

# Survey of South Australian adults' (18+) attitudes, beliefs and behaviours regarding sports betting 2021



Experimental Gambling Research Laboratory  
CQUniversity  
Australia

Matthew Browne  
Gabrielle M Bryden  
Alex M T Russell  
Matthew Rockloff  
Nerilee Hing  
Cassy Dittman  
Michele Lastella

Commissioned by the SA Office for Problem Gambling, Department of Human Services

# Table of Contents

<b>LIST OF TABLES .....</b>	<b>5</b>
<b>LIST OF FIGURES.....</b>	<b>5</b>
<b>EXECUTIVE SUMMARY.....</b>	<b>6</b>
<b>BACKGROUND .....</b>	<b>6</b>
<b>MATERIALS .....</b>	<b>7</b>
<b>RESULTS.....</b>	<b>7</b>
<b>CONCLUSIONS .....</b>	<b>8</b>
<b>INTRODUCTION.....</b>	<b>9</b>
<b>SURVEY FRAMEWORK .....</b>	<b>9</b>
<b>ENVIRONMENTAL EXPOSURE .....</b>	<b>10</b>
<b>SOCIAL NORMATIVE INFLUENCES .....</b>	<b>10</b>
<b>INDIVIDUAL OUTCOME AND CHANGE .....</b>	<b>10</b>
<b>LITERATURE REVIEW .....</b>	<b>11</b>
<b>NORMALISATION THEORY.....</b>	<b>11</b>
<b>ENVIRONMENTAL EXPOSURE TO SPORTS BETTING .....</b>	<b>12</b>
UPTAKE OF SPORTS BETTING IN SOUTH AUSTRALIA.....	12
EASY ACCESSIBILITY TO SPORTS BETTING USING ONLINE AND MOBILE TECHNOLOGIES .....	13
SPORTS BETTING ADVERTISING AND INDUCEMENTS .....	14
EFFECTS OF SPORTS BETTING ADVERTISING ON CHILDREN AND YOUNG PEOPLE .....	15
EFFECTS OF SPORTS BETTING ADVERTISING ON ADULTS.....	16
NORMATIVE INFLUENCES OF SPORTS BETTING ADVERTISING .....	17
COMMUNITY CONCERN ABOUT SPORTS BETTING ADVERTISING .....	18
<b>SOCIAL AND NORMATIVE INFLUENCES ON SPORTS BETTING .....</b>	<b>19</b>
YOUTH BETTING, AND FAMILY AND PEER INFLUENCES AS PROTECTIVE AND RISK FACTORS .....	19
PARENTAL AND FAMILY INFLUENCES ON ADOLESCENTS' GAMBLING.....	19
PEER INFLUENCES ON ADOLESCENTS' GAMBLING .....	20
PEER INFLUENCES AND EXPRESSIONS OF PEER GROUP NORMALISATION AMONG SPORTS BETTORS .....	21
CULTURAL INFLUENCES AND EXPRESSIONS OF THE NORMALISATION OF GAMBLING IN AUSTRALIA.....	22
PUBLIC HEALTH MEASURES AND THE DISRUPTION OF NORMALISATION .....	23
<b>INDIVIDUAL OUTCOMES AND CHANGE .....</b>	<b>24</b>
<b>ERRONEOUS COGNITION IN SPORTS BETTING.....</b>	<b>24</b>
<b>EMOTIONAL INVOLVEMENT IN SPORTS - FANS AND ATHLETES .....</b>	<b>25</b>
<b>PROTECTIVE BEHAVIOURS BY SPORTS BETTORS IN RELATION TO THEIR OWN BETTING .....</b>	<b>25</b>
<b>PROTECTIVE BEHAVIOURS BY CAREGIVERS IN RELATION TO SPORTS BETTING .....</b>	<b>26</b>
<b>CHANGING BEHAVIOUR AND REDUCING HARM.....</b>	<b>27</b>
<b>CONCLUSION .....</b>	<b>27</b>
<b>METHOD.....</b>	<b>28</b>

<b>MEASURES</b> .....	<b>28</b>
SCREENING AND QUOTA QUESTIONS.....	28
ASSESSING GAMBLER STATUS.....	28
INFORMATION ABOUT SPORTS BETTING BEHAVIOUR (SPORTS BETTORS ONLY).....	28
ERRONEOUS BELIEFS AND SAFE SPORTS BETTING BEHAVIOURS .....	29
ATTITUDES TOWARDS SPORTS BETTING PROMOTIONS .....	29
ATTITUDES TOWARDS SPORTS BETTING .....	29
WATCHING SPORTS AND INVOLVEMENT IN SPORTS .....	29
NORMALISATION OF SPORTS BETTING.....	29
PROTECTIVE STRATEGIES RELATED TO SPORTS BETTING .....	30
PROBLEM GAMBLING SEVERITY INDEX (PGSI).....	30
DEMOGRAPHICS.....	31
<b>DATA ANALYSIS</b> .....	<b>31</b>
<b>RESULTS</b> .....	<b>32</b>
<b>SAMPLE DEMOGRAPHICS</b> .....	<b>32</b>
<b>HOUSEHOLD COMPOSITION</b> .....	<b>33</b>
<b>CAREGIVERS OF CHILDREN</b> .....	<b>34</b>
<b>GAMBLING PARTICIPATION, FREQUENCY, EXPENDITURE, AND PROBLEM GAMBLING</b> .....	<b>34</b>
GAMBLING PARTICIPATION AND FREQUENCY .....	34
PROBLEM GAMBLING .....	34
<b>COMMUNITY ATTITUDES TO SPORTS BETTING</b> .....	<b>35</b>
SPORTS BETTING AND ASSOCIATED RISKS .....	35
ADVERTISING AND PROMOTION OF SPORTS BETTING.....	35
SPORTS BETTORS AND NON-SPORTS BETTORS' ATTITUDES TO SPORTS BETTING AND SPORTS BETTING ADVERTISING .....	36
<b>ENGAGEMENT IN WATCHING SPORTS AND BETTING</b> .....	<b>38</b>
MODE OF WATCHING SPORT.....	38
SOCIAL CONTEXT OF WATCHING SPORT .....	38
SPORTS BETTORS' EXPENDITURE .....	39
IN-PLAY BETTING .....	39
<b>IRRATIONAL BELIEFS AND EMOTIONAL INVOLVEMENT IN SPORTS</b> .....	<b>39</b>
REGRESSION OF IRRATIONAL BELIEFS ABOUT SPORTS BETTING WITH DEMOGRAPHICS .....	41
<b>PERCEPTIONS OF NORMALISATION AND ACCESSIBILITY</b> .....	<b>43</b>
DIMENSIONS OF NORMALISATION.....	43
PSYCHOMETRIC ANALYSIS FOR A UNIFIED INDEX OF NORMALISATION .....	44
REGRESSION OF SPORTS BETTING NORMALISATION WITH DEMOGRAPHICS .....	47
<b>ENGAGEMENT IN, CONFIDENCE IN, AND PERCEPTIONS OF THE IMPORTANCE OF PROTECTIVE BEHAVIOURS</b> .....	<b>49</b>
CAREGIVERS (TO CHILDREN OR ADOLESCENTS) AND NON-CAREGIVERS .....	49
CAREGIVERS (TO CHILDREN AND ADOLESCENTS) WHO ARE SPORTS BETTORS .....	51
SPORTS BETTORS AND PROTECTIVE BEHAVIOURS .....	52
PROTECTIVE BEHAVIOURS BY PGSI CATEGORY .....	52
PROTECTIVE SPORTS BETTING STRATEGIES AND SAFE MESSAGING .....	55
PROTECTIVE SPORTS BETTING BEHAVIOURS OF CAREGIVERS WHO ARE SPORTS BETTORS .....	55
REGRESSION OF PROTECTIVE BEHAVIOURS FOR CHILDREN WITH DEMOGRAPHICS OF CAREGIVERS .....	56
<b>DISCUSSION</b> .....	<b>58</b>
<b>ENVIRONMENTAL EXPOSURE</b> .....	<b>58</b>
<b>SOCIAL AND NORMATIVE STANDARDS</b> .....	<b>58</b>

SPORT BETTING CULTURE.....	58
SPORT BETTING NORMALISATION - SCALE DEVELOPMENT.....	59
<b>INDIVIDUAL BEHAVIOURS .....</b>	<b>59</b>
FAILURE TO REJECT IRRATIONAL BELIEFS.....	59
INDIVIDUAL OUTCOME AND CHANGE .....	59
<b>CONCLUSION .....</b>	<b>60</b>
<b><u>REFERENCES.....</u></b>	<b><u>61</u></b>
<b><u>APPENDIX A .....</u></b>	<b><u>74</u></b>

## List of Tables

Table 1. Demographic Variables for the Survey Sample and as assessed by the 2018 gambling prevalence survey (where available).....	32
Table 2. Sports betting, other types of gambling, and gambling severity among surveyed SA adults in the last 12 months.....	35
Table 3. Sports Bettors (n = 732) and Non-sports Bettors (n = 1298) Attitudes to Sports Betting and Sports Betting Advertising.....	37
Table 4. Erroneous Beliefs and Emotional Involvement in Sports Betting of Sports Bettors (n= 732).....	40
Table 5. Item codes, labels, summary statistics and factor loadings for items measuring irrational beliefs and protective behaviours.....	41
Table 6. Regression results using irrational beliefs as the criterion .....	42
Table 7. Regression results using protective behaviours as the criterion .....	43
Table 8. Descriptive statistics for questions measuring the dimensions of normalisation, on a scale of 0 to 100%.....	44
Table 9. Summary statistics for candidate sports betting normalisation items.....	44
Table 10. Regression results using integrated index of normalisation as the criterion .....	48
Table 11. Engagement in, confidence in, and perceptions of importance of protective behaviours by caregivers (to children and adolescents), and non-caregivers .....	50
Table 12. Engagement in, confidence in, and perceptions of importance of protective behaviours by caregivers (to children or adolescents) who are sports bettors .....	51
Table 13. Protective sports betting behaviours of caregivers (of children or adolescents) who are sports bettors.....	52
Table 14. Engagement in, confidence in, and perceptions of importance of protective behaviours by PGSI categories.....	53
Table 15. Engagement in, confidence in, and perceptions of importance of protective behaviours for each response category (%) by PGSI categories.....	54
Table 16. Engagement in protective behaviours and frequency of seeing safe messaging (n = 2030).....	55
Table 17. Protective sports betting behaviours of caregivers (of children or adolescents) who are sports bettors.....	56
Table 18. Caregivers (of children or adolescents) feeling informed and comfortable talking to children or adolescents in their care about the risks of sports betting.....	56
Table 19. Regression results using mean score on protective behaviours with respect to children as the criterion.....	57

## List of Figures

Figure 1. Tiered framework for organisation of the SA survey of attitudes, beliefs, and behaviours toward sports betting. ....	10
Figure 2. Moderate-risk and problem-gambling population prevalence rates by age and gender. Source: Combined dataset of N=70,000 CATI interviews, sourced from most recent Australian population surveys in SA, NSW, VIC, TAS and ACT. Manuscript (Browne et al, in prep). ....	13
Figure 3. Community Attitudes to Sports Betting and Sports Betting Advertising.....	36
Figure 4. Frequency (%) of watching sport by mode of watching during the last 12 months.....	38
Figure 5. Frequency of watching sport by social context during the last 12 months (n = 2030) ...	38
Figure 6. Model for a hierarchical factor analysis of normalisation variables .....	46
Figure 7. Density plot of standardised scores on finalised sports betting normalisation index .....	47

## Executive Summary

This study aimed to develop and implement an initial survey of South Australians' attitudes, beliefs, and practices in relation to sports betting, focusing on normalisation and potential impacts on young people. Normalisation of gambling in the context of enjoying sport can be thought of as the outcome of processes that encourage regular betting, making it an accepted and routine part of everyday life for individuals, their families, and communities. The South Australian government aims to reduce the degree of sports betting normalisation in the state, and the findings documented in this report will serve as a baseline for changing public perceptions.

### Background

Around 7% of South Australian adults participated in sports betting in 2018, a statistically significant increase since 2012. Although less prevalent than electronic gaming machine (EGM) betting, sports betting is known to be one of the riskiest forms of gambling. Sports betting is most popular among young men, and betting usually takes place online and with the aid of a smartphone. Sports betting advertising is an issue of community concern, with extensive brand exposure at sporting stadia, during TV and radio broadcasts, and in print, online and social media. Wagering advertising is commonplace across a variety of media, particularly on channels related to sports. Digital technologies allow operators to send customised push marketing directly to account holders and prospective clients via texts, in-app notifications, emails calls and via social media.

Exposure to advertising is linked to normalisation of betting among young people, with children who watch sport developing strong brand associations between gambling sponsors and sporting iconography. There is a dearth of detailed information on the degree of normalisation of sports betting in South Australia. However, a recent prevalence survey in NSW found that nearly half of the adolescents surveyed reported noticing gambling advertising on television during sports and racing events at least weekly. Nearly one-third of respondents considered betting on sports to be normal, and more than one in six felt that knowing the betting odds was part of following sport and makes watching sport more exciting.

Prior research on gambling normalisation has delineated three key components: family, friends, and the broader community. For adolescents, the behaviour and attitudes of parents and peers appear

### KEY POINTS

- 2030 respondents completed an online survey about sports betting
- South Australians recognise the potential risks around sports betting, have strongly negative attitudes to wagering advertising, and generally agree that it's important for young people to understand the risks
- On a scale of 0 to 100 (where 100 means sports betting is considered completely normal), South Australians scored 45. There is ample room to 'move the needle' with respect to normalisation of sports betting in South Australia
- In other respects, typical attitudes might be described as being reconciled to the ubiquity of sports betting, e.g. in it being a feature of sports that is never going to change
- Younger respondents with higher incomes tended to perceive sports betting as more normalised
- The community generally agrees children should be kept from sports betting, but sports betting parents are less likely to subscribe to this view
- Both caregivers and non-caregivers disapproved of harmful sports betting behaviours, but non-caregivers had significantly higher disapproval levels. About 63% of caregivers and 69% of non-caregivers believe it is not OK if children or adolescents see you betting on sports

to be particularly important in serving either as a risk or protective factor for subsequent development of gambling problems.

## Materials

A key task in this project was to identify available measures, and to adapt and supplement these materials as necessary to provide a comprehensive assessment of sports betting normalisation and related constructs. In addition to assessing the demographic and personal characteristics of respondents (e.g., frequency of sports betting, gambling problems), the major constructs measured were as follows:

- **Normalisation:** A triarchic model of normalisation was adopted, which assesses the concept in relation to family, friends, and the broader community e.g., “My friends would disapprove of me betting on sports” (friends).
- **Dangerous / protective beliefs:** An existing measure of erroneous gambling beliefs was incorporated, e.g., “I can often estimate the true odds better than the advertised odds”, and supplemented by further items assessing protective behaviours e.g., “I stick to a dedicated budget for sports betting”.
- **Attitudes to sports betting and sports betting promotions:** A spectrum of beliefs about sports betting were assessed, e.g. “There is too much sports betting today”, and promotions e.g., “Sports betting advertising during sports games should be banned”.
- **Protective behaviours regarding young people:** Most questions in this category were designed to be given to all participants (caregivers and non-caregivers), such as “It’s OK if children or adolescents see you betting on sports”. For caregivers who also bet on sports, concrete questions about their personal behaviour were also asked, such as, “If I talk about betting sports, I take care not to let them [children in my care] overhear”. Their degree of confidence and comfort in talking to young people about risks involved in sports betting was also assessed.

## Results

A total of 2030 respondents were recruited by a commercial panel provider and completed the full survey. The sample had demographic characteristics similar to the general South Australian population, except for the rate of gambling problems which was significantly higher than population norms. Just under half (45%) cared for their own or someone else’s children or adolescents, and 36% reported betting on sports in the last 12 months.

South Australians felt that sports betting was readily accessible (median rating 92%). However, only 60% felt that betting on sports was a part of South Australian culture.

Most respondents were aware of the potential dangers involved in sports betting and problems caused by wagering advertising. For example, 89% agreed that sports betting can destroy families and 87% agreed that sports advertising makes it hard for people with problems to resist gambling. There was overwhelmingly negative sentiment toward the advertising and promotion of sports betting. For example, 81% agreed that sports betting needs to be more tightly regulated or restricted. Sports bettors tended to have slightly more positive attitudes than those who did not wager.

While a large majority (82%) of sports bettors indicated that they stick to a dedicated budget for sports betting, only 61% avoided betting if they were feeling depressed or upset. Large differences in protective behaviour were seen for problem gamblers. For example, 88% of non-gamblers disagreed that it’s OK to include children or adolescents in their sports betting, compared with only 43% of problem gamblers.

Erroneous beliefs about sports betting reliably reflected an underlying construct ( $\alpha = .90$ ) and were a reasonably strong risk factor for gambling problems ( $r = .47$ ). Younger respondents tended to have more irrational beliefs.

Both caregivers (of children or adolescents) and non-caregivers tended to give strong endorsement of items regarding their confidence and willingness to talk to family members if their sports betting was a problem. For example, 86% of caregivers agreed that if an adult friend or family member is betting a lot on sports, it is a good idea to talk to them about whether sports betting is a problem for them. Both caregivers and non-caregivers disapproved of harmful behaviours, but non-caregivers had significantly higher disapproval levels. For example, 63% of caregivers and 69% of non-caregivers disapproved of the statement 'It's OK if children or adolescents see you betting on sports; and 81% of caregivers and 85% of non-caregivers disagreed that 'It's OK to include children or adolescents in your sports betting'.

Caregivers who were sports bettors appeared ambivalent about keeping their sports conversations private so that children and adolescents don't overhear (51%), and 51% agreed that it was OK if children or adolescents see you betting on sports. However, 67% did not agree that 'It's OK to include children or adolescents in your sports betting'.

Psychometric analysis of the tripartite model of normalisation led to several items being dropped on statistical grounds. A factor analysis confirmed a hierarchical structure, with the global factor encompassing subjective aspects of normalisation in relation to friends, family and the wider community. In the present sample, older participants tended to perceive sports betting as more normalised. We proposed an index based on a simple normalised average of items, which is scaled between a theoretical minimum of 0 and a maximum of 100, with lower scores indicating less normalisation. For the present baseline survey, we calculated a value on this index of 45.19, and a 95% confidence interval of (44.51 to 45.87). The high reliability of this index suggests that it should be a highly sensitive measure of changes in subjective normalisation.

## Conclusions

The present survey included a detailed assessment of several key constructs related to community attitudes towards sports betting. A key outcome was to provide a sensitive and unified index of normalisation, and to estimate a baseline level prior to implementation of communication strategies to change public perceptions. This index can and should be supplemented by the other core constructs assessed in this survey: erroneous beliefs about one's own gambling, attitudes towards sports betting and wagering advertising, and an understanding of the importance of protective behaviours in relation to family, friends and when betting around young people. In general, while the results are not discouraging, they also suggest there is ample room to 'move the needle' with respect to normalisation of sports betting in South Australia. South Australians recognise the potential risks around sports betting, have strongly negative attitudes to wagering advertising, and generally agree that it's important for young people to understand the risks. However, in other respects typical attitudes might be described as somewhat reconciled to the ubiquity of sports betting, e.g., in it being a feature of sports that is never going to change, or complacent with respect to the importance of keeping children and adolescents at arms-length from the activity. We recommend the developed index for tracking changes in normalisation in the broader community. We recommend that this index be supplemented by measures of irrational / dangerous beliefs among gamblers, and measurement of protective behaviours towards young people among caregivers, and also towards friends and family in the broader community. Care should be taken to ensure a similar pool of participants is surveyed in future waves. This should yield a detailed and sensitive means to track changes in sports betting-related perceptions in South Australia.



## Introduction

The South Australian Office for Problem Gambling (OPG) commissioned this study on community attitudes, beliefs, and behaviours around sports betting of South Australian adults (18 years and over). The study's survey was required to reliably capture South Australian adults' attitudes, beliefs and behaviour related to sports betting, adolescents' exposure to sports betting (as reported by carers), and approaches to preventing harm from sports betting. This includes, but is not limited to, the extent to which South Australians believe:

- Betting on sport is normal.
- Gambling enhances the enjoyment of sport.
- Young people and the community are exposed to too much gambling advertising in sport.
- It is important to talk to young people about gambling and the risks.

The OPG requested the online survey be informed by similar recent surveys conducted in other national and international jurisdictions and developed in partnership with the OPG. The survey results will form baseline data relied on by OPG to measure the impact of future marketing campaigns and community education activities seeking to interrupt the normalisation of gambling in sport. The survey aims to reliably capture South Australian adults' attitudes, beliefs and behaviour related to sports betting, be consistent with the approach used in other jurisdictions, be reproducible in any subsequent survey to allow longitudinal analysis of data, and equitably represent the South Australian adult population.

Findings from the research will inform future interventions by the OPG, including a proposed communications campaign 'Here for the Game' which has the goal of disrupting the normalisation of gambling in sport. The results can also inform policy development, particularly in relation to sports betting and young people.

## Survey framework

Figure 1 outlines the framework for the design of the survey. It summarises the overall structure of the South Australian survey of attitudes, beliefs, and behaviours regarding sports betting. In principle there are environmental, social, and individual determinants of behaviours relating to sports betting, which all can contribute to degrees of experienced gambling harm in the community. The survey operationalised each of these tiers with respect to first person reports from adults aged 18 years and over. Some components were also measured second-hand, asking respondents to describe similar constructs regarding friends and family. With regard to questions involving young people, the scope of the survey was restricted to assessing self-reported behaviour, such as whether parents had discussed issues with betting with their children, whether children were present when they bet on sports, and whether their children were present when they discussed their wins.

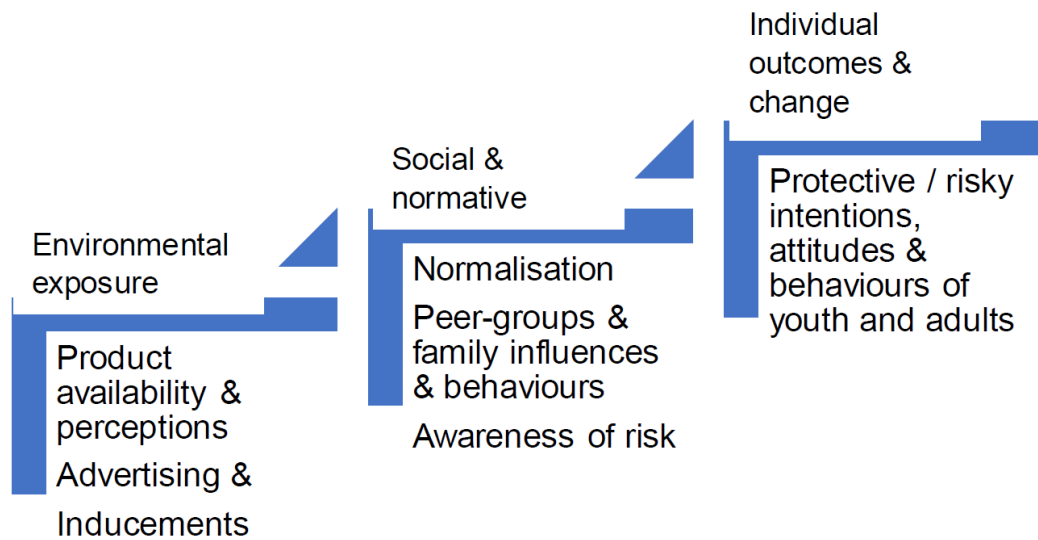


Figure 1. Tiered framework for organisation of the SA survey of attitudes, beliefs, and behaviours toward sports betting.

### Environmental exposure

Imagery and messaging associated with sports betting advertising/promotion often aim to present sports betting not only as an enjoyable activity, but also as a normal and expected social behaviour associated with watching sports. This component included a specific and detailed focus on community perceptions and beliefs about sports betting and advertising. This assessment of attitudes to sports betting and sports betting advertising included promotions targeting children. In addition, the survey captured the degree of sports viewing itself, along with the mode of watching sport (e.g., television) and the social context. From a public health perspective, environmental availability and exposure to potentially risky products represent the first threshold for potential harm.

### Social normative influences

The second tier of our framework encompassed social and normative aspects. For both familial and peer groups, it was useful to capture perceived behaviours, attitudes, and opinions. Awareness of the risks involved in sports gambling, and willingness to discuss the potential hazards with family and friends, is another important component of this tier. This normative dimension captured both normalisation and stigmatisation of sports betting.

### Individual outcome and change

The final tier captured individual-level variables, many of which represent the ultimate outcomes that are associated with increased risk for harm from sports betting. These included key outcomes, such as the frequency and amount spent on sports betting, and whether one had personally experienced gambling-related harm from sports betting, or observed it occur within one's immediate social or familial network. Importantly, it captured willingness or actual performance of discussing potential risks associated with sports betting with friends and family.

The study also included personal behaviours that may increase risk in younger people, such as sharing news of wins with children, or betting in front of children.

In summary, this tiered organising framework provided a strong foundation for the survey design. The following literature review is organised within this framework. Exposure to sports betting products, advertising and inducements, and high engagement with sports, relates to the environmental context that facilitates and normalises a high degree of engagement with sports betting, and makes harm from sports betting possible. The social context, in which sports betting may be normalised by family and friends without consideration of the risks, presents key exacerbating factors, and captures the immediate factors that many broadscale health programs would like to influence. This in turn can drive individual behaviours that lead directly or indirectly to sports-betting related harm. Understanding the contribution of these environmental, normative, social and individual factors can inform the design of marketing campaigns and community education activities seeking to interrupt the normalisation of gambling in sport and provide a baseline for the future evaluation of these interventions.

## Literature review

This literature review summarises relevant Australian and international literature, including peer-reviewed articles, as well as government funded research and technical reports (i.e., grey literature) with the aim of directly informing the development of the survey of South Australian community attitudes to sports betting.

This literature review commences with an explanation of normalisation theory since sports betting normalisation represents a key aspect of the longitudinal measurement framework to be addressed in this study. However, it is also a relatively complex construct that has received minimal attention in terms of scale development and validation. Because the OPG aims to use longitudinal assessment to capture the efficacy of their intervention programs on normalisation, it is crucial that the measure employed is reliable and valid and as sensitive to change as possible. For example, multi-item measures are more sensitive than individual questions, and validated scales are gold standard for measurement tools.

The chapter then reviews research literature relevant to the survey framework (Figure 1) to highlight key factors that appear to contribute to the normalisation of sports betting. As discussed in this review, sports betting is increasingly mediated via online, mobile and interactive technologies. It has become the focus of saturated marketing campaigns targeted at younger men, which in turn appear to be contributing to an increasing normalisation and enculturation of betting as an accepted and normal part of sports viewing and socialisation. Formative influences that occur prior to the age of 18, such as parental and peer gambling, have also been identified as key risk factors for the development of gambling problems, along with adult peer encouragement and cultural influences that increase the social acceptability of gambling. Assessing the degree to which normalisation and enculturation of unhealthy betting practices occur, as well as healthy protective steps, is an important strategy for the long-term reduction of gambling-related harm.

## NORMALISATION THEORY

Normalisation can be considered a process whereby stigmatised or deviant behaviours, individuals or groups come to be features of everyday life that are increasingly accepted and accommodated (Wolfensberger, 1980). Normalisation theory can be used as a conceptual framework to monitor how attitudes and behaviours change over time in relation to a phenomenon of interest. For example, Parker et al.'s seminal monograph "Illegal Leisure: The Normalisation of Adolescent Recreational Drug Use" (Parker et al., 1998) described the

increasing normalisation of tobacco and illegal drugs by both users and non-users in Great Britain. Illicit drug use, once considered the domain of individual or social pathology, had become an unexceptional feature of the lives of young people. Their normalisation thesis purported that recreational drug use was so common among young adults as to be portrayed as 'normal' rather than an issue restricted to subcultures.

Parker et al. (1998) detailed five dimensions of normalisation in relation to drug use:

- Availability/access (e.g., offers of drugs).
- Rates of drug trying (lifetime use).
- Rates of use of drugs (current use).
- Non-users with attitudes that accommodate 'sensible' recreational drug use.
- A level of cultural accommodation in the broader society.

Based on these dimensions, the normalisation of gambling has been defined as:

"The interplay of socio-cultural, environmental, commercial and political processes which influence how different gambling activities and products are made available and accessible, encourage recent and regular use, and become an accepted part of everyday life for individuals, their families, and communities" (Thomas et al., 2018).

