have a conversation with your children about it, how to talk to them about how to... They're going to do this. They're going to be encouraged to gamble online by their friends and by marketing and social media and everything else and the television. What do they need to know about? What do you need to talk about as a parent? If you're going to gamble, how can you do it safely? It's important to have a relationship with your child, so that they can talk to you about things that are going on for them or their friends, or where can they get help (Parent 4)

7. Discussion

This project focused on generating new information about online gambling through interviews with young people aged 18-24 years of age, as well as parents and service providers in the ACT. In this final chapter we summarise some of the main findings and discuss reasons why young people gamble online in light of the current literature. At the end of this chapter we also discuss about harms related to online gambling experienced by young adults and how to address these harms by implementing the public health approach.

7.1. What do young adults gamble on online?

7.1.1. Videogame gambling

Gambling features the current participants engaged with through videogames included four overlapping, but distinct categories: (1) loot boxes, (2) gacha, (3) eSports betting, and (4) different types of skin betting and trading on third party websites. These gambling features were accessible through popular videogames, the most common in the current study included Counterstrike, Overwatch, and League of legends. eSports betting on these games was also very common. Our findings are in support of the broader literature that highlights the emergence of gambling and gambling-like features within videogames and digital environments, as well as the growing presence of gambling in unregulated online environments (King, 2010; Drummond et al., 2020; Flayelle et al., 2023).

Presently in Australia, loot box and gacha games are available to players with no age verification, and without any harm minimisation measures in place⁵. While the Entertainment Software Rating Board⁶, or other age rating systems for videogames (see, PEGI for comparison⁷), have allocated an age rating of 17 for most games including loot box systems, these limits are not enforced by the games themselves and without age verification system they are easily downloaded for free allowing children easy access. While not all loot box systems are considered gambling in a strict sense (Drummond & Sauer, 2018), the majority of videogames with loot boxes played by participants in our study met 5 out of the 6 criteria for gambling. Notably, gacha games such as Genshin Impact and Arknights, as well as videogames with loot boxes that convey a competitive advantage (such as FIFA and League of Legends), meet all 6 criteria for gambling (see Chapter 2).

⁵ https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/Gamingmicro-transactions/Report/c04

⁶ <https://www.esrb.org>

⁷ <https://pegi.info/page/pegi-age-ratings>

None of the participants in the current study reported Fantasy Sports betting, but eSports betting was highly popular, especially among participants who engaged both in videogames, and online sports betting. While eSports betting is available through licensed apps in Australia, similar to sports betting, a relatively large number of illegal offshore sites are also on offer and specifically target young people, as described by the current participants.

7.1.2. Online gambling on traditional gambling activities

Of traditional online gambling activities, the most popular in the current study were sports and races betting online, but also online lottery, which are the most common legal gambling activities in Australia available online (Greer et al., 2023). As opposed to videogame gambling, this type of gambling normally occurred on mobile devices, during live games or events on the weekend, or during sports season, but also late at night due to time difference for some of the popular sports like English Premier League, and NBA games. Less common was engagement with casino type table games and poker machines online for money or in simulated environments free of charge. Online betting mostly occurred on purpose-built apps, and it was more common than not to use multiple – up to 10 individual – apps to place bets on, particularly for sports betting. Having multiple betting accounts also allowed for chasing special offers from betting operators.

7.2. Pathways to gambling online

7.2.1. Videogame gambling

To better understand pathways to gambling on videogames, we asked the participants to recall their first exposure to any gambling activity. For most of them, this had occurred in their early teens, commonly after having engaged with videogames for a number of years. First gambling experiences involved opening loot boxes or gacha and it was common that participants had accidentally ‘stumbled across’ boxes while playing their favourite games. Others had actively sought out these features after seeing promotions within the gaming platforms, or were encouraged to engage by their peers. Loot boxes were the most common types gambling features for participants who started gambling under the age of 18, and provided a gateway to skin betting and trading or eSports betting through unregulated third party sites. Our findings reflect the sheer rise in popularity of video games marketed to underage players (including eSports), and the general rise in the monetisation of videogaming industry through gambling-like in-game purchasing, particularly loot boxes and gacha mechanisms (Brevers et al., 2022).

7.2.2. Traditional online gambling

Similar to videogaming, gambling on sports and other events was seen as a social activity, and it often took place physically at the live event, or watching the live broadcast of the event on TV at pubs and hotels with friends. Multibets were the most popular type of betting on sports apps within groups of friends. The ‘multis’ were attractive given their apparent illusion of ‘big wins’ with relatively small bets, notwithstanding many participants rationally acknowledged that the larger the final winning amount, the smaller the odds were for winning that amount.

Pathways to traditional online gambling occurred through exposure to gambling as a child, either through parents, school or friends, in line with previous studies in Australia and internationally (Hing et al., 2022). The promotion of Melbourne Cup and its impact on normalisation of gambling played a key role in normalisation of gambling at school and family homes of the participants. Participants who engaged in more traditional gambling activities online did not tend to start gambling before they turned 18. Many of them, however, reported a history of heavy technology use, including playing video games as a child and teenager.

A distinct trajectory from video gaming to online gambling was through eSports participation, playing in or watching large tournaments that promote gambling odds and advertise sports betting during the games. The few who had illegally started online gambling underage tended to report more gambling harms, building on existing literature on early exposure to gambling a risk factor for harm.

Another clear pathway to online gambling, mainly sports betting, was through participating in organised sports as a child. Our findings extend recent international evidence (e.g., McGee, 2020) showing normalisation of sports gambling through involvement in sports clubs and events. Being immersed in and developing ‘expertise’ in particular sports through participation, coupled with the normalisation of gambling through sports culture was a key mechanism explaining this pathway. It should be noted, however, that a healthy public health messaging around gambling in the sports club environment was also acknowledged as a protective factor against gambling harm.

7.3. Why do young adults gamble online?

7.3.1. Individual motivations to gamble

The main motivations to currently engage in gambling features were psychological, social, and financial, building on existing, but fragmented evidence of gambling motives for young people in other jurisdictions (Calado et al., 2014; Carran & Griffiths,

2015; Kim et al., 2017; Sirola et al., 2018; Svensson et al., 2011; Tabri et al., 2022; Wilson & Ross, 2011; Wood & Griffiths, 2002; Zaman et al., 2014).

Psychological motivations

Gambling on videogames, sports, or other events simply added on the enjoyment or excitement about the game the participants were following or playing, across various sports and racing, videogames or other events. Sports and eSports betting participants referred to this mechanism as an ‘enhancer’ (of positive experience) or ‘nullifier’ (of negative experience), whereby excitement was guaranteed regardless of the outcome,

The data also shows that opening boxes – or gacha – made participants feel more involved in the game as a result of making a monetary investment in the character, or progressing the storyline. This pattern was also enhanced during COVID19 lockdowns whereby videogames played a key role in relieving boredom or loneliness. For others gambling was a way of regulating stress, or managing negative emotions, notwithstanding this behavioural pattern tended to lead to more stress over time. Our findings are in line with a recent study showing that while some young people use gambling to self-regulate, gambling and its negative consequences are likely to exacerbate deterioration in mood and emotional wellbeing in the long term (Spångberg et al., 2022).

Social motivations

Gambling online was seen as an inherently social activity – ‘a social outlet’, similar to other group activities young people engaged in, such as playing sports, or ‘hanging out’. Similar to found in other studies, the participants were part of ‘social networks’ of other young people who also engaged in online gambling and gaming (Nyemsock et al., 2023). Most videogames with gambling features have a group chat attached to it, or the gamers were concurrently interacting on another social platform (e.g. Discord) while they were playing. Participants described a strong in-group identification based on the types of video games they engaged with, particularly in games with cooperative elements (e.g., counterstrike, overwatch, and league of legends), or immersive storylines (e.g., Tears of Themis, Genshin Impact). This in-group mentality enhanced the social motivations to open loot boxes or gacha, that facilitated bonding, over loot box ‘opening parties’ on group chats attached to the game. Organised events for eSports also attracted those interested in multiplayer games with a competitive edge.

