RESEARCH REPORT

Effects of wagering marketing on vulnerable adults

August 2018

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Victorian Responsible Gambling Foundation

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Our vision: A Victoria free from gambling-related harm

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Effects of wagering marketing on vulnerable adults

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Abstract

This study aimed to examine the impact of different approaches to wagering marketing, including inducements, on vulnerable adults (adults at-risk of, or experiencing, gambling problems). It involved five empirical stages:

- Ecological momentary assessment (EMA) study. This study captured longitudinal data over 15 surveys from regular bettors on races (n = 402) and sports (n = 320). It assessed: 1) exposure to different types of wagering advertisements and inducements; 2) their reported influence on the size, frequency, and riskiness of subsequent bets placed; and 3) longitudinal associations between exposure to wagering advertisements and inducements and betting expenditure.

- Experimental study. This study tested the effects of four types of wagering inducements (bonus bet, better odds, reduced risk, cash rebate) on propensity to choose riskier bets (with greater theoretical loss). Using video game simulation, 299 sports bettors watched and bet on AFL, cricket or soccer matches. Participants were provided with a $4 stake for each trial, and winnings accrued to their take-home compensation. This study assessed: 1) the effects of different types of wagering inducements on the riskiness of bets placed; 2) their relative appeal to bettors; and 3) any differential effects for vulnerable adults.

- Study of play-through conditions on bonus bets. The 299 participants rated the attractiveness of three variations of an inducement offer. *Promo1* simply noted 'terms and conditions apply;' *promo2* included the terms and conditions; *promo3* revealed the offer's true cost. Respondents were asked to calculate the true cost before it was revealed. This study assessed: 1) whether the attractiveness of bonus bet inducements varied with information provided about their play-through conditions; 2) bettors' comprehension of their true cost; and 3) whether this varied by gambler risk group.

- Psychophysiological study. This study measured electrodermal, cardiac and eye movement responses of 60 participants to 12 advertisements. Participants also rated how stimulating each advertisement was and their likelihood of taking up each inducement. This study assessed: 1) the appeal of wagering vs non-wagering inducements; 2) attention, excitement and desire to gamble elicited by four types of wagering inducements (bonus bet, better odds, reduced risk, cash rebate); and 3) variations by gambler risk group.

- Interview study. Interviews with 31 regular race and sports bettors explored causal mechanisms driving betting-related responses to wagering advertisements and inducements. Constructivist grounded theory methods were used to develop a model of influences from wagering advertisements and inducements, including environmental, situational, structural, and individual factors.

Key findings from the study include that wagering advertisements and inducements: are prolific; encourage riskier betting; increase betting expenditure; elicit attention, excitement, and desire to bet amongst vulnerable gamblers; and have negative effects on all gambler risk groups. While aggregate exposure across *all* types of advertisements and inducements increased betting expenditure, those with *most* influence were: direct messages from wagering operators; advertisements on betting websites and apps; betting brands promoted during live and televised race/sports events; commentary promoting betting or betting odds during events; stake-back offers; multi-bet offers; and inducements for rewards program points. Most bettors underestimated the cost of bonus bets with

play-through conditions. Inducement information in wagering advertisements overrode attention to responsible gambling information.

Measures to reduce harmful wagering include banning or restricting inducements that include cash rebate and reduced risk offers, which refund or match part or all of the bet via cash, bonus bets, deposits, or reward points. The appeal of these inducements is that they are thought to minimise betting losses; however, these inducements actually *increase* rather than decrease losses by encouraging riskier bets and increased betting expenditure. Misperceptions about the likely returns from wagering inducements indicate a need for consumer education and operator care in advertising, as well as banning or restricting play-through conditions. Direct messages are particularly problematic and require restrictions or stringent opt-in requirements. Consistent with a public health approach, measures to reduce and regulate wagering advertisements and inducements need to be supplemented by measures to reduce the environmental, structural and situational factors that interact with wagering marketing to normalise betting and contribute to betting-related harm. Reducing this harm is critical, given that two-fifths of Australian adults who bet on sports or races on a monthly basis or more frequently currently meet criteria for at-risk or problem gambling.

Please refer to the executive summary and the main report for further details, including the limitations associated with the study.

Table of contents

List of tables

List of figures

Key terms and acronyms

Term	Description
AUDIT-C	Alcohol Use Disorders Identification Test
Advertising	'A paid, mediated form of communication from an identifiable source, designed to persuade the receiver to take some action, either now or in the future' (Richards & Curran, 2002, p. 74).
AFL	Australian Football League
AIDA	Attention, Interest, Desire, Action. These are the key processes in a seminal stimulus-response model of advertising persuasion (Rawal, 2013).
ANOVA	Analysis Of Variance
ANS	Autonomic Nervous System
ATGS	Attitude Towards Gambling Scale
BIS	Barratt Impulsiveness Scale-Brief
COREQ	Consolidated Criteria for Reporting Qualitative Research
DASS	Depression, Anxiety, and Stress Scale
EMA	Ecological Momentary Assessment
K6	Kessler 6
LME	Linear Mixed Effects
LR	In the low-risk gambling category based on the PGSI (score of 1-2)
Marketing	'The activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large' (American Marketing Association, 2013). Marketing uses the marketing mix, defined as the 'set of marketing tools that an organisation uses to pursue its marketing objectives', most commonly product, price, promotion, and place (Kotler, 2000). Thus, advertising and inducements are only a subset of marketing tools typically used by organisations.
MR	In the moderate-risk gambling category based on the PGSI (score of 3-4)
NG	Non-gambler — has not gambled in the previous 12 months
NPG	In the non-problem gambling category based on the PGSI (score of 0)
PG	In the problem gambling category based on the PGSI (score of 8-27)
PGSI	Problem Gambling Severity Index
Problem Gambling	'is characterised by difficulties in limiting money and/or time spent on gambling which leads to adverse consequences for the gambler, others, or for the community' (Neal, Delfabbro & O'Neil, 2005)
Promotions	Sales promotions (or promotional inducements) are typically non-routine and short-term offers that provide an additional incentive, beyond what is normally received, to induce an immediate sale or to move the sale forward. Through providing triggers to consumer action, they provide a temporary shift in stimuli aimed at overriding any consumer inertia to prompt an immediate shift in purchasing behaviour (Van Waterschoot & Van den Bulte, 1992).
Riskier bets	Bets with longer odds
RG	Responsible Gambling
RQ	Research Question
Safer bets	Bets with shorter odds
SD	Standard Deviation
TC	Terms and Conditions
TV	Television
VRGF	Victorian Responsible Gambling Foundation
Wagering inducements	These inducements offer one or more incentives to bet, in addition to what is normally offered by the core wagering product; further, the incentive is offered in conjunction with a specified betting-related activity and/or redeemed in a form that encourages betting (Hing, Sproston, Brading & Brook, 2015c). Commonly offered wagering inducements include refund/stake-back offers, sign up offers, bonus or better odds, bonus or better winnings, multi-bet offers, winnings paid on losing bets, happy hours or similar, match your stake/deposit, cash rebates, refer a friend offers, free bets to selected punters, other free bets, mobile betting offers, reduced commission, and competitions. Wagering inducements provide incentives such as bonus bets, refunds, better odds or winnings, and cash rebates.

Executive summary

Aims

The Victorian Responsible Gambling Foundation (the Foundation; VRGF) commissioned CQUniversity, in collaboration with the Australian Gambling Research Centre, to conduct this study into the *Effects of wagering marketing on vulnerable adults*. The study was conducted between mid-2016 and mid-2018.

The aim of the study was to examine the impact of approaches to wagering marketing, including inducements, on vulnerable adults. Vulnerable adults were defined by the Foundation as those in low-risk, moderate-risk, and problem gambling categories on the Problem Gambling Severity Index (Ferris & Wynne, 2001). The study was guided by three research questions (RQs):

1. What is the impact of wagering marketing on vulnerable adults?
2. Are particular marketing approaches associated with increases in potentially harmful gambling behaviours?
3. Do gambling inducements change gambler behaviour and attitudes?

Background

The promotion of sports and race betting in Australia has been described as ubiquitous, unavoidable, pervasive, and intrusive. Its proliferation across a wide range of media commenced with the liberalisation of wagering advertising regulations a decade ago, and has been fuelled, since then, by intensifying industry competition.

While attractive product offerings, competitive pricing, and easy access are critical for marketing success, the promotional efforts of wagering operators are arguably the most noticeable element of their marketing strategies. The main promotional tools used have been commercial advertising in traditional media, sponsored advertising during live and televised events, and digital and direct advertising; along with sales promotions offering a wide range of wagering inducements. These inducements include stake-back, multi-bet, match your stake, rewards program, cash out early, and various recruitment offers. These offers are typically incentivised with bonus bets, cash rebates, reduced risk, or better odds.

Researchers, gamblers, sports audiences, parents, and the broader community have expressed concerns that this proliferation of wagering marketing normalises and increases betting, and consequently contributes to greater betting-related harm. Prior research into the effects of wagering marketing has primarily drawn on cross-sectional, self-report data to identify associations between exposure to wagering advertising and inducements, and resulting wagering attitudes, intentions, and behaviours. However, these research designs have been unable to assess any causal impact of wagering advertising and inducements on betting behaviour.

Methods

We used a sequential, explanatory mixed methods design to generate new knowledge and enable us to draw firmer conclusions about the effects of wagering advertisements and inducements on sports and race betting behaviour; including any differential effects on vulnerable adults. We conducted five empirical stages of research.

Ecological momentary assessment (EMA) study

The EMA study captured longitudinal data from baseline samples of 402 at-least fortnightly race bettors and 320 at-least fortnightly sports bettors. After completing a baseline survey, participants completed up to 15 short EMA surveys (5 per week for 3 weeks). The surveys captured participants' betting-related responses to different types of wagering advertisements and inducements as they naturally occurred in a range of traditional and digital media. This methodology maximised ecological validity and minimised recall bias because the surveys were conducted at, or very close to, the time and place that exposure to wagering marketing and betting occurred, within each respondent's natural environment. This study enabled us to assess: 1) exposure to different types of wagering advertisements and inducements; 2) the reported influence that wagering advertisements and inducements had on the size, frequency, and riskiness of subsequent bets placed; and 3) longitudinal associations between exposure to wagering advertisements and inducements and betting expenditure, both in aggregate and for each individual type of advertisement/inducement.

Experimental study

The experimental study tested for the effects of four types of wagering inducements on sports bettors' propensity to accept greater risks on their bets — bonus bets, better odds/winnings, reduced risk, and cash rebates — and also included a no-inducement baseline condition. In addition, the experimental study examined the perceived attractiveness of these inducements. A total of 299 sports bettors completed an online survey. Within the survey, participants were offered the choice of watching and placing bets on one of three sports: Australian Football League (AFL), cricket or soccer. For each sport, video-game technology was used to simulate six trials — one for each of the four inducements, one for the no-inducement control, and one trial to assess the relative attractiveness of the inducements. Each trial consisted of a betting opportunity followed by a 'highlights reel' video showing the relevant outcomes within the fictional sports match. Participants were provided with a stake ($4) for each trial, with winnings directly accruing to their 'account', contributing to their total take-home compensation. Each trial offered three different betting options, varying in the degree of risk and inversely proportional to the potential payoff — as would be the case in a commercially-placed bet. The tendency of players to choose riskier bets (i.e., with greater theoretical loss) was the key (behavioural, repeated measures) dependent variable in the experiment. Participants also rank-ordered the inducements from most to least favourite. This study enabled us to isolate: 1) the effects of different types of wagering inducements on the riskiness of bets placed; 2) their relative appeal to bettors; and 3) any differential effects for vulnerable adults.

Study of play-through conditions on bonus bets

This study focused on a particularly contentious element of some wagering inducements. Play-through conditions on bonus bets require additional betting before bettors can make withdrawals from their betting account. These inducements are potentially misleading and likely to cost the bettor more than anticipated. This study tested the attractiveness of wagering inducements with bonus bets and bettors' comprehension of their cost, using the same sample as the Experimental Study. In an online survey, participants rated the attractiveness of three variations of an inducement. *Promo1* simply noted that 'terms and conditions apply;' *promo2* included the terms and conditions immediately below the offer; and *promo3* revealed the true cost of the offer. Moreover, respondents were asked to calculate the true cost before this figure was revealed. This study enabled us to assess: 1) whether the perceived attractiveness of wagering inducements with bonus bets varied with the information provided about their play-through conditions; 2) bettors' comprehension of their true cost; and 3) whether bettors' comprehension of their true cost varied by gambler risk group.

Psychophysiological study

This study used both self-report and psychophysiological measurements to examine the appeal of wagering inducements, compared to non-wagering inducements, as well as the amount of attention, excitement, and desire to gamble elicited by advertisements for four different types of wagering inducements. Participants comprised sports bettors from each of the four PGSI groups — non-problem gambling (NPG), low-risk (LR), moderate-risk (MR) and problem gambling (PG) — and a sample of non-gamblers (NGs) as a control group. They watched 12 real advertisements at our research laboratory in Melbourne. Half of these advertisements were wagering advertisements, with four of these including inducements (better odds, bonus bet, reduced risk, cash rebate) and two not including any inducements (i.e., general brand awareness advertisements). As another point of comparison, six car advertisements, featuring similar inducements and brand awareness messages, were included. Participants' electrodermal, cardiac, and eye movement responses to these advertisements were measured to determine any differential effects of the various advertisements, including whether these quantities varied for adults vulnerable to gambling problems when compared to less vulnerable others. Participants also rated how stimulating they found each advertisement and, for advertisements with inducements, how likely they would be to take up each offer. This study allowed us to assess the role of wagering inducements in eliciting attention, excitement, and the desire to bet, and enabled comparisons amongst NGs and the four PGSI groups of sports bettors.

Interview study

This qualitative study of regular race and sports bettors aimed to identify causal mechanisms driving betting-related responses to wagering advertisements and inducements. A sample of 31 regular race and sports bettors was recruited from participants in the EMA study — 16 from the race betting stage, and 15 from the sports betting stage. The interviews focused on factors that influenced participants' betting over the previous few months, including any influence from wagering marketing. Data were analysed using constructivist grounded theory methods. This study enabled us to develop a model of influences from wagering advertisements and inducements, including environmental, situational, structural, and individual factors.

Key results

Wagering advertisements and inducements are prolific

- Wagering advertising was ubiquitous: on average, the EMA race and sports betting participants saw each of the nine types of advertising assessed every 1-3 days during the EMA survey period — and this does not include the number of individual exposures to each type of advertising each day. Television (TV) advertisements for betting brands, betting brands promoted during live and televised sports/race events, advertisements on betting websites/apps, and direct messages from wagering operators were the most frequently viewed and recalled types of advertising — with each seen every 1-2 days.

- The EMA participants were also frequently exposed to numerous types of wagering inducements. The most commonly seen were multi-bet offers and stake-back offers, which they were likely to see every 1-2 days. Match your stake or deposit offers, cash out early, sign-up bonuses, rewards programs, and better odds/winnings offers were seen every 3 days on average. Again, these figures do not include the number of individual exposures to each inducement type on any particular day.

- While bettors may purposefully seek out some of these advertisements and inducements, such as when visiting betting websites and apps, participants reported viewing many incidentally, while watching televised sport and engaging with other media. Push marketing also arrives uninvited through emails, texts, and phone calls from wagering operators, with most direct messages promoting specific wagering inducements.

Wagering inducements encourage riskier betting

- In our experimental study, participants preferred bets with inducements (bonus bet, better odds/winnings, reduced risk, cash rebate) over bets without inducements. Further, when bets were accompanied by an inducement, bettors tended to choose riskier bets compared to when no inducement was present. The cash rebate inducement elicited the most risky bets. No differences in results were observed between PGSI groups. These results indicate that wagering inducements increase the appeal of betting, and the tendency to place riskier bets, amongst all gambler groups.

- The fact that inducements encourage more risk-taking is non-obvious, and practically very important. In a commercial environment where the expected returns from gambling are negative for the gambler, high-risk bets lead to greater gambling losses. It may be that inducements effectively pay for themselves where they encourage riskier bets, and thereby amplify operators' profits and gamblers' losses.

- Perversely, while wagering inducements encourage more risk-taking, their promotion appears to lower the perceived risk of betting amongst some bettors. Our interview study revealed that inducements were seen as a way to help minimise losses. In the EMA study, sports bettors tended to report that inducements resulted in them placing safer, rather than riskier, bets. However, these incentivised bets are only less risky if bettors do not unduly increase the riskiness, size, and/or frequency of their bets in response, and if using the inducement does not incur extra, or unexpected, costs. Our experimental study demonstrated that inducements do encourage bettors to bet differently (take riskier bets), while our play-through study

showed that some inducements incur extra costs, which are usually unanticipated (discussed below). Thus, gamblers' perceptions that bets with inducements result in safer or less risky betting appear misguided.

Wagering advertisements and inducements increase betting expenditure

- By demonstrating that wagering inducements encourage riskier betting, the experimental study also showed that wagering inducements increase net betting expenditure — due to the larger pool of losing bettors created with the increased volatility of betting returns.

- Longitudinal analysis of the EMA data found that greater exposure to wagering marketing is also accompanied by increased betting outlay. For both sports and race betting, and amongst all PGSI groups, greater aggregate exposure to wagering advertisements and inducements was accompanied by increased likelihood of betting and increased intended and actual expenditure on betting; and for race betting, spending more on betting than originally intended.

- The correlational relationships in the longitudinal EMA analysis are supported by the self-report EMA data, where bettors were generally more likely to report placing more bets, and larger bets, in response to both wagering advertisements and inducements. Participants in the interview study also described increasing their betting frequency and expenditure, and betting more than intended, in response to wagering advertisements and inducements. As noted above, inducements encourage riskier betting, which increases net expenditure. This consistent pattern of results across studies, using different methodologies, supports our conclusion that, on average, exposure to wagering advertising and inducements increases betting expenditure.