## ENVIRONMENTAL EXPOSURE TO SPORTS BETTING

Environmental exposure to sports betting principally occurs through its uptake and availability in the community and its extensive marketing. This section examines participation in sports betting in South Australia, and its easy accessibility using online and mobile technologies. It then reviews research on sports betting advertising and its effects on young people and adults.

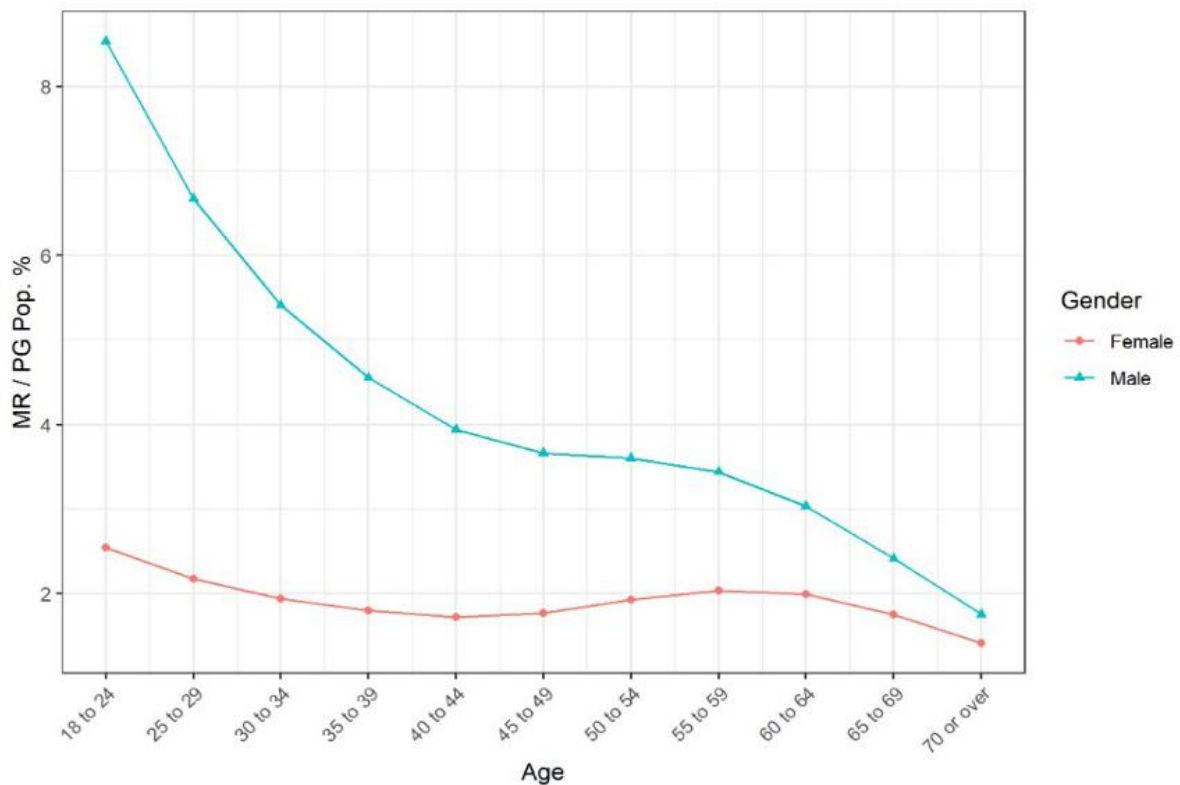
### Uptake of sports betting in South Australia

Participation in sports betting has continued to increase in South Australia. Based on the 2018 South Australian Gambling Prevalence Study (Woods et al., 2018), 7% of South Australian adults participated in sports betting in 2018, a statistically significant increase since 2012. Sports betting is particularly popular among males. Consistent with broader trends, sports betting was six times higher among males (12%) than females (2%), and higher among younger adults, people living in Greater Adelaide, people who only spoke English at home, higher income earners and single respondents (Woods et al., 2018).

The 2018 South Australian Gambling Prevalence Study (Woods et al., 2018) estimated the prevalence of problem gambling in the South Australian adult population to be 0.7%, while 2.2% were moderate risk gamblers, 4.6% were low risk gamblers, 57.2% were non-problem gamblers, and 35.3% were non-gamblers. Problem and at-risk gambling was elevated among sports bettors, with 3.5% classified as problem gamblers, 10.9% moderate risk gamblers and 17.7% low risk gamblers. Further, sports betting participation was a unique risk factor in regression models predicting gambling problems. The heightened risk of gambling problems among sports bettors, and its popularity among younger adults, point to the importance of understanding associated risk factors to inform future marketing campaigns and community education activities seeking to interrupt the normalisation of gambling in sport.

As noted above, most sports bettors are young adult males. Being young and male has consistently been linked to gambling problems in general (Johansson et al., 2009). Likewise, many sports bettors also partake in other forms of gambling (Russell et al., 2019). As shown in Figure 2, younger males experience gambling problems at much higher rates than that of the general population. While much of this impact from gambling problems can be traced back to

traditional forms, such as electronic gambling machines (EGMs), this group is much more likely to experience problems associated with sports betting.



**FIGURE 2. MODERATE-RISK AND PROBLEM-GAMBLING POPULATION PREVALENCE RATES BY AGE AND GENDER. SOURCE: COMBINED DATASET OF N=70,000 CATI INTERVIEWS, SOURCED FROM MOST RECENT AUSTRALIAN POPULATION SURVEYS IN SA, NSW, VIC, TAS AND ACT. MANUSCRIPT (BROWNE ET AL, IN PREP).**

### Easy accessibility to sports betting using online and mobile technologies

The ability to bet on sports using online interactive technologies has been instrumental to its accessibility and uptake. While bets can be placed on sports in land-based venues, including hotels, clubs, casinos and retail betting outlets, the most popular way to bet on sports is online (Lopez-Gonzalez & Griffiths, 2018a; Roy Morgan Research, 2018). In South Australia in 2018, 75% of sports bettors placed their sports bets online, and this was substantially higher (92%) among younger sports bettors aged 18-24 years (Woods et al., 2018). Further, smartphones have become the most used device for sports betting, enabling betting to be conducted from any location (Roy Morgan Research, 2018). In 2018, 88% of South Australian adults who bet on sports online in 2018 did so using a smartphone (Woods et al., 2018).

Betting online, including through smartphones, may elevate the likelihood of harmful gambling. The first national Australian study of online gambling (Hing et al., 2014) found that rates of problem gambling were three times higher among online gamblers, compared to non-online gamblers, and over double the rate for moderate risk and low risk gambling. Further, problem online gamblers were significantly more likely than problem non-online gamblers to be male, younger, and to experience problems with sports and race wagering (Hing et al., 2015a). It is important to note that not all gambling problems among online gamblers are related to their online gambling, since most online gamblers also gamble on land-based forms which are the

source of problems for some (Hing et al., 2014b). However, gambling problems are widespread among Australians who bet on sports. Analysis of the 2015 Household Income and Labour Dynamics in Australia (HILDA) data found that 41% of at-least monthly sports bettors reported one or more symptoms of problem gambling, with 6% having a severe gambling problem (Armstrong & Carroll, 2017).

Several factors have been reported by online gamblers, including sports bettors, as contributors to their loss of control over online wagering (Corney & Davis, 2010; Drakeford & Hudson Smith, 2015; Hing et al., 2015c; Lopez-Gonzalez et al., 2021; McCormack & Griffiths, 2012). Instantaneous access to betting at any time of day and from any location means that sports betting can be used to relieve boredom and loneliness and become integrated into daily activities at home, work and social events. Smartphone ownership is ubiquitous among the main market for sports betting, younger adult males, and people tend to always carry and constantly check their phone, which may facilitate more frequent and impulsive betting. Participants in these studies noted that it was easier to hide online gambling, especially using a smartphone, removing scrutiny from others that might otherwise pressure them into moderating their gambling. They also noted that electronic money had less perceived value and was therefore easier to spend, and that they could bet using a credit card and spend money they did not have. Many commented on the ease and speed of making deposits and placing bets on sports betting apps and websites. In addition, these online gamblers discussed that the proliferation of wagering advertisements and inducements was a major influence on the betting behaviour. This issue is discussed below.

### Sports betting advertising and inducements

Sports betting advertising in Australia has proliferated during the past decade in all forms of media. Wagering advertisements are commonplace in traditional media, most notably on commercial and subscription television during televised sporting events and in sports entertainment shows (Hing et al., 2018a; O'Brien & Iqbal, 2019; Sproston et al., 2015). Sports betting is frequently promoted in radio, print and outdoor media, and in digital and social media (Gainsbury et al., 2015a; Hing et al., 2018a; Sproston et al., 2015). Betting operators are major sponsors of sport, enabling extensive brand exposure at sporting stadia, during TV and radio broadcasts, and in print, online and social media (Lamont et al., 2011; Milner et al., 2013; Sproston et al., 2015; Thomas et al., 2015). This exposure is most noticeable during live and broadcast sporting events, where player uniforms, scoreboards, stadium tiers, perimeter fencing and signage clearly display betting logos (Hing et al., 2014b; Sproston et al., 2015; Thomas et al., 2012a). Digital media also enables operators to send customised push marketing directly to wagering account holders via texts, in-app notifications, emails calls and via social media (Hing et al., 2018c). These messages typically contain a link to the betting website and app, providing an immediate opportunity to place the promoted bet.

In addition to sports betting advertising, a wide range of betting inducements are promoted through traditional and digital media channels, as well as in push marketing to wagering account holders. An audit conducted in 2015 identified 15 generic types of wagering inducements commonly offered to Australian bettors (Hing et al., 2015d). These included stake-back offers, sign up offers, bonus or better odds, bonus or better winnings, multi-bet offers, winnings paid on losing bets, happy hours, matching stakes/deposits, cash rebates, refer a friend offers, free bets to selected punters, other free bets, mobile betting offers, reduced commission, and competitions. Early cash-out offers have also since become widespread (Lopez-Gonzalez & Griffiths, 2017a). Typical incentives to take up these inducements comprise bonus bets, refunds, better odds or winnings, cash rebates and reward points (Hing et al., 2015c, 2018d).

A review of research into gambling advertising (Newall, 2019) reached several main conclusions about its role in influencing gambling behaviour. Gambling marketing is highly targeted and ubiquitous around sport. This marketing most often aims to increase brand awareness, advertises complex financial inducements to bet and promotes complex betting odds. This targeted content appears to influence perceptions of this advertising, particularly among vulnerable groups including children, young people, and individuals with a gambling problem. Further, exposure to this marketing appears to be associated with more frequent and riskier gambling behaviour. The following sections briefly review key research findings relating to the effects of sports betting advertising on young people and adults.

### Effects of sports betting advertising on children and young people

A systematic review of research into gambling advertising and young people concluded that this advertising is intense and varied, particularly on television, during sporting events and in social media (Labrador et al., 2021). Gambling advertising was perceived to target young people, although young people themselves were often critical of it. Further, the review concluded that the main advertising messages attempt to normalise gambling and promote its social and financial benefits. Research has found that youth attitudes to gambling advertising and levels of recall are associated with increased gambling intentions, behaviours, and problems, with most effect on young males and those already gambling at harmful levels (Hing et al, 2014a).

Australian research focusing specifically on sports betting advertising has reported that exposure is linked to increased normalisation of betting among youth, that young people have strong brand association between gambling sponsors and sport, and youth are familiar with sports betting products and terminology (Bestman et al., 2015; Pettigrew et al., 2012; Pitt et al., 2016, 2017; Sproston et al., 2015). Demonstrating the perceived association of sport with betting, an online experiment found an implicit association between gambling and sport among Australian adolescents (Li et al, 2018). Further, this implicit association was positively related to the extent of sports watching, but only among participants with more favourable gambling attitudes. Gambling attitudes and advertising knowledge, rather than the implicit association, significantly predicted gambling intention. Other Australian studies of adolescents found that higher exposure to sports betting advertising, and more positive attitudes to sports betting advertising, are positively related to greater sports betting intentions (Hing et al, 2014a; Sproston et al., 2015). Most recently, the NSW Youth Gambling Study 2020 (Hing et al., 2021) found that nearly half (46.1%) of the adolescents surveyed reported noticing gambling advertising on television during sports and racing events at least weekly. Nearly one-third of respondents considered betting on sports to be normal, and more than one in six felt that knowing the betting odds was part of following sport and makes watching sport more exciting. Exposure to gambling advertising in both traditional and digital media was associated with thinking more positively about gambling, with these positive attitudes linked to gambling participation, intentions, and problems.

Pitt et al. (2016) conducted a qualitative study of 59 family groups (at least one parent and one adolescent aged 14-18 years) that revealed three main themes of initiation, influence and impact relating to the role of sports betting advertising. First, sport was seen as the basis to promote gambling. Wagering has become embedded within sport through saturation marketing, especially during games, through the alignment of sports fan loyalty with gambling, and using sporting stars and commentators for promotions. Second, marketing messages implied that gambling was an integral component of the overall sporting experience and that it was always accessible. Third, parents were generally aware of how gambling promotions impacted discussions around sport, particularly among adolescents who would often discuss betting odds around matches. Another qualitative study analysed the reflections of 111 young people aged 11 to 16 years on the normalisation of gambling in Australia (Nyemcsok et al., 2021). It identified gambling advertising as a major factor in the normalisation of gambling, with respondents noting the saturation level of

advertising in sport, the normalising content of gambling advertising, and the encouragement to bet with money.

In summary, research has generally found that youth are highly exposed to sports betting advertising, have high recall of betting advertisements and brands, associate sport with gambling, and perceive that betting is a socially accepted activity. Research indicates that exposure to sports betting advertising can normalise betting as a normal part of watching sport and foster positive attitudes towards betting and stronger intentions to bet. Further, parents may be key facilitators of young people's exposure to sports betting.

### Effects of sports betting advertising on adults

A recent meta-analytic review of research into gambling advertising suggested a positive association between exposure to gambling advertising and gambling-related attitudes, intentions and behaviours in adults (Bouguettava, et al., 2020). An earlier review concluded that this relationship appeared strongest among gamblers with an existing gambling problem, with advertising providing cues that can trigger gambling among highly involved gamblers (Binde, 2014).

In Australia, several studies have found that exposure to wagering advertising is positively associated with sports betting attitudes, intentions, and behaviour, particularly among higher-risk gamblers. For example, studies with 1,000 Australian adults (Hing et al., 2015d) and with 212 university students (Hing et al., 2013) found that greater exposure to wagering advertising during televised sport was positively correlated with gambling intentions. Another survey of 544 sports bettors found that those with higher problem gambling severity reported increased betting frequency and expenditure, and betting more than intended due to sports betting advertising (Hing et al., 2015e). However, cross-sectional surveys cannot determine causal directions. Individuals may increase their betting in response to betting advertising, or those who bet more may be more exposed to betting advertising. Self-reports of the influence of advertising on behaviour are also fraught, since advertising can have subconscious effects and exposure to advertising is difficult to accurately recall.

In attempting to overcome these shortcomings, a recent study used a combination of longitudinal, experimental and psychophysiological methods to assess the relationship between exposure to wagering marketing and betting behaviour (Browne et al., 2019a; Hing et al., 2019a; Lole et al., 2020; Rockloff et al., 2019a). Based on convergent results across these studies with Australian sports bettors and race bettors, Hing et al. (2018a) concluded that wagering advertisements and inducements: encourage riskier betting; increase betting expenditure; elicit attention, excitement, and desire to bet, particularly among higher-risk gamblers; and have negative effects on all gambler risk groups. Increased betting expenditure was associated with aggregate exposure across all nine types of wagering advertisements and 11 types of inducements examined, which suggests a dose-response effect. Advertisements and inducements with the most influence were: direct messages from wagering operators; advertisements on betting websites and apps; betting brands promoted during live and televised race/sports events; betting-related commentary during events; stake-back offers; multi bet offers; and inducements for rewards points. A separate longitudinal study of direct messages sent by wagering operators to their account holders found that this push marketing is received almost daily, usually contains an inducement to bet, and particularly prompts more, larger and riskier bets (Rawat et al., 2019; Rockloff et al., 2019b; Russell et al., 2018a). Further, wagering inducements appear to be particularly effective in stimulating impulse in-play betting among more involved sports viewers and bettors, including those with a gambling problem (Hing et al., 2018c).



### Normative influences of sports betting advertising

Advertisements and promotions for sports betting have been assessed as being a major contributor to the normalisation of betting. Several researchers have identified young adult males as being the target market for sports betting operators, along with numerous advertising tactics for normalising sports betting among this group (Deans et al., 2016b, 2017a; Gordon et al., 2015; Lopez-Gonzalez et al., 2018b; Milner et al., 2013; Sproston et al., 2015). Sports betting advertisements overwhelmingly depict young men in specific betting and social situations as a 'mirror image' of the target market and the betting behaviours being promoted (Deans et al., 2017a, 2017b). For example, a content analysis of 24 Australian sports betting advertisements (Sproston et al., 2015) noted they frequently depicted betting by young adult men in bars and other social settings. The advertising messages intimated that betting would enhance the bettor's power, success, male bonding, and attractiveness to women. Betting on sports was conveyed as a normal, accepted and perhaps even expected activity undertaken by smart, successful, and technologically savvy young men who value sport and mateship with their male peers. Similar observations were made by Deans et al. (2016a) in their analysis of 85 Australian sports betting advertisements. They identified several symbolic consumption strategies used to increase the social acceptance of sports betting. The most common were sports fan rituals and behaviours presenting betting as central to watching and supporting sport; and depictions of mateship that both appealed to the valued male ritual of bonding over sport while sanitising betting as a social activity. Additional strategies included gender stereotypes; winning; social status; adventure, thrill and risk; happiness; sexualised imagery; power and control; and patriotism. Other research has identified deliberate marketing attempts to shift the image of betting away from an activity previously associated with older working-class men betting in dingy betting outlets (Milner et al., 2013).

A content analysis of bookmakers' advertising narratives in Great Britain and Spain (Lopez-Gonzalez et al., 2018b) sought to understand the normalising of betting behaviour by advertisers through the repetition of messages and pressuring young men to conform to their representation of bettors and betting situations. Betting representations were dominated by men depicted in social situations, but with the betting itself being an individual activity undertaken on a smartphone (Sproston et al., 2015). This transforms group interaction into an individual consumption activity that can be done anywhere at any time (Lopez-Gonzalez et al., 2018b). About half of the advertisements showed betting while watching sport. Aligning betting with sport helps to sanitise sports betting to convey that betting is a normal and healthy activity, just like sport (Lamont et al., 2019; Lopez-Gonzalez et al., 2018b). Depicting betting activities as an integral part of watching sport also makes this message pervasive, because sporting events are already a widely viewed activity (Deans et al., 2016a; Pitt et al., 2016). Content analyses of sports betting advertisements (Deans et al., 2016a; Lopez-Gonzalez et al., 2018b; Milner et al., 2013; Sproston et al., 2015) have found frequent use of humour and celebrity endorsement, which have previously been identified as normalisation tactics used in gambling advertising (Derevensky et al., 2010; Monaghan et al., 2008; Sklar & Derevensky, 2011; Thomas et al., 2014).

Research generally indicates that these normalisation strategies in sports betting advertising have been effective. Young men feel that these advertisements are encouraging them to gamble (Deans et al., 2017b) and perceive that sports betting has become an important part of their sporting rituals (Deans et al., 2017a). Some adolescents feel this marketing is grooming them to gamble (Lamont et al., 2016; Sproston et al., 2015). Adult focus group participants have related how the normalising effects of sports betting advertising are reflected through the greater social acceptance of sports betting, less stigmatisation and its embedding into everyday discussions and activities in social and workplace settings (Lamont et al., 2019; Sproston et al., 2015). Previous research has revealed a growing culture of gambling, particularly among young adult males and male friendship groups (Gordon et al., 2015; Thomas et al., 2012b). These findings

suggest that individuals who engage in sports betting, or who are in family or social contexts in which sports viewing and sports betting occur, are likely to be exposed to betting advertisements that act to normalise the activity. Accordingly, protective behaviours, such as healthy discussions in families about the risks involved, are particularly important for these individuals.

### Community concern about sports betting advertising

The impact of sports betting advertising are of significant interest and concern to the Australian community, as evidenced by extensive public debate about these issues over the past decade, including several government inquiries (Department of Broadband, Communications and the Digital Economy, 2013; Joint Select Committee on Gambling Reform, 2011, 2013). The Joint Select Committee on Gambling Reform (JSCGR) Inquiry into the Advertising and Promotion of Gambling Services in Sport (2013) focused on the amount of sports betting advertising and the effects of saturation advertising on children and young men. Reflecting community concern, the inquiry received numerous submissions about the normalising effect of gambling promotions in sport, particularly for children who are being promoted an adult product in an environment that is marketed as family friendly. For example, the Australian Psychological Society (2013) contended that children are likely to absorb these marketing messages and may be unable to distinguish between the advertising and the game, with gambling becoming an integral part of sport and influencing the attitudes of children and young people. The JSCGR inquiry (2013) also heard evidence of high unprompted recall rates among young people of gambling brands promoted through televised sport.

Several Australian studies have focused on community attitudes to sports betting advertising . In 2013, two-thirds of respondents in a nationally representative sample had recently noticed increased wagering advertising and promotions; one in six considered wagering advertising during sports broadcasts and sports entertainment shows to be unacceptable; and around four-fifths supported restrictions on the timing and amount of this advertising (ACMA, 2013). While some types of sports betting marketing have since been curtailed, the continued pervasiveness of wagering advertising has sustained high levels of community concern about its effects, especially on children and young people. Despite further restrictions on gambling advertising during live sport introduced in 2017, a 2019 report found that gambling advertisements on television and radio subsequently increased by 50% (ACMA, 2019). Television is the most common way that parents and children view live sports, and 88% of parents who watched live sports recalled seeing gambling advertising while doing so. Most parents recalled seeing gambling advertising in other offline media, such as outdoor and print media, as well as online and in social media. Nearly three-quarters of parents were 'bothered' by their children being exposed to gambling advertising, with more concern among parents of older children who are more likely to have a smartphone, be exposed to more betting advertising later at night, and view this content without parental supervision. Parents held particularly strong concerns about their children being exposed to gambling advertising when watching live sport. Aside from their concerns about children, two-fifths of parents were also 'bothered' by gambling advertising in general.

In qualitative research, sports bettors have reported feeling targeted and inundated by sports betting advertising (Deans et al, 2017b; Hing et al., 2018d; Thomas et al., 2012b); while sports viewers have reported annoyance, irritation, and unease about its normalising and persuasive effects (Lamont et al., 2016; Sproston et al., 2015). Australian parents have also expressed concerns about the normalising effects of this advertising on children (Pitt et al., 2016; Thomas, 2012a), while adolescents have criticised this advertising as making them feel they are being groomed to gamble (Lamont et al., 2019; Sproston et al., 2015). Clearly, there are widespread concerns in the community about the normalising effects of sports betting advertising and its potential to increase gambling harm.

## SOCIAL AND NORMATIVE INFLUENCES ON SPORTS BETTING

### Youth betting, and family and peer influences as protective and risk factors

Adult gamblers frequently report becoming familiar with and interested in gambling while growing up, and this is reflected in relatively high rates of gambling participation among underage youth. For example, 30% of adolescents aged 12-17 years in NSW reported having gambled in the preceding 12 months (Hing et al., 2021), while a school-based study in South Australia estimated that at least 25% of students gambled on at least one activity (King & Delfabbro, 2016). Several studies have found that sports betting is quite prevalent among youth who gamble (Delfabbro et al., 2005, Jackson et al., 2008, Gainsbury et al., 2015a, King et al., 2016). For example, Dowling et al. (2010) found that sports betting was the most frequent gambling activity among adolescents (19%), after instant scratch tickets (48%), and private card games (42%), and more than 50% of participants reported attending events with their parents where gambling took place (e.g., races, sports) .

Social influences from family and friends are key drivers of gambling behaviours and gambling problems among both adolescents and adults and can contribute to the normalisation of gambling. These influences begin for children and adolescents via parental modelling, parental supervision, and parental values, attitudes and beliefs (Dowling et al., 2017; McComb & Sabiston, 2010; Oei & Raylu, 2004), and then over time friends and colleagues can also have an influence (McComb & Sabiston, 2010; Russell et al., 2018a). There is additional influence of online social networks using a range of social media and apps for online interaction. Young people can be exposed to gambling content and related norms which will shape users' attitudes toward gambling, particularly when information comes from in-group members who are trusted and liked (Sirola et al., 2021). Subjective norms, that is a belief that important people or groups of people approve of a particular behaviour, have been found to predict gambling behaviours and problematic gambling in several studies (Flack & Morris, 2017; Larimer & Neighbors, 2003, 2016; Lee, 2013; León-Jariego et al., 2020; Neighbors et al., 2007; Neighbors et al, 2012a, 2012b). This section reviews research on parental and peer influences on gambling among young people to highlight key findings. It also briefly discusses cultural influences in recognition that gambling has long been an accepted leisure activity in Australia.

### Parental and family influences on adolescents' gambling

Parents have a major influence on young people's exposure to gambling and the opportunities they have to participate in gambling activities. Children typically have their earliest gambling experiences with parents and may gamble with parents during adolescence. The NSW Youth Gambling Study 2020 concluded that parents are the greatest facilitators of youth gambling (Hing et al., 2021). Most adolescents who gambled reported usually gambling with parents/guardians (54%), followed by adolescent friends (27%), adult relatives (21%), adolescent relatives (20%), and grandparents (20%). Relatively few young people (9%) gambled alone. Those who had gambled online, including on sports betting, most often used a parent's wagering account with permission, paid a family member or friend to place bets for them, or had the family member set up an account for the young person to use. A range of parental factors were positively associated with underage participation in gambling and may be considered risk factors for adolescent gambling. Past-year adolescent gamblers were more likely than non-gamblers to have gambled with their parents when they were growing up, to have grown up in a household that included adult(s) with a gambling problem, to have parents who did not talk about safety online or set rules for online use, and whose parents were more likely to approve of the adolescent's gambling (Hing et al., 2021). More generally, the nature of the parent-adolescent relationship can also affect adolescents' participation in risky activities through influencing their capacity to cope with

stressful life circumstances (Calado et al., 2017a). Several other important parent-related variables, such as parental restrictions and monitoring (Magoon & Ingersoll, 2006), and parents' marital and socioeconomic status (Dowling et al., 2017a), are known to affect youth gambling rates. Research specifically examining the role of parents and other adults in normalising gambling among young people is scarce, although this effect is implied in studies examining parental role modelling through their own gambling, as discussed above. One qualitative study involving 111 young people (11- to 16-year-olds) analysed their reflections on the normalisation of gambling in Australia (Nyemcsok et al., 2021). It revealed a perception among young people that most people engaged regularly in gambling. This was based on beliefs that discourse about gambling among sports fans and adults was common, and that gambling in sport was socially acceptable.

Problem gambling rates among adolescents are as high or even higher than among adults. Recent Australian studies have estimated 1.4% to 1.5% of adolescents have symptoms of a severe gambling problem, with a further 2.2% being at-risk of problem gambling (Freund et al., 2019; Hing et al., 2021). Several parental factors have been associated with problem gambling in young people. Research has consistently found a strong risk factor to be parental gambling problems, which may influence young people through genetic influences, parent modelling, and having more opportunities to gamble themselves (Jacobs et al., 1989; McComb & Sabiston, 2010; Vitaro et al., 2014). A recent multivariate evaluation of 25 proximal and distal risk factors for gambling harm (Browne et al., 2019b) found that having a family member with gambling problems as a child was significantly associated with experiencing gambling harm in adulthood. In NSW, growing up in a household with an adult(s) with a gambling problem uniquely contributed to problem/at-risk gambling among adolescents (Hing et al., 2021). A longitudinal study (Winters et al., 2002) found that parental problem gambling at baseline increased the odds of adolescent problem gambling more than seven-fold two years later. Dowling et al. (2010) found that youth with a family history of problem gambling were 4.5 times more likely to display problem gambling than their peers, with the odds increasing to 13.5 times with a problem gambling father. Earlier uptake of gambling (Castren et al., 2015; Sideli et al., 2018; Winters et al., 2002) and the number of gambling forms engaged in (Hing et al., 2021; Kristiansen & Jensen, 2014) also increase the risk of gambling problems in adolescence, although not all adolescent gamblers develop gambling problems by adulthood (Delfabbro et al., 2014; Vitaro et al., 2004).