Social motivations for sports betting appeared similarly strong, whereby the punters were often physically together while gambling online, either at the live game or at a venue. This also meant that it was impossible to escape gambling without socially isolating from a group of friends, that became problematic for those wanting to stop or moderate their gambling participation. Our findings of social motivations to gamble build on previous research that suggests that gambling for young people is strongly

associated within its broader social context, rather than simply the risk and reward of money (Kristiansen et al., 2015, 2017; Lamont & Hing, 2020; Nekich & Ohtsuka, 2016; Deans et al., 2017).

Financial motivations

Financial gain is a commonly cited motivation to gamble both online and offline within the qualitative literature (Calado et al., 2014; Carran & Griffiths, 2015; Wilson & Ross, 2011; Wood & Griffiths, 2002; Zaman et al., 2014). These findings were replicated in the current data, and participants were motivated to gamble through skin investment and 'winning large' on sports and race events, or lottery. The financial motivations were rarely the initial reason why young people begun video game gambling, but they were strongly related to initiating sports betting and other traditional gambling activities online. While the sample was too small to draw strong conclusions on financial motivations among young adults, those who were financially motivated to gamble also tended to experience more gambling harms. This finding is aligned with other recent evidence showing that financial gambling motives are positively associated with both gambling frequency and problem gambling severity (Tabri et al., 2022).

7.3.2. Industry strategies

Other reasons for young adults gambling online in our data included certain features within the games and apps that encourage gambling behaviours or higher expenditure. These industry strategies associate directly with the gambling motivations described above.

Online payment and in-game currency

Using online payments with or without in-game currency was present in both video game gambling and traditional online gambling. A majority of participants outlined that using money online made it easier to spend but also difficult or impossible to monitor expenditure, especially when in-game currency was also involved. Particularly some videogames that included loot boxes and gacha, involved complicated currency mechanisms that obscured expenditure. Participants who spent large sums on gacha, for example, had been in for a shock when they discovered how much they had spent in a short period of time. The current findings align with a small number of qualitative studies have found that gambling through online platforms made the experience of winning or losing less real: the on-screen dollar figures seemed less like real money, alongside the ease and speed in which bets could be placed similar to findings in other studies (Deans, Thomas, Daube, & Derevensky, 2016; Kristiansen & Trabjerg, 2017; Zaman et al., 2014). These findings also reflect the fact that mobile devices are now an integral part of daily routines, and can be accessed in most locations (Wardle, 2019).

Special offers for new players

Common mechanism in both video game gambling and traditional online gambling were attracting new players with special offers and inducements. This mechanism was less common within the licenced online betting apps mainly used for sports betting, but our data shows that the ban on betting in Australia (Commonwealth of Australia, 2012), has not been effective within the licenced gambling products. Given that the gambling features in video games are not regulated in a similar way, the inducements and special offers were implemented in a multitude or creative ways to encourage or enforce players to gamble. These mechanisms were particularly pronounced in gacha games such as Genshin Impact (See example in Chapter 2). Some third-party websites for skins trading and/or gambling also offer free items as an incentive for signing-up, such as skins (i.e., skinmonkey) or free loot boxes (CS:GO Empire). Furthermore, some videogames have been known to provide new players, including those who have not yet made a purchase, with a time-limited discount offer (King et al., 2019). The current data demonstrated the increased urge to gamble to obtain certain characters that would only be available for a limited duration. The implementation of these mechanisms is not in line with the recent recommendation to ban inducements for licenced online gambling (Commonwealth of Australia, 2023), outlining the need to better regulate gambling features in videogames.

In-game experience

Other built-in strategies in the games to encourage gambling were loot boxes or that offer a competitive advantage, unlock new storylines, or improve the character appearance. These findings are in line with the general trend whereby games are monetised to incentivise and facilitate game progression (King et al., 2019; Flayelle et al., 2023). Certain online videogames, particularly gacha games, tend to design their characters through an anime artwork style and it is well established that players can form strong attachments to these fictional characters within online environments (Karhulahti & Välisalo, 2021; Takagai, 2021; Woods, 2022). This phenomenon has been referred to as “the waifu effect” (Ismail, Fitriana, & Chuin, 2021; O’Meara & Dechamps, 2019), evidence of which was also available in the current data and aptly described by Britt and Britt (2020) “Players seek... particular characters, sometimes called “waifus” (a slang term for virtual “wives” intended to mimic Japanese speech patterns), and may spend in-game currency and attempt the gacha mechanic numerous times. A player who is unlucky and does not receive the desired character may subsequently exchange real-world money for in-game currency to continue pulling from the gacha mechanic, with the process continuing until the player is satisfied” (page 6) However, if the player does not succeed in pulling the desired character, they tend to continue spending money: “because worse than being proven unlucky in gambling, they have been proven unlucky in love” (page 3) (Lax &

Mackenzie, 2019). This deliberate design of attractive characters within videogames were mentioned by participants in our study. They reported feeling romantically attached to their characters, wanting to nurture them, whereby attractiveness encompassed both physical and personality attributes that can be enhanced through gambling.

7.3.3. Advertising

Finally, advertising was consistently referred to as a key reason why participants had initially started, or continued to, gamble. Given that participants in the current study mainly engaged with online media, rather than TV or radio, almost all gambling advertising they were exposed to was through websites and apps. The most common platform for gambling advertising for both traditional gambling and video game gambling was on social media, including influencers live streaming their gambling, winning large sums of money, or providing specific tips to maximise winnings on eSports or sports betting, using skins or real money. These gambling activities, using real or in-game currency, were readily promoted through platforms such as YouTube or Twitch, that are accessible with no age restrictions. Some streamers are known to receive sponsorships by gambling or eSports betting companies to promote gambling products to their consumer base (King, 2018), and the current data confirmed that the financial relationship with the industry was likely – but not transparent – from watching these videos.

The promotion of odds and gambling apps was strongly present in sport events as well as eSports tournaments in the current study. Previous research has outlined that eSports promotional materials are akin to those used by social casino gaming advertisements, that tend to use bright colours, feature young adults in promotional material, reference popular culture, and provide visual cues that others are playing and winning (King, 2018). This is similar to the advertisements for sports betting, that tend to focus on male-oriented mateship, positive themes and social status through light-hearted humour, tapping into the fun aspects of gambling, similar to findings from earlier studies (Deans, Thomas, Daube, Derevensky, et al., 2016). Our findings are in line with those from other jurisdictions, whereby advertising intentionally portrays gambling ‘harmless’ or ‘fun’ (Korn et al., 2005) or ‘more okay’ (Deans, Thomas, Derevensky, et al., 2017). Our findings showed similar depiction of gambling in very recent advertising, notwithstanding stricter regulation of gambling messaging was implemented in early 2023⁸. Gambling as joyful, fun and harmless activity was also

⁸ https://www.dss.gov.au/sites/default/files/documents/11_2022/guidance-fact-sheetconsistent-gambling-messaging-implementation-factsheet_0.pdf

one of the main motivations for the current participants to gamble on sports, and races and eSports.

The external incentives and industry strategies to encourage gambling described by the participants in our study are known to be particularly effective in driving adolescents to undertake unplanned purchases online, including gambling (Griffiths et al. 2014). Given that game publishers and the gambling industry constantly develop and patent new mechanisms that are designed to attract and retain participation (i.e., King et al., 2019), from a consumer protection approach it is crucial to better regulate industry mechanisms implemented online that encourage gambling and other addictive behaviours.

7.4. Gambling Harms

Overall, gambling harms from online gambling were consistent with the general understanding of gambling harms including financial; social; psychological; physical; and occupational types of harm (Langham et al., 2016). The SGHS profiles showed that many of the participants regretted spending money on gambling across the sample. In addition to experiencing regrets, substantial proportion reported reduction in savings and spending money, as well as less spending in recreational activities like eating out or going to movies. These profiles suggest that the young people in the sample overprioritised spending money over other activities or financial goals, similar to results in a recent Tasmanian gambling prevalence study (O’Neil et al., 2021). Financial and social harms were consistently present in the qualitative data, regardless of the type of online gambling activity the participants engaged with, although some distinct patterns emerged within the gambling mode as described next.