Advertisements for wagering inducements elicit attention, excitement, and desire to bet amongst vulnerable gamblers

- In the psychophysiological study, all gambler groups responded to the wagering inducements with greater attention, excitement, and desire to take them up, compared to similar types of car inducements. Conversely, the NG group reported being more likely to take up the car inducements. These results suggest that wagering inducements are unlikely to entice NGs, but have most impact on people who already gamble.

- The eye-tracking data showed that the reduced risk and cash back inducements were most effective at attracting the attention of LRs, MRs and PGs, compared to the bonus bet and better odds inducements. The attention paid to inducements was more dependent on the type of inducement than merely being exposed to an inducement for a longer time.

- Relative appeal of (desire to take-up) each of the four types of wagering inducements varied amongst gambler groups. NPGs, LRs and MRs prioritised reduced risk inducements; PGs prioritised cash back inducements.

- LRs, MRs and PGs reported increased excitement after viewing inducements they rated as appealing. NGs and NPGs did not report greater-than-baseline excitement in response to any type of inducement. Thus, while individuals who gamble regularly but without subsequent problems find certain inducements appealing, they do not report a corresponding increase in excitement. This suggests a dissociation in the role excitement may play in the desire to gamble between problem/at-risk and NPGs. Wagering inducements appear to particularly excite at-risk and PGs.

Some types of wagering advertisements and inducements particularly influence betting behaviour

- Aggregate exposure across *all* types of wagering advertisements and inducements was found to increase betting expenditure, suggesting a cumulative or carryover influence. Nonetheless, particular types of advertisements and inducements were identified as having the *most* influence on betting behaviour, although other types of wagering marketing may also be influential.

- The longitudinal EMA analyses supported the self-report EMA data, finding that greater exposure to the following types of marketing predicts increased betting expenditure:

    - Direct messages from wagering operators increase intention to bet on races, and the likelihood of actually betting on races.

    - Advertisements on betting websites and apps can increase the likelihood of race and sports betting, and the likelihood of spending more on race and sports betting than originally intended.

    - Betting brands promoted during live and televised race/sports events can increase the likelihood of race and sports betting, and race betting expenditure.

    - Commentary promoting betting or betting odds during live and televised events can increase the likelihood of race betting, race betting expenditure, and spending more than intended on race betting.

    - Stake-back offers can increase the likelihood of race betting and race betting expenditure.

    - Multi-bet offers can increase the likelihood of sports betting.

    - Rewards program inducements can increase intended sports betting expenditure.

Most bettors will underestimate the cost of bonus bets with play-through conditions and, therefore, overestimate their attractiveness

- Explaining the play-through conditions, and how to calculate the true cost of a bonus bet offer, reduced the perceived attractiveness of bonus bet offers.

- When presented with the play-through conditions on the promoted bonus bet, nearly three-fifths of participants underestimated the amount they would need to bet in order to withdraw any winnings from the bonus bet. On average, participants estimated the offer would cost them only two-thirds of its true cost. Even frequent and highly involved bettors were likely to underestimate the true cost of the offer.

- Thus, typical explanations of play-through conditions are likely to cause consumers to overestimate an inducement's attractiveness and to take up an offer that costs more than they expected. Further, the play-through conditions are often not contained within promotional advertisements for these inducements, and may be difficult to locate. Current approaches to promoting and explaining these inducements do not provide a realistic means for consumers to exercise informed choice.

Inducement information in wagering advertisements overrides attention to responsible gambling information

- The eye-tracking study demonstrated that relatively little visual attention is paid to responsible gambling information presented in broadcast wagering advertisements promoting an inducement, even though this information was displayed on-screen for longer than such inducements.

- The static nature, small font, placement at the bottom of the screen, and faint colour of the responsible gambling messages may partly explain why this information attracts such little attention — especially when presented in the context of dynamic, appealing, and exciting inducements.

Wagering advertisements and inducements have negative effects on all gambler groups

- Exposure to wagering advertisements and inducements has negative effects on all gambler groups. Exposure promotes riskier betting and increased betting expenditure amongst all PGSI groups. These effects may be elevated for vulnerable adults (LRs, MRs and PGs), particularly in relation to reduced risk and cash rebate inducements. This marketing, therefore, contributes to the significant harms associated with gambling, including harms to lower risk groups, as well as to those with severe gambling problems.

- Specifically, the study found no differences between PGSI groups in:

    - their level of exposure to wagering advertisements and inducements (EMA self-report data);

    - the self-assessed influence of different advertisements and inducements on betting behaviour (EMA self-report data);

    - the tendency for inducements to encourage riskier betting (experimental study);

  - the relationship between greater exposure to wagering advertisements and inducements and increased betting expenditure (longitudinal EMA analysis);
  - their greater attraction to wagering inducements than car inducements (psychophysiological study); and
  - their particular attraction to the reduced risk incentive, although PGs considered the cash rebate incentive to be even more attractive (psychophysiological study).

- However, as noted above, the psychophysiological study found no elevation of excitement levels in NGs and NPGs (compared to baseline) in response to any type of inducement. In contrast, LRs, MRs and PGs paid most visual attention to reduced risk and cash rebate inducements. These types of inducements also elicited the greatest increases in reported excitement amongst these higher risk groups.

Wagering advertising and inducements interact with situational, structural, and individual factors to influence betting behaviours

- Wagering advertisements and inducements are experienced within, and contribute to, a saturated environment for sports and race betting in Australia — where betting is constantly available and accessible, embedded within bettors' social networks, and intrinsically associated with sports and racing.

- Within this environment, numerous situational, structural, and individual factors also shape how wagering advertisements and inducements influence betting behaviour. Relevant situational factors include the social acceptance of betting within the peer group, contextual factors such as boredom and alcohol consumption, and the ability to conceal betting activity on digital devices. Structural aspects of inducements were also influential, such as time limits placed on using them, (mis)perceptions of their value, intensity of direct messaging promoting inducements, and whether offers require extended betting with the wagering operator. Key individual factors shaping bettors' responses to marketing offers included: fear of missing out, cognitive distortions, misperceptions of skill, and the importance of gambling to the individual. These influences may be amplified with increased wagering involvement.

Limitations

The individual results chapters of this report detail the limitations associated with each stage of the study, and these should be considered when interpreting the results. Overall, the key limitations relate to:

- the use of non-representative samples, as preference was given to over-sampling regular sports and race bettors, and gaining adequate numbers from each PGSI group for the required analyses;

- small samples of females and people from CALD and Indigenous communities, which prevented analysis specific to these groups;

- the focus only on regular bettors (to adhere to the requirement to focus on vulnerable adults), which means that the effects of wagering marketing on non-regular bettors have not been considered;

- the self-report nature of some data (subjective measures in the EMA and psychophysiological studies, interview data), although the limitations of these data were offset by the addition of experimental, longitudinal, and eye-tracking data;

- inherent difficulties in accurately measuring exposure to advertising and inducements (given their proliferation), and in isolating the effects of each type on betting behaviour (given cumulative and carryover effects);

- limits to some aspects of the ecological validity of the studies conducted under laboratory conditions (experimental study, psychophysiological study); and

- inherent difficulties involved in assigning causality, given that wagering marketing can influence betting behaviour but betting behaviour can also influence exposure to some types of wagering marketing.

Conclusions and implications

- Regular sports and race bettors are exposed on a daily basis to numerous types of wagering advertisements and inducements, most commonly on television, betting websites and apps, and via direct messages from wagering operators. Many of these advertisements promote inducements to bet, most commonly multi-bet offers and stake-back offers, and also match your stake or deposit offers, cash out early offers, sign-up bonuses, rewards programs, and better odds/winnings offers.

- In alignment with the seminal stimulus-response Attention, Interest, Desire, and Action (AIDA) model of advertising persuasion (Rawal, 2013), this study found that advertisements for wagering inducements engage the *attention* of existing bettors, are particularly effective at eliciting *interest* (excitement) amongst LRs, MRs and PGs, and trigger *desire* to take up inducements considered exciting — all precursors to the *action* stages of betting. Exposure to wagering advertisements and inducements was found to affect betting *intentions*, with greater aggregate exposure linked to higher intended betting expenditure. Heightened aggregate exposure also influences betting *behaviour*, by increasing the likelihood of betting, actual betting expenditure and, amongst race bettors, spending more on betting than intended. When placing bets with inducements, bettors tend to place riskier bets. Key findings from this study for each stage in this process are summarised in Figure 1.

- Apart from the elevated excitement levels found amongst at-risk and PGs, these results did not differ amongst the four PGSI groups of gamblers. Thus, wagering marketing has an impact on all gambler risk groups through encouraging riskier betting and increased betting expenditure. Given that 41% of all regular (at-least monthly) sports bettors and race bettors in Australia experience one or more gambling-related problems (Armstrong & Carroll, 2017a, 2017b), wagering marketing negatively affects substantial numbers of bettors already at-risk of, or currently experiencing, severe gambling problems. These are predominantly young

adult males who are the target group for this marketing and who are increasingly reporting betting-related problems and harm (Hing, Russell, Vitartas, & Lamont, 2016).

- Inducements implicated as having most influence on betting behaviour are those incentivised by cash rebate and reduced risk offers, which refund or match part or all of the bet (under certain conditions) via cash, bonus bets, deposits, or reward points. Reduced risk, through cash rebates or refunds, are particularly attention-grabbing and exciting for at-risk and PGs, and associated with increased betting expenditure. Cash rebates are especially appealing to PGs and encourage riskier betting. Stake-back, multi-bet, and rewards program offers with these incentives were particularly linked to increased betting expenditure.

- A targeted approach to reducing at-risk and problem gambling would, therefore, be to ban or otherwise restrict inducements with these types of incentives. These include stake-back, multi-bet, match your stake/deposit, cash out early, rewards program, and various bonus bet offers. The appeal of these inducements is that they are thought to minimise betting losses; however, these inducements actually *increase* rather than decrease losses by encouraging riskier bets and increased betting expenditure.

- Misperceptions about the likely returns from wagering inducements indicate that consumer education is needed to discourage riskier betting when an inducement is offered, to advise consumers of the (typically low) chances of winning, and that using inducements is not a safer betting strategy. Operators should also ensure that inducements are not promoted in ways that can mislead bettors into thinking they are a safer betting option that is likely to minimise losses (where this is not the case). Particular care is needed in terms of how bets with cash rebates and reduced risk incentives are promoted to avoid misperceptions of their odds, cost, and likely value.

- Given the high potential for confusion about the play-through conditions placed on some bonus bets, these conditions should be banned. Alternatively, more prescriptive regulation is needed so that bettors using these inducements do not inadvertently spend more than they intend or can afford. For example, operators could be required to provide one or more worked examples of the play-through requirements for each inducement, specifying their exact cost. If the latter option is chosen, these explanations should be prominently displayed on the same page as the promotion and in similar sized font.

- Aggregate exposure to wagering advertising is linked to increased betting expenditure. Particularly implicated are direct messages from wagering operators, advertisements on betting websites and apps, betting brands promoted during live and televised race/sports events, and commentary promoting betting or betting odds during live and televised racing events. These results suggest that a reduction in wagering advertising would be likely to reduce betting expenditure and betting more than intended, including amongst at-risk and PGs.

- On 30 March 2018, gambling advertising was banned from live sports broadcasts on television and radio in Australia between 5am and 8.30pm in order to reduce exposure of children to sports-related gambling. It is possible that this ban could also assist in reducing harmful gambling behaviours amongst adults, given the association between exposure to wagering advertising during event broadcasts and increased betting expenditure. However, given this ban generally does not extend to the end of broadcasts of evening sports matches, and does not encompass advertising through other media, it is likely to have limited effectiveness in isolation. The results of this study suggest stronger restrictions are required

to reduce harm. Further, these new restrictions may not result in a net reduction of wagering advertising, but instead encourage a transition to less restricted online, social media, and mobile platforms, as has occurred with the introduction of previous advertising restrictions (Gainsbury et al., 2015; Sproston, Hanley, Brook, Hing, & Gainsbury, 2015).

- The most problematic form of wagering advertising is direct messaging via emails, texts, and phone calls from wagering operators. The majority of these direct messages promote specific wagering inducements (Hing, Russell, & Rawat, 2018a), and bettors report that this marketing is intense and particularly influential on their betting, by encouraging them to place more bets. Greater exposure to direct messages increased betting intentions and the actual likelihood of betting, including amongst vulnerable bettors. A prudent regulatory measure would be to ban this type of push advertising or to mandate a rigorous opt-in requirement to receive these targeted inducements, rather than the current opt-out system.

- Wagering operators could also be required to limit the frequency of these messages, particularly to at-risk and PGs — who could be reliably identified through algorithmic behavioural analysis of wagering data. Messages to at-risk and PGs could then be designed to assist them to maintain control over their betting, instead of tempting them with wagering inducements likely to exacerbate the gambling-related harm they are already experiencing. However, reluctance from operators might be expected given that 46% of sports betting expenditure, and 41% of race betting expenditure, is derived from MRs and PGs (Armstrong & Carroll, 2017a, 2017b). Government regulation is therefore likely to be needed to effectively restrict this form of advertising, and/or the types of inducements it promotes.

- Other forms of advertising linked with increased betting expenditure — advertisements on betting websites and apps, and commentary during racing events — are less obvious targets for restrictions, given they are likely to be actively sought out and valued by bettors for providing useful information.

- More visible responsible gambling information is needed in wagering advertisements. The eye-tracking study confirmed the ineffectiveness of these messages as consumer protection or harm minimisation measures in their current form, as they attract minimal visual attention. This supports several prior studies that have documented considerable consumer scepticism about the purpose and efficacy of these ‘gamble responsibly’ messages, given their static presentation, small font, faint colours, and placement at the bottom of the screen (Lamont, Hing & Vitartas, 2016; Sproston et al., 2015).

- Finally, consistent with a public health approach, measures to reduce and regulate wagering advertisements and inducements (such as those suggested above) need to be supplemented by measures to reduce the environmental, structural and situational factors that interact with wagering marketing to normalise betting and contribute to betting-related harm. Reducing this harm is critical to improving public health, given that two-fifths of at-least monthly sports and race bettors currently meet criteria for at-risk or problem gambling (Armstrong & Carroll, 2017a, 2017b).

Figure 1. Key findings aligned with the stimulus-response process of advertising persuasion

Stimulus-response process	Main findings
Exposure 	Regular bettors are exposed to wagering adverts & inducements on a daily basis. Most frequently seen adverts = on TV, brands promoted in events, on betting websites & apps, direct messages. Most frequently seen inducements = multi-bet & stake-back offers.
Attention 	Gamblers paid more attention to adverts with betting inducements than did NGs. LRs, MRs & PGs paid most attention to adverts with cash rebates & reduced risk inducements.
Interest/excitement 	Increased excitement for LRs, MRs & PGs to inducements that appealed to them. No increased excitement for NGs & NPGs.
Desire to purchase 	NPs, LRs & MRs most attracted to reduced risk inducements. PGs most attracted to cash rebate inducements.
Intention to bet 	Greater exposure to adverts & inducements increases intended betting expenditure — especially direct messages to race bettors.
Betting behaviour: Riskier bets Increased expenditure Spending more than intended 	Inducements encourage riskier betting & increase losses. Greater exposure to adverts & inducements increases likelihood of betting, betting expenditure & spending more than intended. Most influential adverts = direct messages, on websites/apps, brands promoted in events, commentary. Most influential inducements = stake-back offers for race bettors; multi-bet & rewards program offers for sports bettors. Play-through conditions on bonus bets lead to spending more than intended.
Outcomes: Increased losses Increased betting-related harm	Wagering inducements are likely to increase risk-taking & betting losses amongst all PGSI groups, despite perceptions that they help to reduce risk & minimise losses.

1. Background

1.1 Introduction

The Victorian Responsible Gambling Foundation (the Foundation) commissioned CQUniversity, in collaboration with the Australian Gambling Research Centre, to conduct this study into the *Effects of wagering marketing on vulnerable adults*. The study was conducted between mid-2016 and mid-2018. This introductory chapter sets out its aims and scope, and provides a brief review of previous related research.

1.2 Aims

The aim of this study was to examine the impact of approaches to wagering marketing, including inducements, on vulnerable adults. In commissioning this research, the Foundation identified three research questions to be examined:

1. What is the impact of wagering marketing on vulnerable adults?
2. Are particular marketing approaches associated with increases in potentially harmful gambling behaviours?
3. Do gambling inducements change gambler behaviour and attitudes?

1.3 Scope

As requested by the Foundation, the scope of this study included a focus on:

- examining the effects of wagering marketing on behaviour and attitudes, and the potential for wagering marketing to be linked to increased risk of harmful behaviours;
- wagering inducements as a form of marketing;
- the advertising of wagering and wagering inducements, particularly through television and digital media (Internet, social media, SMS, emails);
- marketing for both sports betting and race betting; and
- vulnerable adults, defined as all those at risk of experiencing gambling-related harm who are aged over 18 years. These include those scoring in the LR, MR and PG categories on the Problem Gambling Severity Index (PGSI; Ferris & Wynne, 2001).

1.4 Literature review

Key findings

- Sports betting and race betting marketing has become pervasive in Australia, particularly commercial advertising in traditional media, sponsored advertising, digital and direct advertising, and sales promotions with wagering inducements.
- Researchers, gamblers, sports audiences, parents, and the broader community have expressed concerns that this marketing may normalise and increase betting and betting-related harm.
- Research results to date are suggestive of a relationship between exposure to this marketing and increased betting, especially amongst vulnerable gamblers (those in higher risk gambling groups).
- However, previous research efforts have been largely limited to speculation, self-reports, and cross-sectional studies, which are subject to social desirability, response and recall biases, as well as being limited by participants' introspective ability.
- Thus, rigorous evidence of a link between wagering marketing and betting behaviour has not previously been collected, and any causal impact of advertising and inducements on betting behaviour is currently unknown.