The strong influence of parents on their children's gambling indicates their critical role in talking to young people about gambling and its associated risks. It also points to the importance of community education that can support parents to have these conversations with their children and to provide appropriate role modelling in relation to gambling.

### Peer influences on adolescents' gambling

Adolescents typically place high value on relationships with their peers and seek a sense of peer group belonging. Although some young people gamble alone (Hing et al., 2021; Potenza et al., 2011), peers are an important influence on young people's gambling attitudes and behaviours (Dowling et al., 2017; Savolainen et al., 2019). In NSW, 27% of adolescents gambled with their adolescent friends, often on private forms of gambling such as card games and friendly sports bets (Hing et al., 2021). Private gambling tends to be one of the most frequent activities that young people engage in, and some of this occurs in friendship groups (Nitschke et al., 2013; Purdie et al., 2011; Weinberger et al., 2015).

Young people may also engage in simulated gambling in video games with friends, since many simulated gambling activities such as loot boxes feature in-game interaction, and players may enhance their peer status through their gameplay performance and items won in loot boxes (Russell et al., 2021; Zendle et al., 2019). Peer influences on gambling may be especially

impactful if young people lack real world friendships and join online communities with strangers who may introduce them to gambling. Gambling may become rationalised by adolescents as 'normal' given that their friends and online acquaintances are playing in the same way. Being a member of a social group that provides social incentives to gamble, such as recognition of wins and group status, may be just as appealing for young people as the perceived financial incentives to gamble (Savolainen et al., 2019). The NSW Youth Gambling Study (Hing et al, 2021) found that associating with friends who gamble and having stronger feelings of belonging to an online community predicted gambling participation, intentions and problems among adolescents. These peer influences may increase young people's perceived social acceptance of gambling.

### Peer influences and expressions of peer group normalisation among sports bettors

Several qualitative studies have examined peer influences on the normalisation of sports betting among young adults, mostly young adult males, and its embeddedness into certain peer group cultures. These studies mentioned below highlight how the normalisation of sports betting is expressed within these peer groups and how social pressure acts to maintain engagement in the activity.

A study of 50 Australian male gamblers aged 20-37 years (Deans et al., 2017a, 2017b) identified four major themes in peer group normalisation: (1) the social acceptability and normality of sports wagering; (2) the strengthening coalescence of peer-based sporting rituals with sports gambling (e.g., via online forums and gambling clubs); (3) gambling/sport discourse that helped to create a sense of identity within peer groups; and (4) gambling due to pressure to "fit in" with peers. The authors concluded that sports wagering was rapidly becoming normalised as an embedded activity among peer groups of young male sports fans and posed an emerging health threat for this group. Similar conclusions were drawn by McGee (2020) in a qualitative British study of 32 men aged 18-35 years who regularly engaged in online sports betting. McGee identified four major themes from the analysis: (1) gambling was seen as a normal and enjoyable component of sports events and leagues; (2) access to betting was increased due to mobile apps and this incentivised the men to gamble; (3) risky choices were encouraged via gambling promotions; and (4) sports betting may lead to gambling-related harms. Another qualitative study of 43 male sports bettors in treatment for a gambling disorder (González-Roz et al., 2017) revealed positive connotations associated with sports betting and the absence of negative connotations, in comparison to other forms of gambling. There was little stigma attached to sports betting, there was a novelty to the gambling products, and bets could be made with low stakes. The social legitimisation of sports betting was perceived as emerging from saturation advertising that emphasises the social aspects of sports, and the normalisation of peer betting, particularly in the workplace.

Gordon et al. (2015) examined peer influences on sports betting through conducting friendship group interviews with sports bettors aged 18-30 years to understand how consumers interpret, navigate and participate in sports betting consumption communities in Australia. Their analysis highlighted the social benefits these young adults derived from belonging to a consumption community of sports bettors. These benefits included shared cultural values, connections and interests, and friendly in-group rivalry and banter, which provided a means to express group loyalty and bonding. They could also derive status and self-worth from demonstrating acumen and skill through being knowledgeable about the game and how to navigate the betting odds. These researchers concluded that sports betting was transitioning to a common lifestyle pursuit, that is, becoming an increasingly normalised activity shared by young adult peer groups in Australia.

Raymen and Smith's (2020) study of 28 young male football fans in England also focused on 'lifestyle gambling' in which betting has become a normalised, socialised and firmly embedded

feature of everyday life, and an integral feature of many young men's weekend leisure pursuits. They described how the participants' gambling identities were entangled with issues of sports fandom, masculinities and drinking alcohol, in alignment with a consumer culture that promotes individual hedonism, youthful identity and immediate gratification. This lifestyle however, acted against their own self-interest and posed potential harms to their financial, relationship and personal wellbeing, with these harms themselves becoming a normal feature of sports betting involvement. Lamont and Hing's (2019, 2020) analyses of interviews and focus groups with young male sports bettors aged 18-34 years have also drawn attention to the role of sports betting in entrenching male peer group norms through the cultural capital produced by betting success and the social status arising from risk-taking, analytical skill and friendly rivalry linked to sports betting. Young men were said to face persuasive social pressures to bet on sports to enhance masculine identity and social acceptance.

Focusing on young women, a qualitative study investigated the influence of the normalisation of gambling among 45 women aged 18-34 years in Victoria (McCarthy et al., 2020). Initially family members, and later peers and boyfriends, were key facilitators of their gambling. Many participants were exposed to gambling from a young age, such as having family dinners at gambling venues. Participants observed that the gambling culture had changed and that in the past it was not as common, available, or acceptable to gamble as a young woman, but that now gambling was increasingly normalised. They identified feminised gambling products and environments, excessive marketing, and the availability and accessibility of gambling in the community, as key to this normalisation. However, despite the increased feminisation of gambling, only a small minority of women engage in sports betting. To our knowledge, no research has specifically examined the normalisation of sports betting among Australian women.

The research discussed above indicates that sports betting is deeply entrenched as an integral leisure activity in some peer groups, particularly among young adult males. While consumer culture, sports betting advertising and other environmental factors have acted to normalise sports betting among young men in Australia and elsewhere, peer group dynamics also encourage sports betting to facilitate male bonding, display betting acumen and skill, maintain a masculine identity tied to sports, gambling and drinking, and to 'fit in' with group norms.

### Cultural influences and expressions of the normalisation of gambling in Australia

Gambling has been an integral part of the Australian culture since British colonisation (Delfabbro & King, 2012). Gambling was a common activity in the early colonies, where popular gambling activities included card, dice and coin games among the lower classes, and billiards, cards and horse racing among the upper classes (O'Hara, 1988). In later periods, card playing was common during the gold rushes of the 1850s, the Melbourne Cup commenced in the 1860s, and lotteries were established in the early 20th century (O'Hara, 1988). There has been a near continuous backdrop of illegal gambling, often associated with organised crime, which peaked in the 1980s when anti-corruption forces cracked down on illegal bookmaking and casinos (Finnane, 1990). The introduction of legalised gambling products increased slowly from the 1950s but increased dramatically in the 1990s when electronic gaming machines (EGMs) were legalised in community venues throughout Australia. Gambling continues to become increasingly normalised (Delfabbro & King, 2012; Orford, 2019) with the advent of online gambling including betting on iconic and popular Australian sports such as rugby league and Australian Rules Football. Overall, gambling has been considered an acceptable leisure activity in Australia, a distinguishing cultural feature, and even a source of national pride (McMillen & Eadington, 1986), being romanticised in popular literature (e.g., Hardy, 1950, 1958) and social histories (e.g., Ward, 1958; Horne, 1975; O'Hara, 1988).

A study of 100 Victorian gamblers (Thomas & Lewis, 2012b) captured several aspects of the cultural normalisation of gambling. Most participants believed that gambling was embedded in Australian culture and an integral part of cultural traditions. Gambling was considered a quintessentially Australian pastime which had been normalised and reinforced by well-known concepts of mateship and competition; the importance of sport and racing as traditions; Australia's wartime gambling traditions; and the inextricable link between Australia's drinking culture and gambling. However, participants were concerned that sports gambling was increasingly becoming normalised, particularly for young people, via strong associations with sports games, as well as their use of gaming machines. They expressed concern that the accessibility of gambling and the saturation of advertising and promotions, meant that it was difficult to avoid gambling in some parts of society.

In seeking to understand the determinants of gambling normalisation in Victoria, another study (Thomas et al., 2018) interviewed 50 expert stakeholders in gambling reform. They identified several contributing factors related to the gambling product, including online gambling platforms that make gambling available 24/7, and the greater diversification, choice and intensification of gambling products. Culturally and socially valued community agencies (e.g., sporting clubs) also endorse gambling. The extensive promotion of gambling has led to perceptions that gambling is a normal and regular part of life, and frames gambling as fun and harmless entertainment when consumed responsibly. Further, the gambling industry has influenced gambling research and policy. Government regulation has increased and embedded gambling products and venues within community and suburban locations. To understand the degree to which different gambling products are normalised, an online panel of 1,000 Australians aged 16-88 years was surveyed (Thomas et al., 2018). The results were summarised according to five dimensions of normalisation (Parker et al., 1998) and are outlined below:

- Availability. Most participants perceived sports betting, race betting and EGMs to be very or extremely available in communities.
- Trying rates. EGMs were perceived as being the most common gambling product tried by adults.
- Regular and recent use. Participants had an exaggerated perception, compared to prevalence data, that most adults engaged in regular and recent gambling; and regular gambling was associated with sports betting and EGMs.
- Social and cultural accommodation. Sports and horse betting were perceived as being the most socially and culturally accepted products, and EGMs were less accepted. Respondents noted links between socio-cultural acceptance of gambling and Australian historical traditions, the promotion of gambling, and associations with socially valued institutions such as football codes.
- Normalisation. Sports betting was perceived by about one quarter of participants as being very or extremely normal: the second highest rating behind horse rating.

### Public health measures and the disruption of normalisation

The concept of normalisation and the disruption of normalisation has been applied primarily to tobacco in the public health sector, and is currently a discourse in the public and policy spheres, with UK professionals adopting the public health aim of de-normalisation of smoking (Measham et al., 2016). Tobacco use has gone from being normalised prior to the eighties/nineties to being subsequently stigmatised and de-normalised, due to concerns regarding passive smoking and subsequent legislation banning smoking in enclosed places in most parts of the world. The emergence of electronic cigarettes (e-cigarettes) and vaping products has the potential to re-normalise 'smoking' of these products.

Decades of research have shown that the most effective and sustainable public health strategies to prevent and reduce cigarette smoking, and hence disrupt the normalisation of tobacco

products, are comprehensive and involve interventions at different levels. These include individual, school and community interventions and campaigns (SAMHSA, 2020). The implementation of these interventions should also take into consideration the context and setting in which they will be implemented, and relevant stakeholders (e.g., young people, parents, schools).

There is less comprehensive research into the disruption of the normalisation of gambling compared with tobacco. However, a recent report from Thomas and colleagues (2018) into the determinants of gambling normalisation, found four key priority areas as a result of interviews with experts and stakeholders. These included:

1. *The development of a priority driven research agenda for gambling harm prevention.*
2. *The development of 'industry free' coalitions and 'safe spaces' for consultation about gambling policy and harm prevention.*
3. *The dissemination of clear, independent evidence-based information.*
4. *The development of carefully researched messaging strategies which shift the public debate away from 'problem people' and towards 'problem products'. This includes reframing messages away from 'responsibility' messages. (Thomas et al., 2018)*

The research discussed above suggests that gambling is socially and culturally embedded in Australian society and highlights the importance of measures that aim to reduce the normalisation of sports betting.

## INDIVIDUAL OUTCOMES AND CHANGE

This final section of the literature review focuses on modifiable individual-level variables that are explored in this study as potential risk or protective factors that can influence the key outcomes from sports betting. These outcomes include the frequency and amount spent on sports betting, and whether one has personally experienced gambling-related harm from sports betting, or observed it occur within one's immediate social or familial network.

Importantly, it will capture willingness or actual performance of discussing potential risks associated with sports betting with friends and family. The review also covers personal behaviours that may increase risk in younger people, such as sharing news of wins with children, or betting in front of children.

### Erroneous cognition in sports betting

Erroneous beliefs and cognitive distortions are important predictors of gambling behaviours and gambling problems. A review and meta-analysis of cognitions and beliefs across different forms of gambling found medium to robust effect sizes (Goodie & Fortune, 2013). Examples of erroneous beliefs and distorted cognitions include distorted reframing or reinterpretation of gambling outcomes, beliefs about predictive control, experience and attribution of near-misses, and an illusion of control (Jones & Noël, 2021).

There has been limited research into dedicated sports betting specific beliefs and cognitions, despite the growing evidence that these factors are involved in the development and continuance of sports betting problems. However, one study of 1,147 Australians who bet on sports at least monthly (Russell et al., 2019a) found that erroneous cognitions were uniquely associated with gambling problems specifically related to sports betting, along with money motivations, gambling urges, alcohol issues and lower self-control. However, sports betting behaviour such as



frequency, expenditure and number of sports bet on, did not predict sports betting problems among these regular bettors. These findings suggest that an individual's psychological relationship to sports betting is a primary driver of betting-related problems, rather than just betting behaviour. Further, research with 237 adolescents in Nigeria who engaged in soccer betting found that some specific erroneous cognitions, specifically illusion of control and near-miss attributions, were associated with betting intention (Amazue et al., 2021). Moreover, erroneous beliefs about the role of skill in gambling activities with an element of skill, including sports betting, were found to be higher among skill-based gamblers, particularly those with a gambling problem (McCarron, 2018). Overall, erroneous gambling cognitions are associated with problem gambling, including among sports bettors, and gambling activities with skill-based components may result in some bettors overestimating the role of skill in their betting outcomes. This tendency has been found in sports bettors in treatment where distorted knowledge-based cognitions can persist and be maintained by wagering marketing that emphasises the role of skill in sports betting and by the conflation of betting with the skill-based activity of a sporting contest (Lopez-Gonzalez et al., 2018b, 2020).

### Emotional involvement in sports - fans and athletes

Emotional involvement in sports may influence sports betting behaviours and outcomes, and individuals with a strong interest in sports (e.g., sports fans and athletes) may be at higher risk for sports betting problems. Jones and Noel (2021) examined emotional involvement and erroneous cognitions among German athletes revealing that athletes' emotional involvement strongly predicted betting problems, while erroneous cognitions were associated with more frequent betting activities and higher volumes of betting. Other potential drivers among sports fans and athletes include competition among peers, demonstration of knowledge about the sport, and feelings of competence in betting, as well as loyalty towards a favourite team or player (Deans et al., 2016b; Gordon et al., 2015; Lopez-Gonzalez et al., 2017b). Perceptions by individuals that they are skilled bettors with substantial knowledge of the game can lead to a subjective awareness that their social acceptance and standing is enhanced, and excitement increased (Jenkinson et al., 2018; Raymen & Smith, 2020). It can be argued that athletes have additional risk factors for sports betting problems, because they share the risk factors of sports fans, *and* tend to be risk takers and be highly competitive (Curry & Jiobu, 1995). It has also been reported that athletes prefer supposedly skill-based forms of gambling, such as sports betting (Russell et al., 2019a; Weiss & Loubier, 2010). Studies have found that sports betting and gambling problems are more common among athletes, sports fans and individuals with higher sports involvement (Hing et al., 2015d, Nelson et al., 2007). Greater involvement in sports betting, including larger, more frequent and riskier betting, is also more common among individuals who report higher exposure to wagering advertisements during televised sporting events which they presumably watch out of interest in the game (Browne et al., 2019a; Hing et al., 2019a).

### Protective behaviours by sports bettors in relation to their own betting

Studies into self-regulatory strategies used by gamblers can be grouped into those that have primarily focused on 1) behaviour change strategies that individuals use to reduce or regain control over their gambling, and 2) protective behavioural strategies that individuals use to limit their gambling and stay in control (Rodda et al., 2019).

Several studies have provided useful insights into behaviour change strategies that individuals use to reduce or regain control over their gambling, particularly among at-risk and problem gamblers (Abbott et al., 2014; Hare, 2009; Moore et al., 2012; Rodda et al., 2017, 2018a, 2018b; Thomas et al., 2010). Their overall findings indicated that higher-risk gamblers tend to use more strategies, which is not surprising since gambling problems are accompanied by strong urges and impaired control related to gambling. Accordingly, higher-risk gamblers have a greater need

to adopt behavioural change strategies. They are also more likely to use avoidance and direct-action strategies such as treatment-seeking, which lower risk gamblers are unlikely to need. However, higher-risk gamblers are less likely to adhere to these strategies, compared to lower-risk gamblers, particularly the critical strategy of limiting financial expenditure on gambling. Gambling help clients have identified several issues that can thwart their attempts to implement or maintain their behaviour change strategies (Rodda et al., 2017).

Research has focused on the use of protective behavioural strategies by different gambler risk groups to limit gambling, stay in control, and prevent harmful consequences from gambling (Delfabbro et al., 2020; Hing et al., 2017, 2019b; Lostutter et al., 2014; Rodda et al., 2019; Tong et al., 2020; Wood & Griffiths, 2015; Wood et al., 2017, 2019). The focus of these studies has been on safe gambling practices, and on behaviour change strategies that can be used to reduce harmful gambling. Overall, research in this area has generally found that higher-risk gamblers tend to use stronger avoidance, cognitive and help-seeking strategies which lower-risk gamblers are unlikely to need; whereas lower-risk gamblers appear more likely to use harm reduction strategies to assist the protective goal of controlling or limiting gambling. Only two studies have included a measure of gambling harm (Delfabbro et al., 2020; Hing et al., 2019b). Based on their research, Hing et al. (2019b) identified six practices that best predicted non-harmful gambling: If I'm not having fun gambling, I stop; I keep a household budget; I have a dedicated budget to spend on gambling; My leisure time is busy with other hobbies, social activities and/or sports; If I'm feeling depressed or upset, I don't gamble; and When I gamble, I always set aside a fixed amount to spend. Three practices best predicted harmful gambling and so should be avoided: I research systems or strategies for success at gambling; I use gambling to make money/supplement my income; and I have used cash advances on my credit card to gamble. These strategies were identified in relation to gambling overall, but should still have applicability to sports betting. To our knowledge, no studies have been conducted into self-regulatory strategies used specifically among sports bettors.

### Protective behaviours by caregivers in relation to sports betting

As discussed earlier, parents and other adults in the household when children are growing up are primary influences on young people's attitudes, intentions and behaviours towards gambling. This indicates that caregivers should adopt protective behaviours that help to minimise current or future harm from sports betting among their children. Based on the findings from the NSW Youth Gambling Study 2020 (Hing et al., 2020), parents and caregivers should be a key target group for education and awareness regarding their critical influence on their adolescent's gambling participation. Key behaviours to be targeted in an education campaign are likely to include approval of an adolescent's gambling, discussing gambling wins in the presence of young people, gambling with them, or otherwise facilitating their gambling. Caregivers could also be supported to monitor their children's engagement in simulated forms of gambling and online use more generally. When it comes to limiting children's exposure to sports betting advertising, strategies such as changing settings on social media and web browsers to block gambling advertising or using in-built parental control features or third-party software might be helpful for parents to be made aware of. Importantly, caregivers should be encouraged and supported to talk to their children about the harms that can arise from sports betting and other forms of gambling. While these suggestions appear logical based on research into caregiver influences on youth gambling, they have not been evaluated for their efficacy in reducing gambling harm among young people.

Nonetheless, research in other fields has found that healthy relationships between caregivers and their children, combined with effective parenting that involves limit setting, monitoring, clear communication, and conflict management, help to protect young people against numerous

negative outcomes. These include conduct problems such as aggression, rule-breaking and truancy (Wang et al., 2011), mental health problems (Wang & Sheikh-Khalil, 2014; Yap et al., 2014), risky sexual behaviour (Widman et al., 2016), early alcohol use (Kelly, Toumbourou, et al., 2011) and tobacco use (Kelly, O'Flaherty, et al., 2011). Controlled trials have shown that education and awareness programs for caregivers that target modifiable parenting practices and parent-child relationship behaviours reduce young people's problematic and disruptive behaviour (Sanders et al., 2014) and improve their mental health (Yap et al., 2017). However, relatively little research has been conducted to identify how caregivers can best limit gambling and prevent current and future gambling harm in their children.

### Changing behaviour and reducing harm

The ultimate goal of any population intervention is to increase health and wellbeing and reduce the prevalence of gambling-related harm. This goal is generally accomplished by reducing the influence of modifiable risk factors, e.g., gambling or talking about wins with youth or children present, and the promotion of protective factors, e.g., frank and healthy discussion about the risks involved. However, the final benchmark of any intervention is the reduction of gambling-related harm in the community, either through reducing participation among young people, or reduction of excessive spend among those who do choose to bet. Although the measurement of such an outcome is beyond the scope of the present project, it is important to understand that demonstrating successive links between (a) awareness of population interventions, (b) changes in protective behaviours around sports betting, and finally (c) reductions in gambling harm in those individuals, represents the 'gold standard' for any broadscale population intervention.

## Conclusion

Research examining gambling and sports betting attitudes and behaviour have provided useful guidance in the assessment of many aspects of the current study. The precedents regarding assessment of normalisation in Australia are scant, but fortunately there is strong theoretical work in this area, and existing scales can be applied and adapted for assessing the normalisation of sports betting in Australia. This literature review has informed the development of the survey, which has been developed in consultation with the client.

## Method

A survey of adults aged 18 years or over residing in South Australia was conducted. Data were collected via a cross-sectional online survey, hosted on the Qualtrics platform. Qualtrics assisted with recruiting respondents via multiple panels and removed any potential duplicate or low quality responses. Respondents were reimbursed based on the practices of the panels from which they were recruited.

A total of 2,479 potential respondents started the survey. Of those, 92 were screened out in early screening questions (14 were under the age of 18, and 78 did not live in South Australia). A further 59 were excluded for poor quality responses (e.g., speeding through the survey), and 89 were removed in post-survey data quality checks (e.g., straight lining, duplicate responses). A survey coding error was detected during a soft launch period, and 7 responses were removed. Of the remaining 2,232, 202 started but did not complete the survey, leaving a final total of 2,030 responses, and a completion rate of 91%.

Quotas were used to ensure that the sample approximated the adult population of South Australia. Specifically, quotas were based on population figures from the Australian Bureau of Statistics. Nested quotas were employed for age (in three brackets, see sample demographics in results) and gender (male and female, with no quotas for other genders), and an additional non-nested quotas was used for people living in Adelaide vs outside of Adelaide. While these quotas helped to align the sample with the population based on these characteristics, improving representativeness, the results were not weighted because respondents were recruited from online panels i.e., randomised recruitment was not undertaken. Weighting the sample may have given the impression that the sample was a probability sample, when this was not the case (for more on this, please see Russell et al., 2021).

The study was approved by the CQUniversity Human Research Ethics Committee.

## Measures

For full survey wording and response options, please see the survey instrument in Appendix A.

Respondents were initially shown an information screen, which introduced the survey as the “2021 South Australian Sports Betting Attitudes Survey”. This information screen outlined what was involved in the study and provided information about their rights to withdraw. If respondents agreed to take part, they were asked to click “next” to proceed with the survey.

### Screening and quota questions

Respondents were asked their age and gender, which state or territory they lived in, and if they lived in Adelaide or elsewhere. The survey was programmed so that if any question found them to be ineligible, they were not asked any further questions. For example, respondents who indicated they did not live in South Australia were not asked if they lived in Adelaide or elsewhere in South Australia but were instead thanked for their time and exited the survey.

### Assessing gambler status

Two questions were asked to determine whether respondents were sports bettors and/or any other type of gambler during the last 12 months. Respondents were asked how often they had bet on sporting events/matches, including bets placed online, by telephone or at land-based venues, and were also asked how often they had bet on any other forms of gambling in the last 12 months. Response options were never, 1-6 times (once every two months or less), 7-12 times (once a month or less), 13-24 times (once or twice a month), 25-52 times (once or twice a fortnight), and 53+ times (once a week or more).

### Information about sports betting behaviour (sports bettors only)

Respondents who were identified as having bet on sports at least once in the last 12 months were asked questions about their sports betting behaviour. They were asked what proportion of their bets was placed by smartphone, laptop or desktop computer, by telephone calls, and at land-based venues (with responses required to sum to 100%). They were asked their

expenditure on sports betting during a typical month (open-ended question) and what percentage of their bets was live or in-play (open-ended question).

#### Erroneous beliefs and safe sports betting behaviours

Sports bettors were also asked about their cognitions in relation to sports betting, based on the Erroneous Beliefs and Emotional Involvement Scale (Jones & Noël, 2021). Seven items were selected from the scale which asked, for example, “I can often estimate the true odds better than the advertised odds”. Response options were “strongly disagree”, “disagree”, “agree”, and “strongly agree”. We removed questions with weaker psychometric properties (i.e., lower loadings on factors) and some questions which did not transfer well from German to English. Some questions were reworded for clarity, with the intent of the question remaining. Three additional items were adapted from prior research on safe gambling practices and added to the same question block: “If I'm not having fun gambling on sports, I stop”, “I stick to a dedicated budget for sports betting”, “If I'm feeling depressed or upset, I don't bet on sports”.

#### Attitudes towards sports betting promotions

All respondents, whether they had bet on sports or not, were asked about their attitudes towards sports betting promotions. Nine items were asked, such as “sports betting advertising during sports games should be banned”, with response options, “strongly disagree”, “disagree”, “agree”, and “strongly agree”. These items were created specifically for this survey.

#### Attitudes towards sports betting

All respondents were asked their attitudes towards sports betting, drawn from prior gambling surveys, with some items adapted from items assessing more general attitudes towards gambling in general. Additional questions were devised in collaboration with the SA Office for Problem Gambling. Ten items were asked, including, “There is too much sports betting today”. Response options were “strongly disagree”, “disagree”, “agree”, and “strongly agree”.

#### Watching sports and involvement in sports

All respondents were asked how often they watched sports during the last 12 months on television, live at the ground, or via video on a device or computer. They were also asked how often they had watched sports with friends, family (children under 18) and adult family members. Response options were never/not relevant, 1-6 times (once every two months or less), 7-12 times (once a month or less), 13-24 times (once or twice a month), 25-52 times (once or twice a fortnight), and 53+ times (once a week or more).

#### Normalisation of sports betting

##### Perception of community norms

Respondents used slider scales to rate the normalisation of sports betting for people living in South Australia. Specifically, they rated how accessible sports betting was (‘not at all’ to ‘extremely’), how much it was a normal part of life (‘not at all’ to ‘completely’), the degree to which sports betting is part of South Australian culture (‘not part of the culture’ to ‘completely part of the culture’), and how socially accepted sports betting is in South Australia (‘not at all’ to ‘completely’). Respondents were asked what percentage of the South Australian population they believe bet on sports regularly (e.g., ‘every month’), recently (e.g., ‘within the last month’), and ever (i.e., ‘at any time in their life’), using slider scales from 0 to 100. All of these items were modified from general gambling items in a study of normalisation (Thomas et al, 2018), which was based on the five dimensions of normalisation (Parker et.al., 2002).

##### Social norms: Friends and Family

The Subjective Norms Scale (SNS; Moore & Ohtsuka, 1999), developed to assess social norms (descriptive and injunctive) related to gambling, was included in the survey. The scale has 12 items. Five items relate to gambling by friends, five relate to gambling by family, and two items assess motivation to comply with friends and family respectively (e.g., “Generally I try to fit in with my friends”). Response options were “strongly disagree”, “disagree”, “agree”, and “strongly agree”. The subscales of descriptive and injunctive norms are computed by summing the product of each respective belief statement with the motivation to comply. Flack and Morris (2015) found the scale to have good internal consistency, with the Cronbach alpha of 0.88 for the revised full scale, and 0.83 and 0.86 for the injunctive and descriptive norms subscales, respectively. The

SNS was modified to refer to sports betting and two items (two for friends and two for family) were added to each subscale to broaden the range of sports betting activities canvassed. These included 'my friends/family and I discuss sports betting in-person or in messaging apps' and 'my friends/family and I are part of a betting syndicate'.

#### Protective strategies related to sports betting

All respondents were asked about discussing sports betting and sports betting problems with adults and children/adolescents. First, respondents were asked whether they agreed or disagreed that it was a good idea to talk to an adult family member or friend who was betting a lot on sports about whether their sports betting was a problem, and whether they felt confident talking to a friend or family member about the risks of sports betting. Response options for these items were "strongly disagree", "disagree", "agree", and "strongly agree". Respondents were then asked if they had spoken to someone close to them (an adult family member or friend) about the risks involved in sports betting during the last 12 months. Respondents were also asked if they had seen any messaging about safe sports betting practices in the last 12 months. The response options to these items were "never", "rarely", "sometimes", "usually" and "always".