7.4.1. Financial harm

Financial harms were related to both videogame and traditional online gambling, although the amounts of money that participants lost in one day, or in one event, were much larger in sports and races betting compared to other types of gambling. It was also possible to lose large amounts of money through videogame gambling but given the smaller increments the participants spent at any one time, the amount would be spread across longer periods of time. The financial harms from videogame gambling were more likely be in the form of ‘a shock’ when the participants realised how much they had spent over time. Given that participants in the study did not have many financial responsibilities, and many were still living at home with their parents, the financial consequences were only perceived as ‘harm’, when the amounts were large, and accompanied by psychological distress, shame and regret over losing that money.

7.4.2. Social harm

Gambling in the current data was largely social, and engaging with gambling features strengthened the social bond within the peer group through both videogame and traditional online gambling. Online gambling tended to translate into relationship harms through different mechanisms, depending on the type of gambling participants engaged in.

Relationship impact

For sports betting, impact on relationships was facilitated by preoccupation by the game, or the gambling app, that resulted in difficulty engaging with peers. Given sports betting often took place within 'social networks' of young men (similar to Nyemsock et al., 2023), disagreements about betting outcomes, or being upset after losing money also featured in the data as a distinct pattern. The relational impacts on this age demographic reflect the developmental stage they were in, whereby the impacts would be experienced within their peer group, instead of intimate partnership, or parent-child relationship.

Prioritising time on gaming

For videogame gambling the social impact was associated with time-intense periods of playing, including playing overnight or continuously having the game on while engaging in other activities. This common play pattern related to video game gambling is likely to have a negative impact on spending time on other age-appropriate activities, including peer-interactions, school work or study, and other hobbies. Participants describing time-intense play also outlined that the most time intense periods had occurred in high school, and play time gradually decreased when other responsibilities increased, including working or studying. Importantly, these time-intense periods of gaming were directly related to gambling features in the game; in order to get currency to gamble with, the players had to 'grind', or play through long 'storylines'.

7.4.3. Responding to gambling harm

Taken together, the current data point to patterns in individual and community level risk factors for online gambling harm. They include access to money, younger age (high school), early exposure to gambling through friends, family and school, heavy early technology use, and participation in organised sports. It should be noted, however, that involvement in sports that promotes a public health approach to gambling harm acts as a protective factor against gambling harm. While these individual and community risk factors each warrant a targeted harm reduction strategy, our study highlights a number of environmental risk factors that can be addressed with regulation and public policy.

Notwithstanding gambling advertising for licenced online gambling, such as sports betting, is tightly regulated, it is clear from the current study that TV, radio and social media are still plagued by gambling advertising, and that children are constantly exposed to this advertising. Australian government has recently taken steps towards banning all gambling advertising on mainstream media, in line with its duty of care for young people and children. A far more complicated is the issue of online gambling advertising, and the emergence of social media ‘influencers’ who encourage gambling behaviours through deceitful strategies, as there is currently no one overarching regulatory framework that could be adequately implemented to ban this type of advertising.

Where regulatory change is unfeasible, or while waiting for this action to take place, children, parents and youth serving organisations need more evidence-based resources and guidance to protect them against the risks related to online gambling. These include the specific industry strategies that encourage children and young people to gamble on sports and videogames. The current data points to the need to equip at least three different groups with information about online gambling and related harms: parents, children, and major youth serving organisations such as primary and high schools. Implementing a health literacy framework that is now recognised a critical aspect of the public health approach (WHO, 2017)⁹ is a crucial part of this strategy. In the context of gambling health literacy, this approach aims to increase public knowledge about the health and mental health impacts of gambling, but also the ability to critically evaluate gambling advertising and industry marketing strategies.

7.5. Conclusion

The current project was specifically aimed to generate new evidence about online gambling among young adults in the ACT, and it directly contributes to a critical evidence base to inform public health initiatives to prevent gambling harm among youth. The project generated novel information that confirms the view that navigating the online environment in the delicate age when risk behaviours peak, while being targeted by the gambling industry is one the biggest challenges of the 21st century. It is our duty of care for our children to urgently improve regulation, policy and public health strategies to prevent gambling harm in the complex and fast-moving environment. We make specific recommendations how the current evidence can be used below.

⁹ <https://www.who.int/activities/improving-health-literacy>

Recommendations

Based on the current research and that of others, we call for a comprehensive public health approach to address online gambling harm for young people that includes (but is not limited to) the following strategies:

- Campaigns and/or education programs about gambling features in videogames for primary schools onwards
- Campaigns and/or education programs about gambling advertising online, particularly around social media, game streaming and ‘influencers’ for primary schools onwards
- Student-led initiatives to address gambling harm in high schools
- Co-designed and accessible online resources for children and young people including but not limited to online help platforms, self-help tools, identification of early signs of gambling harm in self and others
- Co-designed harm minimisation measures relating to gambling motives, attitudes and expectations of young people, particularly relating to financial expectations from gambling
- Evidence-based guidelines around time and expenditure limits relating to online gambling including gambling features on videogames
- Evidence-based guidance, training and resources for parents including all of the above
- Evidence-based guidance, training and resources for service providers including all of the above
- Resources for sports clubs (and other relevant youth serving organisations) to develop a comprehensive public health approach to gambling harm

The data presented in this report can also be used to guide regulatory action to address gaps in the current regulatory frameworks including, but not limited to:

- A review of the current video game classification framework
- Age limits for videogames with loot boxes and gacha, including those available without real money
- Tightened age verification protocols for videogames
- Monitoring of third party sites attached to video games enabling skin betting and
- Review of the regulatory framework for online gambling advertising, specifically targeting social media

References

ACT Government Gambling and Racing Commission. (2022). *On-line gambling*. Retrieved from <https://www.gamblingandracing.act.gov.au/industry/on-line-gambling>

ACT Revenue Office. (2022). *Betting operations tax*. Retrieved from <https://www.revenue.act.gov.au/betting-operations-tax#:~:text=As%20of%201%20July%202022,threshold%20in%20a%20financial%20year.>

ACT Gambling and Racing Commission. (2019). *Strategy for gambling harm prevention in the ACT. A public health approach 2019 – 2024*. Retrieved from https://www.gamblingandracing.act.gov.au/data/assets/pdf_file/0009/1436580/Strategy-for-gambling-harm-prevention.pdf

Australian Institute of Health and Welfare (AIHW). (2023). *Gambling in Australia*. Retrieved from <https://www.aihw.gov.au/reports/australias-welfare/gambling>

Antepencko, C. L., Rickey, S. R., Hibbets, A. L., & Rusk, J-D. (2022). Microtransactions and Gambling in the Video Game Industry. *KSU Proceedings on Cybersecurity Education, Research and Practice*. 10. Retrieved from <https://digitalcommons.kennesaw.edu/ccerp/2022/Research/10>

Armstrong, A., & Carroll, M. (2017). *Gambling activity in Australia. Findings from wave 15 of the Household, Income and Labour Dynamics in Australia (HILDA) Survey*. Australian Gambling Research Centre. Retrieved from <https://aifs.gov.au/research/research-reports/gambling-activity-australia>

Australian Communications and Media Authority. (2022a). *Online gambling affiliate services: Compliance priority 2021–22 report*.

Australian Communications and Media Authority. (2022b). *Investigations into online gambling providers*. Retrieved from <https://www.acma.gov.au/investigations-online-gambling-providers>

Australian Communications and Media Authority. (2022c). *Check if a gambling operator is legal*. Retrieved from <https://www.acma.gov.au/check-if-gambling-operator-legal>

Australian Communications and Media Authority. (2022d). *Online gambling in Australia: Findings from the 2021 ACMA annual consumer survey*. Retrieved from <https://www.acma.gov.au/sites/default/files/2022-02/Online%20gambling%20in%20Australia.pdf>

Australian Communications and Media Authority. (2022e). *About the interactive gambling Act*. Retrieved from <https://www.acma.gov.au/about-interactive-gambling-act#:~:text=The%20Interactive%20Gambling%20Act%202001,in%20Dplay%20sports%20betting>

Australian Communications and Media Authority. (2022f). *Rules for gambling ads*. Retrieved from <https://www.acma.gov.au/rules-gambling-ads>

Australian Communications and Media Authority. (2023). *ACMA blocks more illegal offshore gambling and affiliate marketing websites*. Retrieved from <https://www.acma.gov.au/articles/2023-12/acma-blocks-more-illegal-offshore-gambling-and-affiliate-marketing-websites>

Australian Communications and Media Authority. (2019). *Gambling advertising in Australia. Consumer and advertising placement research*.