Wagering on racing and sporting events is a popular activity in Australia, where the legal age for gambling is 18 years or older. Race betting losses totalled $2.9 billion in 2015-16, representing 12.4% of all gambling expenditure; $921 million was lost on sports betting, representing 3.9% of gambling expenditure (Queensland Government, 2017). Sports betting is the fastest growing gambling activity in Australia (13% from 2014-15 to 2015-16), followed by race betting (4%). Bets can be placed online, by telephone, in off-course betting shops, in gambling venues (hotels, clubs, casinos), and at the racing and sporting events themselves.

The promotion of sports and race betting in Australia has been described as ubiquitous, relentless, pervasive, unavoidable, intrusive, and at saturation levels (Hing, Vitartas & Lamont, 2014d; McMullan, 2011; Sproston et al., 2015). This 'avalanche' of marketing (JSCGR, 2013, p. 7) reflects intense industry competition and has catalysed unprecedented market demand for wagering products, particularly online wagering through mobile and smart devices. Numerous factors have contributed to the rapid growth of the wagering industry over the last several years. These include increased uptake and speed of online and mobile technologies; global expansion in the number of 'bettable' sports and racing events; their increased broadcast coverage, and on a broader range of platforms; and deregulation of online wagering and its advertising (Hing et al., 2014c; Sproston et al., 2015). While participation in other forms of gambling has declined in Australia over the last decade (Hing et al., 2014c), sports betting expenditure has increased five-fold in real terms, while race betting expenditure continues to show modest growth (Queensland Government, 2017).

A proliferation of wagering operators now compete intensely for competitive advantage, utilising comprehensive marketing strategies which typically include environmental analysis, consumer research, competitive analysis, market segmentation, target marketing, positioning, stakeholder marketing, and political lobbying. Based on their broader business and marketing strategies, they harness all elements of the marketing mix (product, price, distribution, and promotion) to secure brand

recognition and market share. Wagering operators have greatly expanded their range of betting products, routinely offer price-based incentives to bet, and mobile and online distribution channels ensure easy, 24/7 access from any location. However, while attractive product offerings, competitive pricing, and easy access are critical for marketing success, the promotional efforts of wagering operators are arguably the most noticeable element of their marketing mix.

As discussed in this chapter, the main promotional tools used have been commercial advertising in traditional media, sponsored advertising during live and televised events, and digital and direct advertising; along with sales promotions offering a wide range of wagering inducements. Their proliferation has raised substantial community concerns about their effects on problem and at-risk gamblers (Hing, Lamont, Vitartas & Fink, 2015a; Hing, Russell, Lamont & Vitartas, 2017c; Hing, Sproston, Brook & Brading, 2017d; Lopez-Gonzalez, Estévez & Griffiths, 2017b). The potential of wagering marketing to influence the betting behaviour of these vulnerable adults in ways that increase gambling-related harm is the direct focus of the current study. The remainder of this chapter presents relevant background information and assesses current research evidence on the topic.

1.4.1 Wagering advertising

Commercial advertising in traditional media

Advertising has been defined as ‘a paid, mediated form of communication from an identifiable source, designed to persuade the receiver to take some action, either now or in the future’ (Richards & Curran, 2002, p. 74). This definition reflects the commercial nature, persuasive intent, non-personalised messaging, and use of mass media, which typically characterise advertising in traditional media. Based on commercial advertising spend, gambling is currently amongst the top 20 advertising categories in Australia, and sports betting advertising is the fastest growing category, overall (Hickman & Bennett, 2016).

Wagering advertising has been particularly noticeable on both free-to-air and subscription television, being even more prolific during sports and racing broadcasts on subscription television compared to free-to-air television (ACMA, 2013; Sproston et al., 2015)[1]. Televised advertisements for wagering have predominated in commercial breaks during these broadcasts, promoting betting brands and products, as well as live betting odds and a wide range of inducements to bet (Gordon, Gurrieri & Chapman, 2015; Milner, Hing, Vitartas, & Lamont, 2013; Sproston et al., 2015). Sports viewing audiences have described this advertising as incessant, ubiquitous, and omnipresent, arousing irritation, anger, and distaste amongst some viewers (Lamont et al., 2016; Sproston et al., 2015; Thomas, Lewis, McLeod & Haycock, 2012b). Sports entertainment shows are also punctuated by wagering industry commercials, and contain sponsored segments and discussions of betting options and tips (Milner et al., 2013). Other forms of traditional media used for wagering advertising include radio, print, and outdoor signage, the latter often located at busy public precincts such as shopping centres, transport hubs, and on public transport itself (Sproston et al., 2015).

The sheer volume of sports and race betting advertising in Australia was documented in an environmental scan focusing on six major wagering brands (Sproston et al., 2015). During a 12 week audit period in late 2014, the six companies ran a total of 13,000 advertising events. The most expensive advertisement cost $461,000 and was televised 347 times. In the 12 months to April 2014, 870 individual advertisements with discrete creative content were produced by one company alone

[1] On 30 March 2018, gambling advertising was banned from live sports broadcasts on free-to-air television, Pay-TV and radio, between 5am and 8.30pm.

(the most of any of the six companies) — which does not count the number of times each advertisement was actually shown. Other characteristics of wagering advertising noted in this study include: its intensification in the lead-up to major sporting and racing events; continual refreshment of messages through new advertising content; and its focus on building brand recognition and brand image (Sproston et al., 2015). Similar to results of other Australian studies of wagering advertising content (Deans, Thomas, Daube, Derevensky & Gordon, 2016; Thomas et al., 2012b), common appeals were based on humour, glamour, sophistication, excitement, power, mateship, quirkiness, fun, luck, easy access, and value for money. The advertisements targeted young adult males through messages and images conveying that betting with that operator will enhance the bettor's power, success, male bonding, and attractiveness to women (Sproston et al., 2015; Thomas et al., 2012b).

The pervasiveness of this wagering advertising has raised substantial community concerns about its saturation, normalising effects, and visibility to children and young people (ACMA, 2013; Lamont et al., 2016; Pitt, Thomas, Bestman, Stoneham & Daube, 2016; Sproston et al., 2015; Thomas et al., 2012b). Numerous government reviews and inquiries have been conducted, and some reforms introduced (DBCDE, 2013; ECLC, 2018; JSCGR, 2011, 2013). These include curtailing the promotion of live betting odds as part of sporting match commentary and banning wagering advertising during televised sporting events broadcast in general viewing time. Nevertheless, wagering advertising has been an integral part of watching televised sports and races in Australia, and is also prolific in many other types of traditional media.

Sponsored advertising

Wagering operators are major sponsors and commercial partners of sporting teams, events, competitions, and venues. This sponsorship provides a profitable income stream for many sporting codes, while allowing maximum sponsor exposure at sporting stadia, during sports broadcasts on free-to-air and subscription television, during radio broadcasts, and in print, online, and mobile media (JSCGR, 2011). This exposure is most noticeable during live and broadcast sports and racing events, which display an abundance of betting logos which are clearly visible on player uniforms, team banners, scoreboards, stadium tiers, perimeter fencing, and on-field bolsters (Hing, Vitartas, & Lamont, 2014d; Milner et al., 2013; Thomas, Lewis, Duong & McLeod, 2012a). Racing broadcasts also capture wagering sponsor logos and advertisements 'above betting terminals, alongside race tracks, draped over horses, and on track vehicles, track markers, perimeter screens, staff aprons, wagering representatives' clothing, and the gates of sponsored races' (Sproston et al., 2015, p. 124).

Until recently, this sponsorship also manifested in a proliferation of embedded advertising, integrated into the sporting match itself as part of the entertainment, such as sponsored segments (e.g., replays, man of the match), on-screen displays of logos and betting websites, use of celebrities from betting companies, updates on betting odds by match commentators, and live cross-overs to betting operator representatives for information on the latest offers (Milner et al., 2013; Thomas et al., 2012a). This embedded advertising has been criticised for disguising the persuasive intent of the brand exposure, such that some viewers, particularly children, may not recognise it as advertising (Said, 2010; Wright, 2010). As noted above, the integration of live betting odds into sporting match commentary and coverage has been curtailed in Australia. However, wagering logos remain highly visible in both live and televised sports and racing events. This 'gamblification' of sport, through its sponsorship by betting companies (McMullan, 2011), has been criticised for: its potential to normalise and soften gambling products amongst sports viewers and minors; its potential to trigger gambling amongst at-risk and PGs; its exploitation of fan support and team loyalty to market wagering; and its inappropriate

pairing of gambling with sports that are promoted as healthy and family-friendly (Lamont, Hing & Gainsbury, 2011; Pitt et al., 2016; Thomas et al., 2012b).

Digital and direct advertising

Wagering marketing is also extensive in digital media, including through social media, online advertising, websites, direct emails, and mobile messaging (Sproston et al., 2015). Use of digital media presents opportunities for more customised, unmediated communication directly to individual customers. It also enables wagering operators to circumvent the growing restrictions placed on advertising in traditional media (Gainsbury, Delfabbro, King & Hing, 2016; Hing et al., 2018a; Thomas et al., 2015). Digital advertising is also particularly suited for reaching young, educated adult males who predominate the Australian sports and race betting market (Hing et al., 2014c), and who have higher smartphone ownership and usage compared to all other demographic groups (Deloitte, 2017).

Wagering operators have been increasing their social media presence over recent years, and they regularly post updates about betting events, products, offers, and competitions, actively encouraging customer engagement (Sproston et al., 2015). Wagering operators post more material on social media with gambling-related content, and have more followers, compared to other types of gambling operators (Gainsbury, Delfabbro, King & Hing, 2016). Common types of content include wagering inducements, betting tips, product features that assist betting, sports and racing news, and sponsorship arrangements with sports teams; with latent messages aimed at raising awareness of their brand and product offers, glamourising gambling, emphasising ease of use, encouraging new use, emphasising winning, encouraging betting and brand engagement, and aligning gambling with sport (Gainsbury et al., 2016).

Digital media also enables targeted advertising to individual customers; with a large volume of wagering messages typically received, via SMS, email, phone, and social media, once individuals open a betting account (Hing, Cherney, Blaszczynski, Gainsbury & Lubman, 2014c; Sproston et al., 2015). A recent Australian study of direct advertising messages from wagering operators found that regular sports bettors receive an average of six emails and text messages per week from wagering operators, while regular race bettors receive 11 emails and text messages per week; and that these messages spike in volume immediately before major sporting and racing events (Hing et al., 2018a). The vast majority of the 931 messages analysed in that study communicated a specific promotional inducement for betting (e.g., bonus or better winnings/odds, refund/stake-back offers, match your stake/deposit offers), typically incentivised with bonus bets, rather than communicating a general reminder to bet. These messages usually contained a direct link to the betting website and app, which provided an additional advertising medium and an immediate opportunity to place the promoted bet via these platforms.

1.4.2 Sales promotions offering wagering inducements

Sales promotions offering wagering inducements are another widely used promotional tool by betting companies. In general, inducements aim to change behaviour through changing people's judgments and actions, such that the perceived benefits of a particular action outweigh the perceived risks (Emanuel, Currie & Herman, 2005). In marketing theory, sales promotions (or promotional inducements) are typically non-routine and short-term offers that provide an additional incentive, beyond what is normally received, to induce an immediate sale or to move the sale forward. Through providing triggers to consumer action, they provide a temporary shift in stimuli aimed at overriding any

consumer inertia to prompt an immediate shift in purchasing behaviour (Van Waterschoot & Van den Bulte, 1992).

Wagering inducements offer one or more incentives to bet, in addition to what is normally offered by the core wagering product; further, the incentive is offered in conjunction with a specified betting-related activity and/or redeemed in a form that encourages betting (Hing, Sproston, Brading & Brook, 2015c). An audit conducted in 2015 identified 15 generic types of wagering inducements offered amongst 30 major wagering brands accessible to Australian residents (Hing et al., 2015c). The most common were refund/stake-back offers, followed respectively by sign up offers, bonus or better odds, bonus or better winnings, multi-bet offers, winnings paid on losing bets, happy hours or similar, match your stake/deposit, cash rebates, refer a friend offers, free bets to selected punters, other free bets, mobile betting offers, reduced commission, and competitions. These inducements were typically incentivised with bonus bets, refunds, better odds or winnings, or with cash rebates. Reflecting their changing nature, more recently offered inducements include click-to-call bonuses and early cash-out offers (Hing, Sproston, Brook & Brading, 2017d; Lopez-Gonzalez & Griffiths, 2017a). Additionally, reward points are now increasingly being used by some operators to incentivise wagering inducements, especially those with land-based gambling operations (e.g., casinos) where these points can be redeemed (Hing et al., 2018a).

Wagering inducements aim to elicit a variety of consumer responses — including recruiting, registering, and retaining customers (Weibe, 2008), as well as triggering additional sales, prompting brand switching, accelerating buying, intensifying purchasing, and encouraging riskier bets (Hing et al., 2017d; Newall, 2015). Wagering inducements may also seek to encourage betting on specific events, through particular channels (e.g., mobile phones and tablets) and during nominated time periods (Hing et al., 2015c). In contrast to loyalty schemes and ‘comps’ (complimentary goods and services, such as transport, accommodation, food, beverages), which reward past gambling behaviour and are given to the most loyal customers, promotional inducements aim to influence future behaviour and, therefore, can target the least loyal customers to encourage expenditure (Responsible Gambling Council, 2013). In fact, wagering operators in Australia and elsewhere often curtail or restrict promotional inducements for winning or low-margin customers, while high-value losing customers are ‘routinely offered bonuses or promotions and incentivised to gamble in ever larger amounts’ (Podesta & Thomas, 2017, p.9).

Wagering inducements are heavily promoted through the three forms of advertising discussed above — commercial advertising in traditional media, sponsored advertising, and digital and direct advertising. They are widely featured in broadcast, print and retail advertisements, in social media, directly to consumers via text and email messages, via promotions during live and televised sporting events, and in sports entertainment shows. They are also promoted at the point-of-sale for online betting — on betting websites and mobile apps. These platforms provide consumers with an immediate opportunity to place the incentivised bet, and may result in cue-related impulsive responses, as found for point-of-sale tobacco and alcohol advertising (Carter, Mills & Donovan, 2009; Jones & Smith, 2011; Kirchner et al., 2013; Pettigrew et al., 2015; Wakefield, Germain & Henriksen, 2008). Using online betting, consumers can easily and instantaneously respond to wagering inducements by clicking on a link in the inducement message within the operator’s website, mobile app, direct email, SMS, or social media feed (Hing, Russell, Li & Vitartas, 2018b). Overall, the heavy promotion of wagering inducements, through a range of media, exposes bettors to an ongoing plethora of betting cues that are difficult to avoid, are continually refreshed, and intensify in the lead-up to major events.

1.4.3 Effects of gambling advertising on gambling behaviour

Before focusing specifically on wagering advertising in this review, this section considers research evidence on the effect of gambling advertising, more generally, on gambling behaviour. As discussed below, studies have examined a variety of issues utilising a range of methodologies, but conclusions that can be drawn are limited by the speculative, self-report, and cross-sectional nature of this body of research.

Several studies have conducted content analyses of gambling advertisements and criticised them as being misleading in their depictions of gambling as offering an exciting and glamorous lifestyle, promising easily attainable and instant financial and social rewards, and a realistic reprieve from a lifetime of work (Derevensky, Gupta, Messerlian & Mansour, 2009; McMullan & Miller, 2008, 2009, 2010; Monaghan, Derevensky & Sklar, 2008). Both researchers and gamblers have speculated that gambling advertisements have particular potential for harm if they: reinforce erroneous gambling beliefs, such as the role of luck, superstition, skill, expertise, and practice; appeal to bravado, ego, or status; pressure gamblers into quick decisions; present gambling as an investment; promote 'rags to riches' stories due to gambling; encourage frequent or long venue visits or gambling sessions; obscure the odds of winning; or offer inducements to gamble (Griffiths, 2005b; Monaghan et al., 2008; Productivity Commission, 1999; Schottler Consulting, 2012).

Another research stream has focused on youth, mainly using cross-sectional designs to examine associations between exposure to, and recall of, gambling advertisements, and attitudes and intentions to gamble. Studies have generally found that adolescents are highly exposed to gambling advertising; have high recall of individual advertisements, slogans, and jingles; and may feel they are being groomed to gamble (Amey, 2001; Derevensky et al., 2007; Derevensky, Sklar, Gupta & Messerlian, 2010; Friend & Ladd, 2009; Korn, Hurson & Reynolds, 2005a; Korn, Reynolds & Hurson, 2005b).[2] An eye-tracking study of 39 Swedish youth aged 15 years (Sandberg, Gidlöf & Holmberg, 2011) found they paid visual attention to about 10% of all advertisements they were exposed to while surfing the Internet for 15 minutes; and that males paid attention to more gambling advertisements and viewed them for longer, compared to females.

Youth also report feeling influenced to gamble by gambling advertising. In a Canadian study, 42% of youth reported that gambling advertisements made them want to try gambling, and 11% of males and 3% of females reported gambling, at least sometimes, after seeing a related advertisement (Derevensky et al., 2007). Qualitative and quantitative studies, also with Canadian youth, concluded that gambling advertising encourages adolescent gambling (Korn et al., 2005a, 2005b), with young people thought to be particularly susceptible to the values portrayed in this advertising (Binde, 2014). Cross-sectional surveys of US undergraduate students found that greater media exposure to poker shows and Internet poker advertisements was associated with more positive gambling attitudes and intentions (Lee, Lemanski & Jun, 2008).