Respondents were asked similar questions about children/adolescents, but with some additional detail. Respondents were asked how strongly they agreed that it was important to talk to children and adolescents about the risks of betting on sports, and whether they felt confident talking to children or adolescents about this topic. They were asked how strongly they agreed or disagreed that children and adolescents need to understand that sports betting is not a normal part of enjoying sports. They were also asked if they disagreed or agreed that they should keep sports betting conversations private, so children or adolescents did not overhear, and how strongly they agreed or disagreed that it was OK if children or adolescents saw them betting on sports or were included in their sports betting. All respondents were then asked if they had spoken to a child or adolescent about the risks involved in sports betting during the last 12 months, and whether they had seen messaging in the last 12 months about keeping children or adolescents safe around sports betting. The response options to these items were "never", "rarely", "sometimes", "usually" and "always".

Respondents were then asked if they had cared for their own or someone else's child/children or adolescents during the last 12 months, including full-time parenting to casual child-minding. Respondents who reported doing so were asked their role (e.g., parent, grandparent, foster parent, babysitter, other family member, family friend, other). Respondents who had looked after children or adolescents were asked how often (never to always) they: made sure they did not mention sports betting wins to those children or adolescents; took care not to let children or adolescents overhear discussions about sports betting, and took care not to be in the same room as the children or adolescents when placing bets. Finally, respondents who had children or adolescents in their care were asked how much they agreed or disagreed that they were informed and comfortable in terms of talking to children or adolescents in their care about the risks of sports betting. Response options were "strongly disagree", "disagree", "agree", and "strongly agree".

#### Problem Gambling Severity Index (PGSI)

Respondents who reported gambling on sports and/or on other forms of gambling were asked to complete the 9-item PGSI (Ferris & Wynne, 2001). Respondents completed this scale in relation to their gambling in general in the last 12 months, rather than specifically responding in terms of their sports betting. Response options were never (0), sometimes (1), most of the time (2) and almost always (3). Scores for each item were summed, for a total between 0 and 27.

Respondents were classified into the following categories based on this total score: non-problem gamblers (PGSI = 0), low-risk gamblers (PGSI = 1 to 2), moderate-risk gamblers (PGSI = 3 to 7), and 'problem gamblers' (PGSI = 8 to 27). Reliability in this sample was Cronbach's alpha = .96.

## Demographics

In addition to age and gender, respondents were asked: how many adults and children/adolescents lived in their household during the last 12 months (and their ages if children/adolescents were present); marital status; household composition; highest educational qualification; work status; total household pre-tax household income; country of birth; main language spoken at home; and Aboriginal or Torres Strait Islander status.

## Data analysis

All questions were forced response, meaning that respondents could not proceed through the survey unless they completed each question. All missing data were therefore by design. For example, people who reported not gambling in the last 12 months did not have any data for the PGSI. No missing data replacement was required.

As well as standard cross-tabulations and summary statistics, some parametric analyses were conducted. Psychometric analyses were conducted for several scales, with the main emphasis being on evaluating the suitability of the candidate items for implementing a global index of sports betting normalisation. Exploratory factor analysis, as well as a hierarchical factor analysis was used to evaluate candidate items, as well as to calculate coefficient omega, which is a measure of internal reliability and unidimensionality similar to coefficient alpha, based on Classical Test Theory.

Bivariate comparisons were done using independent groups *t*-tests and correlations. *T*-tests were adjusted for unequal variances, and Spearman correlations were used as appropriate when data violated homogenous normal theory assumptions. For key outcome metrics, such a normalisation or the use of protective behaviours, scale sums were calculated and multiple regressions were conducted to assess variation with respect to: household structure, education level, language other than English (LOTE), age, income, and location (metropolitan Adelaide versus other areas).

The following criterion alphas were used throughout: \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ . Given the number of comparisons conducted throughout the report, the highest threshold ( $p < .05$ ) should be taken to indicate only moderate confidence of a statistically significant result.

## Results

### Sample Demographics

Table 1 details frequency and percentages of key demographic variables for the survey sample, and comparable demographic information for the South Australian population as assessed in the 2018 Gambling Prevalence in South Australia Computer Assisted Telephone Interview (CATI) survey (Woods et al., 2018).

**TABLE 1. DEMOGRAPHIC VARIABLES FOR THE SURVEY SAMPLE AND AS ASSESSED BY THE 2018 GAMBLING PREVALENCE SURVEY (WHERE AVAILABLE)**

Variables	Current panel sample		2018 CATI sample*
	n	%	%
Age			
18-34	565	27.8	13
35-49	549	27.0	27
50+	916	45.1	25
Gender			
Male	981	48.3	45
Female	1036	51.0	56
Other	9	.4	
Prefer not to say	4	.2	
Indigenous			
Not indigenous	1979	97.5	98
Aboriginal	44	2.2	1
Torres Strait Islander	5	.2	
Both Aboriginal and Torres Strait Islander	2	.1	
Education			N/A
No schooling	7	.3	
Did not complete primary school	3	.1	
Completed primary school	32	1.6	
Year 10 or equivalent	224	11.0	
Year 12 or equivalent	401	19.8	
A trade, technical certificate or diploma	601	29.6	
A university or college degree	492	24.2	
Postgraduate qualification	270	13.3	
What you did during the last 12 months			
Worked full-time	683	33.6	31
Worked part-time	385	19.0	18
Self-employed	108	5.3	2
Unemployed and looking for work	103	5.1	3
Full-time student	73	3.6	2
Full-time home duties	126	6.2	3
Retired	452	22.3	38+
Sick or disability pension	73	3.6	38+
Other	27	1.3	
Income			
Less than \$25,000	236	11.6	9
\$25,000 to \$49,999	453	22.3	13
\$50,000 to \$74,999	385	19.0	10.5
\$75,000 to \$149,999	689	33.9	19
\$150,000 or more	267	13.2	11
Country of birth			N/A
Australia	1598	78.7	
Other	432	21.3	



Language spoken at home			
English	1935	95.3	90
LOTE	95	4.7	9
Marital status			
Single/never married	458	22.6	19
Living with partner/de-facto relationship	365	18.0	61+
Married	951	46.8	61+
Divorced or separated	211	10.4	9
Widowed	45	2.2	10
Type of Household			N/A
Single person	366	18.0	
One parent family with children	153	7.5	
Couple with children	625	30.8	
Couple with no children	647	31.9	
Group household	173	8.5	
Other	66	3.2	
Problem gambling status (PGSI)			
Non-problem gambler	825	40.6	57.2
Low-risk gambler	210	10.3	4.6
Moderate-risk gambler	158	7.8	2.2
Problem gambler	220	10.8	0.7

**NOTES: \* SOURCE: WOODS, A., SPROSTON, K., BROOK, K., DELFABBRO, P., & O'NEIL, M. (2018). GAMBLING PREVALENCE IN SOUTH AUSTRALIA (2018). +INDICATES THE 2018 POPULATION SURVEY DID NOT DISCRIMINATE BETWEEN THOSE CATEGORIES. THE COMBINED CATEGORY TOTAL IS GIVEN. TOTALS MAY NOT ADD TO 100% DUE TO ROUNDING, NON-RESPONSE OR OTHER MINOR RESPONSE CATEGORIES NOT LISTED HERE.**

Compared to the 2018 CATI survey, the current panel survey included a higher proportion of younger respondents (18-34 years) and fewer respondents in the 50+ years range. There was a similar proportion and a roughly equal number of males and females. The work status profile for both surveys was quite similar. It was not possible to compare the samples with respect to income, since a large proportion of respondents to the 2018 survey (39%) either did not know their income or chose not to respond. The current sample included a higher proportion of individuals who spoke a LOTE at home. Perhaps most importantly, the panel included a much higher proportion of individuals who indicated some degree of gambling problems. This is a common observation in online panel surveys and reflects the biggest departure of the self-selected and financially compensated panel from the general population.

## Household Composition

Respondents were asked “How many persons aged 18 years or older (adults) usually lived in your household during the last 12 months”. The results were as follows:

- 21.7% of respondents reported living alone in their household.
- 55.8% of respondents had one other person in their household.
- 13.7% had 2 other people in their household.
- 5.8% had 3 other people in their household.
- 1.7% had 4 other people in their household.
- 0.3% had 5 other people in their household.

When asked “How many persons aged less than 18 years (children/adolescents) usually lived in your household during the last 12 months?” answered were as follows:

- 65.0% of respondents had no children or adolescents in their household.
- 16.3% had one child or adolescent in the household.

- 13.7% had two children or adolescents in the household.
- 3.2% had three children or adolescents in the household.
- 1.2% had four children or adolescents in the household.

Of those who said they had one or more children or adolescents under the age of 18 in the house (35%), children were in the following age brackets:

- 13.2% were aged 0-4 years old.
- 13.2% were aged 5-9 years old.
- 14.4% were aged 10-14 years old.
- 9.3% were aged 15-19 years old.

## Caregivers of children

Caregivers of children include those who do not necessarily cohabit with the child, such as grandparents or other relatives. Under half (44.9%) of respondents regularly cared for their own or someone else's child/children or adolescents. Caregivers included parents (46.9%), grandparents (22.6%), other family member (11.3%), family friend (8.3%), babysitter/minder (7.7%), foster parents (1.0%), and other (2.2%).

## Gambling participation, frequency, expenditure, and problem gambling

### Gambling participation and frequency

Over a third (36.1%) of the sample reported betting on sports in the last 12 months, and 65.9% reported participating in other forms of gambling (see Table 2). It was most common for those surveyed who bet on sports and other forms of gambling, to only do so occasionally, with 19.3% of the total sample betting on sports 1-6 times in the last 12 months, and 31.1% of the total sample betting on other forms of gambling 1-6 times.

### Problem gambling

Non-gamblers comprised 30.4% of the sample. The PGSI was completed by those who had gambled in the last 12 months, and 40.6% of the total sample screened as non-problem gamblers, 10.3% as low risk gamblers, 7.8% as moderate risk gamblers, and 10.8% as problem gamblers.

**TABLE 2. SPORTS BETTING, OTHER TYPES OF GAMBLING, AND GAMBLING SEVERITY AMONG SURVEYED SA ADULTS IN THE LAST 12 MONTHS**

<i>Gambling Behaviours</i>	<i>Survey Sample (n = 2030)</i>	
	<i>n</i>	<i>%</i>
<i>Sports bettor</i>		
Yes	732	36.1
No	1298	63.9
<i>Other gambler</i>		
Yes	1338	65.9
No	692	34.1
<i>Frequency of betting on sports events/matches in the last 12 months</i>		
Never	1298	63.9
1 to 6 times	391	19.3
7-12 times (once a month or less)	116	5.7
13-24 times (once or twice a month)	87	4.3
25 to 52 times (once or twice a fortnight)	66	3.3
53 or more times (once a week or more)	72	3.5
<i>Frequency of betting on other forms of gambling in the last 12 months</i>		
Never	692	34.1
1 to 6 times	631	31.1
7-12 times (once a month or less)	212	10.4
13-24 times (once or twice a month)	143	7.0
25 to 52 times (once or twice a fortnight)	152	7.5
53 or more times (once a week or more)	200	9.9
<i>PGSI</i>		
Non-gamblers	617	30.4
Non-problem gambler	825	40.6
Low risk gambler	210	10.3
Moderate risk gambler	158	7.8
Problem gambler	220	10.8

## Community Attitudes to Sports Betting

### Sports betting and associated risks

Most respondents agreed gambling on sports is part of the Australian culture and you are never going to change that (54%), but that there is too much sports betting today (78.3%), that casual sports betting can lead to problems if you are not careful (86.1%) and that sports betting can destroy families (89.4%). The majority disagreed that sports betting is just another hobby (57.2%), although most agreed that occasional sports betting is harmless (73.1%).

The majority agreed that betting advertising encourages people who enjoy sport to start gambling (74.5%), that it increases gambling problems in Australia (81.5%), that people who bet on sports are at-risk of developing gambling problems (79.9%). and that sports advertising makes it hard for people with problems to resist gambling (87%).

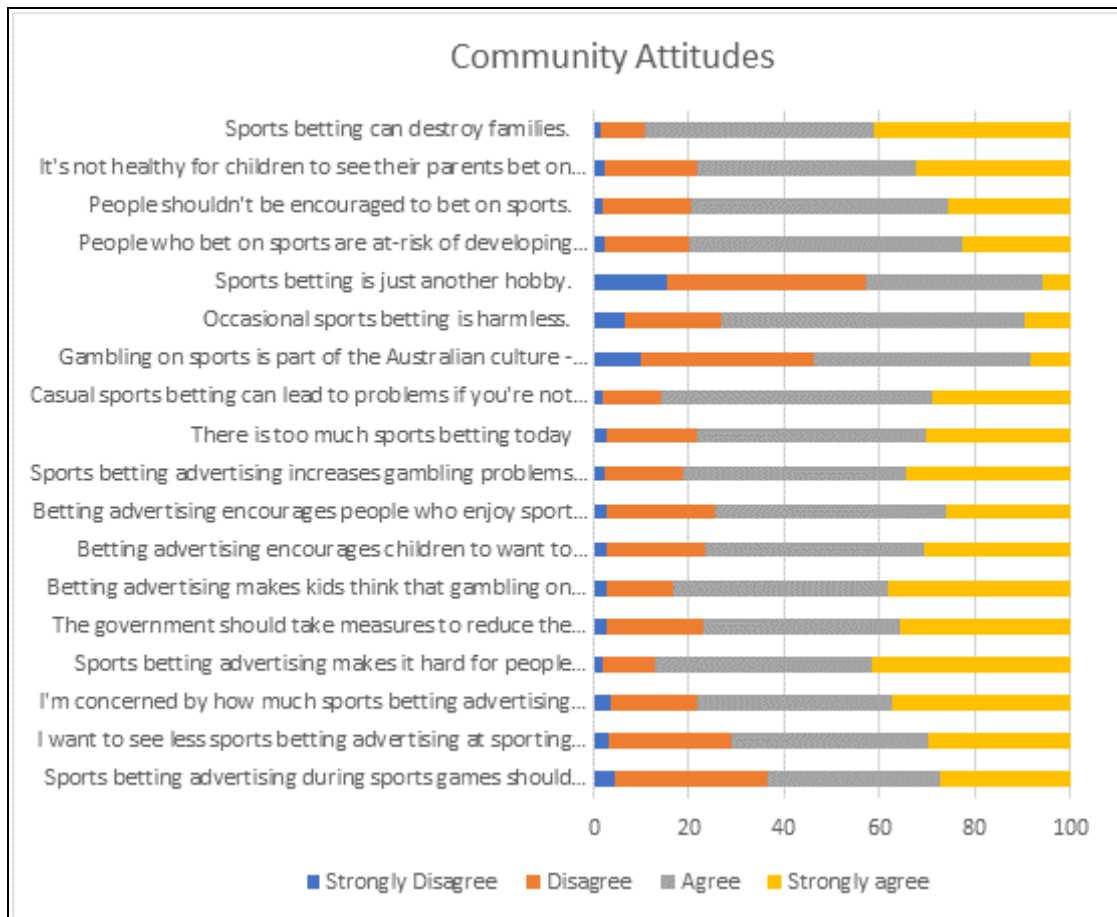
### Advertising and promotion of sports betting

There was overwhelmingly negative sentiment toward the advertising and promotion of sports betting.

Most respondents agreed (see Figure 3) that people should not be encouraged to bet on sports (79.4%). They agreed that sports betting advertising should be banned (63.5%), that they want to

see less sports betting advertising at sporting events (71%), that the government should take measures to reduce the amount of sports betting advertising (77.3%), and that sports betting needs to be more tightly regulated or restricted (80.9%).

Respondents were concerned by how much sports betting advertising children are exposed to (78.2%), that it makes kids think that gambling on sport is normal (83.6%) and encourages children to want to gamble on sports (76.5%). They believed it is not healthy for children to see their parents bet on sports (78.4%).



**FIGURE 3. COMMUNITY ATTITUDES TO SPORTS BETTING AND SPORTS BETTING ADVERTISING (N = 2030)**

### Sports bettors and non-sports bettors' attitudes to sports betting and sports betting advertising

Table 3 compares non-sports bettors with sports bettors regarding their attitudes to sports betting and sports betting advertising. Non-sports bettors were significantly more likely than sports bettors to agree with negative statements about the advertising and promotion of sports betting, and the risks associated with sports betting. Sports bettors were significantly more likely than non-sports bettors to agree that: gambling on sports is just part of the Australian culture and you are not going to change that; occasional sports betting is harmless, and that sports betting is just another hobby. However, the magnitude of the differences between these two groups on the 4-point Likert scale was not large.

TABLE 3. SPORTS BETTORS (N = 732) AND NON-SPORTS BETTORS (N = 1298) ATTITUDES TO SPORTS BETTING AND SPORTS BETTING ADVERTISING

Community Attitudes	Non-Sports Bettors M (SD)	Sports Bettors M (SD)	t <sup>1</sup>
Sports betting advertising during sports games should be banned.	3.01 (.845)	2.60 (.846)	10.446***
I want to see less sports betting advertising at sporting venues.	3.12 (.794)	2.73 (.830)	10.436***
I'm concerned by how much sports betting advertising children are exposed to.	3.22 (.797)	2.94 (.842)	7.482***
Sports betting advertising makes it hard for people with problems to resist gambling.	3.36 (.683)	3.10 (.779)	7.686***
The government should take measures to reduce the amount of sports betting advertising.	3.20 (.780)	2.93 (.834)	7.339***
Betting advertising makes kids think that gambling on sport is normal.	3.27 (.741)	3.05 (.797)	5.922***
Betting advertising encourages children to want to gamble on sports.	3.11 (.767)	2.92 (.813)	5.075***
Betting advertising encourages people who enjoy sport to start gambling.	3.00 (.780)	2.93 (.760)	2.189*
Sports betting advertising increases gambling problems in Australia.	3.22 (.733)	2.98 (.780)	6.736***
There is too much sports betting today	3.17 (.743)	2.87 (.782)	8.324***
Casual sports betting can lead to problems if you're not careful.	3.20 (.670)	3.02 (.693)	5.501***
Gambling on sports is part of the Australian culture - you're never going to change that.	2.40 (.788)	2.73 (.734)	-9.473***
Occasional sports betting is harmless.	2.62 (.730)	3.01 (.611)	-12.594***
Sports betting is just another hobby.	2.12 (.757)	2.72 (.737)	-17.359***
People who bet on sports are at-risk of developing gambling problems.	3.08 (.660)	2.88 (.754)	5.892***
People shouldn't be encouraged to bet on sports.	3.15 (.689)	2.83 (.717)	9.823***
It's not healthy for children to see their parents bet on sports.	3.19 (.734)	2.90 (.804)	7.953***
Sports betting can destroy families.	3.35 (.667)	3.18 (.727)	5.114***
Sports betting needs to be more tightly regulated or restricted.	3.23 (.712)	2.95 (.798)	8.102***

<sup>1</sup> EQUAL VARIANCES NOT ASSUMED

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

## Engagement in watching sports and betting

### Mode of Watching Sport

Figure 4 shows the mode of watching sports in the sample. Most sport was watched on television (M = 3.63, Mdn = 4.0, SD = 1.79), followed by video on a device or computer (M = 2.09, Mdn = 1.00, SD = 1.09), and then live at the ground (M = 1.76, Mdn = 1.00, SD = 1.09).

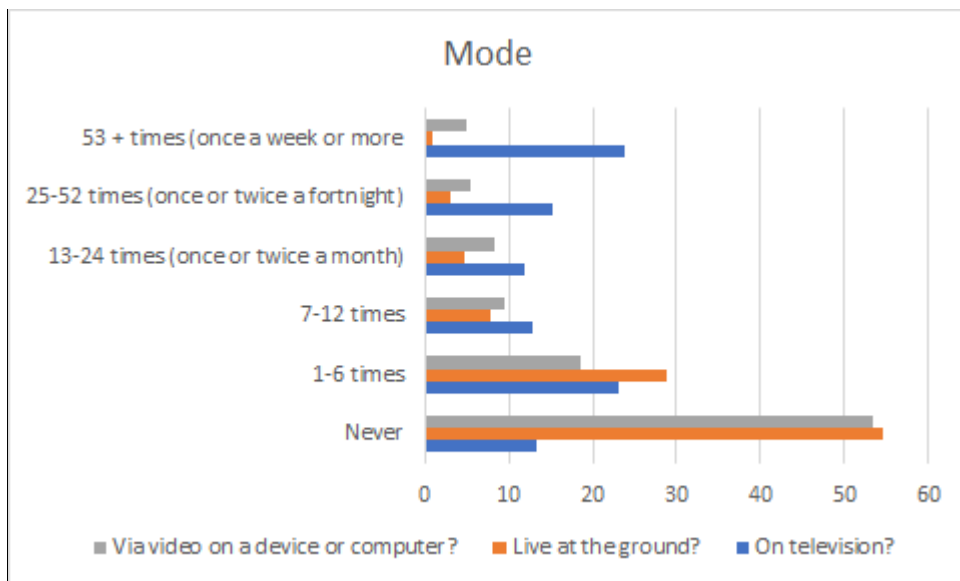


FIGURE 4. FREQUENCY (%) OF WATCHING SPORT BY MODE OF WATCHING DURING THE LAST 12 MONTHS (N = 2030)

### Social Context of Watching Sport

Figure 5 shows the social context of watching sports. Most sports were watched with adult family members (M = 2.70, Mdn = 2.00, SD = 1.62), followed by watching with friends (M = 2.22, Mdn = 2.00, SD = 1.38), and last with family including children under 18 (M = 1.82, Mdn = 1.00, SD = 1.31).

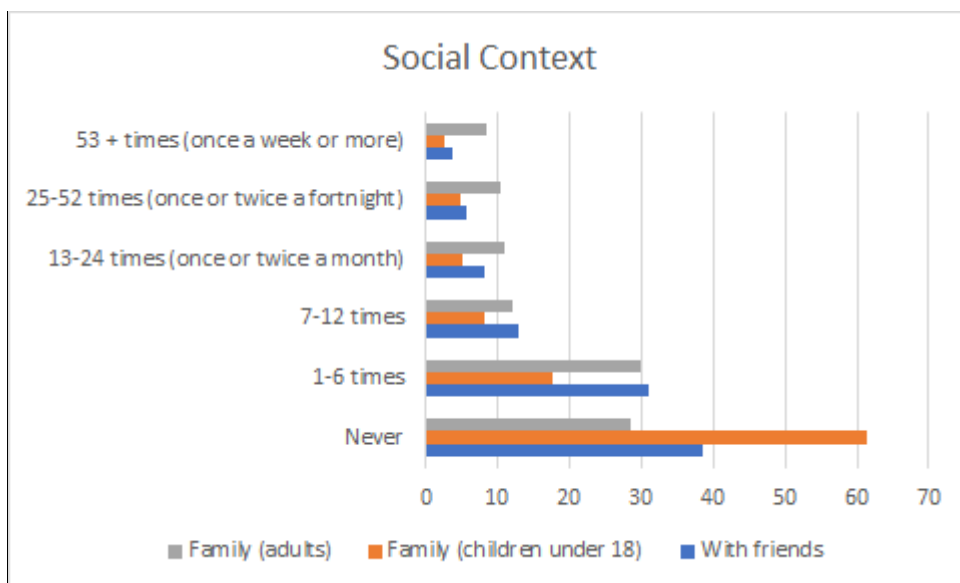


FIGURE 5. FREQUENCY OF WATCHING SPORT BY SOCIAL CONTEXT DURING THE LAST 12 MONTHS (N = 2030)

### Sports bettors' expenditure

Sports bettors (n=732) were asked to think about the last 12 months, and to estimate how much they spent betting on sports in a typical month. The results are as follows:

- 44.0% of sports bettors spent less than \$50 in a typical month.
- 15.3% of sports bettors spent between \$50 and \$99 in a typical month.
- 17.9% of sports bettors spent between \$100 to \$199 in a typical month.
- 18.6% of sports bettors spent between \$200 and \$999 in a typical month.
- 4.2% of sports bettors spent \$1,000 or more in a typical month.

### In-play betting

Sports bettors were asked to estimate the percentage of their sports betting in the last 12 months that was in-play or live betting (i.e., bets placed once the match has started). The results were as follows:

- 46.4% of sports bettors reported **zero** in-play or live betting in the last 12 months.
- 26.8% of sports bettors reported that from **1 to 49%** of their sports betting was in-play or live betting.
- 17.8% of sports bettors reported that **50%** of their sports betting was in-play or live betting.
- 9% of sports bettors reported that from **51-99%** of their sports betting was in-play or live betting.

### Irrational beliefs and emotional involvement in sports

Beliefs about sports betting (irrational beliefs and emotional involvement) were asked of the 732 respondents who were sports bettors. Table 4 below reports the percentages across response categories for each sports belief.

**TABLE 4. ERRONEOUS BELIEFS AND EMOTIONAL INVOLVEMENT IN SPORTS BETTING OF SPORTS BETTORS (N= 732)**

<i>Erroneous Beliefs/ Emotional Involvement</i>	Strongly disagree	Disagree	Agree	Strongly agree
	%	%	%	%
<i>When I win my sports bet, it's due to my skill and knowledge of sports.</i>	12.4	31.1	48.4	8.1
<i>When I win my sports bet, it's due to my experience as a bettor.</i>	13.1	42.8	37.6	6.6
<i>Just narrowly losing a bet shows how good my skills as a bettor are.</i>	16.5	48.1	30.6	4.8
<i>Betting on sport is safer as it relies less on luck than other forms of gambling.</i>	12.6	29.2	47.8	10.4
<i>The highs are higher and the lows are lower when I bet on my favourite team or player.</i>	10.2	32.2	47.4	10.1
<i>The very moment I place a bet, I feel good.</i>	7.7	35.0	49.0	8.3
<i>I can often estimate the true odds better than the advertised odds.</i>	17.2	45.4	32.1	5.3
<i>If you have the knowledge and skills, betting on sports is a good way to make extra money.</i>	11.2	34.6	46.2	8.1
<i>My chances of picking a winner on a sports match are better than most people.</i>	14.5	48.2	31.1	6.1
<i>Bookmakers make mistakes when setting odds, which I can take advantage of.</i>	11.3	46.6	35.4	6.7

Table 5 below summarises the 13 items designed to measure beliefs and behaviours about sports betting. Items 1-10 assess irrational or potentially harmful beliefs about sports betting, while items 11-13 are concerned with protective behaviours. Given that those two sets of items were derived from different validated scales, we expected a two-dimensional factor analysis to show a clear factor loading structure. As shown in Table 5 (columns F1 and F2), this appeared to be the case. Furthermore, the correlation between the two factors was almost zero (-0.02), suggesting that dangerous beliefs and protective behaviours were two independent constructs. For the second factor, three is an insufficient number of items for testing scale reliability. However, alpha reliability for the 10 items assessing irrational beliefs was high at .90. The correlation of mean score for these items was moderately correlated with the PGSI total ( $r = .47$ ), further supporting the validity of this scale as a measure of risk beliefs. We considered the factor structure and reliability as suitable for summation for further analysis as a total summed / averaged scale.

With mean scores between 2 (disagree) and 3 (agree), South Australian sports bettors appeared to respond neutrally to probes describing potentially maladaptive or risky beliefs about sports betting. However, South Australian sports bettors were slightly more likely to assert the use of protective strategies (e.g., sticking to a dedicated budget).