Australian Institute of Health and Welfare (AIHW). (2023). *Gambling in Australia*. Retrieved from <https://www.aihw.gov.au/reports/australias-welfare/gambling>

Braun, V., & Clarke, V. (2022). Conceptual and design thinking for thematic analysis. *Qualitative Psychology*, 9(1), 3–26. <https://doi.org/10.1037/qup0000196>

Braun, V., & Clarke, V. (2021). One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative Research in Psychology*, 18(3), 328–352. <https://doi.org/10.1080/14780887.2020.1769238>

Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, 11(4), 589–597. <https://doi.org/10.1080/2159676X.2019.1628806>

Braun, V., & Clarke, V. (2013). *Successful Qualitative Research: A Practical Guide for Beginners*. SAGE Publication, London.

Braun, V., & Clarke, V. (2012). Thematic analysis. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.), *APA handbook of research methods in psychology, Vol. 2. Research designs: Quantitative, qualitative, neuropsychological, and biological* (pp. 57–71). American Psychological Association. <https://doi.org/10.1037/13620-004>

Brevers, D., Vögele, C., & Billieux, J. (2022). The Evolving Landscape of Sports Betting: A Risk for Young People? In *Wohlbefinden und Gesundheit im Jugendalter: Theoretische Perspektiven, empirische Befunde und Praxisansätze* (pp. 363–392). Springer Fachmedien Wiesbaden Wiesbaden.

Britt, B. C., & Britt, R. K. (2021). From waifus to whales: The evolution of discourse in a mobile game-based competitive community of practice. *Mobile Media & Communication*, 9(1), 3–29. doi: <https://doi.org/10.1177/2050157920934509>

Browne, M., Goodwin, B. C., & Rockloff, M. J. (2018). Validation of the short gambling harm screen (SGHS): A tool for assessment of harms from gambling. *Journal of Gambling Studies*, 34(2), 499–512. <https://doi.org/10.1007/s10899-017-9698-y>

Calado, F., Alexandre, J., & Griffiths, M. D. (2014). Mom, dad It's only a game! Perceived gambling and gaming behaviors among adolescents and young adults: An

exploratory study. *International Journal of Mental Health and Addiction*, 12(6), 772–794. <https://doi.org/10.1007/s11469-014-9509-y>

Canale, N., Vieno, A., Griffiths, M. D., Rubaltelli, E., & Santinello, M. (2015). How do impulsivity traits influence problem gambling through gambling motives? The role of perceived gambling risk/benefits. *Psychology of Addictive Behaviors*, 29(3), 813.

Carbonneau, R., Vitaro, F., Brendgen, M., & Tremblay, R. E. (2015). Variety of gambling activities from adolescence to age 30 and association with gambling problems: A 15-year longitudinal study of a general population sample. *Addiction*, 110(12), 1985–1993. <https://doi.org/10.1111/add.13083>

Carran, M., & Griffiths, M. (2015). Gambling and social gambling: An exploratory study of young people's perceptions and behaviour. *Journal of Entrepreneurship, Management, and Innovation*, 33(1), 101–113. <https://doi.org/10.51698/aloma.2015.33.1.101-113>

Cermak, D. (2020). Micro-Transactions, Massive Headaches: International Regulation of Video Game Loot Boxes. *Michigan State International Law Review*, 28(2), 273–322.

Chen, C., & Fang, Z. (2023). Gacha Game Analysis and Design. *Proc. ACM Meas. Anal. Comput. Syst*, 7(1). <https://doi.org/10.1145/3579438>

Clemens, F., Hanewinkel, R., & Morgenstern, M. (2017). Exposure to gambling advertisements and gambling behavior in young people. *Journal of Gambling Studies*, 33(1), 1–13. <https://doi.org/10.1007/s10899-016-9606-x>

Commercial television industry code of practice. (2018). Retrieved from <https://www.freetv.com.au/resources/code-of-practice/>

Commonwealth of Australia (2023). *You Win Some, You Lose Some More*. Retrieved from https://www.aph.gov.au/Parliamentary_Business/Committees/House/Social_Policy_and_Legal_Affairs/Onlinegamblingimpacts/Report

Commonwealth of Australia (2012). *Interactive and online gambling and gambling advertising Interactive Gambling and Broadcasting Amendment (Online Transactions and Other Measures) Bill 2011*. Retrieved from https://www.aph.gov.au/Parliamentary_Business/Committees/Joint/Former_Committees/gamblingreform/completedinquires/2010-13/interactiveonlinegamblingadvertising/report/index

Commonwealth of Australia (2017). *Interactive Gambling Amendment Act 2017*. Retrieved from <https://www.legislation.gov.au/Details/C2017A00085>

Constantinou, A., & Fenton, N. (2013). Profiting from arbitrage and odds biases of the European football gambling market. *Journal of Gambling Business and Economics*, 7(2).

Davidson, T., Rodgers, B., Taylor-Rodgers, E., Suomi, A., & Lucas, N. (2015). *2014 survey on gambling, health, and wellbeing in the ACT*. Centre for Gambling Research, Australian National University. Retrieved from https://www.gamblingandracing.act.gov.au/__data/assets/pdf_file/0010/846901/2014-Survey-on-Gambling,-Health-and-Wellbeing-in-the-ACT-.pdf

Davidson, T., & Rodgers, B. (2010). *2009 Survey of the nature and extent of gambling, and problem gambling, in the Australian Capital Territory*. Centre for Gambling Research, Australian National University. Retrieved from https://www.gamblingandracing.act.gov.au/__data/assets/pdf_file/0005/745043/ACT-Gambling-Prevalence-Study.pdf

Deans, E. G., Thomas, S. L., Daube, M., & Derevensky, J. (2017). The role of peer influences on the normalisation of sports wagering: A qualitative study of Australian men. *Addiction Research & Theory*, 25(2), 103–113. <https://doi.org/10.1080/16066359.2016.1205042>

Deans, E. G., Thomas, S. L., Derevensky, J., & Daube, M. (2017). The influence of marketing on the sports betting attitudes and consumption behaviours of young men: Implications for harm reduction and prevention strategies. *Harm Reduction Journal*, 14(1), 1–12. <https://doi.org/10.1186/s12954-017-0131-8>

Delfabbro, P., & King, D. (2021). Contentious issues and future directions in adolescent gambling research. *International Journal of Environmental Research and Public Health*, 18(21), 1–11. <https://doi.org/10.3390/ijerph182111482>

Delfabbro, P., & King, D. (2020). Gaming-gambling convergence: Evaluating evidence for the 'gateway' hypothesis. *International Gambling Studies*, 20(3), 380–392. <https://doi.org/10.1080/14459795.2020.1768430>

Delfabbro, P., & King, D. L. (2019). Challenges in the Conceptualisation and Measurement of Gambling-Related Harm. *Journal of gambling studies*, 35(3), 743–755. <https://doi.org/10.1007/s10899-019-09844-1>

Delfabbro, P., & King, D. (2017). Prevention paradox logic and problem gambling: Does low-risk gambling impose a greater burden of harm than high-risk gambling?. *Journal of behavioral addictions*, 6(2), 163–167. <https://doi.org/10.1556/2006.6.2017.022>

Delfabbro, P., King, D., & Griffiths, M. D. (2014). From adolescent to adult gambling: an analysis of longitudinal gambling patterns in South Australia. *Journal of gambling studies*, 30(3), 547–563. <https://doi.org/10.1007/s10899-013-9384-7>

Delfabbro, P., Winefield, A., & Anderson, S. (2009). Once a gambler – always a gambler? A longitudinal analysis of gambling patterns in young people making the transition from adolescence to adulthood. *International Gambling Studies*, 9(2), 151–163. <https://doi.org/10.1080/14459790902755001>

Department of Infrastructure, Transport, Regional Development, Communications, and the Arts. (2022, November 2). *Interactive gambling*. <https://www.infrastructure.gov.au/media-technology-communications/internet/interactive-gambling>