Adult studies have also gathered self-reports on the influence of gambling advertising. A qualitative study of 50 Australian online gamblers found that advertising and promotions played a very limited role in converting NGs to online gamblers, but had a much stronger reported role in increasing gambling amongst existing gamblers (Hing et al., 2014a). Similarly, in a large Australian survey (*N* = 4,594), only 10% of Internet gamblers reported that advertising and promotions were critical to their initial uptake of online gambling, but 29% reported increasing their online gambling expenditure as a result of viewing online gambling promotions (Hing et al., 2014c). Mixed results have been found in studies examining the effects of gambling promotions (such as prize draws) in land-based venues.

[2] Adolescents in Derevensky et al.'s studies were aged 12-19 years. Those in Korn et al.'s studies were aged 12-17 years.

Two studies found they increased gambling expenditure (Lucas & Bowen, 2002; Southwell, Boreham & Laffan, 2008), while another study reported no effect (Edelhoff, Grimes & Battista, 2014).

Comparative research has examined whether gambling advertising impacts differentially on different gambler risk groups. In a large Norwegian study (*N* = 6,034), a higher proportion of people with gambling problems reported that gambling advertising impacted on their gambling-related attitudes, interest, and behaviour, compared to recreational gamblers, regardless of level of advertising exposure (Hanss, Mentzoni, Griffiths & Pallesen, 2015). In research with 100 New Zealand adults, those with a gambling problem reported a larger influence on spending more than intended for some gambling forms and gambling slogans, compared to NPGs (Schottler Consulting, 2012). Also in New Zealand, people experiencing gambling problems felt more encouraged by gambling advertising to think they could win (Clarke et al., 2006, 2007). Studies in Australia, the UK, Sweden, Denmark, and Hong Kong have all indicated more self-reported influence of gambling advertising on problem compared to NPGs (Binde, 2014; Hing et al., 2014a; McCormack, Shorter & Griffiths, 2013). Higher risk gamblers have also reported greater influence of venue-based gambling promotions on gambling expenditure (Narayanan & Manchanda, 2012; Responsible Gambling Council, 2013; Southwell et al., 2008). Gambling advertisements and promotions can act as reminders about gambling, trigger gambling urges, provide inducements to gamble, and undermine attempts to moderate gambling (Binde, 2009; Boughton & Brewster, 2002; Grant & Kim, 2001; Hing et al., 2014a). Youth with gambling problems also report stimulation to gamble from related advertisements (Derevensky et al., 2010; Felsher, Derevensky & Gupta 2004a, 2004b; Korn et al., 2005b). Overall, there is consistent evidence that people with gambling problems report more stimulation to gamble from gambling advertising and promotions, compared to people without gambling problems. However, it is not known whether this is a real effect, whether higher risk gamblers are more attuned to gambling advertising, or whether there is a third variable explanation (Binde, 2014).

Overall, the effects of gambling advertising on gambling behaviour remain uncertain due to the self-report, cross-sectional, and exploratory research designs utilised to date. When used as a sole means of data collection, self-reported impacts of gambling advertising can be unreliable on their own, because advertising can subtly and subconsciously affect product preferences over time; and because of the well-recognised third-person effect, where people tend to believe that advertising influences other people, but not themselves (Binde, 2014). Further, cross-sectional designs cannot identify causal pathways; greater exposure to gambling advertising may lead to greater gambling involvement, or vice versa. More rigorous designs are needed to accurately assess the effects of gambling advertising on gambling behaviour.

1.4.4 Effects of wagering advertising on betting behaviour

Research into wagering advertising has entailed similar approaches to research into gambling advertising, more generally. As discussed below, themes examined include: content of wagering advertisements; self-reported attitudes to wagering advertising; cross-sectional studies of associations between exposure to wagering advertising and wagering attitudes, intentions, and behaviours, including differential effects by gambler risk groups; and some aspects of wagering inducements.

Frequent appeals used in wagering advertising include sports team fandom and loyalty, mateship, masculinity, power and control, excitement, risk, winning, social status, sexual appeal, fun, glamour, and sophistication (Deans et al., 2016; Sproston et al., 2015). Use of these appeals has been criticised for normalising betting by influencing the cultural meanings that young males hold about the

relationship between gambling and sport (Deans et al., 2016), conveying only positive messages about wagering (Thomas et al., 2012), and encouraging betting and impulse betting (Lindsay et al., 2013; Thomas et al., 2012a). This type of advertising has also been criticised for downplaying the risk involved in betting, magnifying control over wagering outcomes, and heavily promoting in-play betting which can facilitate problematic gambling (Lopez-Gonzalez, Estévez & Griffiths, 2017b; Lopez-Gonzalez, Guerrero-Solé, Estévez & Griffiths, 2017d; Lopez-Gonzalez, Guerrero-Solé & Griffiths, 2017e; McCormack & Griffiths, 2013). However, evidence of these effects is primarily limited to self-reports from some bettors.

Several studies have focused on attitudes to wagering advertising amongst the broader community and particular population sub-groups. In a representative national Australian survey, two-thirds of respondents 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). In qualitative research, sports bettors have expressed feeling targeted and bombarded by sports betting advertising (Deans, Thomas, Derevensy & Daube, 2017; Thomas et al., 2012b); while sports viewers have reported some positive emotions, such as excitement, hope, and arousal, as well as negative responses including annoyance, irritation, and concern about its normalising and persuasive effects (Lamont et al., 2016; Sproston et al., 2015). Australian parents have also expressed concerns that the proliferation of this advertising normalises gambling amongst children (Thomas, 2012); while adolescents (aged 12-17) report high awareness of, and exposure to, wagering advertising, particularly during live and broadcast sporting events (Hing, Vitartas, Lamont & Fink, 2014e; Pitt et al., 2016).

Cross-sectional studies have revealed associations between exposure to wagering advertising and wagering attitudes, intentions, and behaviour. In research involving 212 Australian university students, greater exposure to gambling and wagering advertising during televised sport was positively associated with gambling intentions; and those with higher PGSI scores tended to have greater exposure to this type of advertising, to view it more favourably, be interested in the gambling sponsor's products, and be more willing to use them (Hing, Vitartas & Lamont., 2013). In a survey of 131 Australian adolescents aged 12-17, greater intention to bet on sports once of legal gambling age was predicted by male gender, and positive attitudes to both gambling sponsors and to the advertising of gambling during televised sport (Hing et al., 2014e). Focusing on adults (N = 1,000), more frequent exposure to sports-embedded gambling advertising predicted greater intended frequency of sports betting, as did higher PGSI scores, previous sports betting participation, and more positive attitudes to this advertising (Hing et al., 2015a). Amongst 544 Australian sports bettors, PGs indicated highest approval of, and feeling most encouragement to bet from, sports betting promotions during televised sport, when compared to other gambler risk groups (Hing, Lamont, Vitartas & Fink, 2015b). In a sample of 2,589 Australian adults, those with greater exposure to sports betting advertising in digital media were more likely to bet regularly on sport, while those with greater exposure to race betting advertising in traditional media were more likely to bet regularly on races (Sproston et al., 2015). These relationships were mediated by emotional and cognitive responses to this advertising, and by social norms. These cross-sectional studies indicate a likely relationship between exposure to wagering advertising and wagering attitudes, intentions, and behaviour, but are unable to clarify causal directions. While exposure may heighten positive attitudes, intentions, and behaviours, it is also highly likely that more involved bettors are more exposed to this advertising. These studies are also limited by their self-reported measures of exposure to wagering advertising. More accurate measures, such as eye-tracking, are needed to assess visual attention to wagering advertisements and their component elements (Binde, 2014). A recent innovative study based on the Implicit Association Test found an implicit association between gambling and sport amongst youth

aged 14-24 years due to exposure to gambling advertising, sponsorship and other brand encounters (Li, Browne, Langham, Thorne & Rockloff, 2018).

Little is known about how wagering inducements, such as stake-back offers, matching deposits, and bonus bets, influence betting behaviour. Hing et al. (2017d) discussed their potential to entice new users to betting through recruitment offers (e.g., sign-up and refer-a-friend offers); and to encourage further betting amongst existing users through the opening of additional betting accounts, by lowering the price of betting, by encouraging volume purchasing through multi-bets, and by promoting rapid and concentrated betting during happy hours. They were particularly critical of bonus bets with play-through conditions, which require bettors to spend more on betting before being able to withdraw any winnings from the bonus bet — which clearly increases their betting activity. Further, the terms and conditions associated with bonus bets often obscure their true cost, undermining informed decision-making. Cash-out inducements have also been criticised for transforming betting into a continuous activity, and facilitating loss of control due to the changed structural characteristics and the emotionally charged context in which cash-out decisions are typically made (Lopez-Gonzalez & Griffiths, 2017a). However, these concerns about wagering inducements have not been verified by empirical research beyond some anecdotal accounts.

Some qualitative studies have captured gamblers' views about the effects of wagering inducements on their betting behaviour. For example, 34 of the 50 young male sports bettors interviewed in one Australian study identified inducements as the most effective marketing strategy in getting themselves and others to bet on sports (Deans et al., 2017). Some described how these incentives lower the perception of risk, stimulate impulsive bets, and promote feelings of control over betting outcomes (Deans et al., 2017). Sports bettors also report opening multiple betting accounts to access inducements from numerous operators (Deans et al., 2017; Gordon et al., 2015; Hing et al., 2014a, 2014b; Thomas et al., 2012b). People in treatment for problem gambling particularly report increased betting in response to wagering inducements, explaining that they activate urges to gamble, can undermine resolutions to curtail betting, trigger relapse, and extend time and money spent on wagering through the use of bonus bets and matched deposits (Hing et al., 2014a).

Empirical research has examined associations between uptake of wagering inducements and impulse betting. Several features of wagering inducements might trigger impulse betting, including their promotion during bettable events, push marketing efforts directed at consumers, and ease of uptake at the point-of-sale (Hing, Li, Vitartas & Russell, 2017a). A large survey of Australian sports bettors (N = 1,813) found that more frequent users of wagering inducements had a greater tendency to place impulse in-play bets, particularly PGs and frequent sports viewers (Hing, Russell, Li & Vitartas, 2018b). Further, these inducements were predictive of impulse betting during play, regardless of individual psychological characteristics including buying impulsiveness, and socio-demographic characteristics such as age. However, causal directions for these relationships could not be ascertained by this cross-sectional study.

Empirical research has also confirmed that wagering inducements tend to incentivise complex bets, whose odds are difficult to estimate, and risky bets, with low odds of winning and which increase gambling losses and operator profits. This research was conducted in the UK by examining betting advertisements during the 2014 soccer World Cup (Newall, 2015), and during televised English Premier League matches; and also through a series of five experiments (N = 1,467) demonstrating that soccer fans rarely formed rational probability judgments for complex events (Newall, 2017). The types of inducements examined in these studies were very similar to those offered in Australia; in fact, many are offered by the same multinational wagering operators in both countries.

Finally, a survey containing video clips of 20 mock sports betting promotions was administered to regular, non-regular, and non-sports bettors (*N* = 611) to determine the elements of the clips that most engaged the desire to gamble (Hing, Vitartas & Lamont, 2017e). A conjoint analysis revealed that type of bet had more utility than type of commentator, type of appeal, and format of the promotion. 'Risk-free' bets (offering a refund under certain conditions) were the most enticing of all bet types examined, and for all gambler risk groups, indicating the relative appeal of this type of wagering incentive.

In summary, research into the effects of wagering advertising on betting behaviour has similar limitations, as identified earlier, for research into gambling advertising. While researchers have advanced numerous theoretical reasons why wagering advertisements and inducements might influence sports and race betting behaviour, particularly for higher risk gamblers, empirical research has largely been limited to self-reported and cross-sectional data — although a few studies have used more sophisticated designs. The next chapter outlines several innovative studies conducted for this project, designed specifically to help address this gap in knowledge.

2. Approach

2.1 Introduction

As the previous chapter explained, prior research into the effects of wagering marketing has primarily drawn on cross-sectional, self-report data to identify associations between exposure to wagering advertising and inducements, and wagering attitudes, intentions, and behaviours. To advance research in this area, a key consideration when designing the current study was to incorporate innovative methodologies with greater potential to identify causal pathways. Some optimal designs for providing causal evidence were not considered, because they were well beyond the budget for the study (e.g., a longitudinal cohort consumer study), or unsuited to the focus and practicalities of conducting the study (e.g., randomised controlled trial, case control study). A sequential, explanatory mixed methods design was instead chosen to optimise the potential of the study to yield new knowledge, and to draw firmer conclusions about the effects of wagering advertisements and inducements on sports and race betting behaviour; including any differential effects on vulnerable adults (at-risk and PGs). This chapter provides an overview of the design for each of the five empirical stages of research conducted for this study. Details of the methods and results for each stage are explained in the subsequent chapters. Ethical approval to conduct all stages of this study was obtained from CQUniversity Human Research Ethics Committee.

2.2 Stages of empirical research

2.2.1 Ecological momentary assessment (EMA) study

The EMA study captured longitudinal data from baseline samples of 402 at-least fortnightly race bettors and 320 at-least fortnightly sports bettors. After completing a baseline survey, participants completed up to 15 short EMA surveys (5 per week for 3 weeks). The surveys captured participants' betting-related responses to different types of wagering advertisements and inducements as they naturally occurred in a range of traditional and digital media. This methodology maximised ecological validity and minimised recall bias because the surveys were conducted at, or very close to, the time and place that exposure to wagering marketing and betting occurred, within each respondent's natural environment. This study enabled us to assess: 1) exposure to different types of wagering advertisements and inducements; 2) the reported influence that wagering advertisements and inducements had on the size, frequency, and riskiness of subsequent bets placed; and 3) longitudinal associations between exposure to wagering advertisements and inducements and betting expenditure, both in aggregate and for each individual type of advertisement/inducement.

2.2.2 Experimental study

The experimental study tested for the effects of four types of wagering inducements on sports bettors' propensity to accept greater risks on their bets — bonus bets, better odds/winnings, reduced risk, and cash rebates — and also included a no-inducement baseline condition. In addition, the experimental study examined the perceived attractiveness of these inducements. A total of 299 sports bettors completed an online survey. Within the survey, participants were offered the choice of watching and placing bets on one of three sports: AFL, cricket or soccer. For each sport, video-game technology

was used to simulate six trials — one for each of the four inducements, one for the no-inducement control, and one trial to assess the relative attractiveness of the inducements. Each trial consisted of a betting opportunity followed by a 'highlights reel' video showing the relevant outcomes within the fictional sports match. Participants were provided with a stake ($4) for each trial, with winnings directly accruing to their 'account', contributing to their total take-home compensation. Each trial offered three different betting options, varying in the degree of risk and inversely proportional to the potential payoff — as would be the case in a commercially-placed bet. The tendency of players to choose riskier bets (i.e., with greater theoretical loss) was the key (behavioural, repeated measures) dependent variable in the experiment. Participants also rank-ordered the inducements from most to least favourite. This study enabled us to isolate: 1) the effects of different types of wagering inducements on the riskiness of bets placed; 2) their relative appeal to bettors; and 3) any differential effects for vulnerable adults.

2.2.3 Study of play-through conditions on bonus bets

The play-through conditions study focused on a particularly contentious element of some wagering inducements. Play-through conditions on bonus bets require an amount equivalent to the bonus bet, and/or the initial stake, and/or any winnings from the bonus bet, to be wagered at least once, but sometimes multiple times — before bettors can make withdrawals from their betting account with that operator. These inducements have been criticised as potentially misleading and likely to cost the bettor more than anticipated (Hing et al., 2017d). This study tested the attractiveness of wagering inducements with bonus bets and bettors' comprehension of their cost, using the same sample as the Experimental Study. In an online survey, participants rated the attractiveness of three variations of an inducement. *Promo1* simply noted that 'terms and conditions apply;' *promo2* included the terms and conditions immediately below the offer; and *promo3* revealed the true cost of the offer. Moreover, all respondents were asked to calculate the true cost before this figure was revealed. This study enabled us to assess: 1) whether the perceived attractiveness of wagering inducements with bonus bets varied with the information provided about their play-through conditions; 2) bettors' comprehension of their true cost; and 3) whether bettors' comprehension of their true cost varied by gambler risk group.

2.2.4 Psychophysiological study

This study used both self-report and psychophysiological measurements to examine the appeal of wagering inducements, compared to non-wagering inducements, as well as the amount of attention, excitement, and desire to gamble elicited by advertisements for four different types of wagering inducements. The 60 participants comprised sports bettors from each of the four PGSI groups (NPG, LR, MR and PG), and a sample of NGs as a control group. They watched 12 real advertisements at our research laboratory in Melbourne. Half of these advertisements were wagering advertisements, with four of these including inducements (better odds, bonus bet, reduced risk, cash rebate) and two not including any inducements (i.e., general brand awareness advertisements). As another point of comparison, six car advertisements, featuring similar inducements and brand awareness messages, were included. Car advertisements were chosen because this product category was the only one we could identify with advertisements that featured all relevant types of inducements. Participants' electrodermal, cardiac, and eye movement responses to these advertisements were measured to determine any differential effects of the various advertisements, including whether these quantities varied for adults vulnerable to gambling problems when compared to less-vulnerable others. Participants also rated how stimulating they found each advertisement and, for advertisements with inducements, how likely they would be to take up each offer. This study allowed us to assess the role

of wagering inducements in eliciting attention, excitement, and the desire to bet, and enabled comparisons amongst NGs and the four PGSI groups of sports bettors.

2.2.5 Interview study

This qualitative study of regular race and sports bettors aimed to identify causal mechanisms driving betting-related responses to wagering advertisements and inducements. A sample of 31 regular race and sports bettors was recruited from participants in the EMA study — 16 from the race betting stage, and 15 from the sports betting stage. The interviews focused on factors that influenced participants' betting over the previous few months, including any influence from wagering marketing. Data were analysed using constructivist grounded theory methods. This study enabled us to develop a model of influences from wagering advertisements and inducements, including environmental, situational, structural, and individual factors.