**TABLE 5. ITEM CODES, LABELS, SUMMARY STATISTICS AND FACTOR LOADINGS FOR ITEMS MEASURING IRRATIONAL BELIEFS AND PROTECTIVE BEHAVIOURS**

Code	Label	M	SD	F1	F2	h2	u2
irrat1	When I win my sports bet, it's due to my skill and knowledge of sports	2.52	0.81	0.72		0.52	0.48
irrat2	When I win my sports bet, it's due to my experience as a bettor	2.38	0.79	0.75		0.57	0.43
irrat3	Just narrowly losing a bet shows how good my skills as a bettor are	2.24	0.78	0.77		0.59	0.41
irrat4	Betting on sport is safer as it relies less on luck than other forms of gambling	2.56	0.84	0.62		0.39	0.61
irrat5	The highs are higher and the lows are lower when I bet on my favourite team or player	2.57	0.81	0.61		0.38	0.62
irrat6	The very moment I place a bet, I feel good	2.58	0.75	0.57		0.33	0.67
irrat7	I can often estimate the true odds better than the advertised odds	2.26	0.80	0.74		0.55	0.45
irrat8	If you have the knowledge and skills, betting on sports is a good way to make extra money	2.51	0.80	0.63		0.4	0.6
irrat9	My chances of picking a winner on a sports match are better than most people	2.29	0.79	0.76		0.58	0.42
irrat10	Bookmakers make mistakes when setting odds, which I can take advantage of	2.37	0.77	0.64		0.41	0.59
irrat11	If I'm not having fun gambling on sports, I stop	3.10	0.69		0.73	0.53	0.47
irrat12	I stick to a dedicated budget for sports betting	3.06	0.75		0.58	0.34	0.66
irrat13	If I'm feeling depressed or upset, I don't bet on sports	2.68	0.85		0.38	0.16	0.84

**NOTES: FACTOR LOADINGS < 0.1 SUPPRESSED**

### Regression of irrational beliefs about sports betting with demographics

A regression analysis was conducted to better understand which segments of the South Australian population tended to hold more irrational or potentially harmful beliefs about sports betting, as summarised in Table 6. The criterion (dependent) variable was the average of the 10 items assessing irrational beliefs described in the previous section. Couples with children, and those with higher levels of education tended to hold more irrational beliefs. The latter effect may be because of the higher degree of self-efficacy with respect to making 'expert' sports bets felt by those with more advanced education. South Australians who spoke a LOTE at home also tended to have more irrational beliefs. However, the largest effect (in terms of explained variance) was for age, with younger respondents tending to hold more irrational beliefs about sports betting.

TABLE 6. REGRESSION RESULTS USING IRRATIONAL BELIEFS AS THE CRITERION

Predictor	b	b 95% CI [LL, UL]	sr <sup>2</sup>	sr <sup>2</sup> 95% CI [LL, UL]
(Intercept)	2.43**	[2.18, 2.68]		
Household (One parent family with children)	0.08	[-0.09, 0.24]	.00	[-.00, .01]
Household (Couple with children)	0.21**	[0.09, 0.33]	.01	[-.01, .03]
Household (Couple with no children)	-0.04	[-0.17, 0.09]	.00	[-.00, .00]
Household (Group household)	0.06	[-0.10, 0.23]	.00	[-.00, .00]
Household (Other)	-0.19	[-0.45, 0.08]	.00	[-.00, .01]
Education	0.05**	[0.02, 0.08]	.01	[-.01, .02]
LOTE	0.22*	[0.04, 0.40]	.01	[-.00, .02]
Age (Decades)	-0.07**	[-0.09, -0.05]	.03	[.01, .05]
Location (Outside Adelaide)	-0.09	[-0.19, 0.02]	.00	[-.00, .01]
Income	-0.02	[-0.05, 0.00]	.00	[-.00, .01]
R <sup>2</sup> = .113** 95% CI [.06, .15]				

**NOTE. A SIGNIFICANT B-WEIGHT INDICATES THE SEMI-PARTIAL CORRELATION IS ALSO SIGNIFICANT. B REPRESENTS UNSTANDARDIZED REGRESSION WEIGHTS. SR<sup>2</sup> REPRESENTS THE SEMI-PARTIAL CORRELATION SQUARED. LL AND UL INDICATE THE LOWER AND UPPER LIMITS OF A CONFIDENCE INTERVAL, RESPECTIVELY. \* INDICATES P < .05. \*\* INDICATES P < .01.**

Since our psychometric analysis revealed that the three protective behaviours around one's own sports betting loaded on a single factor, we conducted a regression analysis to explore whether mean level of endorsement varied with respect to demographic variables (see Table 7). However, given that this ad-hoc scale comprises only three items, caution is advised in interpretation and reference should be made to the item content above (items 11-13). Couples with children, as well as those with a higher level of education, were more likely to endorse protective measures with respect to their own sports betting.

TABLE 7. REGRESSION RESULTS USING PROTECTIVE BEHAVIOURS AS THE CRITERION

Predictor	b	b 95% CI [LL, UL]	sr2	sr2 95% CI [LL, UL]
(Intercept)	2.67**	[2.41, 2.93]		
Household (One parent family with children)	0.01	[-0.16, 0.18]	.00	[-.00, .00]
Household (Couple with children)	0.13*	[0.00, 0.25]	.01	[-.01, .02]
Household (Couple with no children)	0.11	[-0.02, 0.25]	.00	[-.00, .01]
Household (Group household)	0.17	[-0.00, 0.34]	.01	[-.01, .02]
Household (Other)	0.23	[-0.04, 0.50]	.00	[-.01, .01]
Education	0.05**	[0.01, 0.08]	.01	[-.00, .02]
LOTE	-0.12	[-0.30, 0.07]	.00	[-.00, .01]
Age (Decades)	-0.01	[-0.04, 0.02]		
Location (Outside Adelaide)	-0.02	[-0.13, 0.09]	.00	[-.00, .00]
Income	-0.01	[-0.04, 0.01]	.01	[-.01, .02]
R <sup>2</sup> = .025 95% CI [.00, .04]				

**NOTES: A SIGNIFICANT B-WEIGHT INDICATES THE SEMI-PARTIAL CORRELATION IS ALSO SIGNIFICANT. B REPRESENTS UNSTANDARDIZED REGRESSION WEIGHTS. SR<sup>2</sup> REPRESENTS THE SEMI-PARTIAL CORRELATION SQUARED. LL AND UL INDICATE THE LOWER AND UPPER LIMITS OF A CONFIDENCE INTERVAL, RESPECTIVELY. \* INDICATES P < .05. \*\* INDICATES P < .01.**

## Perceptions of normalisation and accessibility

### Dimensions of normalisation

Table 8 below reports the descriptive statistics for questions which measured the five dimensions of normalisation (Parker et al., 1998). Respondents consider sports betting to be accessible, a normal part of life in SA, part of the South Australian culture, and socially acceptable. Respondents estimated about half of people they know bet regularly and recently of sports, and about 60% in their lifetime.

**TABLE 8. DESCRIPTIVE STATISTICS FOR QUESTIONS MEASURING THE DIMENSIONS OF NORMALISATION, ON A SCALE OF 0 TO 100%**

<i>Dimensions of Normalisation</i>	<b>Mean</b>	<b>Mdn</b>	<b>SD</b>
<i>How accessible is betting on sports to people living in South Australia?</i>	86.6	92.0	16.7
<i>Is sports betting a normal part of life in South Australia?</i>	59.8	61.0	24.9
<i>Is betting on sports a part of South Australian culture?</i>	57.2	60.0	26.3
<i>Is betting on sports socially accepted in South Australia?</i>	69.4	71.0	22.2
<i>Thinking about people in South Australia what percentage of adults (during the sporting season) bet on sports regularly (e.g., every month)?</i>	46.4	48.0	22.3
<i>Thinking about people in South Australia what percentage of adults (during the sporting season) bet on sports recently (i.e., in the last month)?</i>	50.0	49.0	23.0
<i>Thinking about people in South Australia what percentage of adults (during the sporting seasons) bet on sports ever (i.e., at any time in their life)?</i>	59.4	61.0	23.5

#### Psychometric analysis for a unified index of normalisation

The survey included 21 items assessing three facets of sports betting normalisation associated with perceptions of friends, family, and the community. Perceptions of friends and family were assessed using a 4-point Likert scale, while perceptions of the wider community were assessed using a slider from 0 to 100. The goal of our psychometric analysis was to assess the internal consistency of the different facets of the measure, and to assess suitability of items for aggregation into a global index of sports betting normalisation. Table 9 summarises key summary statistics of the individual items.

**TABLE 9. SUMMARY STATISTICS FOR CANDIDATE SPORTS BETTING NORMALISATION ITEMS**

<b>Item</b>	<b>Mean</b>	<b>SD</b>	<b>Mdn</b>	<b>Skew</b>	<b>Kurt.</b>	<b>SE</b>	
<b>Friends</b>							
1	My friends are OK with sports betting	2.7	0.74	3	-0.57	0.2	0.02
2	Most of my friends have bet on sports occasionally	2.56	0.79	3	-0.32	-0.37	0.02
3	My friends often go to places where people are betting on sports	2.42	0.79	2	-0.08	-0.49	0.02
4	My friends would disapprove of me betting on sports	2.28	0.81	2	0.48	-0.15	0.02
5	Generally I try to fit in with my friends	2.39	0.77	2	-0.12	-0.49	0.02
6	My friends and I discuss sports betting in-person or in messaging apps	1.91	0.89	2	0.56	-0.7	0.02

7	My friends and I are part of a betting syndicate	1.64	0.8	1	1.12	0.6	0.02
Family							
1	My family is OK with sports betting	2.37	0.82	2	-0.27	-0.75	0.02
2	People in my family have bet on sports occasionally	2.46	0.84	3	-0.45	-0.68	0.02
3	My family often go to places where people are betting on sports	2.15	0.85	2	0.19	-0.75	0.02
4	My family would disapprove of me betting on sports	2.51	0.88	2	0.2	-0.73	0.02
5	Generally, I try to fit in with my family	2.58	0.79	3	-0.34	-0.33	0.02
6	My family and I discuss sports betting in-person or in messaging apps	1.76	0.83	2	0.81	-0.18	0.02
7	My family and I are part of a betting syndicate	1.54	0.75	1	1.35	1.31	0.02
Community							
1	How accessible is betting on sports to people living in South Australia?	86.57	16.7	92	-1.78	4.01	0.37
2	Is betting on sports a normal part of life in South Australia?	59.83	24.87	61	-0.49	-0.27	0.55
3	Is betting on sports a part of South Australian culture?	57.24	26.29	60	-0.42	-0.49	0.58
4	Is betting on sports socially accepted in South Australia?	69.37	22.19	71	-0.85	0.79	0.49
5	Thinking about people in South Australia, what percentage of adults (during the sporting seasons) bet on sports regularly (e.g., every month)?	46.39	22.32	48	0.19	-0.63	0.5
6	Thinking about people in South Australia, what percentage of adults (during the sporting seasons) bet on sports recently (i.e., in the last month)?	46.94	23	49	0.17	-0.73	0.51
7	Thinking about people in South Australia, what percentage of adults (during the sporting seasons) bet on sports ever (i.e., at any time in their life)?	59.43	23.52	61	-0.35	-0.62	0.52

NOTES: N= 2030

A guiding assumption of our analysis was that perceptions of friends, family and the community would represent partially independent facets of normalisation but would nevertheless also contribute to a global measure. This corresponds to a hierarchical factor model, which includes both a global factor  $g$  (global subjective perceptions of normalisation), and three sub-factors

(corresponding to perceptions of friends, family, and the community). Accordingly, we conducted an informal hierarchical factor analysis to test this factor structure.

Figure 6 below illustrates the fitted model. The items are labelled with respect to the numbering given in Table 9 above. There was a clear three factor structure apparent, although friends and family items showed significant cross-loadings, which can be confidently attributed to the replicated item content across these two facets. All of the candidate items showed relatively homogenous loadings on g, with the exception of friends5, family5, friends4, family4 and community1 which did not load highly on the general factor.

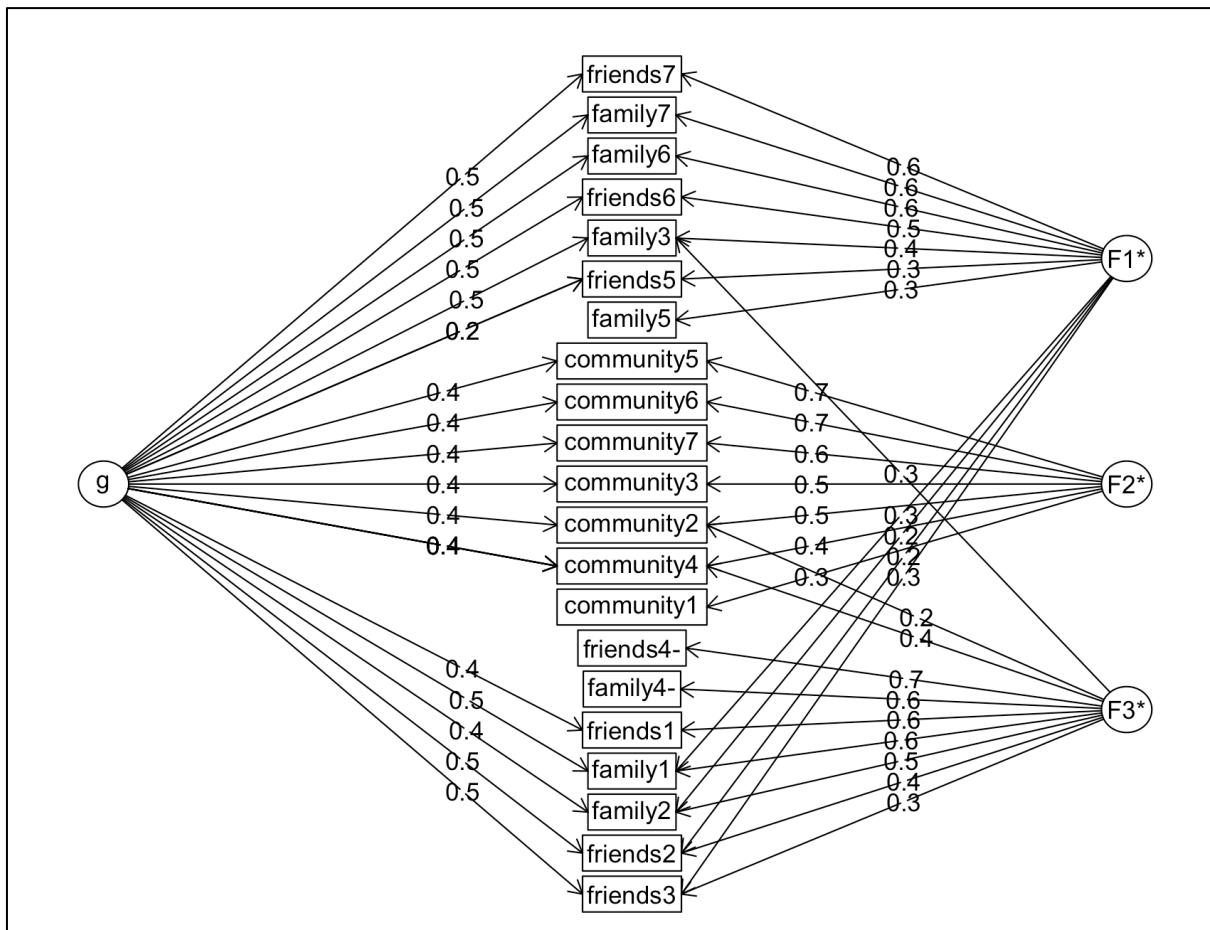
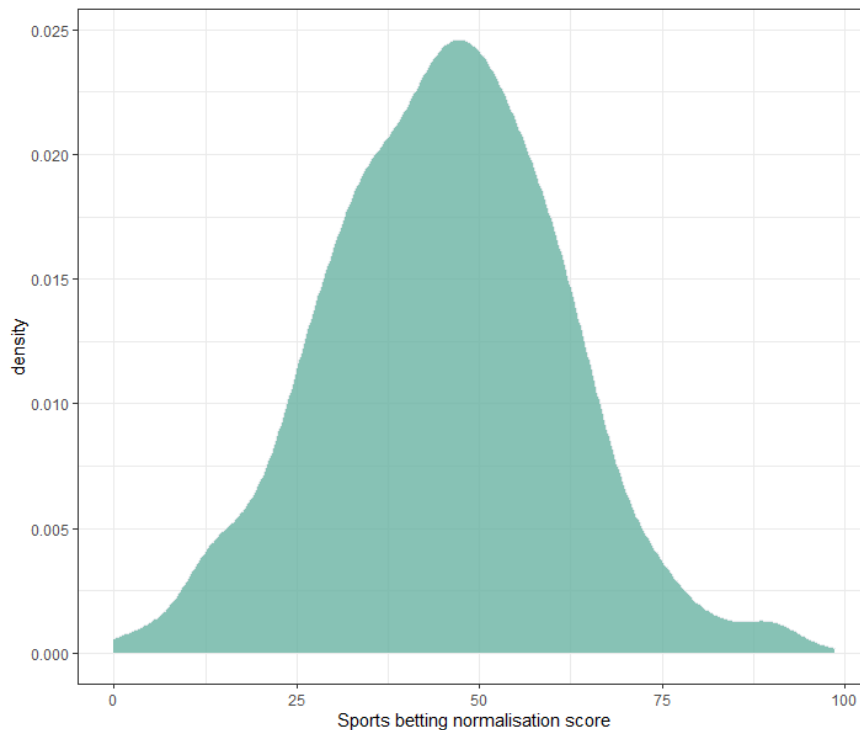


FIGURE 6. MODEL FOR A HIERARCHICAL FACTOR ANALYSIS OF NORMALISATION VARIABLES

Considering the item content, friends/family 5 corresponds to 'fitting in' with friends or family members in general and does not directly concern sports betting. Friends/family 4 were the only negatively worded items evaluated. Negatively worded items are known to often perform worse in psychometric evaluations when most other probes are positively worded, because of difficulties in respondents changing their response frame. Community 1 asks about accessibility of sports betting in South Australia. Accessibility is arguably in reality very high, and this is reflected in the very high mean score for this item. Accordingly, it is perhaps not surprising that this item would not function well as an indicator of subjective perceptions, but rather simply reflects the fact that most respondents tended to answer the question accurately.

We removed the five above-mentioned items with poor loadings on the global factor and re-analysed, calculating a reliability coefficient (omega total) of .91 for the general factor, which indicated a highly reliable measure. The intended use of the measure is to track subjective perceptions of sports betting normalisation via a single score. Because all retained items are positively coded, no reversal of scores is required. However, items regarding community are

assessed on a [0,100] slider scale, whereas the other items are assessed on a [1,4] scale. A simple approach to transforming all items to the same scale is to normalise each of the Likert items such that they have a minimum of zero and a maximum of 100; i.e., the following coding: 1 = 0, 2 = 33.3\*, 3 = 66.6\*, 4 = 100. Calculating the average of the normalised scores yields an integrated index of sports betting normalisation with a theoretical maximum of 100 and a minimum of 0. In the present survey, we calculated an average score of 45.19, with a confidence interval of (44.51, 45.87). Thus, given a survey of 2000 respondents, the tight confidence intervals for this scale suggests a highly precise and sensitive measure of average perceptions of sports betting normalisation. Figure 7 provides a density plot (smoothed histogram) of the measure, illustrating that scores are approximately normally distributed, with most respondents scoring between 25 and 75.



**FIGURE 7. DENSITY PLOT OF STANDARDISED SCORES ON FINALISED SPORTS BETTING NORMALISATION INDEX**

### Regression of sports betting normalisation with demographics

Table 10 summarises the relationship between demographic variables and the integrated index of sports betting normalisation described in the previous section (i.e., perceptions of normalisation and accessibility). The most important effect by a large margin was age, with younger participants perceiving sports betting as more normalised. Thus, this is consistent with the possession of potentially hazardous beliefs regarding sports betting, which is more prevalent among younger participants. Somewhat concerningly, couples with children tended to view sports betting as more normalised than others, although this likely due to the fact that parents with children at home tended to be slightly younger. There was also greater perceptions of normalisation among those with a higher income and lower educational attainment.



TABLE 10. REGRESSION RESULTS USING INTEGRATED INDEX OF NORMALISATION AS THE CRITERION

Predictor	b	b 95% CI [LL, UL]	sr2	sr2 95% CI [LL, UL]
(Intercept)	62.04**	[57.84, 66.23]		
Household (One parent family with children)	2.36	[-0.54, 5.25]	.00	[-.00, .00]
Household (Couple with children)	2.69*	[0.59, 4.79]	.00	[-.00, .01]
Household (Couple with no children)	-0.54	[-2.55, 1.48]	.00	[-.00, .00]
Household (Group household)	-0.01	[-2.84, 2.82]	.00	[-.00, .00]
Household (Other)	-3.52	[-7.50, 0.47]	.00	[-.00, .00]
Education	-1.10**	[-1.64, -0.56]	.01	[.00, .01]
LOTE	0.26	[-2.92, 3.45]	.00	[-.00, .00]
Age (Decades)	-2.73**	[-3.14, -2.31]	.07	[.05, .09]
Location (Outside Adelaide)	-0.43	[-2.02, 1.15]	.00	[-.00, .00]
Income	0.48*	[0.07, 0.88]	.00	[-.00, .01]
R2 = .127** 95% CI [.10, .15]				

NOTE. A SIGNIFICANT B-WEIGHT INDICATES THE SEMI-PARTIAL CORRELATION IS ALSO SIGNIFICANT. B REPRESENTS UNSTANDARDIZED REGRESSION WEIGHTS. SR2 REPRESENTS THE SEMI-PARTIAL CORRELATION SQUARED. LL AND UL INDICATE THE LOWER AND UPPER LIMITS OF A CONFIDENCE INTERVAL, RESPECTIVELY. \* INDICATES  $P < .05$ . \*\* INDICATES  $P < .01$ .

## Engagement in, confidence in, and perceptions of the importance of protective behaviours

### Caregivers (to children or adolescents) and non-caregivers

Table 11 compares the responses from caregivers (of children or adolescents) with non-caregivers, on their engagement in, confidence in, and perceptions of the importance of protective behaviours.

Both caregivers and non-caregivers endorsed protective behaviours, but caregivers had significantly higher levels of endorsement (agreed and strongly agreed) as follows:

- If an adult friend or family member is betting a lot on sports, it is a good idea to talk to them about whether sports betting is a problem for them (85.9% of caregivers, and 79.7% of non-caregivers).
- I feel confident talking to a friend or family member about the risks of sports betting (79.9% of caregivers, and 71.8% of non-caregivers).
- I feel confident talking to a child or adolescent about the risks of sports betting (88.6 % of caregivers, and 78.3% of non-caregivers).

Both caregivers and non-caregivers disapproved (disagreed or strongly disagreed) of harmful behaviours, but non-caregivers had significantly higher disapproval levels:

- It's OK if children or adolescents see you betting on sports (62.6% of caregivers, and 69.2 % of non-caregivers).
- It's OK to include children or adolescents in your sports betting (80.6% of caregivers, and 85.4 % of non-caregivers).

Both groups were equally likely to endorse the following protective behaviours:

- It is important to talk to children and adolescents about the risks of betting on sports (93% of caregivers, and 91.4% of non-caregivers agreed or strongly agreed).
- Children and adolescents need to understand that betting is not a normal part of enjoying sports (90.4 % of caregivers, and 88.7% of non-caregivers).
- It's important to keep your sports betting conversations private so that children and adolescents don't overhear (62.2% of caregivers, and 63.9% of non-caregivers).

**TABLE 11. ENGAGEMENT IN, CONFIDENCE IN, AND PERCEPTIONS OF IMPORTANCE OF PROTECTIVE BEHAVIOURS BY CAREGIVERS (TO CHILDREN AND ADOLESCENTS), AND NON-CAREGIVERS**

Protective Behaviours	Caregivers (n = 911)					Non-caregivers (n = 1119)					t- test <sup>1</sup>
	Strongly disagree %	Disagree %	Agree %	Strongly agree %	M (SD)	Strongly disagree %	Disagree %	Agree %	Strongly agree %	M (SD)	t
<i>If an adult friend or family member is betting a lot on sports, it's a good idea to talk to them about whether sports betting is a problem for them.</i>	1.1	13.1	61.3	24.6	3.09 (.642)	3.7	16.6	56.6	23.1	2.99 (.738)	-3.3**
<i>I feel confident talking to a friend or family member about the risks of sports betting.</i>	1.9	18.2	60.8	19.1	2.97 (.669)	4.2	23.9	56.0	15.8	2.83 (.734)	- 4.4***
<i>It's important to talk to children and adolescents about the risks of betting on sports.</i>	.9	6.0	56.6	36.4	3.29 (.615)	1.5	7.1	56.5	34.9	3.25 (.648)	-1.4
<i>I feel confident talking to a child or adolescent about the risks of sports betting.</i>	.5	10.9	58.4	30.2	3.18 (.632)	3.1	18.5	55.2	23.1	2.98 (.736)	- 6.5***
<i>Children and adolescents need to understand that betting is not a normal part of enjoying sports.</i>	1.1	8.5	51.0	39.4	3.29 (.664)	2.0	9.3	51.1	37.6	3.24 (.699)	-1.4
<i>It's important to keep your sports betting conversations private so that children and adolescents don't overhear.</i>	5.9	31.8	43.1	19.1	2.75 (.829)	6.8	29.2	45.8	18.1	2.75 (.838)	-.02
<i>It's OK if children and adolescents see you betting on sports.</i>	20.6	42.0	33.2	4.2	2.21 (.814)	22.2	47.1	27.9	2.9	2.11 (.776)	-2.6**
<i>It's OK to include children or adolescents in your sports betting.</i>	43.7	36.9	14.6	4.8	1.81 (.860)	45.3	40.1	12.0	2.6	1.72 (.773)	-2.4*

<sup>1</sup>FOR ALL COMPARISONS, EQUAL VARIANCES NOT ASSUMED. \* P < .05; \*\* P < .01; \*\*\*P < .001

### Caregivers (to children and adolescents) who are sports bettors

Table 12 reports the responses from caregivers (to children and adolescents) who are sports bettors. Caregivers who were sports bettors strongly endorsed protective behaviours (agreed and strongly agreed) as follows:

- If an adult friend or family member is betting a lot on sports, it is a good idea to talk to them about whether sports betting is a problem for them (85.0%)
- I feel confident talking to a friend or family member about the risks of sports betting (85.1%).
- I feel confident talking to a child or adolescent about the risks of sports betting (87.9%).
- Children and adolescents need to understand that betting is not a normal part of enjoying sports (85.8%).

The average level of endorsement for the following two statements (protective and harmful respectively) was ambivalent (slightly above 50 percent).

- It's important to keep your sports betting conversations private so that children and adolescents don't overhear (50.9%).
- It's OK if children or adolescents see you betting on sports (50.9%).

Caregivers who were sports bettors disapproved (disagreed and strongly disagreed) with the following harmful behaviour:

- It's OK to include children or adolescents in your sports betting (66.9%).

**TABLE 12. ENGAGEMENT IN, CONFIDENCE IN, AND PERCEPTIONS OF IMPORTANCE OF PROTECTIVE BEHAVIOURS BY CAREGIVERS (TO CHILDREN OR ADOLESCENTS) WHO ARE SPORTS BETTORS**

<i>Protective Behaviours</i>	<b>Caregivers who are sports bettors (n = 381)</b>				M (SD)
	Strongly disagree	Disagree	Agree	Strongly agree	
	%	%	%	%	
<i>If an adult friend or family member is betting a lot on sports, it's a good idea to talk to them about whether sports betting is a problem for them.</i>	1.6	13.4	58.5	26.5	3.10 (.673)
<i>I feel confident talking to a friend or family member about the risks of sports betting.</i>	1.6	13.4	63.8	21.3	3.05 (.639)
<i>It's important to talk to children and adolescents about the risks of betting on sports.</i>	1.6	8.7	56.4	33.3	3.22 (.662)
<i>I feel confident talking to a child or adolescent about the risks of sports betting.</i>	0.8	11.3	59.3	28.6	3.16 (.638)
<i>Children and adolescents need to understand that betting is not a normal part of enjoying sports.</i>	1.3	12.9	53.3	32.5	3.17 (.692)
<i>It's important to keep your sports betting conversations private so that children and adolescents don't overhear.</i>	4.7	29.9	42.8	22.6	2.83 (.829)

<i>It's OK if children and adolescents see you betting on sports.</i>	13.4	35.7	42.8	8.1	2.46 (.825)
<i>It's OK to include children or adolescents in your sports betting.</i>	30.4	36.5	23.6	9.4	2.21 (.952)

### Sports bettors and protective behaviours

Sports bettors endorsed (agreed and strongly agreed) three protective behaviours (see Table 13) to protect themselves when sports betting as follows:

- If I'm not having fun gambling on sports, I stop (86.3%).
- I stick to dedicated budget for sports betting (81.7%).
- If I'm feeling depressed or upset, I don't bet on sports (60.5%).