Department of Social Services. (2018). *National consumer protection framework for online wagering in Australia – National policy statement*. Retrieved from <https://www.dss.gov.au/communities-and-vulnerable-people-programs-services-gambling/national-consumer-protection-framework-for-online-wagering-national-policy-statement>

Dowling, N. A., Oldenhof, E., Shandley, K., Youssef, G. J., Vasiliadis, S., Thomas, S. A., Frydenberg, E., & Jackson, A. C. (2018). The intergenerational transmission of problem gambling: The mediating role of offspring gambling expectancies and motives. *Addictive Behaviors*, *77*, 16–20. <https://doi.org/10.1016/j.addbeh.2017.09.003>

Dowling, N. A., Shandley, K. A., Oldenhof, E., Affleck, J. M., Youssef, G. J., Frydenberg, E., Thomas, S. A., & Jackson, A. C. (2017). The intergenerational transmission of at-risk/problem gambling: The moderating role of parenting practices. *The American Journal on Addictions*, *26*(7), 707–712. <https://doi.org/10.1111/ajad.12599>

Dowling, N. A., Shandley, K., Oldenhof, E., Youssef, G. J., Thomas, S. A., Frydenberg, E., & Jackson, A. C. (2016). The intergenerational transmission of problem gambling: The mediating role of parental psychopathology. *Addictive Behaviors*, *59*, 12–17. <https://doi.org/10.1016/j.addbeh.2016.03.002>

Drummond, A., Sauer, J. D., Hall, L. C., Zendle, D., & Loudon, M. R. (2020). Why loot boxes could be regulated as gambling. *Nature Human Behaviour*, *4*, 986–988. <https://doi.org/10.1038/s41562-020-0900-3>

Drummond, A., & Sauer, J. D. (2018). Video game loot boxes are psychologically akin to gambling. *Nature Human Behaviour*, *2*, 530–532. <https://doi.org/10.1038/s41562-018-0360-1>

Dussault, F., Brunelle, N., Kairouz, S., Rousseau, M., Leclerc, D., Tremblay, J., Cousineau, M.-M., & Dufour, M. (2017). Transition from playing with simulated gambling games to gambling with real money: A longitudinal study in adolescence. *International Gambling Studies*, *17*(3), 386–400. <https://doi.org/10.1080/14459795.2017.1343366>

Estévez, A., Jauregui, P., Momeñe, J., Macia, L., López-González, H., Iruarrizaga, I., Riquelme-Ortiz, C., Granero, R., Fernández-Aranda, F., Vintró-Alcaraz, C., Mestre-Bach, G., Munguía, L., Solé-Morata, N., & Jiménez-Murcia, S. (2021). Longitudinal Changes in Gambling, Buying and Materialism in Adolescents: A Population-Based Study. *International journal of environmental research and public health*, *18*(6), 2811. <https://doi.org/10.3390/ijerph18062811>

Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating Rigor Using Thematic Analysis: A Hybrid Approach of Inductive and Deductive Coding and Theme Development. *International Journal of Qualitative Methods*, 5(1), 80–92. <https://doi.org/10.1177/160940690600500107>

Flayelle, M., Brevers, D., King, D. L., Maurage, P., Perales, J. C., & Billieux, J. (2023). A taxonomy of technology design features that promote potentially addictive online behaviours. *Nature Reviews Psychology*, 2, 136–150. <https://doi.org/10.1038/s44159-023-00153-4>

Free TV Australia. (2022). *Industry Standards*. Retrieved from <https://www.freetv.com.au/what-we-do/industry-standards/>

Freund, M., Noble, N., Hill, D., White, V., Evans, T., Oldmeadow, C., Guerin, N., & Sanson-Fisher, R. (2022). The prevalence and correlates of gambling in Australian secondary school students. *Journal of Gambling Studies*, 38(4), 1173–1194. <https://doi.org/10.1007/s10899-021-10098-z>

Gainsbury, S. M., Abarbanel, B., & Blaszczynski, A. (2020). The relationship between in-play betting and gambling problems in an Australian context of prohibited online in-play betting. *Frontiers in Psychiatry*, 11, 574884–574884. <https://doi.org/10.3389/fpsy.2020.574884>

Gainsbury, S. M., & Blaszczynski, A. (2017). How blockchain and cryptocurrency technology could revolutionize online gambling. *Gaming Law Review*, 21(7), 482–492. <https://doi.org/doi.org/10.1089/qlr.2017.2174>

Gainsbury, S. M., King, D. L., Russell, A. M. T., Delfabbro, P., & Hing, N. (2017). Virtual addictions: An examination of problematic social casino game use among at-risk gamblers. *Addictive Behaviors*, 64, 334–339. <https://doi.org/10.1016/j.addbeh.2015.12.007>

Gainsbury, S. M. (2015). Online Gambling Addiction: The Relationship Between Internet Gambling and Disordered Gambling. *Current Addiction Reports*, 2, 185–193. <https://doi.org/10.1007/s40429-015-0057-8>

Gambling Research Exchange Ontario. (2019). *GREO briefing note. Public health approaches to gambling—Global initiatives*. Retrieved from [https://www.greo.ca/Modules/EvidenceCentre/files/GREO%20\(2019\)%20Public%20health%20approaches%20to%20gambling%20-%20Global%20initiatives.pdf](https://www.greo.ca/Modules/EvidenceCentre/files/GREO%20(2019)%20Public%20health%20approaches%20to%20gambling%20-%20Global%20initiatives.pdf)

Gibson, E., Griffiths, M. D., Calado, F., & Harris, A. (2022). The relationship between videogame micro-transactions and problem gaming and gambling: A systematic review. *Comput. Hum. Behav*, 131. <https://doi.org/10.1016/j.chb.2022.107219>

Glozah, F. N., Tolchard, B., & Pevalin, D. J. (2019). Participation and attitudes towards gambling in Ghanaian youth: an exploratory analysis of risk and protective factors. *International journal of adolescent medicine and health*, 33(4), 10.1515/ijamh-2018-0175. <https://doi.org/10.1515/ijamh-2018-0175>

Gordon, R., Gurrieri, L., & Chapman, M. (2015). Broadening an understanding of problem gambling: The lifestyle consumption community of sports betting. *Journal of Business Research*, 68(10), 2164–2172. <https://doi.org/10.1016/j.jbusres.2015.03.016>

Greer, N., Boyle, C. M., & Jenkinson, R. (2022). Harms associated with loot boxes, simulated gambling and other in-game purchases in video games: a review of the evidence. Retrieved from https://www.classification.gov.au/sites/default/files/documents/agrc_literature_review_final_20220906_accessible.pdf

Greer, N., Rockloff, M., Browne, M., Hing, N., & King, D. L. (2019). Esports betting and skin gambling: A brief history. *Journal of Gambling Issues*, 43, 128-146. <http://dx.doi.org/10.4309/jgi.2019.43.8>

Greer, N., Jenkinson, R., Murray Boyle, C., Jaktar, U., Vandenberg, B., & Sakata, K. (2023). *Consumer views on emerging trends and future directions for gambling in Australia, 2022: National Gambling Trends Study*. Melbourne: Australian Gambling Research Centre, Australian Institute of Family Studies.

Greer, N., Jenkinson, R., Vandenberg, B., & Sakata, K. (2023). *Regular online betting in Australia, 2022: National Gambling Trends Study*. Melbourne: Australian Gambling Research Centre, Australian Institute of Family Studies.

Griffiths, M. D., Davies, M. N. O., & Chappell, D. (2004). Online computer gaming: a comparison of adolescent and adult gamers. *J. Adolesc.* 27, 87–96. doi: 10.1016/j.adolescence.2003.10.007

Hare, S. (2015). Study of Gambling and Health in Victoria, Victoria, Australia: Victorian Responsible Gambling Foundation and Victorian Department of Justice and Regulation.