2.3 Scope of the research

The following clarifications are made in relation to the study's scope:

- The aims of the study, as specified by the funding agency, are descriptive rather than explanatory — focusing on the impacts of different types of wagering advertisements and inducements on gambling attitudes and behaviour and on different gambler risk groups. Because the study did not set out to explain the effects of wagering advertising on consumers, and the process that may be involved in this persuasive communication, identifying and testing an *a priori* theoretical model was considered unnecessary. Nevertheless, the seminal AIDA model (which stands for Attention, Interest, Desire, Action) was helpful in interpreting the study's results. It is the most popular model that has been widely used to study and measure the effect of advertising (Wijaya, 2015). This hierarchical model presents a four stage process to explain how persuasive communication, such as advertising, works by 1) getting the attention of potential customers; 2) gaining their interest in the product, service, offer or brand; 3) converting this interest into desire for what is being offered; 3) resulting in purchase intentions and purchase action (Rawal, 2013).

- The design included the broad scope of wagering advertisements and inducements, but with particular emphasis on the latter. The EMA study and the interview study accommodated all types of wagering advertisements and inducements to which consumers are exposed. The experimental, psychophysiological, and play-through studies focused specifically on responses to wagering inducements.

- Vulnerable adults were defined as those at risk of experiencing gambling-related harm aged 18 years or over. Problem Gambling Severity Index (PGSI) score is a commonly used proxy of gambling harm, such that NPGs (0) experience no harm; LRs (1-2) experience low levels of harm; MRs (3-7) experience moderate harm; and PGs (8-27) typically experience severe harm (Ferris & Wynne, 2001). Some sub-analyses in the current study combined MRs and PGs where cell counts were low, while others used PGSI scores rather than categories, as appropriate to the analyses.

- The empirical stages of research contributed differentially to addressing the three RQs identified in Chapter 1. This is clarified in Table 1, along with the samples for each stage.

- In summary, the five stages of empirical research provided several sources of evidence that were integrated to address the research questions, in order to provide a comprehensive and cohesive study. The EMA study was included to collect (close to) real-time advertising exposure and betting data to ensure ecological validity. The experimental study then manipulated exposure to advertising to test for effects on betting behaviour. The psychophysiological study captured non-betting responses to advertising exposure, to help to explain the process of advertising persuasion in attracting attention, gaining interest/excitement, engaging desire and shaping intention to bet. The play-through conditions study focused on a widely used incentive, bonus bets, and common conditions that apply to their use in wagering inducements. The interview study examined the effects of wagering advertisements and inducements within the broader contexts in which they are received, including the influence of environmental, situational, structural, and individual factors.

Table 1. Research stages, samples, and research questions addressed

Stage	Samples	RQ1	RQ2	RQ3
EMA study	320 regular* Australian sports bettors and 402 regular Australian race bettors	√	√	√
Experimental study	186 regular Victorian sports bettors on cricket, AFL or soccer; 113 non-regular Victorian sports bettors	√	√	√
Play-through conditions study	Same sample as experimental study	√	√	
Psychophysiological study	37 regular Victorian sports bettors, 12 at-least monthly Victorian sports bettors, and 11 NGs from Victoria	√	√	
Interview study	15 regular Victorian sports bettors and 16 regular Victorian race bettors	√	√	√

Note: RQ1: What is the impact of wagering marketing on vulnerable adults? RQ2: Are particular marketing approaches associated with increases in potentially harmful gambling behaviours? RQ3: Do gambling inducements change gambler behaviour and attitudes? * Regular bettors for all samples were defined as those who bet at-least fortnightly during the last 12 months.

3. Ecological Momentary Assessment Study

Key findings for EMA Aim 1

Aim 1 of the EMA study was to examine exposure to wagering advertisements and inducements, and their reported influence on the size, frequency, and riskiness of bets placed — amongst regular race bettors and sports bettors, and by PGSI group.

- The results confirm the proliferation of wagering advertisements across a wide range of media, and indicate that they are frequently seen by regular bettors.
- Inducements are also frequently seen, but less so than advertisements. This may be because some, but not all, advertisements can contain inducements.
- Two types of advertisements were reported to particularly influence betting behaviour — personal emails, text messages, or phone calls from betting companies (direct messages), and advertisements on betting websites or apps.
- Direct messages influenced the betting of about one-fifth of all bettors during each daily EMA survey period (on average).
- Advertisements on betting websites or apps influenced the betting of about one in six bettors during each daily EMA survey period (on average).
- Amongst both sports and race bettors, advertisements were more likely to prompt the placement of more bets, rather than fewer bets.
- Advertisements were more likely to prompt race bettors to place larger bets than smaller bets, and riskier bets than safer bets.
- Sports bettors were approximately just as likely to place smaller bets as larger bets, and were more likely to report placing safer bets than riskier bets, in response to advertisements.
- Six types of inducements were reported to particularly influence betting behaviour — stake-back offer, multi-bet offer, match your stake or deposit offer, better odds or winnings, cash out early on a multi-bet, and earning points for a rewards program.
- Stake-back offers influenced the betting of about one-quarter of all bettors during each daily EMA survey period (on average).
- Multi-bet offers and match your stake or deposit offers each influenced the betting of about one-fifth of all bettors during each daily EMA survey period (on average).
- Amongst both sports and race bettors, inducements were more likely to prompt the placement of more bets rather than fewer bets, and larger bets rather than smaller bets.
- Race bettors were also more likely to place riskier bets than safer bets in response to wagering inducements, while the reverse was true for sports bettors.
- There was no clear pattern of significant differences by PGSI group in being exposed to, and influenced by, wagering advertisements and inducements.

Key findings for EMA Aim 2

- Aim 2 of the EMA study was to determine whether exposure to wagering advertisements and inducements influenced intended betting expenditure, actual betting expenditure, and spending more than intended — and whether or not this differed by PGSI group.
- The results indicate that greater aggregate exposure to wagering inducements and advertisements is associated with increased likelihood of betting, and increased intended and actual expenditure on race and sports betting.
- Greater aggregate exposure to race betting inducements and advertisements is associated with individuals spending more than they intended on race betting.
- Exposure to inducements and advertisements affects all gamblers; no differential effects on PGs/MRs are apparent.
- Compared to other regular bettors, PGs/MRs tend to spend more on betting on days when they bet, rather than necessarily betting more often.
- In general, exposure to advertisements tended to have a stronger relationship with betting, compared to inducements.
- Amongst race bettors, advertisements associated with increased betting expenditure were brands (betting brands promoted during live and televised race events), direct messaging (personal emails, text messages, or phone calls from race betting companies), gambling websites (advertisements on race betting websites or apps), and commentary (promoting betting or betting odds during live and televised racing events). The only inducement associated with increased race betting expenditure was the stake-back offer (some money back if bet doesn't win). These advertisements and inducements had varying effects. Greater exposure to brands, direct messaging, betting websites/apps, commentary, and stake-back offers increased the likelihood of betting. Greater exposure to brands, commentary, and stake-back offers was associated with increased betting expenditure. Increased exposure to direct messaging increased intention to bet; gambling websites increased the likelihood of betting more than intended; and commentary increased spending more than intended.
- Amongst sports bettors, greater exposure to advertising on websites (advertisements on sports betting websites or apps) and brands (betting brands promoted during live and televised sports events), as well as to multi-bet offer inducements (bonus bet, refund or cash if multi-bet fails by one leg), was associated with a higher likelihood of betting. Rewards program inducements were associated with increased intended betting expenditure. Exposure to website/app advertising was associated with an increased likelihood of betting when not originally intended, as well as the likelihood of betting more than intended.

3.1 Introduction and aims

This stage of the study adopted an Ecological Momentary Assessment (EMA) design. The EMA captured longitudinal real-time data to assess the effects of wagering advertising and inducements on betting-related behaviours of regular race and sports bettors, as it naturally occurred over racing and sporting seasons. This methodology was selected as it maximises ecological validity and minimises recall bias, since its component surveys are conducted at, or very close to, the time and place that the

salient experiences and behaviours occur within an individual's natural environment (Shiffman, Stone & Hufford, 2008). An EMA methodology can therefore provide unique insight into the dynamics that surround affect, cognition, and behaviour within the social and environmental contexts in which they occur. This methodology also minimises the limitations of recall bias that are seen in more global, retrospective self-reports that require participants to report on past behaviour and experiences over long time periods (Shiffman et al., 2008). EMA methodologies are particularly suited to assessing immediate influences on discrete, episodic behaviours, and have therefore been used in relation to cigarette smoking (Shiffman et al., 2002), binge eating (Haedt-Matt & Keel, 2011), alcohol use (Hussong, Hicks, Levy & Curran, 2001; Litt, Cooney & Morse, 2000), and drug use (Freedman, Lester, McNamara, Milby & Schumacher, 2006; Hopper et al., 2006). For these reasons, this approach was considered highly appropriate to examine the influence of wagering marketing on betting related behaviours.

The specific aims of this EMA study were to examine, amongst regular race bettors and regular sports bettors, and by PGSI group:

- exposure to wagering advertisements and inducements, and their reported influence on the size, frequency, and riskiness of bets placed; and
- whether exposure to wagering advertisements and inducements influenced intended betting expenditure, actual betting expenditure, and spending more than intended.

3.2 Method

3.2.1 Recruitment and sampling for the baseline survey

Approval for this research was granted by the Central Queensland University Human Research Ethics Committee (H16/06-178). A total of 722 eligible respondents completed an online survey which targeted two separate samples of Australian adults: regular horse/greyhound race bettors (*n* = 402) and regular sports bettors (*n* = 320). Regular bettors were those who bet at least fortnightly on the targeted gambling activity. Respondents were recruited with the assistance of a major sports betting company operating in Australia, which emailed eligible customers an invitation to complete the survey.[3] To achieve quotas, this sample was supplemented by a sample of regular bettors recruited in a previous five year period by the project's chief investigator. This group was also emailed the invitation. Anyone interested in taking part could click on an embedded link within the invitation that took them to the CQUniversity managed website, which contained an information sheet, consent form, and either the race bettor or sports bettor baseline survey. The betting company had no further involvement in the study nor did they have any access to resultant data. The baseline surveys recruited race bettors in January-February 2017 and sports bettors in May 2017, who consented to participate in the EMA surveys over the following few months.

The dates for the 15 EMA surveys were provided to respondents in the information sheet, allowing them to check their availability and make an informed decision when consenting to participate. The baseline surveys were completed online through the Qualtrics platform, taking approximately 17.5

[3] The betting company knew about, but had no control over, the nature and purpose of the research. We designed the sampling procedure and have no reason to think the betting company manipulated this, given the high proportions of respondents who met criteria for problem and at-risk gambling.

minutes and 18.4 minutes to complete, for race bettors and sports bettors, respectively. Respondents were compensated $10 for the baseline survey in the form of an electronic shopping voucher.

Respondents were screened in the baseline survey to meet the following inclusion criteria: (a) aged 18 years or over, (b) at least fortnightly betting on horse/greyhound races or sports, dependent on the survey invited to, (c) live in Australia, (d) consent to participate in the follow-up EMA surveys and provide their contact details (first name, email, mobile number), (e) have a smartphone and mobile data plan, to complete the Monday to Saturday EMA surveys that were sent via SMS invitation, and (f) have access to a computer or tablet with Internet access, for completion of the longer Sunday EMA surveys that were sent via email and SMS.

3.2.2 EMA surveys

The race and sports bettor samples were invited to complete 15 EMA surveys, across three time periods, being invited to five surveys per week on Monday, Wednesday, Friday, Saturday, and Sunday. The EMA survey dates were selected to coincide with racing and sporting event seasons, and the weekly surveys were conducted three weeks apart (Table 2).

Table 2. EMA survey dates by sample

Stage	EMA survey	First week	Second week	Third week
Race bettors (*n* = 402)	Monday	20/02/2017	13/03/2017	3/04/2017
	Wednesday	22/02/2017	15/03/2017	5/04/2017
	Friday	24/02/2017	17/03/2017	7/04/2017
	Saturday	25/02/2017	18/03/2017	8/04/2017
	Sunday	26/02/2017	19/03/2017	9/04/2017
Sports bettors (*n* = 320)	Monday	22/05/2017	12/06/2017	3/07/2017
	Wednesday	24/05/2017	14/06/2017	5/07/2017
	Friday	26/05/2017	16/06/2017	7/07/2017
	Saturday	27/05/2017	17/06/2017	8/07/2017
	Sunday	28/05/2017	18/06/2017	9/07/2017

The Monday to Saturday surveys were designed to take 3-5 minutes to complete, and asked respondents questions pertaining to the previous 24/48 hours (since the last survey) about their betting expenditure, exposure to, and influence of, advertisements and inducements on betting behaviour, and then their intended betting expenditure for the next 24/48 hours (until the next survey). A weblink to the Monday to Saturday surveys was sent to respondents via SMS, with the intention that the survey would be completed via their mobile device, allowing behaviour to be captured as close to 'real-time', as possible. The Sunday surveys were designed to take about 10 minutes to complete, and asked respondents questions pertaining to the past week's betting behaviour, various situational factors, and the influence of advertisements and promotions on their betting behaviour. These questions were also asked about the *last bet* made that week. Sunday surveys were sent via SMS and email to respondents, and could be completed on the respondent's smartphone, computer, or tablet.

Invitations to all EMA surveys were sent at 5pm on the day, and reminders at 10am the following day. Surveys had to be to completed by 4.30pm on the second day. To maximise response rates,

reminders of the upcoming week of EMA surveys were sent via email and SMS in the week leading up to the first Monday survey. After the last EMA survey was completed, respondents were reimbursed a tiered amount based on the number of EMA surveys completed (excluding the initial baseline survey) in the form of an electronic shopping voucher: $30 for 4-8 surveys, $70 for 9-12 surveys, and $100 for 13-15 surveys.

Response rates for the individual EMA surveys ranged from 50-69% for race bettors and 57-76% for sports bettors. Table 3 shows response rates by week and day. Approximately one-third of each sample (31.8% race bettors; 38.1% sports bettors) completed all 15 EMA surveys (Table 4),[4]

Table 3. Response rates by EMA survey by data collection weeks

Stage	EMA survey	First week n (%)	Second week n (%)	Third week n (%)
Race bettors (*n* = 402)	Monday	277 (68.9)	250 (62.2)	228 (56.7)
	Wednesday	253 (62.9)	237 (59)	221 (55)
	Friday	249 (61.9)	230 (57.2)	214 (53.2)
	Saturday	246 (61.2)	217 (54)	202 (50.2)
	Sunday	272 (67.7)	249 (61.9)	229 (57)
Sports bettors (*n* = 320)	Monday	243 (75.9)	216 (67.5)	204 (63.8)
	Wednesday	239 (74.7)	209 (65.3)	210 (65.6)
	Friday	231 (72.2)	205 (64.1)	194 (60.6)
	Saturday	228 (71.3)	197 (61.6)	185 (57.8)
	Sunday	240 (75.0)	218 (68.1)	206 (64.4)

Table 4. Response rates by total number of surveys completed and sample

Total EMA surveys completed	Race bettors n (%)	Sports bettors n (%)
0	86 (21.4)	41 (12.8)
1	26 (6.5)	17 (5.3)
2	8 (2.0)	9 (2.8)
3	12 (3.0)	8 (2.5)
4	6 (1.5)	2 (0.6)
5	5 (1.2)	7 (2.2)
6	4 (1.0)	8 (2.5)
7	10 (2.5)	5 (1.6)
8	6 (1.5)	11 (3.4)
9	4 (1.0)	6 (1.9)
10	12 (3.0)	8 (2.5)
11	12 (3.0)	11 (3.4)
12	14 (3.5)	10 (3.1)
13	24 (6.0)	23 (7.2)
14	45 (11.2)	32 (10.0)
15	128 (31.8)	122 (38.1)
Total	**402 (100)**	**320 (100)**

[4] In order to determine if there was any attritional bias in the samples, we examined the number of surveys completed by age and gender. No relationship was found between number of surveys completed and age (race bettors r = .07, p = .253; sports bettors r = -.02, p = .755). There were few females in either sample, and no relationship was found between gender and number of surveys completed (race bettors t(243) = 1.70, p = .091; sports bettors t(15.73) = 1.31, p = .210).

3.2.3 Measures

The baseline and EMA survey instruments are included as Appendix A and Appendix B respectively.

Types of wagering advertisements and inducements included

The types of racing and sports wagering advertisements and inducements, that were the subject of various measures, were selected based on previous research, and the research team's knowledge of common wagering advertisements and inducements offered by betting operators. Specifically, we utilised the list of wagering advertisements used in a national Australian study of wagering advertising (Sproston et al., 2015) and the list of wagering inducements generated by an audit of these inducements (Hing et al., 2015c), and added two inducement types – cash out early on a multi-bet (a recently introduced inducement type) and rewards program offers (which had been out-of-scope in Hing et al.'s 2015c study). These are listed in Table 5, along with their abbreviations, as used in subsequent tables.

Table 5. Race and sports betting advertisements and promotions

Advertisements	**Abbreviation**
Betting brands promoted during live and televised [race/sports] events (e.g., logos, signage)	Brands during events
Commentary promoting betting or betting odds during live and televised [racing/sports] events	Commentary during events
Betting/odds related discussions in [race/sports] entertainment shows (e.g., [The Good Oil/The Footy Show])	Discussions in sports shows
TV advertisements for betting brands	TV adverts
Radio or print advertisements for betting brands	Radio or print adverts
Advertisements on [race/sports] betting websites or apps (e.g., promoting particular bets)	Adverts on betting websites/apps
[Race/Sports] betting advertisements on unrelated websites or apps	Adverts on unrelated websites/apps
Personal emails, text messages, or phone calls from [race/sports] betting companies	Direct messages
Social media posts by [race/sport] betting companies (e.g., on Facebook, Twitter, etc.)	Social media posts
Promotions	**Abbreviation**
Sign up bonus (to open a betting account)	Sign up bonus
Refer a friend offer	Refer a friend offer
Click to call bonus (for using this technology to place in-play bet)	Click to call bonus
Mobile betting bonus (for betting via mobile phone or tablet)	Mobile betting bonus
Multi-bet offer (bonus bet, refund or cash if multi-bet fails by one leg)	Multi-bet offer
Stake-back offer (some money back if bet doesn't win)	Stake-back offer
Match your stake or deposit (with bonus bets)	Match your stake/deposit
Better odds or winnings for certain combined bets	Better odds or winnings
Happy hours with better odds or winnings	Happy hours
Cash out early on a multi-bet	Cash out early on multi-bet
Rewards program run by betting companies	Rewards program

Baseline survey measures

The baseline survey contained the following measures. Not all measures are relevant to the analyses presented in this report.