**TABLE 13. PROTECTIVE SPORTS BETTING BEHAVIOURS OF CAREGIVERS (OF CHILDREN OR ADOLESCENTS) WHO ARE SPORTS BETTORS**

		Caregivers who are sports bettors (n = 381)					
Sports betting behaviours around children		Never	Rarely	Sometimes	Usually	Always	M (SD)
		%	%	%	%	%	
<i>If I make a win betting on sports, I take care not to mention it to them.</i>		7.9	9.4	23.6	24.4	34.6	3.69 (1.255)
<i>If I talk about betting sports, I take care not to let them overhear.</i>		6.6	13.1	18.6	28.1	33.6	3.69 (1.243)
<i>If I bet on sports, I make sure not to do it when they are in the same room.</i>		7.1	13.1	18.9	22.0	38.8	3.72 (1.292)

### Protective behaviours by PGSI category

Table 14 reports the means (M), standard deviations (SD) for each of the four PGSI categories for the protective behaviours examined. The Spearman correlation coefficient between the PGSI sum score and each of the protective behaviours is also given, with negative values indicating that individuals with a higher degree of gambling problems were less likely to endorse the behaviour.

Those with a higher degree of gambling problems were:

- less likely to agree that it is important to talk to children or adolescents about the risks of betting on sports.
- less likely to agree that children and adolescents need to understand that betting is not a normal part of enjoying sports.
- less likely to agree that it's important to keep your sports betting conversations private so that children and adolescents don't overhear.
- were more likely to agree that it's OK if children and adolescents see you betting on sports.
- were more likely to agree that it's OK to include children or adolescents in your sports betting.

**TABLE 14. ENGAGEMENT IN, CONFIDENCE IN, AND PERCEPTIONS OF IMPORTANCE OF PROTECTIVE BEHAVIOURS BY PGSI CATEGORIES**

Protective Behaviours	Non problem gamblers (n = 825)	Low risk gamblers (n = 210)	Moderate risk gamblers (n = 158)	Problem gamblers (n = 220)	r <sup>1</sup>
	M (SD)	M (SD)	M (SD)	M (SD)	
<i>If an adult friend or family member is betting a lot on sports, it's a good idea to talk to them about whether sports betting is a problem for them.</i>	3.03 (.672)	3.00 (.615)	3.05 (.666)	2.98 (.849)	-.001
<i>I feel confident talking to a friend or family member about the risks of sports betting.</i>	2.87 (.675)	2.93 (.685)	2.92 (.727)	2.95 (.726)	.049
<i>It's important to talk to children and adolescents about the risks of betting on sports.</i>	3.31 (.567)	3.19 (.602)	3.22 (.654)	3.06 (.828)	-.102**
<i>I feel confident talking to a child or adolescent about the risks of sports betting.</i>	3.11 (.658)	3.03 (.673)	2.99 (.740)	2.96 (.745)	.049
<i>Children and adolescents need to understand that betting is not a normal part of enjoying sports.</i>	3.28 (.658)	3.20 (.702)	3.14 (.718)	3.09 (.741)	-.101***
<i>It's important to keep your sports betting conversations private so that children and adolescents don't overhear.</i>	2.72 (.820)	2.74 (.836)	2.80 (.802)	2.93 (.835)	.089**
<i>It's OK if children and adolescents see you betting on sports.</i>	2.16 (.766)	2.12 (.770)	2.12 (.726)	2.71 (.874)	.152***
<i>It's OK to include children or adolescents in your sports betting.</i>	1.66 (.725)	1.71 (.702)	1.83 (.775)	2.60 (1.004)	.284***

**1. SPEARMAN'S CORRELATION COEFFICIENT**

\* P < .05\*\* P < .01; \*\*\* P < .001

Table 15 reports the percentages across each response category (e.g., Strongly disagree) by PGSI category.

**TABLE 15. ENGAGEMENT IN, CONFIDENCE IN, AND PERCEPTIONS OF IMPORTANCE OF PROTECTIVE BEHAVIOURS FOR EACH RESPONSE CATEGORY (%) BY PGSI CATEGORIES**

<i>Protective Behaviours</i>	<b>Non problem gamblers (n = 825)</b>				<b>low risk gamblers (n = 210)</b>				<b>moderate risk gamblers (n = 158)</b>				<b>problem gamblers (n = 220)</b>			
	SD <sup>1</sup>	D	A	SA	SD	D	A	SA	SD	D	A	SA	SD	D	A	SA
<i>If an adult friend or family member is betting a lot on sports, it's a good idea to talk to them about whether sports betting is a problem for them.</i>	1.8	15.8	60.2	22.2	1.0	15.7	65.2	18.1	1.9	13.9	61.4	22.8	6.8	16.4	48.6	28.2
<i>I feel confident talking to a friend or family member about the risks of sports betting.</i>	2.4	22.5	60.2	14.8	1.9	21.4	58.6	18.1	5.1	15.2	62.0	17.7	2.7	20.9	55.5	20.9
<i>It's important to talk to children and adolescents about the risks of betting on sports</i>	0.2	4.7	59.3	35.8	1.0	7.6	63.3	28.1	1.9	7.0	58.2	32.9	5.0	16.4	46.4	32.3
<i>I feel confident talking to a child or adolescent about the risks of sports betting.</i>	1.1	13.5	58.8	26.7	1.0	18.1	57.6	23.3	3.8	16.5	57.0	22.8	3.2	20.0	54.1	22.7
<i>Children and adolescents need to understand that betting is not a normal part of enjoying sports.</i>	1.1	8.2	52.2	38.4	2.9	8.1	55.7	33.3	2.5	12.0	54.4	31.0	1.8	17.7	50.0	30.5
<i>It's important to keep your sports betting conversations private so that children and adolescents don't overhear.</i>	5.3	35.5	41.0	18.2	7.1	29.5	45.2	18.1	5.7	26.6	49.4	18.4	5.9	20.9	47.7	25.5
<i>It's OK if children and adolescents see you betting on sports.</i>	20.5	44.6	33.0	1.9	21.9	46.7	29.0	2.4	19.6	50.0	29.1	1.3	11.4	22.7	49.5	16.4
<i>It's OK to include children or adolescents in your sports betting.</i>	47.6	40.2	10.7	1.5	42.5	44.3	12.9	0.5	38.0	43.0	17.1	1.9	17.7	25.0	36.8	20.5

**SD = STRONGLY DISAGREE; D = DISAGREE; A = AGREE; SA = STRONGLY AGREE**

The data in collapsed response categories (e.g., collapsing agreed and strongly agreed) for those behaviours that had significant correlations shows that:

- 95.1% of non-gamblers endorsed (i.e., strongly agreed and agreed) that it's important to talk to children and adolescents about the risks of betting on sports; compared with 78.7% of problem gamblers.
- 90.6% of non-gamblers endorsed that children and adolescents need to understand that betting is not a normal part of enjoying sports, compared with 85% of problem gamblers.
- 59.2% of non-gamblers endorsed that it's important to keep your sports betting conversations private so that children and adolescents don't overhear, compared with 68.6% of problem gamblers.
- 65.1% of non-gamblers disagreed (i.e., strongly disagreed and disagreed) that it's OK if children and adolescents see you betting on sports, compared to only 34.1% of problem gamblers.
- 87.8% of non-gamblers disagreed that it's OK to include children or adolescents in your sports betting, compared with 42.7% of problem gamblers.

### Protective Sports Betting Strategies and Safe Messaging

Most respondents (see Table 16) had never spoken to a child or an adolescent about the risks involved in sports betting in the last year (79.9%) or had spoken to someone close to them about the risks involved in sports betting (66.6%). About two-fifths of the sample had never seen any messaging about safe sports betting practices in the last year (43.5%), but 11.1% had often seen messaging, 24.8% once or twice, and 20.6% sometimes. A large proportion (80.2%) of respondents had never seen any messaging about keeping children or adolescents safe around sports betting.

**TABLE 16. ENGAGEMENT IN PROTECTIVE BEHAVIOURS AND FREQUENCY OF SEEING SAFE MESSAGING (N = 2030)**

Behaviours/Safe Messaging	Total Sample (n = 2030)			
	Never	Once or Twice	Sometimes	Often
	%	%	%	%
<i>Have you spoken to a child or an adolescent about the risks involved in sports betting during the last 12 months?</i>	79.9	12.4	5.8	2.0
<i>Have you spoken to someone close to you (e.g., adult friend, family member) about the risks involved in sports betting during the last 12 months?</i>	66.6	23.0	8.3	2.1
<i>In the last 12 months, have you seen any messaging about safe sports betting practices?</i>	43.5	24.8	20.6	11.1
<i>In the last 12 months, have you seen any messaging about keeping children or adolescents safe around sports betting?</i>	80.0	11.1	6.8	2.1

### Protective Sports Betting Behaviours of Caregivers who are Sports Bettors

The majority of caregivers (of children or adolescents) who are sports bettors engaged in protective behaviours (see Table 17) regarding children or adolescents in their care, as follows:



- If I make a win betting on sports, I take care not to mention it to them (59% usually or always).
- If I talk about betting sports, I take care not to let them overhear (61.7% usually or always).
- If I bet on sports, I make sure not to do it when they are in the same room (60.8% usually or always).

**TABLE 17. PROTECTIVE SPORTS BETTING BEHAVIOURS OF CAREGIVERS (OF CHILDREN OR ADOLESCENTS) WHO ARE SPORTS BETTORS**

Sports betting behaviours around children or adolescents in their care	Caregivers who are sports bettors (n = 381)				
	Never %	Rarely %	Sometimes %	Usually %	Always %
<i>If I make a win betting on sports, I take care not to mention it to them.</i>	7.9	9.4	23.6	24.4	34.6
<i>If I talk about betting sports, I take care not to let them overhear.</i>	6.6	13.1	18.6	28.1	33.6
<i>If I bet on sports, I make sure not to do it when they are in the same room.</i>	7.1	13.1	18.9	22.0	38.8

The majority (87.2%) of caregivers (of children or adolescents) who were sports bettors felt informed enough to talk to children or adolescents in their care about the risks of sports betting, and felt comfortable talking to children or adolescents in their care about the risks of sports betting (see Table 18).

**TABLE 18. CAREGIVERS (OF CHILDREN OR ADOLESCENTS) FEELING INFORMED AND COMFORTABLE TALKING TO CHILDREN OR ADOLESCENTS IN THEIR CARE ABOUT THE RISKS OF SPORTS BETTING**

Sports betting behaviours around children	Caregivers who are sports bettors (n = 381)			
	Strongly disagree %	Disagree %	Agree %	Strongly agree %
<i>I feel informed enough to talk to children or adolescents in my care about the risks of sports betting.</i>	2.9	10.0	61.2	26.0
<i>I feel comfortable talking to children or adolescents in my care about the risks of sports betting.</i>	2.9	10.0	58.3	28.9

### Regression of protective behaviours for children with demographics of caregivers

Items assessing protective behaviours with respect to children showed a moderately high degree of reliability ( $\alpha = .72$ ). Given this is an ad-hoc scale, caution should be exercised in any analysis of the mean score across items. However, it is presented here to provide a parsimonious summary of potential variation in these behaviours with respect to demographics. As shown in Table 19 below, couples with children tended to score slightly higher on items assessing attitudes

towards protective sports betting behaviours oriented towards children. However, there were no other demographics effects detected.

**TABLE 19. REGRESSION RESULTS USING MEAN SCORE ON PROTECTIVE BEHAVIOURS WITH RESPECT TO CHILDREN AS THE CRITERION**

Predictor	b	b 95% CI [LL, UL]	sr <sup>2</sup>	sr <sup>2</sup> 95% CI [LL, UL]
(Intercept)	2.66**	[2.56, 2.75]		
Household (One parent family with children)	0.03	[-0.04, 0.10]	.00	[-.00, .00]
Household (Couple with children)	0.07**	[0.02, 0.12]	.00	[-.00, .01]
Household (Couple with no children)	0.00	[-0.04, 0.05]	.00	[-.00, .00]
Household (Group household)	0.01	[-0.05, 0.07]	.00	[-.00, .00]
Household (Other)	-0.03	[-0.12, 0.06]	.00	[-.00, .00]
Education	0.01	[-0.00, 0.02]	.00	[-.00, .00]
LOTE (A language other than English)	0.01	[-0.07, 0.08]	.00	[-.00, .00]
Age (Decades)	-0.00	[-0.01, 0.01]	.00	[-.00, .00]
Location (Outside Adelaide)	-0.03	[-0.06, 0.01]	.00	[-.00, .00]
Income	0.00	[-0.01, 0.01]	.00	[-.00, .00]
	R <sup>2</sup> = .013**			
	95% CI [.00, .02]			

**NOTE. A SIGNIFICANT B-WEIGHT INDICATES THE SEMI-PARTIAL CORRELATION IS ALSO SIGNIFICANT. B REPRESENTS UNSTANDARDIZED REGRESSION WEIGHTS. SR<sup>2</sup> REPRESENTS THE SEMI-PARTIAL CORRELATION SQUARED. LL AND UL INDICATE THE LOWER AND UPPER LIMITS OF A CONFIDENCE INTERVAL, RESPECTIVELY. \* INDICATES P < .05. \*\* INDICATES P < .01.**

## Discussion

This study reports on a survey on beliefs and attitudes towards sports betting in South Australia. Understanding beliefs and attitudes in the community is important for establishing a baseline against which to track progress in protecting South Australians from gambling harm. Although sports betting can be enjoyed as a recreational pursuit, and some people bet without experiencing significant problems or harm, regular bettors are at risk for spending too much (Hing et al., 2021).

Many children are interested in professional sports and enjoy watching sport with their parents and caregivers. However, the frequent promotion of gambling products, discussion of gambling odds and betting around young people can contribute to sports betting being viewed as a normal and even necessary part of enjoying professional sport as a spectator (Lamont et al., 2016; Sproston et al., 2015). This commingling of betting and spectatorship contributes to the normalisation of gambling as an attractive adult activity. Research has shown that most young adults with gambling problems develop their first issues in adolescence (Russell et al., 2020). Consequently, it is important that young people should be shielded and discouraged from gambling. The normalisation of gambling within professional sports viewership has the opposite effect.

Tackling normalisation of gambling within professional sport viewership is difficult, even when gambling is lawfully restricted to adults. Since both adults and children enjoy watching sports, it is very difficult to prevent children from absorbing advertising meant for the adult audience (O'Brien & Iqbal, 2019). Moreover, there are at least some adults with lax or ambivalent attitudes towards how normalisation of gambling affects young people, and will readily discuss odds, betting, and place bets in front of children. This research broadly surveyed attitudes of South Australian adults to understand what factors influence whether they 1) see betting as normal, 2) find that betting enhances enjoyment of sport, and 3) talk to young people about betting, including discussion around the risks of gambling.

### Environmental exposure

Normalisation of sports-betting can be usefully divided into conceptual categories that represent different points of leverage for reducing normalisation. First, *environmental exposure* is a feature that is largely, although not entirely, under the control of legislative and regulatory management. Product availability is determined by law, advertising is restricted, and inducements are limited to establish parameters. However, offshore betting is difficult to restrict. This present research does not directly address this environmental dimension, however, since this is a matter of law and regulation rather than public opinion and behaviour. Nevertheless, it is worth recognising that this avenue is one where government can effect change. In fact, one of the principal motivations for this survey research is to establish a baseline to measure future improvements to normalisation from a "Here for the game" advertising campaign aimed at changing attitudes and behaviours. As a government initiative, such advertising can be considered a change in the "environment" that ultimately affects the next tier of influence: social and normative standards.

### Social and normative standards

These standards are shared community attitudes towards normalisation, peer-group and family attitudes towards sports betting, and general awareness of the risks associated with betting. Environmental factors, such as the ubiquity of gambling advertising, influence the social and normative standards that are held by the public (Hing et al., 2016). The general social and normative standards in the community are guideposts for how people respond to sports and betting, and particularly how parents and caregivers interact with children on the topic.

### Sport betting culture

The present research showed that most respondents agreed that sport betting is part of "Australian culture and you're never going to change that (54%)," and "occasional sports betting

is harmless (73.1%).” Nevertheless, people generally agreed that there is “too much sports betting today (78.3%).” Thus, there is a general acceptance of sports betting as an indelible feature of sports culture in South Australia, even though people recognise some issues with sports betting. In short, there appears to be ample room to change community level attitudes away from accepting sports betting as a normal feature for enjoyment of professional sport. However, there are stronger attitudes towards feeling that sports betting can be a problematic influence on children. Respondents were concerned by how much sports betting advertising children are exposed to (78.2%), and believed it is not healthy for children to see their parents bet on sports (78.4%). Consequently, it may be most advantageous, at this social and normative level, to change attitudes away from viewing sports betting as an inevitable feature of Australian culture. Perhaps unsurprisingly, the results showed that people who bet on sports were particularly accepting of sports betting as a cultural constant. Although this group may be resistant to change, there is more room for them to change their opinions.

### Sport betting normalisation - scale development

One problem with irrational beliefs is that there is little in past research that suggests gambling related irrationalities are amenable to change without professional treatment (Lopez-Gonzalez et al., 2020). A better alternative was to develop a general scale of sports gambling normalisation that would be more sensitive to change over time in population attitudes, since it would draw from a larger base of community opinions that might reasonably change over a timespan of one or more years. Consequently, drawing from past research traditions, the survey trialled a customised scale of sports-betting normalisation with items that are summed together to form a normalisation score for every respondent. This scale showed strong initial psychometric properties with respect to a high coefficient alpha of .91 for the general factor, and a 3 subfactor structure. The subfactors found in an exploratory factor analysis included: perceptions of friends, perceptions of family, and perceptions of the community. Future advertising efforts may seek to target these sub facets to drive cultural change, particularly by pointing to evidence that indicates where these beliefs are not well founded. For instance, sports bettors responding to the item “thinking about people in South Australia, what percentage of adults (during the sporting seasons) bet on sports” generated a wildly inaccurate estimate of 59%. Changing attitudes towards normalisation of sport-betting may be particularly helpful, since our survey found that sports-bettors who cared for children were particularly prone to see sports betting as normalised. Presumably such attitudes are putting their children at greater risk for induction into a culture of gambling that can result in future gambling harm.

## Individual behaviours

### Failure to reject irrational beliefs

When asked about irrational beliefs around gambling, sports bettors fell in-between endorsing and rejecting these beliefs. Arguably, recreational gamblers should reject irrational beliefs, and therefore these in-between results offer no comfort. Fortunately, sports bettors were more likely to endorse protective strategies, such as “If I’m not having fun gambling on sports, I stop.” Nevertheless, this survey demonstrated that there is ample room to argue against irrational beliefs that likely contribute to people’s gambling-related harm. It appears particularly necessary to tackle this problem, since sports bettors caring for children (and incidentally those with high income) are more likely to endorse these irrational beliefs.

### Individual outcome and change

Ultimately, social and normative standards can put children at risk for gambling-related harm by virtue of follow-on behaviours of their parents and/or caregivers. Thus, actions such as gambling in front of children, discussing odds or even protective actions such as talking to children about the risks of gambling, are informed by the social and normative context. Fortunately, both sports bettors who care for children, as well as those who do not, generally disagree with the statements that “It’s OK if children or adolescents see you betting on sports (62.6 % of caregivers, and 69.2 % of non-caregivers disagree), and “It’s OK to include children or adolescents in your sports betting (80.6 % of caregivers, and 85.4 % of non-caregivers disagree). In addition, sports bettors

generally agreed that they felt confident in talking to children or adolescents about the risks of betting on sports. Nevertheless, there is substantial room for improvement on attitudes towards these behaviours. In the future, we expect that attitudes towards these behaviours should move towards greater disagreement on sharing in sports betting with children. Further, these changes should correspond with improvements away from sports-betting normalisation, as measured by our new scale outlined above. We found the younger respondents with higher incomes and also sports bettors tended to view sports betting as more normalised. The demographic effects are partially explained by the fact that sports bettors tend to be younger, and of parenting age. Regardless, this emphasises the fact that interventions should focus on this particular cohort, both because they have more permissive views than other population segments, and also because they tend to be directly caring for, or cohabiting with, children and adolescents.

Problem gamblers and individuals who identify as sports bettors are additional cohorts that are likely to require particular attention in education campaigns regarding sports betting and children. Problem gamblers were more likely to endorse behaviours that model gambling as an acceptable and low-risk activity (e.g., it's OK if children and adolescents see you betting on sports) and behaviours that directly engage children in gambling (e.g., it's OK to include children or adolescents in your sports betting), which is an illegal activity for children aged under 18 years. Similarly, while more than half of sports bettors (between 59-62% across these items) who were caregivers usually or always engaged in protective behaviours around their children (e.g., If I make a win betting on sports, I take care not to mention it to them; If I bet on sports, I make sure not to do it when they are in the same room), this still leaves a significant proportion of sports bettors (up to 40%) who only sometimes or rarely attempt to protect their children from their own sports betting behaviour. Given that parental gambling is a key risk factor for adolescent gambling (Calado et al., 2017b; McComb & Sabiston, 2010), and family of origin exposure to problem gambling is one of the strongest risk factors for gambling problems during adulthood (Browne, Hing, et al., 2019), considerable work needs to be done with at-risk groups of parents to prevent intergenerational transmission of pro-gambling attitudes, and problem gambling. Importantly, the findings from this survey give insight into the types of behaviours that may be contributing to the transmission of gambling from parents to children and could therefore be targeted in an intervention or education campaign.

Our results showed that a large proportion (80%) of respondents had never seen any messaging about keeping children or adolescents safe around sports betting. Further, despite reporting high confidence in talking to children, had never spoken to a child or an adolescent about the risks involved in sports betting in the last year (79.9%). Therefore, there is ample opportunity for improvement through an effective communications strategy.

## Conclusion

This study explored attitudes, belief and behaviours that relate to the normalisation of sports betting within South Australia. It was particularly concerned with how normalisation of sports betting affects young people, since adults who develop gambling problems usually develop their first problems in adolescence. Normalisation is actuated through environmental factors, such as availability of betting and advertising, which impacts on community attitudes and norms on sports betting. In turn, these norms affect behaviours around gambling, including problematic behaviours of discussing odds around children, and betting in the presence of children. A normalisation measure was developed in this research to provide a baseline for tracking decrease in sports betting normalisation over time that should result from a planned campaign called "Here for the game." Lastly, this research revealed good scope for improvement in protective behaviours and highlighted the need for better communication to the public around sports betting normalisation and its negative effects on children.

## References

- Abbott, M., Bellringer, M., Garrett, N., & Mundy-McPherson, S. (2014). *New Zealand 2012 National Gambling Study: Overview and gambling participation. Report No. 1*. Wellington: Ministry of Health.
- Amazue, L. O., Awo, L. O., Agbo, A. A., Ekwe, C. N., & Ojiaku, M. C. (2021). Association of near-miss with two erroneous gambling cognitions and betting intention: Evidence from Nigerian adolescents. *Journal of Gambling Studies*, 1-16.
- Armstrong, A., & Carroll, M. (2017). *Sports betting in Australia*. Melbourne: Australian Gambling Research Centre. Retrieved July 28, 2021 from <https://aifs.gov.au/agrc/publications/sports-betting-australia>
- Australian Communications and Media Authority. (2019a). *Gambling advertising in Australia: Consumer and advertising placement research*. Canberra: ACMA.  
<https://www.acma.gov.au/publications/2019-11/report/gambling-advertising-research>
- Australian Communications and Media Authority. (2019b). *Interactive gambling*. Retrieved from: <https://www.acma.gov.au/Industry/Internet/Internet-content/Interactive-gambling/internet-gambling>
- Australian Psychological Society. (2013). *Submission to the Joint Select Committee on Gambling Reform Inquiry into the advertising and promotion of gambling services in sport*. Retrieved 9 October 2013 from: <http://www.psychology.org.au/publications/inpsych/2013/june/gambling/>
- Bestman, A., Thomas, S. L., Randle, M., & Thomas, S. D. (2015). Children's implicit recall of junk food, alcohol and gambling sponsorship in Australian sport. *BMC Public Health*, 15(1), 1022.
- Binde, P. (2014). *Gambling advertising: A critical research review*. London: The Responsible Gambling Trust.
- Bouguettaya, A., Lynott, D., Carter, A., Zerhouni, O., Meyer, S., Ladegaard, I., Gardner, J., & O'Brien, K. S. (2020). The relationship between gambling advertising and gambling attitudes, intentions and behaviours: Aa critical and meta-analytic review. *Current Opinion in Behavioral Sciences*, 31, 89–101. <https://doi.org/10.1016/j.cobeha.2020.02.010>
- Browne, M., Hing, N., Russell, A.M.T., Thomas, A., & Jenkinson, R. (2019a). The impact of exposure to wagering advertisements and inducements on intended and actual betting expenditure: An ecological momentary assessment study. *Journal of Behavioral Addictions*, 8(1), 146-156. doi:10.1556/2006.8.2019.10
- Browne, M., Hing, N., Rockloff, M., Russell, A. M. T., Nicoll, F., & Smith, G. (2019b). A multivariate evaluation of 25 proximal and distal risk-factors for gambling-related harm. *Journal of Clinical Medicine*, 8(4), 509.
- Browne, M., Rawat, V., Tulloch, C., Murray-Boyle, C. & Rockloff, M.R. (2021). The evolution of gambling-related harm measurement: Lessons from the last decade. *International Journal of*

*Environmental Research and Public Health*, Special Issue: The Social Cost and Public Health Impact of Gambling and Online Game Playing.