Hetherington, B., & Phillips, T. (2023). *Discussion paper: Gambling harm and the online gambling environment*. Victorian Responsible Gambling Foundation, Melbourne. Retrieved from https://responsiblegambling.vic.gov.au/documents/1145/Discussion_Paper_Online_Gambling_Environment_February_2023.pdf

Hing, N., Lole, L., Russell, A. M. T., Rockloff, M., King, D. L., Browne, M., Newall, P., & Greer, N. (2022). Adolescent betting on esports using cash and skins: Links with gaming, monetary gambling, and problematic gambling. *PLOS ONE*, 17(5), e0266571–e0266571. <https://doi.org/10.1371/journal.pone.0266571>

Hing, N., Smith, M., Rockloff, M., Thorne, H., Russell, A. M. T., Dowling, N. A., & Breen, H. (2022). How structural changes in online gambling are shaping the contemporary experiences and behaviours of online gamblers: An interview study. *BMC Public Health*, 22(1), 1–1620. <https://doi.org/10.1186/s12889-022-14019-6>

Hing, N., Russell, A. M. T., Black, A., Rockloff, M., Browne, M., Rawat, V., Greer, N., Stevens, M., Dowling, N. A., Merkouris, S., King, D. L., Salonen, A. H., Breen, H., &

Woo, L. (2022). Gambling prevalence and gambling problems amongst land-based-only, online-only and mixed-mode gamblers in Australia: A national study. *Computers in Human Behavior*, 132, 107269. <https://doi.org/10.1016/j.chb.2022.107269>

Hing, N., Russell, A., Browne, M., Rockloff, M., Greer, N., Rawat, V., Stevens, M., Dowling, N. A., Merkouris, S., King, D., Breen, H., Salonen, A., & Woo, L. (2021). *The second national study of interactive gambling in Australia (2019-2020)*. Gambling Research Australia. <https://www.gamblingresearch.org.au/sites/default/files/2021-10/Final%20IGS%20report%202021.pdf>

Hing, N., Russell, A. M. T., Browne, M., Greer, N., Newall, P., Sproston, K., Chen, L., Coughlin, S. (2020). *NSW Youth Gambling Study 2020*. NSW Office of Responsible Gambling. Retrieved from <https://www.gambleaware.nsw.gov.au/-/media/files/published-research-pdfs/nsw-youth-gambling-study-2020-full-report-and-appendices.ashx?rev=1452eb173aed42d9912888b6bc9c938b&hash=EE703F58BCA2B9C9521A665CEDF4D935>

Hing, N., Gainsbury, S., Blaszczynski, A., Wood, R., Lubman, D., & Russell, A. (2014). *Interactive gambling*. Gambling Research Australia. Retrieved from <https://www.gamblingresearch.org.au/sites/default/files/2019-10/Interactive%20Gambling%202014.pdf>

Hollén, L., Dörner, R., Griffiths, M. D., & Emond, A. (2020). Gambling in young adults aged 17–24 years: A population-based study. *Journal of Gambling Studies*, 36(3), 747–766. <https://doi.org/10.1007/s10899-020-09948-z>

Holtgraves, T. (2009). Evaluating the Problem Gambling Severity Index. *Journal of Gambling Studies*, 25(1), 105–120. <https://doi.org/10.1007/s10899-008-9107-7>

Ismail, I. F., Fitriana, M., & Chuin, C. L. (2021). The relationship between loneliness, personality differences, motivation and video game addiction in the context of gacha games in F2P mobile games: A global setting. *Journal of Engineering Science and Technology*, 6, 1-12.

Jauregui, P., & Estevez, A. (2020). Predictive role of attachment, coping, and emotion regulation in gambling motives of adolescents and young people. *Journal of Gambling Studies*, 36(4), 1283–1300

Jenkinson, R., Sakata, K., Khokhar, T., Tajin, R., & Jatkar, U. (2020). Gambling in Australia during COVID-19. *Australian Gambling Research Centre*. Retrieved from https://aifs.gov.au/sites/default/files/publication-documents/2009_gambling_in_australia_during_covid-19_0.pdf

Jenkinson, R., de Lacy-Vawdon, C., & Carroll, M. (2019). *Weighing up the odds: Sports betting and young men*. Australian Gambling Research Centre. <https://aifs.gov.au/research/research-snapshots/weighing-odds-sports-betting-and-young-men>

Jenny, S. E., Manning, R. D., Keiper, M. C., & Olrich, T. W. (2017). Virtual(ly) athletes: Where eSports fit within the definition of "sport." *Quest*, 69(1), 1–18. <https://doi.org/10.1080/00336297.2016.1144517>

Karhulahti, V., & Välisalo, T. (2021). Fictosexuality, Fictoromance, and Fictophilia: A Qualitative Study of Love and Desire for Fictional Characters. *Frontiers in Psychology*, 11(575427). doi: 10.3389/fpsyg.2020.575427.

Khan, A., & Muqtadir, R. (2016). Motives of Problematic and Nonproblematic Online Gaming among Adolescents and Young Adults. *Pakistan Journal of Psychological Research*, 31(1).

Kim, H. S., Coelho, S., Wohl, M. J. A., Rockloff, M., McGrath, D. S., & Hodgins, D. C. (2022). Self-generated motives of social casino gamers. *Journal of Gambling Studies*. <https://doi.org/10.1007/s10899-022-10135-5>

Kim, H. S., Wohl, M. J., Gupta, R., & Derevensky, J. L. (2017). Why do young adults gamble online? A qualitative study of motivations to transition from social casino games to online gambling. *Asian Journal of Gambling Issues and Public Health*, 7, 1–11.

Kim, H. S., Wohl, M. J. A., Gupta, R., & Derevensky, J. (2016). From the mouths of social media users: A focus group study exploring the social casino gaming–online gambling link. *Journal of Behavioral Addictions*, 5(1), 115–121. <https://doi.org/10.1556/2006.5.2016.014>

King, D. L., Delfabbro, P. H., Gainsbury, S. M., Dreier, M., Greer, N., & Billieux, J. (2019). Unfair play? Video games as exploitative monetized services: An examination of game patents from a consumer protection perspective. *Computers in Human Behavior*, 101, 131–143. <https://doi.org/10.1016/j.chb.2019.07.017>

King, D. (2018). *Online gaming and gambling in children and adolescents – Normalising gambling in cyber places*. Victorian Responsible Gambling Foundation. <https://responsiblegambling.vic.gov.au/resources/publications/online-gaming-and-gambling-in-children-and-adolescents-normalising-gambling-in-cyber-places-479/>

King, D., Delfabbro, P., & Griffiths, M. (2010). The convergence of gambling and digital media: Implications for gambling in young people. *Journal of Gambling Studies*, 26(2), 175–187. <https://doi.org/10.1007/s10899-009-9153-9>

Koeder, M. J., Tanaka, E., & Mitomo, H. (2018). "Loot boxes" in digital games - A gamble with consumers in need of regulation? An evaluation based on learnings from Japan. 22nd ITS Biennial Conference, Seoul 2018. Beyond the boundaries: Challenges for business, policy and society 190385, International Telecommunications Society (ITS).

Kolandai-Matchett, K., & Wenden Abbott, M. (2022). Gaming-gambling convergence: Trends, emerging risks, and legislative responses. *International Journal of Mental Health and Addiction*, 20(4), 2024–2056. <https://doi.org/10.1007/s11469-021-00498-y>