Demographic information: This comprised age (years), gender, country of birth (Australia or other), postcode, residential state/territory, main language spoken at home (English or other), education level, household structure, employment status, annual personal income, and weekly expenditure on recreational activities.

Problem gambling: All respondents completed the 9-item PGSI (Ferris & Wynne, 2001) in the baseline survey, which is the most widely used and validated measure of problem gambling severity in Australia (Problem Gambling Research and Treatment Centre, 2011). The PGSI contains nine items with four response options: 'Never' (0), 'Sometimes' (1), 'Most of the time' (2), and 'Almost always' (3). Total scores were summed across the 9 items, and respondents were categorised by PGSI score into NPGs (0), LRs (1-2), MRs (3-7), and PGs (8-27).

Psychological distress: Respondents completed the Kessler 6 (K6; Kessler et al., 2002), which covers symptoms of nervousness, hopelessness, restlessness, depression, worthlessness, and effort. Response options were: 'none of the time' (0), 'a little of the time' (1), 'some of the time' (2), 'most of the time' (3) and 'all of the time' (4). A sum of the scores on all six items was calculated to give an index of psychological distress.

Impulsiveness: This was measured by the 8-item Barratt Impulsiveness Scale-Brief (BIS-Brief; Steinberg, Sharp, Stanford & Tharp, 2013). Response options were 'Rarely/never' (1), 'Occasionally' (2), 'Often' (3) and 'Almost always/always' (4), to statements such as 'I do things without thinking', 'I am self-controlled' (reverse coded), and 'I act on the spur of the moment'. After appropriate reverse coding, the mean score across all items was computed and used in subsequent analyses.

Alcohol consumption: A shortened version of the Alcohol Use Disorders Identification Test (AUDIT-C; Babor, Higgins-Biddle, Saunders, & Monteiro, 2001) measured alcohol consumption, including identification of hazardous or harmful drinking, and alcohol dependence. The first question asked for the frequency of drinking alcohol in the past year on a scale from 'never' (0) to '4 or more times a week' (4). Respondents drinking alcohol in the past year were then asked for the number of alcoholic drinks consumed on a 'typical day' when drinking. Lastly, drinkers were asked for the past year 'how often do you have six or more drinks on one occasion' on a scale from 'never' (1) to 'daily or almost daily' (5).

Gambling and betting behaviour: This comprised: age when started betting regularly (fortnightly) on racing/sports; number of days in the last month bet on racing/sports; money placed on race/sports bets in the past month ($AUD); frequency of planned spend on betting; frequency of watching/listening to event bet on; frequency of betting when affected by alcohol; frequency of betting when affected by drugs; types of information used to inform race/sports betting in the last month; number of wagering accounts with sports betting operators; degree of being in touch with the world of racing/sports in the last month; and expenditure on other types of gambling in the last month.

Exposure to and perceived influence of wagering advertisements and inducements: For each type of advertisement and inducement listed in Table 5, respondents were asked how often they had seen or heard it in the last month, on a response scale: 'Never — did not see/hear this at all over the last month' (1), 'Sometimes — once a week or less' (2), 'Often — several times a week' (3), 'Very often — daily or almost daily' (4), or 'Extremely often — several times a day' (5). For the advertisements and inducements that respondents had seen or heard, they were then asked to report how much each

type influenced their race/sports betting (e.g., to place more bets, riskier bets, or bet more money): 'Not at all' (1), 'Somewhat' (2), or 'A lot' (3).

EMA survey measures

The EMA surveys contained the following measures. Not all measures are relevant to the analyses presented in this report.

Exposure to, and perceived influence of, wagering advertisements and inducements: The Monday to Sunday EMA surveys asked respondents how often they had heard/seen each type of advertisement or inducement listed in Table 5 *in the last 24 or 48 hours* (since the last survey), rated on a scale from 'Never' (1), 'A few times' (2), to 'Often' (3). Then, for each type of advertisement and inducement they reported being exposed to 'A few times' or 'Often', respondents were asked whether and how this had influenced their betting. Specifically, participants were asked to respond 'yes' or 'no' to the following statements: I bet smaller amounts, I bet larger amounts, I placed fewer bets, I placed more bets, I placed safer bets, I placed riskier bets, or 'other influence' to be specified.

Additionally, the EMA Sunday survey asked respondents about the frequency of betting *in the past week*, on a 4 point scale (1 = 'Never' to 4 = 'Almost always') in response to seeing or hearing betting advertisements or inducements, based on aspects of the offer or other factors (e.g., 'it offered you a good deal', 'you had extra money available', 'it was a special sports event', 'it was convenient and easy to place the bet').

Of all the advertisements and inducements exposed to throughout the week, respondents were then asked which were *most influential* on their betting in the *past week*, and in what ways they influenced their race/sports betting. Respondents answered 'yes' or 'no' to the following: I bet smaller amounts, I bet larger amounts, I placed fewer bets, I placed more bets, I placed safer bets, I placed riskier bets, or 'other influence' to be specified.

Lastly, respondents were asked specifically about the influence of advertisements and inducements exposed to in the past week on their *last bet,* using the same response options of 'how much' and 'in what ways' they were influenced.

Betting behaviour: The EMA surveys asked respondents their actual betting expenditure for the last 24/48 hours (since the last survey) and intended betting expenditure in the next 24/48 hours (until the next survey). As a check on betting expenditure, the Sunday EMA survey asked for total past week betting expenditure if a respondent reported betting $0 in all the EMA surveys for that week, or if they had missing data for any of the 5 (daily) expenditure questions. The EMA Sunday survey also collected *past week* information on betting behaviour, including: number of bets per day; percentage of bets planned versus on impulse; and percentage of bets placed by different modes (e.g., online using a smartphone; online using a computer, tablet, laptop or TV; telephone call; at a land-based venue). The sports betting sample were also asked (in relation to the past week): the percentage of bets placed before versus during a match they had bet on; and the percentage of bets made by type (match outcome, exotic bets, micro bets). Expenditure, planned versus impulse, and mode used to place bet were also asked of the *last bet* made that week.

Situational variables: The situational context of race/sports betting in the *past week,* and for the *last bet,* was also of interest. For the past week, respondents were asked all locations they placed bets (e.g., home, work, licensed venue, racetrack) and where they placed most of their bets; percentage of bets placed alone/with friends/with acquaintances or other, less known, people; and frequency of

betting on race/sports when affected by alcohol and illicit drugs ('never' to 'almost always'). For the last bet made that week, respondents were asked about betting location; who they bet with; whether they were affected by alcohol or illicit drugs; and whether their bet was influenced by various information sources (e.g., a tip from a friend/family/colleague; a free tip from an expert; or a purchased tip from an expert). Finally, sports bettors were asked whether they currently had any type of betting restrictions placed on them by betting operators (e.g., bets refused by operator, operator-imposed limits on betting, operator sends fewer promotions than previously).

3.2.4 Participant characteristics

Demographics

Appendix C shows the demographic characteristics of respondents to the baseline surveys of race bettors and sports bettors. The majority of both samples were Australian born, English speaking, male (88.1% of race bettors; 92.5% of sports bettors), employed full-time, had post-secondary education, and lived as a couple with or without dependent children. Ages ranged between 18 and 84 years, with mean ages of 41.3 (*SD* = 13.7) years and 40.7 (*SD* = 14.1) years for race bettors and sports bettors, respectively. The recruitment purposefully oversampled respondents living in the state of Victoria, due to the location and focus of the funding agency.

Problem gambling

A reasonably equal distribution of NPGs, LRs and MRs was recruited, with a lower proportion of PGs amongst both race and sports bettors (Table 6). Because our samples comprised regular bettors, higher proportions of at-risk and PGs were found than in the general population. The sampling of regular bettors maximised the sample size in each PGSI group, facilitating comparative analyses.

Table 6. Problem gambling status by survey sample

PGSI Status	Race Bettors n (%)	Sports Bettors n (%)
NPG	118 (29.4)	83 (25.9)
LR	102 (25.4)	95 (29.7)
MR	118 (29.4)	100 (31.3)
PG	64 (15.9)	42 (13.1)

3.3 Analysis and results for Aim 1: Exposure to and perceived influence of wagering advertisements and inducements

The first aim of the EMA study was to examine exposure to wagering advertisements and inducements, and their reported influence on the size, frequency, and riskiness of bets placed — amongst regular race bettors and sports bettors, and by PGSI group. While these represent self-reported descriptive data only, the collection of these data every 24/48 hours during the EMA survey periods minimised recall bias. Additionally, we were able to compare the self-reported influence that the wagering advertisements and inducements had on betting behaviour to their actual influence on betting expenditure (EMA Aim 2) — to assess participants' introspective ability. This assessment can inform the design of future research studies into the influence of gambling marketing.

In addressing the first aim of the EMA study, only the 233 race bettors and 203 sports bettors who completed at least 10 of the 15 EMA surveys were included in the analyses — to optimise the reliability of the results. Their demographic characteristics are shown in Appendix D. For each of these participants, we created summary variables for each type of advertisement and inducement. These captured whether a participant *ever* reported seeing/hearing or being influenced by each advertisement and inducement in any EMA survey, and the proportion of EMAs in which they reported seeing/hearing or being influenced by each advertisement and inducement. For example, if a participant reported seeing the multi-bet inducement in 12 out of 15 completed surveys, their score was .8 or 80%. Thus, each participant had a variable that captured exposure in general, the relative frequency of exposure, and influence in general, as well as the relative frequency of influence. We also analysed the proportion of respondents who reported being influenced by each advertisement and inducement at each of the 15 surveys during the EMA period, both as a percentage of those who saw each type of marketing and as a percentage of the total sample. As these proportions were relatively stable during the EMA period, we report an average of these percentages.

Comparisons were made between PGSI groups in terms of the percentage who reported *ever* seeing/hearing, or being influenced by, each advertisement and inducement during the EMA surveys (chi-square tests with pairwise tests of independence), and in terms of their frequency of exposure (one-way ANOVAs with pairwise Tukey tests). This repeated testing occurred over 9 advertisements and 11 inducements (Table 5), and alpha was thus, reduced to (.05/20 =) .0025 for these comparisons.

Results for Aim 1 are presented below in relation to wagering advertisements, then for wagering inducements.

3.3.1 Exposure to and perceived influence of wagering advertisements

Exposure to advertisements

More than 90% of both sports and race bettors reported seeing most of the nine types of advertisements during the survey period. On average, respondents reported seeing most of these types of advertisements on about half of the EMA days surveyed. The most frequently seen were TV

advertisements for betting brands, and betting brands promoted during live and televised sports/race events (Table 7).

Table 7. Exposure to wagering advertisements

Advertisement	Sports bettors		Race bettors	
	% ever saw/heard[a]	Frequency of exposure[b] (Mean, SD)	% ever saw/heard[a]	Frequency of exposure[b] (Mean, SD)
Brands during events	99.5	66.8 (27.3)	97.4	62.6 (29.9)
Commentary during events	94.6	49.7 (30.8)	95.3	52.2 (31.3)
Discussions in sports shows	91.1	41.7 (31.6)	81.1	34.6 (31.7)
TV adverts	98.0	68.6 (29.9)	98.3	68.0 (29.1)
Radio or print adverts	88.7	44.8 (33.9)	91.8	52.4 (34.7)
Adverts on betting websites/apps	97.5	60.0 (29.4)	97.9	58.1 (30.3)
Adverts on unrelated websites/apps	90.1	42.1 (32.1)	83.3	41.2 (34.0)
Direct messages	97.0	54.4 (29.3)	96.1	58.1 (30.2)
Social media posts	77.3	43.6 (38.2)	73.0	42.9 (38.3)

Note: [a] based on whether a participant ever reported seeing/hearing an advertisement in any EMA. [b] Proportion of EMAs in which they reported seeing/hearing each advertisement.

Perceived influence of advertisements

Between 29-66% of both sports and race bettors reported being influenced by each type of advertisement at some point during the *three week* survey period. On average, each type of advertisement influenced between 9-21% of both sports and race bettors during each *daily* EMA survey period (Table 8).

Two types of advertisements stood out as being (reportedly) most influential on betting behaviour. The most influential was personal emails, text messages, or phone calls from betting companies (direct messages). These reportedly influenced the betting of 60.1% of sports bettors and 66.5% of race bettors at some point during the three EMA survey weeks; and influenced an average of 20.6% of sports bettors, and 21.5% of race bettors, during each daily EMA survey period. The next most influential was advertisements on betting websites or apps. These reportedly influenced the betting of 52.7% of sports bettors and 49.8% of race bettors at some point during the three EMA survey weeks; and influenced an average of 17.0% of sports bettors and 13.2% of race bettors during each daily EMA survey period.

Table 8. Perceived influence of wagering advertisements

Advertisement	% ever influenced[a]	Frequency of influence[b] (Mean, SD)	% influenced (those who saw/heard[c])	% influenced (total sample[c])
Sports bettors				
Brands during events	41.4	10.8 (19.9)	21.5	14.4
Commentary during events	42.9	10.1 (19.2)	24.4	12.2
Discussions in sports shows	42.4	10.2 (18.4)	28.7	12.0
TV adverts	42.9	10.7 (19.4)	20.5	14.1
Radio or print adverts	30.5	8.1 (16.8)	22.2	10.0
Adverts on betting websites/apps	52.7	14.2 (21.7)	28.5	17.0
Adverts on unrelated websites/apps	29.6	8.1 (18.4)	23.6	9.9
Direct messages	60.1	16.4 (21.5)	37.6	20.6
Social media posts	33.5	10.8 (19.6)	24.7	10.7
Race bettors				
Brands during events	35.2	8.4 (17.5)	16.8	10.5
Commentary during events	44.6	11.2 (19.9)	24.7	12.9
Discussions in sports shows	39.9	11.4 (17.2)	30.3	10.5
TV adverts	39.5	9.1 (17.5)	17.2	11.6
Radio or print adverts	32.2	8.6 (17.5)	19.1	10.0
Adverts on betting websites/apps	49.8	11.6 (19.6)	22.9	13.2
Adverts on unrelated websites/apps	28.8	8.7 (17.6)	21.1	8.6
Direct messages	66.5	18.8 (22.5)	37.0	21.5
Social media posts	33.9	13.5 (21.4)	28.1	12.0

Note: [a] based on whether a participant ever reported being influenced by an advertisement in any EMA. [b] Proportion of EMAs in which they reported being influenced by each promotion. [c] averaged over all EMAs.

Most influential advertisements

The three Sunday surveys confirmed that both the sports and race bettors perceived direct messages to have the most influence on their betting behaviour (between 31-46% of the sample at each Sunday survey) (Table 9). This was followed by advertisements on betting websites or apps (around 17-19% of sports bettors and 6-14% of race bettors), and betting/odds related discussions in sports/race entertainment shows (7-11% of sports bettors and 10-14% of race bettors). The latter was the least frequently seen type of advertising, but may be particularly influential as a strong push mechanism for betting.

Table 9. Most influential advertisement each week (Sunday surveys)

Advertisement	Week 1	Week 2	Week 3
Sports bettors			
Brands during events	6.6	5.7	9.0
Commentary during events	3.6	8.5	10.1
Discussions in sports shows	10.9	9.4	6.7
TV adverts	9.5	7.5	9.0
Radio or print adverts	0.0	1.9	4.5
Adverts on betting websites/apps	16.8	17.0	19.1
Adverts on unrelated websites/apps	1.5	4.7	3.4
Direct messages	42.3	36.8	31.5
Social media posts	8.8	8.5	6.7
Race bettors			
Brands during events	4.2	5.8	8.3
Commentary during events	9.1	0.0	10.1
Discussions in sports shows	13.9	13.0	10.1
TV adverts	6.7	3.6	8.3
Radio or print adverts	3.6	2.2	3.7
Adverts on betting websites/apps	6.1	13.8	10.1
Adverts on unrelated websites/apps	1.2	0.7	2.8
Direct messages	46.1	40.6	35.8
Social media posts	9.1	7.2	11.0

How advertisements influence bettors

Race bettors who were influenced by each type of advertisement were more likely to report placing larger, rather than smaller, bets as a result of wagering advertisements. Sports bettors were approximately just as likely to report placing smaller bets as larger bets due to advertisements. Amongst sports bettors, the types of advertisements that were most likely to prompt larger bets were direct messages from betting companies, and advertisements on sports betting websites or apps. Amongst race bettors, all types of advertisements reportedly prompted larger, rather than smaller, bets (on average).

Both sports and race bettors were more likely to report placing more bets due to advertisements, rather than fewer bets. All types of advertisements had this reported effect on both samples.

Sports bettors were more likely to report placing safer bets as a result of advertisements, rather than riskier bets, while the results were more balanced for race bettors. Amongst sports bettors, all types of advertisements were more likely to prompt safer bets rather than riskier bets. Amongst race bettors, race betting advertisements on unrelated websites or apps, commentary promoting betting or betting odds during live and televised race events, and advertisements on race betting websites or apps were the most likely types of advertisements to prompt riskier bets.