- Calado, F., Alexandre, J., & Griffiths, M. D. (2017a). How coping styles, cognitive distortions, and attachment predict problem gambling among adolescents and young adults. *Journal of Behavioral Addictions*, *6*, 648-657.
- Calado, F., Alexandre, J., & Griffiths, M. D. (2017b). Prevalence of adolescent problem gambling: A systematic review of recent research. *Journal of Gambling Studies*, *33*(2), 397-424. <https://doi.org/10.1007/s10899-016-9627-5>
- Castrén, S., Grainger, M., Lahti, T., Alho, H., & Salonen, A. H. (2015). At-risk and problem gambling among adolescents: a convenience sample of first-year junior high school students in Finland. *Substance Abuse Treatment, Prevention, and Policy*, *10*(1), 9.
- Corney, R., & Davis, J. (2010). The attractions and risks of Internet gambling for women: A qualitative study. *Journal of Gambling Issues*, (24), 121-139.
- Curry, T. J., & Jiobu, R. M. (1995). Do motives matter? Modeling gambling on sports among athletes. *Sociology of Sport Journal*, *12*(1), 21–35. <https://doi.org/10.1123/ssj.12.1.21>
- Deans, E. G., Thomas, S. L., Daube, M., Derevensky, J., & Gordon, R. (2016a). Creating symbolic cultures of consumption: an analysis of the content of sports wagering advertisements in Australia. *BMC Public Health*, *16*(1), 1-11.
- Deans, E. G., Thomas, S. L., Daube, M., & Derevensky, J. (2016b). “I can sit on the beach and punt through my mobile phone”: The influence of physical and online environments on the gambling risk behaviours of young men. *Social Science & Medicine*, *166*, 110–119. <https://doi.org/10.1016/j.socscimed.2016.08.017>
- Deans, E. G., Thomas, S. L., Daube, M., & Derevensky, J. (2017a). 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. (2017b). 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). <https://doi.org/10.1186/s12954-017-0131-8>
- Delfabbro, P., & King, D. (2012). Gambling in Australia: Experiences, problems, research and policy. In *Addiction* (Vol. 107, Issue 9, pp. 1556–1561). <https://doi.org/10.1111/j.1360-0443.2012.03802.x>
- 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), 547–63.
- Delfabbro, P., King, D. L., & Georgiou, N. (2020). Positive play and its relationship with gambling harms and benefits. *Journal of Behavioral Addictions*. doi: <https://doi.org/10.1556/2006.2020.00041>

- Delfabbro, P., Lahn, J., & Grabosky, P. (2005). Further evidence concerning the prevalence of adolescent gambling and problem gambling in Australia: A study of the ACT. *International Gambling Studies*, 5, 209-228.
- Department of Broadband Communications and the Digital Economy. (2013). *Final report 2012: Review of the Interactive Gambling Act 2001*. Canberra: DBCDE.
- Derevensky, J., Sklar, A., Gupta, R., & Messerlian, C. (2010). An empirical study examining the impact of gambling advertisements on adolescent gambling attitudes and behaviors. *International Journal of Mental Health and Addiction*, 8(1), 21-34.
- Dowling, N. A., Jackson, A. C., Thomas, S. A., & Frydenberg, E. (2010). *Children at risk of developing problem gambling*. Melbourne: Gambling Research Australia.
- Dowling, N. A., Merkouris, S. S., Greenwood, C. J., Oldenhof, E., Toumbourou, J. W., & Youssef, G. J. (2017). Early risk and protective factors for problem gambling: A systematic review and meta-analysis of longitudinal studies. *Clinical Psychology Review*, 51, 109-124.
- Drakeford, B. P., & Hudson Smith, M. (2015). Mobile gambling: Implications of accessibility. *Journal of Research Studies in Business & Management*, 1(1), 3-28.
- Ferris, J., Wynne, H., & Single, E. (2001). *Canadian Problem Gambling Index*. In *PsycTESTS Dataset*. <https://doi.org/10.1037/t00772-000>
- Finnane, M. (1990). Police corruption and police reform: The Fitzgerald inquiry in Queensland, Australia. *Policing and Society*, 1(2), 159–171. <https://doi.org/10.1080/10439463.1990.9964611>
- Flack, M., & Morris, M. (2017). Gambling-related beliefs and gambling behaviour: Explaining gambling problems with the theory of planned behaviour. *International Journal of Mental Health and Addiction*, 15(1), 130–142. <https://doi.org/10.1007/s11469-015-9611-9>
- Freund, M., Noble, N., Hill, D., White, V., Evans, T., Oldmeadow, C. & Sanson-Fisher, R. (2019). *The prevalence and correlates of gambling in secondary school students in Victoria, Australia, 2017*. Victorian Responsible Gambling Foundation, Melbourne.
- Gainsbury, S., King, D., Delfabbro, P., Hing, N., Russell, A., Blaszczynski, A., Derevensky, J. (2015a). *The use of social media in gambling*. Melbourne: Gambling Research Australia.
- Gainsbury, S., King, D., Abarbanel, B., Delfabbro, P., & Hing, N. (2015b). *Convergence of gambling and gaming in digital media*. Melbourne, VIC: Victorian Responsible Gambling Foundation.
- González-Roz, A., Fernández-Hermida, J. R., Weidberg, S., Martínez-Loredo, V., & Secades-Villa, R. (2017). Prevalence of Problem Gambling Among Adolescents: A Comparison Across Modes of Access, Gambling Activities, and Levels of Severity. *Journal of Gambling Studies / Co-Sponsored by the National Council on Problem Gambling and Institute for the Study of Gambling and Commercial Gaming Studies*, 33(2), 371–382. <https://doi.org/10.1007/s10899-016-9652-4>
- Goodie, A. S., & Fortune, E. E. (2013). Measuring cognitive distortions in pathological gambling:



- review and meta-analyses. *Psychology of Addictive Behaviors: Journal of the Society of Psychologists in Addictive Behaviors*, 27(3), 730–743. <https://doi.org/10.1037/a0031892>
- 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.
- Hardy, F. (1950). *Power without glory*. Frogmore: Panther.
- Hardy, F. (1958). *The four-legged lottery*. London: World Distributors.
- Hare, S. (2009) *A study of gambling in Victoria: Problem gambling from a public health perspective*. Melbourne: Victorian Department of Justice.
- Hare, S. (2009) *A study of gambling in Victoria: Problem gambling from a public health perspective*. Melbourne: Victorian Department of Justice.
- Hing, N., Vitartas, P., & Lamont, M. (2013). Gambling sponsorship of sport: An exploratory study of links with gambling attitudes and intentions. *International Gambling Studies*, 13(3), 281-301.
- Hing, N., Vitartas, P., Lamont, M., & Fink, E. (2014a). Adolescent exposure to gambling promotions during televised sport: An exploratory study of links with gambling intentions. *International Gambling Studies*, 14(3), 374-393.
- Hing, N., Gainsbury, S., Blaszczynski, A., Wood, R., Lubman, D., & Russell, A. (2014b). *Interactive gambling*. Melbourne: Gambling Research Australia.
- Hing, N., Vitartas, P., & Lamont, M. (2014c). *Promotion of gambling and live betting odds during televised sport: Influences on gambling participation and problem gambling*. Brisbane: Report prepared for the Queensland Department of Justice and Attorney-General.
- Hing, N., Russell, A.M.T, Gainsbury, S.M., & Blaszczynski, A. (2015a). Characteristics and help-seeking behaviors of Internet gamblers based on most problematic mode of gambling. *Journal of Medical Internet Research*, 17(1), E13. DOI:10.2196/jmir.3781 URL: <http://www.jmir.org/2015/1/e13/>
- Hing, N., Cherney, L., Gainsbury, S. M., Lubman, D. I., Wood, R. T., & Blaszczynski, A. (2015b). Maintaining and losing control during internet gambling: A qualitative study of gamblers' experiences. *New Media & Society*, 17(7), 1075–1095. <https://doi.org/10.1177/1461444814521140>
- Hing, N., Sproston, K., Brading, R., & Brook, K. (2015c). *Review and analysis of sports and race betting inducements*. Melbourne: Victorian Responsible Gambling Foundation.
- Hing, N., Lamont, M., Vitartas, P., & Fink, E. (2015d). Sports-embedded gambling promotions: A study of exposure, sports betting intention and problem gambling amongst adults. *International Journal of Mental Health and Addiction*, 13(1), 115-135. DOI: 10.1007/s11469-014-9519-9
- Hing, N., Lamont, M., Vitartas, P., & Fink, E. (2015e). How sports bettors respond to sports-embedded gambling promotions: Implications for compulsive consumption. *Journal of*

- Business Research*, 68, 2057-2066. DOI:10.1016/j.jbusres.2015.03.003
- Hing, N., Russell, A.M.T., Vitartas, P., & Lamont, M. (2016). Demographic, behavioural and normative risk factors for gambling problems amongst sports bettors. *Journal of Gambling Studies*, 32, 625-641. DOI: 10.1007/s10899-015-9571-9
- Hing, N., Sproston, K., Tran, K., & Russell, A. M. T. (2017). Gambling responsibly: Who does it and to what end? *Journal of Gambling Studies*, 33, 149-165. DOI: 10.1007/s10899-016-9615-9
- Hing, N., Russell, A. M. T., Rockloff, M.J., Browne, M., Langham, E., Li, E., Lole, L., Greer, N., Thomas, A., Jenkinson, R., Rawat, V., & Thorne, H. (2018a). *Effects of wagering marketing on vulnerable adults*. Melbourne: Victorian Responsible Gambling Foundation.
- Hing, N., Russell, A.M.T., & Rawat, V. (2018b). *Direct messages received from wagering operators*. Melbourne: Victorian Responsible Gambling Foundation.
- Hing, N., Russell, A. M. T., Li, E., & Vitartas, P. (2018c). Does the uptake of wagering inducements predict impulse betting on sport? *Journal of Behavioural Addictions*.7(1), 146-147.
- Hing, N., Russell, A. M., Thomas, A., & Jenkinson, R. (2019a). Wagering advertisements and inducements: Exposure and perceived influence on betting behaviour. *Journal of Gambling Studies*, 35(3), 793-811.
- Hing, N., Browne, M., Russell, A.M.T., Rockloff, M, Rawat, V., Nicoll, F., & Smith, G. (2019b). Avoiding gambling harm: An evidence-based set of safe gambling practices for consumers. *PLoSOne*, 14(10), e0224083.
- Hing, N., Russell, A. M. T., Thomas, A., & Jenkinson, R. (2019c). Hey big spender: An ecological momentary assessment of sports and race betting expenditure by gambler characteristics. *Journal of Gambling Issues*, 42, 42-61.
- Hing, N., Russell, A. M. T., King, D., Rockloff, M., Browne, M., Greer, N., Newall, P., Sproston, K., Chen, L., & Coughlin, S. (2020). *NSW youth gambling study 2020*. Sydney: NSW Responsible Gambling Fund.
- Hing, N., Russell, A. M. T., Browne, M., Rockloff, M., Greer, N., Rawat, V., Stevens, M., Dowling, N., Merkouris, S., King, D., Breen, H., Salonen, A., & Woo, L. (2021). *The second national study of interactive gambling in Australia (2019-20)*. Sydney: Gambling Research Australia.
- Horne, D. (1975). Ockerism. *Meanjin Quarterly*, 3(4), 462-467.
- Jackson, A. C., Dowling, N., Thomas, S. A., Bond, L., & Patton, G. (2008). Adolescent gambling behaviour and attitudes: A prevalence study and correlates in an Australian population. *International Journal of Mental Health and Addiction*, 6(3), 325-352.
- Jacobs, D. F. (1989). *Illegal and undocumented: A review of teenage gambling and the plight of children of problem gamblers in America*. In H. J. Shaffer, S. A. Stein, B. Gambino, & T. N. Cummings (Eds.), *Compulsive gambling: Theory, research, and practice* (p. 249–292). Lexington Books/D. C. Heath and Com.

- Jenkinson, R., de Lacy-Vawdon, C., & Carroll, M. (2018). *Weighing up the odds: Young men, sports and betting*. Melbourne, Australia: Victorian Responsible Gambling Foundation.
- Johansson, A., Grant, J. E., Kim, S. W., Odlaug, B. L., & Götestam, K. G. (2009). Risk factors for problematic gambling: a critical literature review. *Journal of Gambling Studies*, / Co-Sponsored by the National Council on Problem Gambling and Institute for the Study of Gambling and Commercial Gaming, 25(1), 67–92. <https://doi.org/10.1007/s10899-008-9088-6>
- Joint Select Committee on Gambling Reform. (2011). *Interactive and online gambling and gambling advertising*. Canberra: Commonwealth of Australia.
- Joint Select Committee on Gambling Reform. (2013). *The advertising and promotion of gambling services in sport*. Canberra: Commonwealth of Australia.
- Jones, C. M., & Noël, B. (2021). Skin in the game - Erroneous beliefs and emotional involvement as correlates of athletes' sports betting behavior and problems. *Journal of Behavioral Addictions*. <https://doi.org/10.1556/2006.2021.00034>
- Kelly, A. B., O'Flaherty, M., Connor, J. P., Homel, R., Toumbourou, J. W., Patton, G. C., & Williams, J. (2011). The influence of parents, siblings and peers on pre- and early-teen smoking: A multilevel model. *Drug and Alcohol Review*, 30(4), 381-387. <https://doi.org/https://doi.org/10.1111/j.1465-3362.2010.00231.x>
- Kelly, A. B., Toumbourou, J. W., O'Flaherty, M., Patton, G. C., Homel, R., Connor, J. P., & Williams, J. (2011). Family relationship quality and early alcohol use: Evidence for gender-specific risk processes. *Journal of Studies on Alcohol and Drugs*, 72(3), 399-407. <https://doi.org/10.15288/jsad.2011.72.399>
- King, D. L., & Delfabbro, P. H. (2016). Adolescents' perceptions of parental influences on commercial and simulated gambling activities. *International Gambling Studies*, 16, 424-441.
- Kristiansen, S. G., & Jensen, S. M. (2014). Prevalence and correlates of problematic gambling among Danish adolescents. *International Journal of Social Welfare*, 23, 89–99.
- Labrador, F. J., Estupiñá, F. J., Vallejo-Achón, M., Sánchez-Iglesias, I., González Álvarez, M., Fernández-Arias, I., Labrador, M., & Bernaldo-de-Quirós, M. (2021). *Exposure of adolescents and youth to gGambling advertising: Aa systematic review*. <https://revistas.um.es/analesps/article/download/428921/295511/1568131>
- Lamont, M., Hing, N., & Gainsbury, S. (2011). Gambling on sport sponsorship: A conceptual framework for research and regulatory review. *Sport Management Review*, 14, 246-257.
- Lamont, M., Hing, N., & Vitartas, P. (2016). Affective responses to gambling promotions during televised sport: A qualitative analysis. *Sport Management Review*, 19(3), 319-331.
- Lamont, M., & Hing, N. (2019). Intimations of masculinities among young male sports bettors. *Leisure Studies*, 38(2), 245-259.
- Lamont, M., & Hing, N. (2020). Sports betting motivations among young men: An adaptive theory analysis. *Leisure Sciences*, 42(2), 185-204, DOI: 10.1080/01490400.2018.1483852
- Larimer, M. E., & Neighbors, C. (2003). Normative misperception and the impact of descriptive

- and injunctive norms on college student gambling. In *Psychology of Addictive Behaviors*, 7(3), 235-243 (Vol. 17, Issue 3, pp. 235–243). <https://doi.org/10.1037/0893-164x.17.3.235>
- Larimer, M. E., & Neighbors, C. (2016). *Gambling-Related Injunctive Norms Scale*. In *PsycTESTS Dataset*. <https://doi.org/10.1037/t46444-000>
- Lee, H.-S. (2013). Predicting and understanding undergraduate students' intentions to gamble in a casino using an extended model of the theory of reasoned action and the theory of planned behavior. In *Journal of Gambling Studies*, 29(2), 269-288 (Vol. 29, Issue 2, pp. 269–288). <https://doi.org/10.1007/s10899-012-9302-4>
- León-Jariego, J. C., Parrado-González, A., & Ojea-Rodríguez, F. J. (2020). Behavioral intention to gamble among adolescents: differences between gamblers and non-gamblers—Prevention rRecommendations. In *Journal of Gambling Studies*, 36(2), 555-571 (Vol. 36, Issue 2, pp. 555–572). <https://doi.org/10.1007/s10899-019-09904-6>
- Li, E., Langham, E., Browne, M., Rockloff, M., & Thorne, H. (2018). Gambling and sport: Implicit association and explicit intention among underage youth. *Journal of Gambling Studies*, 34(3), 739-756.
- Lole, L., Russell, A. M. T., Li, E., Greer, N., Thorne, H., & Hing, N. (2020). Interest in inducements: A psychophysiological study on sports betting advertising. *International Journal of Psychophysiology*, 147, 100-106.
- Lopez-Gonzalez, H., & Griffiths, M. D. (2017a). 'Cashing out' in sports betting: implications for problem gambling and regulation. *Gaming Law Review*, 21(4), 323-326.
- Lopez-Gonzalez, H., Estévez, A., & Griffiths, M. D. (2017b). Marketing and advertising online sports betting: A problem gambling perspective. *Journal of Sport and Social Issues*, 41(3), 256-272.
- Lopez-Gonzalez, H., & Griffiths, M. D. (2018a). Understanding the convergence of markets in online sports betting. *International Review for the Sociology of Sport*, 53(7), 807–823. <https://doi.org/10.1177/1012690216680602>
- Lopez-Gonzalez, H., Guerrero-Solé, F., & Griffiths, M. D. (2018b). A content analysis of how “normal” sports betting behaviour is represented in gambling advertising. *Addiction Research & Theory*, 26(3), 238–247. <https://doi.org/10.1080/16066359.2017.1353082>
- Lopez-Gonzalez, H., Estévez, A., & Griffiths, M. D. (2018c). Controlling the illusion of control: A grounded theory of sports betting advertising in the UK. *International Gambling Studies*, 18(1), 39-55.
- Lopez-Gonzalez, H., Griffiths, M. D., & Estévez, A. (2020). Why some sports bettors think gambling addiction prevented them from becoming winners? A qualitative approach to understanding the role of knowledge in sports betting products. *Journal of Gambling Studies*, 36(3), 903-920.
- Lopez-Gonzalez, H., Jiménez-Murcia, S., & Griffiths, M. D. (2021). The erosion of nongambling spheres by smartphone gambling: A qualitative study on workplace and domestic disordered

- gambling. *Mobile Media & Communication*, 9(2), 254-273.
- Lostutter, T. W., Lewis, M. A., Cronce, J. M., Neighbors, C., & Larimer, M. E. (2014). The use of protective behaviors in relation to gambling among college students. *Journal of Gambling Studies*, 30(1), 27-46.
- Magoon, M. E., & Ingersoll, G. M. (2006). Parental modeling, attachment, and supervision as moderators of adolescent gambling. *Journal of Gambling Studies*, 22(1), 1-22.
- McCarron, E. (2018). *Cognitive biases and numerical reasoning and their relationship with problem gambling in skilled and chance-based activities* (Doctoral dissertation).
- McCarthy, S., Thomas, S., Pitt, H., Daube, M., & Cassidy, R. (2020). "It's a tradition to go down to the pokies on your 18th birthday" - the normalisation of gambling for young women in Australia. *Australian and New Zealand Journal of Public Health*, 44(5), 376–381. <https://doi.org/10.1111/1753-6405.13024>
- McComb, J. L., & Sabiston, C. M. (2010). Family influences on adolescent gambling behavior: a review of the literature. *Journal of Gambling Studies / Co-Sponsored by the National Council on Problem Gambling and Institute for the Study of Gambling and Commercial Gaming* *Journal of Gambling Studies*, 26(4), 503–520. <https://doi.org/10.1007/s10899-010-9181-5>
- McCormack, A., & Griffiths, M. D. (2012). Motivating and inhibiting factors in online gambling behaviour: A grounded theory study. *International Journal of Mental Health and Addiction*, 10(1), 39-53.
- 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.
- McMillen, J., & Eadington, W. R. (1986). The evolution of gambling laws in Australia. *New York Law School Journal of International and Comparative Law*, 8(1), 167-192.
- Measham, F., O'Brien, K., & Turnbull, G. (2016). "Skittles & Red Bull is my favourite flavour": e-cigarettes, smoking, vaping and the changing landscape of nicotine consumption amongst British teenagers—implications for the normalisation debate. *Drugs: Education, Prevention and Policy*, 23(3), 224-237.
- Milner, L., Hing, N., Vitartas, P., & Lamont, M. (2013). An exploratory study of embedded gambling promotion in Australian football television broadcasts. *Communication, Politics and Culture*, 46, 177-198.
- Monaghan, S., Derevensky, J., & Sklar, A. (2008). Impact of gambling advertisements and marketing on children and adolescents: Policy recommendations to minimise harm. *Journal of Gambling Issues*, 22, 252-274.
- Moore, S. M., & Ohtsuka, K. (1999). The prediction of gambling behavior and problem gambling from attitudes and perceived norms. *Social Behavior and Personality: An International Journal*, 27(5), 455–466. <https://doi.org/10.2224/sbp.1999.27.5.455>

- Moore, S. M., Thomas, A. C., Kyrios, M., & Bates, G. (2012). The self-regulation of gambling. *Journal of Gambling Studies*, 28(3), 405-420.
- Neighbors, C., Lostutter, T. W., Whiteside, U., Fossos, N., Walker, D. D., & Larimer, M. E. (2007). Injunctive norms and problem gambling among college students. *Journal of Gambling Studies*, 23(3), 259–273. <https://doi.org/10.1007/s10899-007-9059-3>
- Neighbors, C., Lostutter, T. W., Larimer, M. E., & Takushi, R. Y. (2012a). Gambling Quantity and Perceived Norms Scale. In *PsycTESTS Dataset*. <https://doi.org/10.1037/t04047-000>
- Neighbors, C., Lostutter, T. W., Whiteside, U., Fossos, N., Walker, D. D., & Larimer, M. E. (2012b). *Gambling Attitudes and Injunctive Norms Scale*. In *PsycTESTS Dataset*. <https://doi.org/10.1037/t04048-000>
- Nelson, T. F., LaBrie, R. A., LaPlante, D. A., Stanton, M., Shaffer, H. J., & Wechsler, H. (2007). Sports betting and other gambling in athletes, fans, and other college students. *Research Quarterly for Exercise and Sport*, 78(4), 271-283.
- Newall, P. W., 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.
- Nitschke, J. (2013). *Investigation of the incidence of online gambling in adolescents in Ballarat, and attitudes to and awareness of problem gambling in adolescents*. Ballarat: Central Highlands Primary Care Partnership & Ballarat Community Health.
- 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>
- O'Hara, J. (1988). *A mug's game: A history of gaming and betting in Australia*. Sydney: UNSW Press.
- O'Brien, K., & Iqbal, M. (2019). *Extent of, and children and young people's exposure to, gambling advertising in sport and non-sport TV*. Melbourne: Victorian Responsible Gambling Foundation.
- Oei, T. P. S., & Raylu, N. (2004). Familial influence on offspring gambling: a cognitive mechanism for transmission of gambling behavior in families. *Psychological Medicine*, 34(7), 1279–1288. <https://doi.org/10.1017/s0033291704003150>
- Orford, J. (2019). The normalisation of dangerous gambling. In *Harm Reduction for Gambling* (pp. 36–44). <https://doi.org/10.4324/9780429490750-5>
- Parker, H. J., Parker, H., Aldridge, J., & Measham, F. (1998). *Illegal Leisure: The normalization of adolescent recreational drug use*. Psychology Press. <https://play.google.com/store/books/details?id=2nUVUcZ0gxcC>
- Pettigrew, S., Ferguson, R., & Rosenberg, M. (2012). *Children's assimilation of sports sponsorship messages*. Perth: Health Promotion Unit, School of Sport Science, Exercise

and Health, The University of Western Australia.

- Pitt, H., Thomas, S. L., Bestman, A., Stoneham, M., & Daube, M. (2016). "It's just everywhere!" Children and parents discuss the marketing of sports wagering in Australia. *Australian and New Zealand Journal of Public Health*, 40(5), 480-486.
- 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), 1-12.
- Potenza, M. N., Wareham, J. D., Steinberg, M. A., Rugle, L., Cavallo, D. A., Krishnan-Sarin, S., & Desai, R. A. (2011). Correlates of at-risk/problem internet gambling in adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry*, 50, 150-159.
- Purdie, N., Matters, G., Hillman, K., Murphy, M., Ozolins, C., & Millwood, P. (2011). *Gambling and young people in Australia*. Melbourne: Australian Council for Educational Research.
- Rawat, V., Hing, N., & Russell, A. M. T. (2019). What's the message? A content analysis of emails and texts received from wagering operators during sports and racing events. *Journal of Gambling Studies*, 36, 1107–1121.
- Raymen, T., & Smith, O. (2020). Lifestyle gambling, indebtedness and anxiety: A deviant leisure perspective. *Journal of Consumer Culture*, 20(4), 381-399.
- Rockloff, M. J., Browne, M., Hing, N., Russell, A. M. T., & Greer, N. (2019). Sports-betting incentives encourage gamblers to select the long odds: An experimental investigation using monetary rewards. *Journal of Behavioral Addictions*, 8(2), 268-276.
- Rodda, S. N., Hing, N., Hodgins, D. C., Cheetham, A., Dickins, M., & Lubman, D. I. (2017). Change strategies and associated implementation challenges: An analysis of online counselling sessions. *Journal of Gambling Studies*, 33(3), 955-973.
- Rodda, S. N., Hing, N., Hodgins, D. C., Cheetham, A., Dickins, M., & Lubman, D. I. (2018a). Behaviour change strategies for problem gambling: an analysis of online posts. *International Gambling Studies*, 18(3), 420-438.
- Rodda, S. N., Bagot, K. L., Cheetham, A., Hodgins, D. C., Hing, N., & Lubman, D. I. (2018b). Types of change strategies for limiting or reducing gambling behaviors and their perceived helpfulness: A factor analysis. *Psychology of Addictive Behaviors*, 32(6), 679.
- Rodda, S. N., Bagot, K. L., Manning, V., & Lubman, D. I. (2019). 'Only take the money you want to lose': Strategies for sticking to limits in electronic gaming machine venues. *International Gambling Studies*, 19(3), 489-507.
- Roy Morgan Research. (2018). *Mobile betting drives growth in online wagering*. Retrieved from <http://www.roymorgan.com/findings/7624-mobile-betting-users-march-2018-201806172313>
- Russell, A.M.T., Hing, N., Browne, M., & Rawat, V. (2018a). Are direct messages (texts and emails) from wagering operators associated with betting intention and behaviour? An ecological momentary assessment study. *Journal of Behavioral Addictions*, 7(4), pp. 1079–1090.

- Russell, A.M.T., Hing, N., Browne, M., Li, E., & Vitartas, P. (2018b). Who bets on micro events (microbets) in sports? *Journal of Gambling Studies*. doi: 10.1007/s10899-018-9810-y
- Russell, A. M. T., Langham, E., & Hing, N. (2018c). Social influences normalize gambling-related harm among higher risk gamblers. *Journal of Behavioral Addictions*, 7(4), 1100–1111. <https://doi.org/10.1556/2006.7.2018.139>
- Russell, A. M., Hing, N., & Browne, M. (2019a). Risk factors for gambling problems specifically associated with sports betting. *Journal of Gambling Studies*, 35(4), 1211-1228.
- Russell, A. M., Hing, N., Li, E., & Vitartas, P. (2019b). Gambling risk groups are not all the same: Risk factors amongst sports bettors. *Journal of Gambling Studies*, 35(1), 225-246.
- Russell, A.M.T., Armstrong, T., Rockloff, M., Greer, N., Hing, N., & Browne, M. (2020). *Exploring the changing landscape of gambling in childhood, adolescence and young adulthood*. Sydney: NSW Responsible Gambling Fund.
- Russell, A.M.T., Hing, N., Newall, P., Greer, N., & Dittman, C. (2021, under review). *From adolescence to young adulthood: Associations between simulated and traditional gambling, and the role of parental factors*. Melbourne: Victorian Responsible Gambling Foundation.
- Sanders, M. R., Kirby, J. N., Tellegen, C. L., & Day, J. J. (2014). The Triple P-Positive Parenting Program: a systematic review and meta-analysis of a multi-level system of parenting support. *Clinical Psychology Review*, 34(4), 337-357. <https://doi.org/10.1016/j.cpr.2014.04.003>
- 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, 15-30.
- Sideli, L., La Barbera, D., Montana, S., Sartorio, C. R., Seminerio, F., Corso, M., ... & La Cascia, C. (2018). Pathological gambling in adolescence: a narrative review. *Mediterranean Journal of Clinical Psychology*, 6(1).
- 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. <https://doi.org/10.1016/j.tele.2021.101582>
- Sklar, A., & Derevensky, J. L. (2010). Way to play: Analyzing gambling ads for their appeal to underage youth. *Canadian Journal of Communication*, 35(4), 533.
- socio-cultural study of 100 Victorian gamblers*. Victoria, Australia: Office of Gaming and Racing, Department of Justice.
- Sproston, K., Hanley, C., Brook, K., Hing, N., & Gainsbury, S. (2015). *Marketing of sports betting and racing*. Gambling Research Australia.
- Substance Abuse and Mental Health Services Administration (SAMHSA). (2020). *Reducing vaping among youth and young adults*. SAMSHA Publication No. PEP20=06-01-003. Rockville, MD: National Mental Health and Substance Use Policy Laboratory, Substance Abuse and Mental Health Services Administration, 2020.