- Koivula, A., Oksanen, A., Sirola, A., Savolainen, I., Kaakinen, M., Zych, I., & Paek, H.-J. (2022). Life satisfaction and online-gambling communities: A cross-national study of gambling activities among young Finnish, American, South Korean and Spanish people. *Journal of Gambling Studies*, 38(4), 1195–1214. <https://doi.org/10.1007/s10899-021-10081-8>
- Korn, D., Hurson, T., & Reynolds, J. (2005). *Commercial gambling advertising: Possible impact on youth knowledge, attitudes, beliefs and behavioural intentions*. Ontario Problem Gambling Research Centre. Retrieved from [https://www.greo.ca/Modules/EvidenceCentre/files/Korn%20et%20al\(2005\)Commercial_gambling_advertising.pdf](https://www.greo.ca/Modules/EvidenceCentre/files/Korn%20et%20al(2005)Commercial_gambling_advertising.pdf)
- Kristiansen, S., & Severin-Nielsen, M. K. (2022). Adolescent gambling advertising awareness: A national survey. *International Journal of Social Welfare*, 31(2), 263–273. <https://doi.org/10.1111/ijsw.12501>
- Kristiansen, S., & Trabjerg, C. M. (2017). Legal gambling availability and youth gambling behaviour: A qualitative longitudinal study. *International Journal of Social Welfare*, 26(3), 218–229. <https://doi.org/10.1111/ijsw.12231>
- Kristiansen, S., Trabjerg, M. C., & Reith, G. (2015). Learning to gamble: Early gambling experiences among young people in Denmark. *Journal of Youth Studies*, 18(2), 133–150. <https://doi.org/10.1080/13676261.2014.933197>
- Lamont, M., & Hing, N. (2020). Sports betting motivations among young men: An adaptive theory analysis. *Leisure Sciences*, 42(2), 185.
- Lax, G. L., & Mackenzie, M. (2019). *Against All Odds: Desire and Monetisation in Japanese Mobile Games*. Retrieved from https://digraa.org/wp-content/uploads/2019/01/DIGRAA_2019_paper_38.pdf
- Miller, H. (2017). Gen Bet: Has gambling gatecrashed our teens. *Victoria, Australia: Victorian Responsible Gambling Foundation*.
- Langham, E., Thorne, H., Browne, M., Donaldson, P., Rose, J., & Rockloff, M. (2016). Understanding gambling related harm: a proposed definition, conceptual framework, and taxonomy of harms. *BMC public health*, 16, 80. <https://doi.org/10.1186/s12889-016-2747-0>
- Lopez-Gonzalez, H., Estévez, A., Jiménez-Murcia, S., & Griffiths, M. D. (2018). Alcohol Drinking and Low Nutritional Value Food Eating Behavior of Sports Bettors in Gambling Advertisements. *International journal of mental health and addiction*, 16(1), 81–89. <https://doi.org/10.1007/s11469-017-9789-0>
- Macey, J., & Hamari, J. (2019). eSports, skins and loot boxes: Participants, practices and problematic behaviour associated with emergent forms of gambling. *New Media & Society*, 21(1), 20–41. <https://doi.org/10.1177/1461444818786216>

Macía, L., Estévez, A., & Jáuregui, P. (2022). Gambling: Exploring the role of gambling motives, attachment and addictive behaviours among adolescents and young women. *Journal of Gambling Studies*, 1–19.

Marshall, D., Haughton, J., & Harris, N. (2005). *Young men and gambling in the ACT: An exploratory study of attitudes, perceptions, and engagement*. Centre for Gambling Research, Australian National University. https://www.gamblingandracing.act.gov.au/__data/assets/pdf_file/0007/745054/Young-Men-and-Gambling-in-the-ACT.pdf

Martin-Moreno, J. M., Harris, M., Jakubowski, E., & Kluge, H. (2016). Defining and assessing public health functions: A Global analysis. *Annual Review of Public Health*, 37, 335–355. <https://doi.org/10.1146/annurev-publhealth-032315-021429>

McGee, D. (2020). On the normalisation of online sports gambling among young adult men in the UK: A public health perspective. *Public Health*, 184, 89–94. <https://doi.org/10.1016/j.puhe.2020.04.018>

Ministry of Culture and Tourism, People's Republic of China. (2016). *Ministry of Culture Notice Regarding Strengthening Regulation Online Gaming Operations*. Culture Market Release, 32. Retrieved from <https://www.chinalawtranslate.com/en/ministry-of-culture-notice-regarding-strengthening-regulation-online-gaming-operations/>

Molde, H., Holmøy, B., Merkesdal, A. G., Torsheim, T., Mentzoni, R. A., Hanns, D., Sagoe, D., & Pallesen, S. (2019). Are video games a gateway to gambling? A longitudinal study based on a representative Norwegian sample. *Journal of Gambling Studies*, 35(2), 545–557. <https://doi.org/10.1007/s10899-018-9781-z>

Montiel, I., Basterra-González, A., Machimbarrena, J. M., Ortega-Barón, J., & González-Cabrera, J. (2022). Loot box engagement: A scoping review of primary studies on prevalence and association with problematic gaming and gambling. *PLOS ONE*, 17(1), e0263177. <https://doi.org/10.1371/journal.pone.0263177>

Neely, E. L. (2021). Come for the game, stay for the cash grab: The ethics of loot boxes, microtransactions, and freemium games. *Games and Culture*, 16(2), 228-247.

Nekich, M. A., & Ohtsuka, K. (2016). Bread, milk and a Tattslotto ticket: The interpretive repertoires of young adult gambling in Australia. *Asian Journal of Gambling Issues and Public Health*, 6(1), 4–17. <https://doi.org/10.1186/s40405-016-0013-0>

Newall, P. W. S., Moodie, C., Reith, G., Stead, M., Critchlow, N., Morgan, A., & Dobbie, F. (2019). Gambling marketing from 2014 to 2018: A literature review. *Current Addiction Reports*, 6(2), 49-56. <https://doi.org/10.1007/s40429-019-00239-1>

NSW The Office of Responsible Gambling. (2021). *NSW working towards zero gambling harm. NSW Office of Responsible Gambling Strategic Plan 2021 – 2024*. <https://www.gambleaware.nsw.gov.au/-/media/files/org-strategic-plan-2021-24.ashx?rev=bb1a580542704503adc3700d0ce6640c>

Noble, N., Freund, M., Hill, D., White, V., Leigh, L., Lambkin, D., Scully, M., & Sanson-Fisher, R. (2022). Exposure to gambling promotions and gambling behaviours in Australian secondary school students. *Addictive Behaviors Reports*, *16*, 100439–100439. <https://doi.org/10.1016/j.abrep.2022.100439>

Nyemcsok, C., Thomas, S. L., Pitt, H., Pettigrew, S., Cassidy, R., & Daube, M. (2021). Young people's reflections on the factors contributing to the normalisation of gambling in Australia. *Australian and New Zealand Journal of Public Health*, *45*(2), 165–170. <https://doi.org/10.1111/1753-6405.13063>

Northern Territory Racing Commission. (2022). *Sports bookmakers and betting exchange operators licensed in the Northern Territory*. Retrieved from <https://industry.nt.gov.au/boards-and-committees/racing-commission/sports-bookmakers-and-betting-exchange-operators>

O'Brien, K., & Iqbal, M. (2019). *Extent of, and children and young people's exposure to, gambling advertising in sport and non-sport TV*. Retrieved from <https://responsiblegambling.vic.gov.au/resources/publications/extent-of-and-children-and-young-peoples-exposure-to-gambling-advertising-in-sport-and-non-sport-tv-679/>

O'Farrell, B. (2015). *Review of illegal offshore gambling*. Department of Social Services. Retrieved from https://www.dss.gov.au/sites/default/files/documents/04_2016/review_of_illegal_offshore_wagering_18_december_2015.pdf

O'Meara, D., & Dechamps, L. (2019). *The Waifu Effect - Exploring Attraction and Love for Fictional Characters*. Retrieved from <https://static1.squarespace.com/static/5e1f7cd7492d5f20a6f86dd6/t/5e2b315a2f9ad9725dcaaa05/1579888987192/The+Waifu+Effect.pdf>

O'Neil, Whetton, Delfabbro, Sproston, Brook, Hughes, & Tran (2021). Fifth Social and Economic Impact Study of Gambling in Tasmania 2021. Volume 2: 2020 Prevalence Survey Report. Tasmanian Government Department of Treasury and Finance.