Table 10. How each advertisement was influential, amongst those influenced

Advertisement	Smaller bets	Larger bets	Fewer bets	More bets	Safer bets	Riskier bets	Other
Sports bettors							
Brands during events	34.1	33.4	27.4	52.6	48.8	24.3	11.5
Commentary during events	33.8	37.2	32.6	52.6	45.0	26.2	15.2
Discussions in sports shows	39.1	31.3	32.9	46.7	43.3	27.6	11.2
TV adverts	33.0	25.7	32.3	51.5	46.0	20.8	12.6
Radio or print adverts	37.5	27.0	35.0	45.6	52.8	24.9	14.2
Adverts on betting websites/apps	24.3	46.7	24.2	58.1	36.5	29.5	12.6
Adverts on unrelated websites/apps	42.4	37.4	38.7	39.8	43.5	29.8	16.0
Direct messages	20.7	46.2	17.4	63.5	35.0	32.6	9.9
Social media posts	43.6	37.5	35.4	49.4	41.9	36.9	10.1
Race bettors							
Brands during events	27.0	45.6	23.5	56.2	33.8	39.7	4.9
Commentary during events	22.3	46.6	17.4	57.7	28.7	41.3	6.7
Discussions in sports shows	24.4	45.3	18.5	56.4	33.6	35.0	6.6
TV adverts	33.9	40.6	27.5	51.9	37.2	35.0	6.2
Radio or print adverts	26.7	46.9	19.5	54.7	31.5	37.8	4.7
Adverts on betting websites/apps	24.0	43.5	19.1	59.2	34.6	40.4	9.1
Adverts on unrelated websites/apps	29.8	46.1	25.3	51.7	34.2	42.6	4.4
Direct messages	19.0	40.2	15.8	63.9	34.5	32.4	10.8
Social media posts	29.2	40.5	27.1	57.4	39.1	34.3	6.2

Comparisons based on PGSI group

To test if any advertisement was seen/heard more by, or were more influential on, different PGSI groups, we ran a series of one-way ANOVAs (with PGSI group as the independent variable), with Tukey pairwise comparisons. The dependent variables were the proportion of EMAs in which respondents reported seeing/hearing each advertisement and the proportion of EMAs in which they reported being influenced by each advertisement. Because we were conducting comparisons of 9 advertisements (and 11 inducements, reported below), alpha was set to .05/20 = .0025, to reduce the risk of Type I error.

Only two significant differences were found. Amongst race bettors, PGs were significantly more likely to report being influenced by betting brands promoted during live and televised events, and commentary promoting betting or betting odds during live and televised events in more of the EMAs compared to NPGs (p = .001 and .002, respectively). Additionally, no significant results were detected for comparisons between PGSI groups, in terms of the most influential advertisement, as captured by the Sunday surveys.

3.3.2 Exposure to and perceived influence of wagering inducements

Exposure to inducements

More than 80% of both sports and race bettors reported seeing seven of the 11 types of inducements during the survey period, and over 57% had seen nine of the 11 types (Table 11). The most frequently seen inducement types were multi-bet offers, stake-back offers, match your stake or deposit offers, and cash out early on a multi-bet (seen during 44-60% of EMAs).

Table 11. Exposure to wagering inducements

Inducement	Sports bettors		Race bettors	
	% ever saw/heard[a]	Frequency of exposure[b] (Mean, *SD*)	% ever saw/heard[a]	Frequency of exposure[b] (Mean, *SD*)
Sign up bonus	89.2	39.2 (30.2)	90.1	45.4 (32.3)
Refer a friend offer	60.6	18.3 (25.3)	57.1	19.3 (27.8)
Click to call bonus	43.3	14.2 (23.6)	48.5	15.8 (25.7)
Mobile betting bonus	61.1	20.8 (27.4)	62.2	24.8 (31.7)
Multi-bet offer	99.0	59.7 (28.2)	94.0	53.3 (32.5)
Stake-back offer	98.5	56.6 (29.2)	98.3	58.5 (27.6)
Match your stake/deposit	96.1	45.2 (29.1)	97.9	51.6 (28.8)
Better odds or winnings	87.2	32.7 (28.7)	85.0	35.6 (30.7)
Happy hours	41.4	10.9 (20.1)	43.3	12.8 (23.2)
Cash out early on multi-bet	88.2	44.0 (32.7)	89.3	46.5 (33.9)
Rewards program	87.2	40.2 (33.1)	90.1	45.5 (33.1)

Note: [a] based on whether a participant ever reported seeing/hearing an inducement in any EMA. [b] Proportion of EMAs in which they reported seeing/hearing each inducement.

Perceived influence of inducements

Between 17-65% of sports bettors, and 12-70% of race bettors, reported being influenced by each type of inducement at some point during the *three week* survey period. On average, each type of inducement influenced between 4-26% of both sports and race bettors during each *daily* EMA survey period (Table 12). These results indicate wide variation between the reported influence of the 11 inducement types on betting behaviour.

Six types of inducements stood out as being particularly influential on the betting behaviour of sports bettors. The most influential was the stake-back offer, which reportedly influenced the betting of 64.5% of sports bettors at some point during the three EMA survey weeks; and influenced an average of 24.9% of sports bettors during each daily EMA survey period. This was followed by the multi-bet offer (62.1%, 23.0%) and match your stake or deposit offer (56.7%, 18.2%). Better odds or winnings, cash out early on a multi-bet, and earning points for a rewards program were also amongst the most influential sport betting inducements.

These same six types of inducements were also reported as the most influential on the betting behaviour of race bettors, although in a slightly different order. The stake-back offer was, again, the most influential, reportedly influencing the betting of 70.0% of race bettors at some point during the three EMA survey weeks; and influencing an average of 26.0% of race bettors during each daily EMA survey period. This was followed by the match your stake or deposit offer (61.8%, 19.3%) and multi-

bet offer (45.1%,16.2%). Consistent with the sports bettor results, better odds or winnings, cash out early on a multi-bet, and earning points for a rewards program were also amongst the most influential race betting inducements.

Table 12. Perceived influence of wagering inducements

Inducement	% ever influenced[a]	Frequency of influence[b] (Mean, *SD*)	% influenced (those who saw/heard[c])	% influenced (total sample[c])
Sports bettors				
Sign up bonus	26.1	7.0 (17.3)	20.0	7.8
Refer a friend offer	17.2	6.3 (16.0)	24.2	4.4
Click to call bonus	17.2	9.8 (19.9)	37.4	5.3
Mobile betting bonus	26.6	10.9 (19.3)	37.9	7.9
Multi-bet offer	62.1	17.6 (23.0)	38.5	23.0
Stake-back offer	64.5	19.4 (24.5)	43.8	24.9
Match your stake/deposit	56.7	14.9 (22.4)	40.2	18.2
Better odds or winnings	51.7	13.1 (20.5)	43.4	14.1
Happy hours	20.2	10.7 (18.9)	46.2	5.0
Cash out early on multi-bet	48.3	14.6 (22.5)	37.1	16.4
Rewards program	45.8	14.1 (23.7)	37.9	15.2
Race bettors				
Sign up bonus	29.6	5.6 (13.6)	15.2	6.9
Refer a friend offer	12.0	3.4 (12.4)	22.2	4.2
Click to call bonus	14.6	3.7 (12.5)	28.8	4.5
Mobile betting bonus	24.9	6.3 (16.0)	31.6	7.7
Multi-bet offer	45.1	13.2 (21.8)	30.8	16.2
Stake-back offer	70.0	21.9 (24.5)	44.6	26.0
Match your stake/deposit	61.8	15.8 (20.7)	37.5	19.3
Better odds or winnings	45.9	11.1 (19.5)	39.2	13.7
Happy hours	18.0	4.6 (14.4)	43.9	5.6
Cash out early on multi-bet	33.5	8.8 (19.0)	23.9	11.0
Rewards program	45.5	11.4 (20.0)	31.7	14.4

Note: [a] based on whether a participant ever reported being influenced by an inducement in any EMA. [b] Proportion of EMAs in which they reported being influenced by each inducement. [c] averaged over all EMAs.

Most influential inducements

The three Sunday surveys confirmed that both the sports and race bettors perceived stake-back offers to have the most influence on their betting (23-33% of the sports bettor sample and 42-46% of the race bettor sample at each Sunday survey). These results also confirmed the greater influence of multi-bet offers, match your stake or deposit offers, better odds or winnings, and earning points for a rewards program, compared to the remaining types of inducements, along with cash out early on a multi-bet amongst sports bettors (Table 13).

Table 13. Most influential inducement each week (Sunday surveys)

Inducement	Week 1	Week 2	Week 3
Sports bettors			
Sign up bonus	2.6	3.8	2.8
Refer a friend offer	0.7	0.0	0.9
Click to call bonus	0.0	0.8	0.0
Mobile betting bonus	3.3	2.3	1.9
Multi-bet offer	20.4	18.2	18.5
Stake-back offer	23.0	33.3	24.1
Match your stake/deposit	19.1	15.9	19.4
Better odds or winnings	14.5	9.1	13.0
Happy hours	0.0	0.0	0.0
Cash out early on multi-bet	11.2	11.4	8.3
Rewards program	5.3	5.3	11.1
Race bettors			
Sign up bonus	3.6	4.0	2.2
Refer a friend offer	0.6	0.7	0.0
Click to call bonus	1.2	0.7	0.0
Mobile betting bonus	3.6	3.3	3.6
Multi-bet offer	9.6	6.7	7.3
Stake-back offer	41.6	43.3	46.0
Match your stake/deposit	23.5	20.7	18.2
Better odds or winnings	6.6	8.0	4.4
Happy hours	0.6	0.0	0.7
Cash out early on multi-bet	3.6	0.0	2.2
Rewards program	5.4	9.3	15.3

How inducements influence bettors

Both sports and race bettors who were influenced by each type of inducement were more likely to report placing larger, rather than smaller, bets as a result of wagering inducements. Amongst sports bettors, the types of inducements that were most likely to prompt larger bets were match your stake or deposit offers, stake-back offers, better odds or winnings, cash out early on a multi-bet, happy hours, multi-bet offers, and rewards program offers. Amongst race bettors, all types of inducements reportedly prompted larger, rather than smaller, bets (on average).

Both sports and race bettors were more likely to report placing more bets due to inducements, rather than fewer bets. All types of inducements had this reported effect on both samples.

Sports bettors were more likely to report placing safer bets as a result of inducements, rather than riskier bets. In contrast, race bettors were more likely to place riskier than safer bets. Amongst sports bettors, nearly all types of inducements were more likely to prompt safer bets rather than riskier bets, except for the multi-bet offer and cash out early on a multi-bet. Amongst race bettors, nearly all types of inducements were more likely to prompt riskier bets, rather than safer bets, except for the stake-back offer and a rewards program offer.

Table 14. How each inducement was influential, amongst those influenced

Inducement	Smaller bets	Larger bets	Fewer bets	More bets	Safer bets	Riskier bets	Other
Sports bettors							
Sign up bonus	41.1	41.4	38.7	51.2	56.8	36.7	16.1
Refer a friend offer	42.3	31.3	31.7	45.2	59.0	37.5	14.2
Click to call bonus	39.7	36.9	40.7	50.6	54.6	39.8	12.3
Mobile betting bonus	43.4	31.1	37.6	51.0	48.5	34.8	10.8
Multi-bet offer	26.6	43.9	24.6	52.8	38.6	41.7	10.8
Stake-back offer	15.2	52.2	19.5	60.5	40.5	34.8	8.5
Match your stake/deposit	22.6	56.2	22.4	61.2	41.2	31.1	11.6
Better odds or winnings	27.2	47.5	27.3	48.6	37.9	34.2	15.8
Happy hours	48.3	47.2	41.7	49.2	57.7	36.7	12.6
Cash out early on multi-bet	29.4	47.5	29.7	45.7	42.5	47.6	15.4
Rewards program	26.7	39.3	21.0	57.8	50.1	18.8	17.4
Race bettors							
Sign up bonus	23.3	52.4	19.4	61.5	31.7	41.3	8.4
Refer a friend offer	33.5	43.2	20.9	53.5	34.3	50.8	4.7
Click to call bonus	39.4	45.0	28.1	50.9	36.7	44.1	3.5
Mobile betting bonus	25.1	51.7	14.6	66.5	28.0	58.5	5.9
Multi-bet offer	23.8	45.0	17.4	64.0	33.5	49.6	4.4
Stake-back offer	16.3	50.8	12.7	67.4	36.9	35.7	5.3
Match your stake/deposit	19.4	50.0	19.2	58.2	36.5	38.0	7.2
Better odds or winnings	24.3	51.2	19.1	60.1	36.8	42.5	5.3
Happy hours	23.1	58.8	23.0	55.1	26.3	48.5	4.2
Cash out early on multi-bet	30.8	40.4	25.5	51.7	37.2	47.2	4.9
Rewards program	17.5	39.8	19.2	54.2	37.0	28.0	15.2

Comparisons based on PGSI group

We used the same procedures as previously used for the advertisements to test if any of the inducements were seen/heard more by, or were more influential on, different PGSI groups. No significant results were found for any of these comparisons.

3.4 Analysis and results for Aim 2: Influence of wagering advertisements and inducements on betting expenditure

The second aim of the EMA study was to determine whether exposure to wagering advertisements and inducements influenced intended betting expenditure, actual betting expenditure, and spending more than intended — and whether or not this differed by PGSI group.

Several considerations determined the analyses undertaken, which will be enumerated below. All analyses were undertaken in the open-source *R* statistical programming environment (R Core Team, 2013). The samples for these analyses comprised the 316 race bettors and the 279 sports bettors who had completed at least one EMA survey. Their demographic characteristics are shown in Appendix E.

3.4.1 Analytical methods

The general modelling objective was to assess the impact of promotions and advertisements on gambling expenditure, on a weekly basis. Further, we aimed to test whether or not there was a differential effect of promotions and advertisements on participants with gambling problems. Additionally, we wanted to consider models in which we controlled for future gambling intentions. By doing so, we could test whether promotions and advertisements influenced participants to gamble more than they intended. Finally, we also wanted to predict ***intended*** gambling expenditure from the same variables, in order to determine whether promotions and advertisements influenced intentions.

These objectives advised for a regression approach, involving several models, all including an interaction between problem gambling status and exposure to promotions and advertisements, as well as their respective main effects. No mediation effects were involved in the present analyses. The technical details of the modelling also needed to take into account the repeated measures, distribution of the response, and other issues, which will be discussed in the sections below.

EMA / Repeated measurements

The analysis needed to take into account the repeated measurements over the 15 EMA assessment periods, clustered within individuals. Accordingly, we applied linear mixed effects (LME) models, implemented using the *lme4* package (Bates, Sarkar, Bates, & Matrix, 2007). LMEs are the standard statistical approach for implementing regression in a repeated-measures / longitudinal context. LMEs incorporate fixed effects, similar to standard regression, as well as random effects; which can be used to deal with non-independence of samples. The LMEs employed in this analysis were quite simple, involving only a random intercept for participants; which accounted for variation in the response (dependent variable) due to individual differences. Thus, covariation between observations within individuals – which precludes the use of ordinary least squares regression due to violation of the assumption of non-independence of observations – are accounted for by the random participant ID factor.

Distribution of the response

We modelled both actual and intended monetary spend on race/sports betting. Both of these variables had a zero-inflated log-normal distribution. That is, they had a spike at zero reflecting time periods in which no money was (intended to be) spent, and a long-positive tail of non-zero spend periods. Transformation and plotting of both intended and actual spend confirmed that the log of the observed non-zero responses corresponded closely to a normal distribution.

Generally, these data cannot be modelled assuming normally-distributed errors and a linear link between the covariates and the response. There are several possible modelling approaches, including the use of the Tweedie distribution (Dunn & Smyth, 2008; Hasan & Dunn, 2011). However, only one or two approaches are also compatible with LME modelling. We employed a 'hurdle' model, in which the observed data are assumed to arise from a two-stage process: first, a 'hurdle' is overcome that distinguishes zero from non-zero observations (in this case, whether or not the respondent intended to bet, or actually bet). Second, a continuous log-normal distribution, that is conditional on the observation being non-zero, is used to model non-zero responses (in this case, amongst those who reported intending to bet, or actually betting, this models how much they intended to bet, or actually bet).

In practical terms, the hurdle approach involved fitting two LME regression models to each response. The first is a binomial logistic regression that predicts the probability of the response being zero or non-zero, which is fitted on the complete dataset. The second assumes a normally distributed response, but is fitted to the subset of positive observations that are log-transformed. The interpretation of effects at each stage is quite intuitive. A positive effect observed at the logistic regression stage indicates that the covariate is associated with an increased likelihood of betting (versus not). A positive effect observed at the conditional continuous regression stage, indicates that the covariate is associated with a greater spend, among individuals who have decided to bet. Importantly, the information informing model estimation at each stage is 'orthogonal:' the coefficient estimates are independent.

Finally, note that the log-transformation not only stabilises the error variance, but also treats the link between the response and the covariates as non-linear. As we are modelling monetary amounts, we considered this to be a desirable outcome, since a difference between large amounts of money has proportionally less psychological salience than a similar difference between small amounts of money.

Controlling for intentions

As mentioned, we were interested in understanding the impact of exposure to race/sports betting inducements and advertisements on both intended and actual race/sports betting spend. However, a further question is whether or not this marketing might influence individuals to spend more than intended. In each of our momentary assessments, we asked about spend intentions for the subsequent time period. Thus, by including intentions in the previous time period in a model predicting spend, we can additionally assess whether marketing can affect spend relative to intentions.

Selection / aggregation of inducements and advertisements

We measured exposure to 11 inducement types and 9 advertisement types (see Table 5). Exposure to each type tended to be mutually moderately correlated, with an average Spearman correlation of

.35-.40. Given 20 predictors, simultaneous entry of all variables, as well as a further 20 interactions with problem gambling status, would have resulted in an unacceptable degree of collinearity and model complexity. Accordingly, two approaches were undertaken to reduce the number of predictors.