- Thomas, A., Moore, S., Kyrios, M., Bates, G., Meredyth, D., & Jessop, G. (2010). Problem gambling vulnerability: The interaction between access, individual cognitions and group beliefs/preferences. *Melbourne: Swinburne University of Technology*.
- Thomas, S. L., & Lewis, S. (2012a). *Conceptualisation of gambling risks and benefits: a socio-cultural study of 100 Victorian gamblers*. Melbourne: Department of Justice.
- Thomas, S. L., Lewis, S., Duong, J., & McLeod, C. (2012b). Sports betting marketing during sporting events: a stadium and broadcast census of Australian Football League matches. *Australian and New Zealand Journal of Public Health*, 36(2), 145-152.
- Thomas, S. L. (2014). *Parents and adolescents discuss gambling advertising: A qualitative study*. Melbourne: Victorian Responsible Gambling Foundation.
- Thomas, S. L., Bestman, A., Pitt, H., Deans, E., Randle, M. J., Stoneham, M., & Daube, M. (2015). *The marketing of wagering on social media: An analysis of promotional content on YouTube, Twitter and Facebook*. Melbourne: Victorian Responsible Gambling Foundation.
- Thomas, S., Pitt, H., Bestman, A., Randle, M., McCarthy, S., & Daube, M. (2018). *The determinants of gambling normalisation: Causes, consequences and public health responses*. Victoria: Victorian Responsible Gambling Foundation.
- Tong, K. K., Chen, J. H., & Wu, A. (2020). Validation and application of the Positive Play Scale adapted for Chinese gamblers: Its relation to disordered gambling and gambling attitudes. *Frontiers in Psychology*, 11, 263.
- Vitaro F., Wanner B., Ladouceur R., Brendgen M. & Tremblay R.E. (2004). Trajectories of gambling during adolescence. *Journal of Gambling Studies*, 20(1), 47–69.
- Vitaro, F., Hartl, A. C., Brendgen, M., Laursen, B., Dionne, G., & Boivin, M. (2014). Genetic and environmental influences on gambling and substance use in early adolescence. *Behavior Genetics*, 44, 347-355.
- Wang, M.-T., & Sheikh-Khalil, S. (2014). Does parental involvement matter for student achievement and mental health in high school? *Child Development*, 85(2), 610-625. <https://doi.org/10.1111/cdev.12153>
- Wang, M.-T., Dishion, T. J., Stormshak, E. A., & Willett, J. B. (2011). Trajectories of family management practices and early adolescent behavioral outcomes. *Developmental Psychology*, 47(5), 1324-1341. <https://doi.org/10.1037/a0024026>
- Ward, R. (1958). *The Australian Legend*. Melbourne: Oxford University Press.
- Weinberger, A. H., Franco, C. A., Hoff, R. A., Pilver, C. E., Steinberg, M. A., Rugle, L., ... & Potenza, M. N. (2015). Gambling behaviors and attitudes in adolescent high-school students: Relationships with problem-gambling severity and smoking status. *Journal of Psychiatric Research*, 65, 131-138.
- Weiss, S. M., & Loubier, S. L. (2010). Gambling habits of athletes and nonathletes classified as disordered gamblers. *The Journal of Psychology*, 144(6), 507–521. <https://doi.org/10.1080/00223980.2010.503248>

- Widman, L., Choukas-Bradley, S., Noar, S. M., Nesi, J., & Garrett, K. (2016). Parent-adolescent sexual communication and adolescent safer sex behavior: A meta-analysis. *JAMA Pediatrics*, *170*(1), 52-61. <https://doi.org/10.1001/jamapediatrics.2015.2731>
- Winters, K. C., Stinchfield, R. D., Botzet, A., & Anderson, N. (2002). A prospective study of youth gambling behaviors. *Psychology of Addictive Behaviors*, *16*(1), 3.
- Wolfensberger, W. (1980). The definition of normalisation: Updates, problems, disagreements and misunderstandings. In R. Flynn & K. Nitsch (Eds), *Normalisation, social integration and community services*. Baltimore: University Park Press.
- Wood, R. T., & Griffiths, M. D. (2015). Understanding positive play: An exploration of playing experiences and responsible gambling practices. *Journal of Gambling Studies*, *31*(4), 1715-1734. doi: 10.1007/s10899-014-9489-7
- Wood, R. T., Wohl, M. J., Tabri, N., & Philander, K. (2017). Measuring responsible gambling amongst players: Development of the Positive Play Scale. *Frontiers in Psychology*, *8*, 227.
- Wood, R., Wohl, M., & Tabri, N. (2019). *Focusing on positive play to optimize responsible gambling strategy*. Retrieved from: <https://gamres.org/wp-content/uploads/2019/05/PPS-overview-and-Canadian-example-2019.pdf>
- Woods, A., Sproston, K, Brook, K, Delfabbro, P. & O'Neil. (2018). *Gambling prevalence in South Australia*. Departmentt. of Human Services, South Australia.
- Yap, M. B. H., Lawrence, K. A., Rapee, R. M., Cardamone-Breen, M. C., Green, J., & Jorm, A. F. (2017). Partners in Parenting: A multi-level web-based approach to support parents in prevention and early intervention for adolescent depression and anxiety. *JMIR Ment Health*, *4*(4), e59. <https://doi.org/10.2196/mental.8492>
- Yap, M. B. H., Pilkington, P. D., Ryan, S. M., & Jorm, A. F. (2014). Parental factors associated with depression and anxiety in young people: A systematic review and meta-analysis. *Journal of Affective Disorders*, *156*, 8-23. <https://doi.org/https://doi.org/10.1016/j.jad.2013.11.007>
- Zendle, D., Meyer, R., & Over, H. (2019). Adolescents and loot boxes: Links with problem gambling and motivations for purchase. *Royal Society Open Science*, *6*(6), 190049.

## Appendix A

### Community Attitudes to Sports Betting Survey (18+) in South Australia **A Survey of Attitudes about Sports Betting in South Australia**

#### Project Overview

Welcome to the 2021 SOUTH AUSTRALIAN SPORTS BETTING ATTITUDES SURVEY. The South Australian Government has funded this study to help researchers, policy makers, and other key stakeholders gain a better understanding of attitudes towards sports betting.

#### Participation Procedure

You have been selected to participate in an anonymous online survey that asks about your beliefs and attitudes toward sports betting, as well as any sports betting you may have participated in during the past 12 months. Completion of the survey will take around 20 minutes. Qualtrics has been paid by CQUniversity to undertake the online component of the study, including recruitment of participants.

#### Benefits and Risks

It is expected that this project may benefit the Government and community's understanding of sports betting in South Australia. You may benefit from completing this survey through a system of accruing points that can be exchanged for various forms of reward and compensation. It is important that you respond to the questions with honesty so that the results can reliably inform Government policy.

There is no anticipated risk to you greater than that of inconvenience for the time taken to complete the online survey. We do not anticipate that participation in this research will cause you any undue discomfort beyond that experienced in normal day to day living. However, if you are concerned, please consider viewing the support available at [www.lifeline.org.au](http://www.lifeline.org.au) or contacting your General Practitioner or if gambling is a problem for you or others, please call the Gambling Helpline on 1800 858 858 or go to [www.gamblinghelponline.com.au](http://www.gamblinghelponline.com.au).

#### Confidentiality / Anonymity

The survey will not collect any identifying information; your responses will be anonymous.

The data will be securely stored in accordance with CQUniversity Code of Conduct for Research. It is anticipated that the data may be of value to future research, so we do not intend to dispose of it.

#### Outcome

The results of this research will be disseminated in the form of reports, journal articles and conference presentations.

#### Consent

Your consent to participate in this project will be obtained through your agreement to the Electronic Consent below.

#### Right to Withdraw

Your participation in this survey is voluntary. You may withdraw at any time prior to completing the survey simply by closing the survey window on your web browser. However, any completed surveys will be included in this research. If you wish to withdraw after submitting the survey, the information you have already provided cannot be deleted. This is because we will not be collecting any identifiable information from you and therefore, will not be able to identify your information.

### Feedback

A short summary of the project's findings in plain English will be available in 12 months. To request a copy, please email the researcher listed below.

### Questions/ Further Information

If you have any questions about this project, please contact the Chief Investigator Professor Matthew Browne via [m.browne@cqu.edu.au](mailto:m.browne@cqu.edu.au). Please contact Central Queensland University's Division of Research (Tel: 07 4923 2603; E-mail: [ethics@cqu.edu.au](mailto:ethics@cqu.edu.au)) should there be any concerns about the nature and/or conduct of this research project. This project has been approved by the CQUniversity Human Research Ethics Committee, approval number 23192

### ELECTRONIC CONSENT:

Clicking on the "next" button below indicates that: You have read the above information. You voluntarily agree to participate; and You give your consent for the data you provide in the following survey to be used for the research purpose described above.

What is your age?

(Please enter a number below)

State In which state or territory do you mainly live?

(Please select one)

New South Wales (1)

Victoria (2)

South Australia (3)

Queensland (4)

Tasmania (5)

Western Australia (6)

Northern Territory (7)

Australian Capital Territory (8)

Location Where in South Australia do you live?

Adelaide (1)

Elsewhere (2)

B\_Q1 During the last 12 months, about how often did you bet on sporting events/matches?

Includes any sports betting done online, by telephone and at land-based venues – using money (i.e., not just for fun - using points).

Never (1)

1 to 6 times (once every two months or less) (2)

7 to 12 times (once a month or less) (3)

13 to 24 times (once or twice a month) (4)

25 to 52 times (once or twice a fortnight) (5)

53+ times (once a week or more) (6)

B\_Q5 During the last 12 months, on average how often did you bet on any other forms of

gambling (excluding sports), such as pokies, horse/greyhound racing, scratchies, lottery/lotto/pools tickets, bingo, keno, casino games, card games, esports, non-sporting events such as elections.

Never (1)

1 to 6 times (once every two months or less) (2)

7 to 12 times (once a month or less) (3)

13 to 24 times (once or twice a month) (4)

25 to 52 times (once or twice a fortnight) (5)

53+ times (once a week or more) (6)

B\_S1 This section asks about betting on sporting events for money or cryptocurrency in the last 12 months.

Please note that here, and throughout this survey, sports betting refers only to betting on sporting events and does not include betting on esports, or horse/ greyhound races.

B\_Q2 In the past 12 months, about what percentage of your expenditure on sports betting was done using the following ...

(Please enter percentages and make sure they add up to 100%)

Online using a smartphone : \_\_\_\_\_ (1)  
 Online using a laptop or desktop computer : \_\_\_\_\_ (2)  
     By telephone calls : \_\_\_\_\_ (4)  
 At land-based venues : \_\_\_\_\_ (3)  
     Total : \_\_\_\_\_

B\_Q3 Thinking about the last 12 months, about how much money did you spend on sports betting in a typical month?

(Note, if you only bet during the sporting season, include a typical month during that time).

\_\_\_\_\_

B\_Q4 In the last 12 months, about what percentage of your sports betting was in-play or live betting? (Bets placed once the match has started)

(Please enter a percentage below)

\_\_\_\_\_

B\_S2 The following statements relate to your thoughts and behaviours in relation to betting on sports.

Please rate how strongly you disagree or agree with each statement

	Strongly disagree (1)	Disagree (2)	Agree (3)	Strongly agree (4)
When I win my sports bet, it's due to my skill and knowledge of sports (Own_SB_att1_1)				
When I win my sports bet, it's due to my experience as a bettor (Own_SB_att1_2)				
Just narrowly losing a bet shows how good my skills as a bettor are (Own_SB_att1_3)				
Betting on sport is safer as it relies less on luck than other forms of				

gambling  
 (Own\_SB\_att1\_4)  
 The highs are  
 higher and the  
 lows are lower  
 when I bet on my  
 favourite team or  
 player  
 (Own\_SB\_att1\_5)  
 The very moment  
 I place a bet, I feel  
 good  
 (Own\_SB\_att1\_6)

Please rate how strongly you disagree or agree with each statement

	Strongly disagree (1)	Disagree (2)	Agree (3)	Strongly agree (4)
I can often estimate the true odds better than the advertised odds (Sportsbetting_att2_1)				
If you have the knowledge and skills, betting on sports is a good way to make extra money (Sportsbetting_att2_2)				
My chances of picking a winner on a sports match are better than most people (Sportsbetting_att2_3)				
Bookmakers make mistakes when setting odds, which I can take advantage of (Sportsbetting_att2_10)				
If I'm not having fun gambling on sports, I stop (Sportsbetting_att2_4)				
I stick to a dedicated budget for sports betting (Sportsbetting_att2_7)				
If I'm feeling depressed or upset, I don't bet on sports (Sportsbetting_att2_8)				

C\_S1 The next few questions ask you about advertising for sports betting. This includes advertising or promotions for sports bets, for sports betting companies, and promotion of odds. This also includes advertising in all types of media.

Please rate how strongly you agree or disagree with each statement.

	Strongly disagree (1)	Disagree (2)	Agree (3)	Strongly agree (4)
Sports betting advertising during sports games should be banned (1)				
I want to see less sports betting advertising at sporting venues (2)				
I'm concerned by how much sports betting advertising children are exposed to (3)				
Sports betting advertising makes it hard for people with problems to resist gambling (4)				
The government should take measures to reduce the amount of sports betting advertising (5)				
Betting advertising makes kids think that gambling on sport is normal (6)				
Betting advertising encourages children to want to gamble on sports (7)				
Betting advertising encourages people who enjoy sport to start gambling (8)				
Sports betting advertising increases gambling problems in Australia (9)				

E\_S1 Our next questions ask about attitudes towards sports betting. Remember sports betting does not include betting on esports, or horse/greyhound races.

Please rate how strongly you disagree or agree with each statement

	Strongly disagree (1)	Disagree (2)	Agree (3)	Strongly agree (4)
There is too much sports betting today (1)				
Casual sports betting can lead to problems if you're not careful (2)				
Gambling on sports is part of the Australian culture - you're never going to change that (3)				
Occasional sports betting is harmless (4)				
Sports betting is just another hobby (5)				

Please rate how strongly you disagree or agree with each statement

	Strongly disagree (1)	Disagree (2)	Agree (3)	Strongly agree (4)
People who bet on sports are at-risk of developing gambling problems (1)				
People shouldn't be encouraged to bet on sports (2)				
It's not healthy for children to see their parents bet on sports (3)				
Sports betting can destroy families (5)				
Sports betting needs to be more tightly regulated or restricted (6)				

D\_S1 The following questions ask about how often you watch sports and who you watch sports with.

D\_Q1 During the last 12 months, how often did you watch sports ...



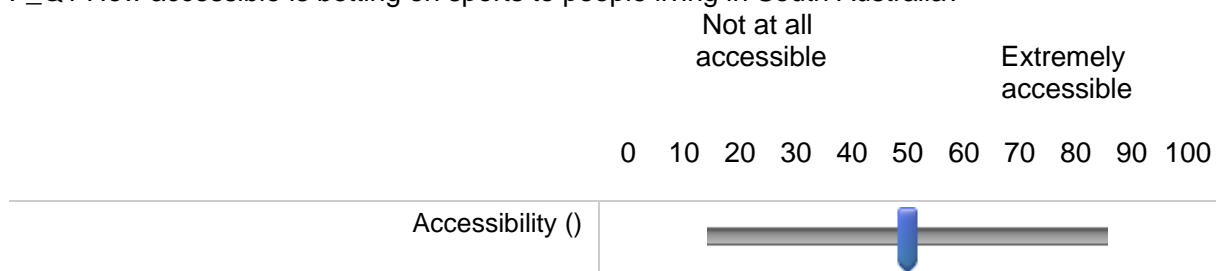
	Never (1)	1 to 6 times a year (once every two months or less) (2)	7 to 12 times (once a month or less) (3)	13 to 24 times (once or twice a month) (4)	25 to 52 times (once or twice a fortnight) (5)	53+ times (once a week or more) (6)
on television (1) live at the ground (2) via video on a device or computer (3)						

D\_Q2 During the last 12 months, how often did you watch sports with ...

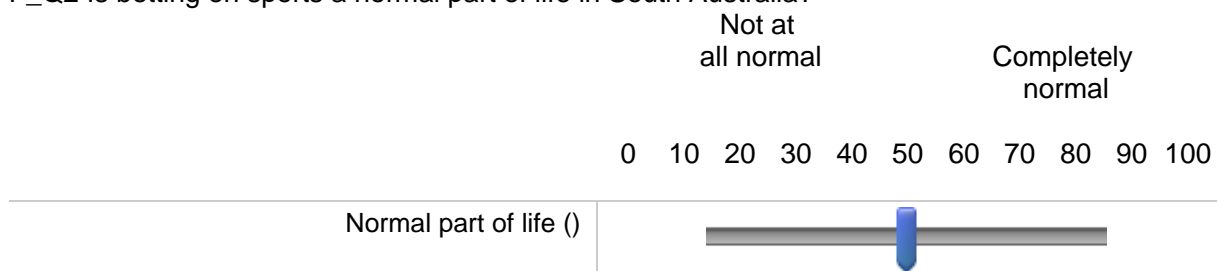
	Never/Not relevant (1)	1 to 6 times a year (once every two months or less) (2)	7 to 12 times (one a month or less) (3)	13 to 24 times (once or twice a month) (4)	25 to 52 times (once or twice a fortnight) (5)	53+ times (once a week or more) (6)
Friends (1) Family (children under 18) (2) Family (adults) (3)						

F\_S1 The following questions are about sports betting for people living in South Australia. Responses are on a sliding scale - please move the slider to your preferred position.

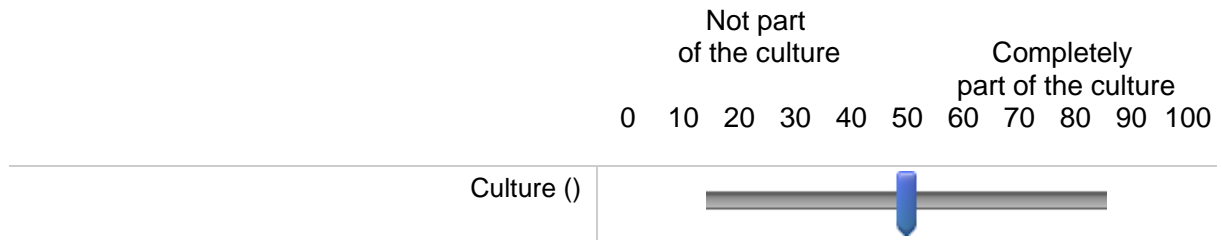
F\_Q1 How accessible is betting on sports to people living in South Australia?



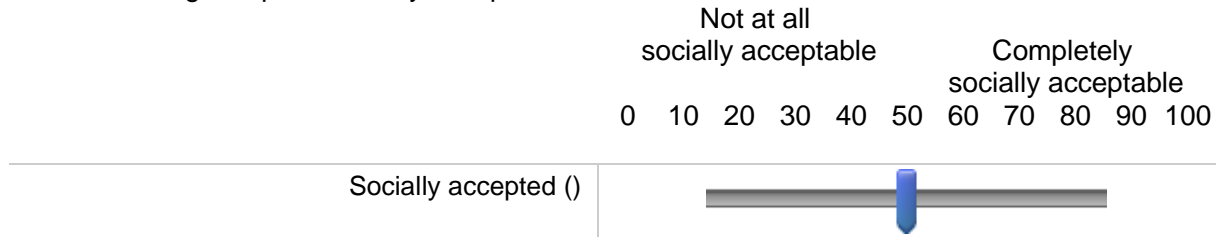
F\_Q2 Is betting on sports a normal part of life in South Australia?



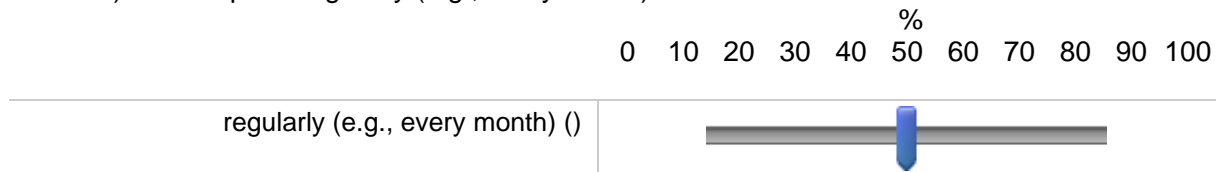
F\_Q3 Is betting on sports a part of South Australian culture?



F\_Q4 Is betting on sports socially accepted in South Australia?



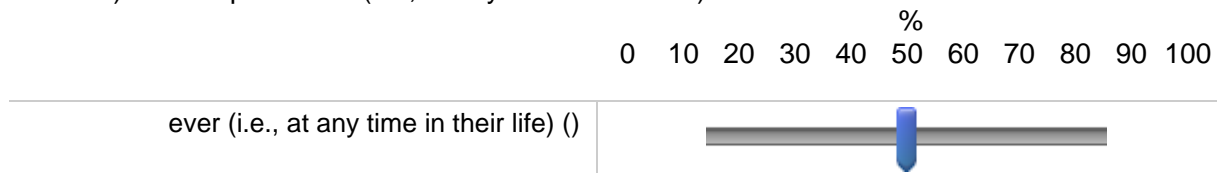
F\_Q5 Thinking about people in South Australia, what percentage of adults (during the sporting seasons) bet on sports regularly (e.g., every month)?



F\_Q6 Thinking about people in South Australia, what percentage of adults (during the sporting seasons) bet on sports recently (i.e., in the last month)?



F\_Q7 Thinking about people in South Australia, what percentage of adults (during the sporting seasons) bet on sports ever (i.e., at any time in their life)?



F\_S2 The following section presents statements about family/friends and sports betting. Please indicate if you agree or disagree with these statements.

How strongly do you agree or disagree with each of the following statements?  
Please note that these questions are about your friends.

	Strongly disagree (1)	Disagree (2)	Agree (3)	Strongly agree (4)
My friends are OK with sports betting (1)				
Most of my friends have bet on sports occasionally (2)				
My friends often go to places where people are betting on sports (3)				
My friends would disapprove of me betting on sports (7)				
Generally I try to fit in with my friends (4)				
My friends and I discuss sports betting in-person or in messaging apps (5)				
My friends and I are part of a betting syndicate (6)				

How strongly do you agree or disagree with each of the following statements?  
Please note that these questions are about your family.

	Strongly disagree (1)	Disagree (2)	Agree (3)	Strongly agree (4)
My family is OK with sports betting (2)				
People in my family have bet on sports occasionally (4)				
My family often go to places where people are betting on sports (1)				
My family would disapprove of me betting on sports (3)				
Generally, I try to fit in with my family (5)				

My family and I  
discuss sports  
betting in-person  
or in messaging  
apps (6)

My family and I  
are part of a  
betting syndicate  
(7)

H\_S1 The following statements relate to your attitudes to sports betting and children/young people and friends.

Please rate how strongly you disagree or agree with each statement

	Strongly disagree (1)	Disagree (2)	Agree (3)	Strongly agree (4)
If an adult friend or family member is betting a lot on sports, it's a good idea to talk to them about whether their sports betting is a problem for them (1)				
I feel confident talking to a friend or family member about the risks of sports betting (2)				

H\_Q8 Have you spoken to someone close to you (e.g., adult friend, family member) about the risks involved in sport betting during the last 12 months?

- Never (1)
- Once or twice (2)
- Sometimes (3)
- Often (4)

H\_Q10 In the last 12 months, have you seen any messaging about safe sports betting practices?

- Never (1)
- Once or twice (2)
- Sometimes (3)
- Often (4)

Please rate how strongly you disagree or agree with each statement

	Strongly disagree (1)	Disagree (2)	Agree (3)	Strongly agree (4)
It's important to talk to children and adolescents about the risks of betting on sports (1)				
I feel confident talking to a child or adolescent about the risks of sports betting (8)				
Children and adolescents need to understand that betting is not a normal part of enjoying sports (2)				

It's important to keep your sports betting conversations private so that children and adolescents don't overhear (3)  
 It's OK if children and adolescents see you betting on sports (4)  
 It's OK to include children or adolescents in your sports betting (6)

H\_Q9 Have you spoken to a child or an adolescent about the risks involved in sport betting during the last 12 months.

- Never (1)
- Once or twice (2)
- Sometimes (3)
- Often (4)

H\_Q11 In the last 12 months, have you seen any messaging about keeping children or adolescents safe around sports betting?

- Never (1)
- Once or twice (2)
- Sometimes (3)
- Often (4)

H\_Q13 In the past 12 months, have you cared for your own or someone else's child/children or adolescents? This can include anything from full-time parenting to casual child-minding.

- No (1)
- Yes (2)

Skip To: End of Block If In the past 12 months, have you cared for your own or someone else's child/children or adolescent... = No

H\_Q14 In your role of full-time or occasional caregiver to any children or adolescents aged 17 or less, are you mainly a ...

- Parent (1)
- Grandparent (2)
- Foster parent (3)
- Babysitter/minder for family/friends (4)
- Other family member (6)
- Family friend (7)
- Other, please specify (8) \_\_\_\_\_

H\_Q15 Regarding children or adolescents in my care ...

	Never (1)	Rarely (2)	Sometimes (3)	Usually (4)	Always (5)
If I make a win betting on sports, I take					

care not to mention it to them (1)  
 If I talk about betting on sports, I take care not to let them overhear (2)  
 If I bet on sports, I make sure not to do it when they are in the same room (3)

H\_Q16 Regarding children or adolescents in your care, how strongly do you agree or disagree with the following statements?

	Strongly disagree (1)	Disagree (2)	Agree (3)	Strongly agree (4)
I feel informed enough to talk to children or adolescents in my care about the risks of sports betting (4)				
I feel comfortable talking to children or adolescents in my care about the risks of sports betting (5)				

G\_S1 Please answer the following questions about your gambling in general, not just your sports betting. Remember that this survey is anonymous.

PGSI In the last 12 months, how often:

	Never (0)	Sometimes (1)	Most of the time (2)	Almost always (3)
Have you needed to gamble with larger amounts of money to get the same feeling of excitement? (PGSI_1)				
Have people criticised your betting or told you that you had a gambling problem, regardless of whether or not you thought it				

was true?  
(PGSI\_2)

Have you felt that  
you might have a  
problem with  
gambling?

(PGSI\_3)

When you  
gambled, did you  
go back another  
day to try to win  
back the money  
you lost?

(PGSI\_4)

Has gambling  
caused you any  
health problems,  
including stress  
or anxiety?

(PGSI\_5)

Have you felt  
guilty about the  
way you gamble  
or what happens  
when you  
gamble?

(PGSI\_6)

Has your  
gambling caused  
any financial  
problems for you  
or your  
household?

(PGSI\_7)

Have you bet  
more than you  
could really afford  
to lose? (PGSI\_8)

Have you  
borrowed money  
or sold anything  
to get money to  
gamble?  
(PGSI\_9)

PGSI\_help If gambling is a problem for you or others, please call the Gambling Helpline on 1800 858 858 or go to [www.gamblinghelponline.org.au](http://www.gamblinghelponline.org.au) for free, confidential advice, available 24/7. If this questionnaire has raised any other issues for you, please call Lifeline on 13 11 14.

I\_S1 IMPORTANT – PLEASE READ These are our last few questions of the survey. For these questions, consider what your answer was during the last 12 months.

I\_Q1 Are you ...

A man (1)

A woman (2)

Another gender (please specify if you would like to) (3) \_\_\_\_\_

Prefer not to say (7)



I\_Q2 INCLUDING YOURSELF, how many persons aged 18 years or older (adults) usually lived in your household during the last 12 months?

(Please note, the minimum answer accepted here is 1, because the answer must include yourself.)

\_\_\_\_\_

I\_Q3 How many persons aged less than 18 years (children/adolescents) usually lived in your household during the last 12 months?

\_\_\_\_\_

You said that you have children or adolescents under the age of 18 in the house. Are any of them in the following age brackets?

	No (0)	Yes (1)
0 to 4 years old (Kids_age_1)		
5 to 9 years old (Kids_age_2)		
10 to 14 years old (Kids_age_3)		
15 to 17 years old (Kids_age_4)		

I\_Q4 Which of the following best describes your marital status during the last 12 months?

(Please select one response)

- Single/never married (1)
- Living with partner/de facto relationship (2)
- Married (3)
- Divorced or separated (4)
- Widowed (5)

I\_Q5 Which of the following best describes your household during the last 12 months? (Please select one response)

- Single person (1)
- One parent family with children (2)
- Couple with children (3)
- Couple with no children (4)
- Group household (5)
- Other (please specify) (6) \_\_\_\_\_

I\_Q6 What is your highest educational qualification? (Please select one response)

- No schooling (1)
- Did not complete primary school (2)
- Completed primary school (3)
- Year 10 or equivalent (4)
- Year 12 or equivalent (5)
- A trade, technical certificate or diploma (6)
- A university or college degree (7)
- Postgraduate qualification (8)

I\_Q7 Which of the following best describes what you did during the last 12 months?

- Worked full-time (1)
- Worked part-time or casual (2)
- Self-employed (3)
- Unemployed and looking for work (4)
- Full-time student (5)
- Full-time home duties (6)
- Retired (7)
- Sick or disability pension (8)
- Other (please specify) (9) \_\_\_\_\_

I\_Q8 To the nearest thousand dollars (in Australian dollars), what do you estimate your total household income before taxes was during the last 12 months?

- \$0 to \$9,999 (1)
- \$10,000 to \$24,999 (2)
- \$25,000 to \$49,999 (3)
- \$50,000 to \$74,999 (4)
- \$75,000 to \$99,999 (5)
- \$100,000 to \$149,999 (6)
- \$150,000 to \$199,999 (7)
- \$200,000 to \$249,999 (8)
- \$250,000 to \$299,999 (9)
- \$300,000 or more (10)

I\_Q9 In which country were you born?

- Australia (1)
- Other (please specify) (2) \_\_\_\_\_

I\_Q10 What is the main language that you speak at home? (Please select one response)

- English (1)
- A language other than English (please specify) (2)  
\_\_\_\_\_

I\_Q11 For statistical purposes, are you of Aboriginal or Torres Strait Islander origin?

- No (1)
  - Yes, Aboriginal (2)
  - Yes, Torres Strait Islander (3)
  - Yes, both Aboriginal and Torres Strait Islander (4)
- 

Thank you

Thank you for taking part in this research!

If gambling is a problem for you or others, please call the Gambling Helpline on 1800 858 858 or go to [www.gamblinghelponline.org.au](http://www.gamblinghelponline.org.au) for free, confidential advice, available 24/7. If this questionnaire has raised any other issues for you, please call Lifeline on 13 11 14.