Parrado-González, A., & León-Jariego, J. C. (2020). Exposure to gambling advertising and adolescent gambling behaviour. Moderating effects of perceived family support. *International Gambling Studies*, *20*(2), 214–230. <https://doi.org/10.1080/14459795.2020.1712737>

Paterson, M., Leslie, P., & Taylor, M. (2019). *2019 ACT gambling survey*. Centre for Social Research and Methods, Australian National University. Retrieved from <https://csrcm.cass.anu.edu.au/centres/cgr/2019-act-gambling-survey>

Petheram, L. (2017). *At odds. Young people and gambling in the ACT*. Youth Coalition of the ACT. Retrieved from https://www.gamblingandracing.act.gov.au/__data/assets/pdf_file/0010/1172845/AtOdds_young_people_and_gambling_FinalReport_2017.pdf

Podesta, J., & Thomas, A. (2017). *Betting restrictions and online wagering in Australia*. Retrieved from <https://aifs.gov.au/research/research-reports/betting-restrictions-and-online-wagering-australia>

Pitt, H., Thomas, S. L., Randle, M., Cowlshaw, S., Arnot, G., Kairouz, S., & Daube, M. (2022). Young people in Australia discuss strategies for preventing the normalisation of gambling and reducing gambling harm. *BMC Public Health*, 22(1), 956. <https://doi.org/10.1186/s12889-022-13201-0>

Pitt, H., Thomas, S. L., Bestman, A., Daube, M., & Derevensky, J. (2017). Factors that influence children's gambling attitudes and consumption intentions: Lessons for gambling harm prevention research, policies and advocacy strategies. *Harm Reduction Journal*, 14(1), 11. <https://doi.org/10.1186/s12954-017-0136-3>

Queensland Government. (2021). *Gambling harm minimization plan for Queensland 2021-25*. Retrieved from <https://www.publications.qld.gov.au/dataset/gambling-harm-min/resource/f9fbcab9-5e5c-4925-8723-8f1762615557>

Quinlan, C. K., Goldstein, A. L., & Stewart, S. H. (2014). An investigation of the link between gambling motives and social context of gambling in young adults. *International Gambling Studies*, 14(1), 115–131.

Roberts, K., Dowell, A. & Nie, J. B. (2019). Attempting rigour and replicability in thematic analysis of qualitative research data; a case study of codebook development. *BMC Med Res Methodol*, 19(66). <https://doi.org/10.1186/s12874-019-0707-y>

Ross, A., & Nieborg, D. (2021). Spinning is winning: Social casino apps and the platformization of gamble-play. *Journal of Consumer Culture*, 21(1), 84–101. <https://doi.org/10.1177/1469540521993931>

Russell, A. M. T., Hing, N., Browne, M., Li, E., & Vitartas, P. (2019). Who bets on micro events (microbets) in Sports? *Journal of Gambling Studies*, 35(1), 205–223. <https://doi.org/10.1007/s10899-018-9810-y>

Saldana, J. (2016). *The Coding Manual for Qualitative Researchers*. Sage Publications Inc.

Sandelowski M. (2010). What's in a name? Qualitative description revisited. *Research in nursing & health*, 33(1), 77–84. <https://doi.org/10.1002/nur.20362>

Savolainen, I., Oksanen, A., Kaakinen, M., Sirola, A., Zych, I., & Paek, H.-J. (2021). The role of online group norms and social identity in youth problem gambling. *Computers in Human Behavior*, 122(106828). <https://doi.org/10.1016/j.chb.2021.106828>

Savolainen, I., Sirola, A., Kaakinen, M., & Oksanen, A. (2019). Peer group identification as determinant of youth behavior and the role of perceived social support in problem gambling. *Journal of Gambling Studies*, 35(1), 15–30. <https://doi.org/10.1007/s10899-018-9813-8>

Skinner, H., Biscope, S., Murray, M., & Korn, D. (2004). Dares to addiction: Youth definitions and perspectives on gambling. *Canadian Journal of Public Health*, 95(4), 264–267. <https://doi.org/10.1007/BF03405128>

Sirola, A., Kaakinen, M., Savolainen, I., Paek, H.-J., Zych, I., & Oksanen, A. (2021). Online identities and social influence in social media gambling exposure: A four-country study on young people. *Telematics and Informatics*, 60(101582).

Sirola, A., Kaakinen, M., & Oksanen, A. (2018). Excessive gambling and online gambling communities. *Journal of Gambling Studies*, 34(4), 1313–1325. <https://doi.org/10.1007/s10899-018-9772-0>

Spångberg, J., Månsson, J., Törrönen, J., & Samuelsson, E. (2022). Making sense of gambling. Swedish youth navigating between risk and responsibility. *International Gambling Studies*, 1–18. <https://doi.org/10.1080/14459795.2022.2077977>

Spicer, S. G., Nicklin, L. L., Uther, M., Lloyd, J., Lloyd, H., & Close, J. (2022). Loot boxes, problem gambling and problem video gaming: A systematic review and meta-synthesis. *New Media & Society*, 24(4), 1001–1022. <https://doi.org/10.1177/14614448211027175>

Spicer, S. G., Fullwood, C., Close, J., Nicklin, L. L., Lloyd, J., & Lloyd, H. (2022). Loot boxes and problem gambling: Investigating the "gateway hypothesis". *Addictive behaviors*, 131(107327). <https://doi.org/10.1016/j.addbeh.2022.107327>

Svensson, J., Romild, U., Nordenmark, M., & Månsdotter, A. (2011). Gendered gambling domains and changes in Sweden. *International Gambling Studies*, 11(2), 193–211. <https://doi.org/10.1080/14459795.2011.581676>

Tabri, N., Xuereb, S., Cringle, N., & Clark, L. (2022). Associations between financial gambling motives, gambling frequency and level of problem gambling: A meta-analytic review. *Addiction*, 117(3), 559–569.

Takagi, H., & Terada, K. (2021). The effect of anime character's facial expressions and eye blinking on donation behavior. *Scientific Reports*, 11(9146). doi: <https://doi.org/10.1038/s41598-021-87827-2>

Thomas, S. (2018). *The determinants of gambling normalisation: Causes, consequences and public health responses*. Victorian Responsible Gambling Foundation.

Tomić, N. Z. (2018). Economic model of microtransactions in video games. *J. Econ. Sci. Res*, 1(1).

Tremayne, K., Masterman-Smith, H., & McMillen, J. (2001). *Survey of the nature and extent of gambling and problem gambling in the ACT*. Australian Institute for Gambling Research, University of Western Sydney. Retrieved from https://www.gamblingandracing.act.gov.au/__data/assets/pdf_file/0009/745065/Survey-of-Problem-Gambling-in-the-ACT.pdf

Victorian Responsible Gambling Foundation. (2022). *Reducing Gambling Harm in Victoria. Outcomes Framework 2022 V1.1*. Retrieved from https://responsiblegambling.vic.gov.au/documents/1030/VRGF_Reducing_gambling_harm_in_Vic_2022_FINAL_MARCHweb.pdf

Wardle, H. (2019). Perceptions, people and place: Findings from a rapid review of qualitative research on youth gambling. *Addictive Behaviors, 90*, 99–106. <https://doi.org/10.1016/j.addbeh.2018.10.008>

Wilson, D. H., & Ross, N. A. (2011). Place, gender and the appeal of video lottery terminal gambling: Unpacking a focus group study of Montreal youth. *GeoJournal, 76*(2), 123–138. <https://doi.org/10.1007/s10708-009-9284-7>

Windholz, E. L. (2021). Fantasy sports in Australia: Co-regulation and commercial accommodation. *The International Sports Law Journal, 21*(3), 154–165. <https://doi.org/10.1007/s40318-021-00187-x>

Woods, O. (2022). The Economy of Time, the Rationalisation of Resources: Discipline, Desire and Deferred Value in the Playing of Gacha Games. *Games and Culture, 17*(7-8), 1075-1092. <https://doi.org/10.1177/15554120221077728>

Wood, R. T. A., & Griffiths, M. D. (2002). Adolescent perceptions of the National Lottery and scratchcards: A qualitative study using group interviews. *Journal of Adolescence, 25*(6), 655–668. <https://doi.org/10.1006/jado.2002.0515>

Yalcin, R. U. (2022). Research on gambling in young people: A co-occurrence analysis. *Journal of Gambling Studies*. <https://doi.org/10.1007/s10899-022-10131-9>

Zaman, B., Geurden, K., De Cock, R., De Schutter, B., & Vanden Abeele, V. (2014). Motivation profiles of online Poker players and the role of interface preferences: A laddering study among amateur and (semi-) professionals. *Computers in Human Behavior, 39*, 154–164. <https://doi.org/10.1016/j.chb.2014.07.009>

Zendle, D., & Cairns, P. (2019). Loot boxes are again linked to problem gambling: Results of a replication study. *PLOS ONE, 14*(3), e0213194. <https://doi.org/10.1371/journal.pone.0213194>