First, we tested models that aggregated, by a simple sum score, total exposure to inducements and advertisements. Whilst this aggregation method is relatively crude, we assumed that it would yield an acceptable indication of total exposure to inducements and advertising.

Our second approach was based on selecting specific inducements and advertisements from the full set for inclusion in the model. We employed a modern statistical technique called the 'lasso' for variable selection (Friedman, Hastie, & Tibshirani, 2008, 2010) using the *glmnet* package. The lasso, and related regularisation procedures, can be understood as a form of robust stepwise variable selection, which is not vulnerable to the sample-variability problems of classical approaches. In brief, a regularisation term, which penalises non-zero beta coefficients, is added to the normal regression penalty for misfit to the response. By varying the weight of this term, the goal of model parsimony / sparsity can be balanced against optimising fit to the data.

For each of the regressions on specific inducements and advertisements, we first ran the lasso procedure, which yielded an ordering of these inducements and advertisements, from most to least salient, in predicting the response. This determined the order of variable inclusion in the final two-stage LME models. We stopped including further predictors when it did not yield a significant improvement in model fit. Finally, interactions between the specific inducements and advertisements and problem gambling status were added to the model.

Problem gambling status

Initial exploration of the data suggested that the most important distinction between PGSI thresholds, in terms of predicting spend, was between the PG and MR groups, and LR and NPG groups. Accordingly, in the interests of model parsimony, PGSI category was represented as a binary contrast between these groups.

Weekend versus weekly betting

Betting is generally more likely to be undertaken on a weekend, rather than a weekday. Accordingly, our models included a contrast between Saturdays and other weekdays (contr_Sat).

3.4.2 Results

The hurdle LME models exploring the impact of exposure to race and sports betting inducements (Promo) and advertisements (Advert) on race/sports betting expenditure are presented between Table 15 - Table 18. In all tables, the six columns represent a single regression model, and rows correspond to predictors. Each pair of adjacent columns represents a two-stage LME, with columns 1, 3, and 5 being the logistic regression stage, and columns 2, 4, and 6 being the log-normal continuous stage. The first hurdle model (1,2) is a model of differential spend; i.e., spend, controlling for intentions at the previous time point, to indicate spending more or less than intended. The second hurdle model (3,4) is of raw spend, and the third model (5,6) is of intended spend.

Results for race betting

Table 15 presents hurdle LME models of spend on race betting from aggregated inducement and advertisement exposure. PG/MR status was consistently associated with increased magnitude of spending (actual, intended, and differential), but not with an increased probability of betting in any given time period — i.e., increased frequency of betting. Greater exposure to inducements and advertisements was also associated with larger spends (actual, intended, and differential), and also with a greater likelihood of betting. Greater exposure to advertisements, but not inducements, was associated with a greater likelihood of ultimately betting when one did not originally intend to do so. However, the effect sizes were small relative to between-subjects differences, individual's intentions, and the effect of PG/MR status. No interactions between aggregated inducement and advertisement exposure and PG/MR status were significant.

Table 15. Summary of linear mixed effects models predicting spend on race betting from aggregated inducement and advertisement exposure

DV:	Spend		Spend		Intent	
Stage:	*logistic* (1)	*log-normal* (2)	*logistic* (3)	*log-normal* (4)	*logistic* (5)	*log-normal* (6)
Fixed Effects						
Intent(t-1) > 0	2.701** (0.130)					
log(Intent(t-1))		0.252** (0.012)				
PG/MR	-0.865 (0.571)	0.836** (0.290)	-0.207 (0.574)	0.732** (0.280)	-0.648 (0.542)	0.732** (0.280)
Num. Promo.	0.009 (0.031)	0.027* (0.012)	0.088** (0.027)	0.050** (0.010)	0.041 (0.025)	0.050** (0.010)
Num. Advert.	0.094** (0.031)	0.056** (0.013)	0.156** (0.027)	0.052** (0.011)	0.025 (0.025)	0.052** (0.011)
PG/MR * Num. Promo.	0.038 (0.047)	-0.014 (0.017)	-0.022 (0.041)	-0.027 (0.015)	0.012 (0.037)	-0.027 (0.015)
PG/MR * Num. Advert.	0.058 (0.046)	-0.004 (0.017)	0.058 (0.041)	0.013 (0.015)	0.022 (0.036)	0.013 (0.015)
Intercept	-2.322** (0.388)	1.929** (0.199)	-2.437** (0.390)	2.550** (0.190)	-0.305 (0.359)	2.550** (0.190)
Random effects Var.	(1)	(2)	(3)	(4)	(5)	(6)
Intercept(ID)	1.206	1.144	2.851	1.795	3.851	1.849
Num. Obs.	2,756	1,870	3,592	2,567	3,585	2,567
Num. ID	283	276	318	307	316	307
LL	-1,212.073	-2,555.561	-1,778.533	-3,682.437	-1,893.897	-3,682.437
AIC	2,440.146	5,129.121	3,571.067	7,380.875	3,801.794	7,380.875
BIC	2,487.518	5,178.925	3,614.372	7,427.679	3,845.086	7,427.679

Note: *p<0.05. **p<0.01.

Table 16 summarises models predicting race betting from specific inducements and advertisements. Of the advertisements, increased exposure to brands, direct messaging, gambling websites/apps, and commentary were associated with increased betting expenditure. Only the stake-back offer inducement was individually associated with an increase in spend. The specific pattern of effects varied between advertisement types. For example, direct messaging increased the probability of an

individual betting, and also their intention of betting in the subsequent time period. However, it did not appear to affect the magnitude of the (intended) spend. Effect sizes were small relative to unexplained variability between individuals, but of a similar (though slightly smaller) magnitude to effects observed for Sat. vs Weekdays and PG status. On the other hand, brands and commentary tended to increase both the likelihood of betting, and the magnitude of the spend. Given that the confidence intervals of these detected effects overlap, we did not find evidence that the effect of exposure to brands and commentary was significantly different. No interactions were observed between PG/MR status and exposure to different types of inducements and advertisements.

Table 16. Summary of linear mixed effects models predicting spend on race betting from specific inducements and advertisements

DV:	Spend		Spend		Intent	
Stage:	*logistic* (1)	*log-normal* (2)	*logistic* (3)	*log-normal* (4)	*logistic* (5)	*log-normal* (6)
Fixed Effects						
Intent(t-1) > 0	2.541** (0.136)					
log(Intent(t-1))		0.253** (0.012)				
PG/MR	-0.665 (0.488)	0.618** (0.199)	-0.182 (0.479)	0.545* (0.220)	-0.577 (0.506)	0.537** (0.162)
Sat. vs Week.	0.778** (0.200)		1.253** (0.184)			
brands	0.228 (0.169)	0.131* (0.060)	0.385** (0.143)	0.114* (0.053)		
direct_messaging	0.250 (0.147)		0.495** (0.129)		0.416** (0.123)	
gamble_websites	0.351* (0.153)		0.393** (0.130)			
commentary	0.028 (0.169)	0.241** (0.059)	0.295* (0.144)	0.178** (0.053)		
stake_back_offer	0.112 (0.149)		0.352** (0.125)	0.316** (0.044)	0.160 (0.120)	
PG/MR*contr_Sat	-0.760** (0.294)		-0.676* (0.273)			
PG/MR*brands	0.059 (0.252)	0.027 (0.086)	0.092 (0.215)	0.089 (0.076)		
PG/MR*direct_messaging	0.261 (0.226)		-0.156 (0.198)		0.002 (0.182)	
PG/MR*gamble_websites	-0.046 (0.230)		0.075 (0.201)			
PG/MR*commentary	0.442 (0.260)	-0.066 (0.085)	0.387 (0.220)	-0.010 (0.076)		
PG/MR*stake_back_offer	0.140 (0.216)		-0.041 (0.183)	-0.113 (0.063)	-0.177 (0.171)	
Intercept	-2.486** (0.331)	2.552** (0.140)	-2.193** (0.318)	3.057** (0.150)	-0.571 (0.334)	4.158** (0.110)
Random Effects Var.	(1)	(2)	(3)	(4)	(5)	(6)
Intercept(ID)	1.131	1.215	2.917	1.888	3.763	1.374
Num. Obs.	2,756	1,870	3,592	2,567	3,585	2,567
Num. ID	283	276	318	307	316	307
LL	-1,185.312	-2,555.703	-1,701.927	-3,665.714	-1,875.689	-3,758.152
AIC	2,402.623	5,129.406	3,433.853	7,351.427	3,781.377	7,524.304
BIC	2,497.368	5,179.209	3,526.650	7,409.932	3,874.145	7,547.706

Note: *p<0.05. **p<0.01.

Results for sports betting

Table 17 presents models of sports betting from aggregated inducement and advertisement exposure. This marketing did not appear to influence differential spend; i.e., betting more or less than intended. However, greater exposure to both forms of marketing was associated with increased raw spend, intentions to spend larger amounts, and a greater probability of betting in the current period. These effects were of small magnitude, relative to PG/MR status and random variation between individuals. No interactions between this marketing and PG/MR status were found. However, PG/MR status was positively and uniformly associated with both increased likelihood of betting / intending to bet, increased spend and intention to spend, and also a greater likelihood of betting and spending more than intended.

Table 17. Summary of linear mixed effects models predicting spend on sports betting from aggregated inducement and advertisement exposure

DV:	Spend		Spend		Intent	
Stage:	*logistic* (1)	*log-normal* (2)	*logistic* (3)	*log-normal* (4)	*logistic* (5)	*log-normal* (6)
Fixed Effects						
Intent(t-1) > 0	2.683** (0.133)					
log(Intent(t-1))		0.257** (0.014)				
PG/MR	0.579** (0.195)	0.543** (0.134)	0.787** (0.246)	0.711** (0.165)	0.791** (0.235)	0.711** (0.165)
Num. Promo.	0.106 (0.142)	-0.014 (0.052)	0.407** (0.128)	0.088* (0.045)	0.134 (0.116)	0.088* (0.045)
Num. Advert.	0.238 (0.131)	0.088 (0.050)	0.559** (0.112)	0.147** (0.043)	-0.137 (0.104)	0.147** (0.043)
PG/MR * Num. Promo.	0.103 (0.210)	0.078 (0.072)	-0.075 (0.193)	-0.039 (0.062)	-0.136 (0.169)	-0.039 (0.062)
PG/MR * Num. Advert.	-0.246 (0.204)	-0.100 (0.071)	-0.233 (0.178)	0.001 (0.061)	0.188 (0.159)	0.001 (0.061)
Intercept	-0.977** (0.147)	2.793** (0.100)	0.994** (0.161)	3.656** (0.111)	0.398* (0.155)	3.656** (0.111)
Random effects Var.	(1)	(2)	(3)	(4)	(5)	(6)
Intercept(ID)	1.268	0.974	2.952	1.709	2.881	1.709
Num. Obs.	2488	1641	3231	2249	3228	2249
Num. ID	258	249	279	272	279	272
LL	-1119.06	-2126.033	-1646.94	-3029.32	-1781.86	-3029.32
AIC	2254.125	4270.066	3307.878	6074.642	3577.723	6074.642
BIC	2300.679	4318.694	3350.442	6120.388	3620.281	6120.388

Note: *p<0.05. **p<0.01.

Table 18 shows models predicting spend on sports betting from specific inducements and advertisements. Exposure to advertising on websites/apps and brands, as well as to multi-bet offer inducements, was associated with a higher likelihood of betting in the current period. This model (3) involved the largest effect sizes observed for advertisements and inducements, about half the size of the effect for Sat. versus Weekday betting, and a third of the size of the effect of PG/MR status. Rewards program inducements were associated with an intention to spend more. Exposure to website/app advertising was associated with an increased likelihood of betting, when not originally intended.

Whilst participants generally tended to bet more on Saturdays rather than other days of the week, this effect was significantly attenuated in the case of PGs/MRs. That is, PGs/MRs were more likely to undertake sports betting throughout the week.

Table 18. Summary of linear mixed effects models predicting spend on sports betting from specific promotions and advertisements.

DV:	Spend		Spend		Intent	
Stage:	*logistic* (1)	*log-normal* (2)	*logistic* (3)	*log-normal* (4)	*logistic* (5)	*log-normal* (6)
Fixed Effects						
Intent(t-1) > 0	2.571** (0.137)					
log(Intent(t-1))		0.261** (0.014)				
PG/MR	0.504 (0.404)	0.545** (0.133)	1.520** (0.477)	0.701** (0.215)	0.801** (0.234)	0.734** (0.192)
Sat. vs Week.	0.704** (0.183)		1.082** (0.167)			
gamble_websites	0.425** (0.134)		0.420** (0.122)			
brands			0.545** (0.111)			
multi_bet_offer			0.577** (0.121)			
rewards_prog				0.087 (0.050)		0.142** (0.048)
tv_advert				0.178** (0.045)		
PG/MR*contr_Sat	-0.493 (0.291)		-0.556* (0.272)			
PG/MR*gamble_websites	0.129 (0.213)		-0.015 (0.204)			
PG/MR*brands			-0.143 (0.188)			
PG/MR*multi_bet_offer			-0.156 (0.197)			
PG/MR*rewards_prog				-0.028 (0.069)		-0.021 (0.067)
PG/MR*tv_advert				0.035 (0.064)		
Intercept	-1.811** (0.261)	2.778** (0.099)	-1.961** (0.307)	3.174** (0.148)	0.389* (0.155)	3.455** (0.130)
Random Effects Var.	(1)	(2)	(3)	(4)	(5)	(6)
Intercept(ID)	1.307	0.961	2.923	1.636	2.892	1.629
Num. Obs.	2,488	1,641	3,231	2,249	3,228	2,249
Num. ID	258	249	279	272	279	272
LL	-1,106.354	-2,120.289	-1,598.621	-3,033.296	-1,782.928	-3,047.335
AIC	2,228.709	4,250.578	3,219.243	6,082.591	3,571.856	6,106.670
BIC	2,275.263	4,277.594	3,286.129	6,128.337	3,590.095	6,140.980

Note: *p<0.05. **p<0.01.

3.5 Limitations

The findings from the EMA study should be interpreted with the following limitations in mind:

- Only regular (at-least fortnightly) sports bettors and race bettors were included, which precludes any assessment of the effects of wagering advertisements and inducements on less frequent bettors.
- The sample was not representative at the baseline survey (i.e., at recruitment), and substantial attrition occurred before, and during, the EMA survey periods. Those who opted into the study, and who completed more EMA surveys, may differ from the population of regular sports and race bettors.
- The sample was predominantly male. While this aligns with the profile of regular race and sports bettors in the general population, the results may not generalise to female bettors.
- While the EMA design minimised recall bias by collecting data every 24/48 hours, respondents still relied on recall in identifying the advertisements and inducements they had been exposed to, and the amount they had bet during those time periods.
- While we attempted to describe each type of advertisement and inducement as accurately as possible (within the space limits of the survey instrument), some participants may have confused some types; e.g., 'Betting brands promoted during live and televised [race/sports] events (e.g., logos, signage)' with 'TV advertisements for betting brands'.
- We only measured exposure to each type of wagering advertisements and inducements, and not the number of exposures to each type. Accurately measuring the latter was considered impossible for numerous types of marketing, e.g., number of brand exposures during live and televised sports and racing events; quantity of commentary during events; number of advertisements and inducements when viewing operator websites.
- Results for EMA Aim 1 rely on self-reported assessments of whether, and how, respondents' betting had been influenced by each type of advertisement and inducement they had seen during each EMA period. Further, participants' assessment of whether their bets were 'safer' or 'riskier' may have been based on their perceptions rather than objective odds — and this perception can be affected by the inducements themselves (e.g., as offering 'refunds', 'money-back guarantees', and 'bonus bets').

4. Experimental Study

Key findings

The experimental study aimed to test for the effects of inducements on gamblers' propensity to accept greater risks (longer odds) on their bets, and whether this varied with gambling risk severity.

- Results indicate that bets with inducements (bonus bet, better odds/winnings, reduced risk, cash rebate) are perceived as more attractive by sports bettors than bets without inducements — although some participants still chose non-incentivised bets when given the choice.
- Better-odds of winning was the most attractive incentive amongst those considered, followed by the bonus bet, cash rebate, reduced risk, and no incentive condition, respectively.
- When sports bettors bet with incentives offered, they tend to choose riskier bets (i.e., those with longer-odds and higher payoffs). That is, the inducements, in general, led to significantly more risky betting than the non-inducement condition, with the cash rebate inducement eliciting the most risky bets.
- No differences were observed amongst PGSI groups for any of the results above.
- The consequence of people choosing long odds is to increase the volatility of their returns. For the population of gamblers, increased volatility will necessarily create a larger pool of gamblers in a losing position, and a smaller pool of gamblers with larger wins. If long odds bets are priced to provide poorer value to bettors compared to short odds, they could increase gamblers' losses, and equivalently, increase operators' profits.

4.1 Introduction and aims

Inducements offered for sports and race betting have been a cause for concern due to the potential for deceptive practices, as well as the potential to alter people's gambling choices in a manner that may not conform to their best interests. Like any inducement or marketing effort, it is fairly trivial to show that offering greater value, in the form of inducements, should increase consumption. The demand equation is a fundamental tenet of microeconomics, where lowering of price — or equivalently increasing value — of a product should translate to more purchases. However, in the case of gambling products, it is also important to consider other aspects of consumption when considering the effects of inducements. Gambling inducements can potentially alter people's risk-based gambling choices, and therefore, have an additional impact on their spending by encouraging irrational purchases. The random nature of gambling, and the typical pattern of small losses punctuated by large wins, makes it difficult to estimate the cost of gambling sessions in advance, or keep track of gambling expenditures as they are realised.

One feature of gambling expenditure that is particularly troublesome, with respect to impact on long-run expenditure, is the choice of relative risk for bets (i.e., short odds vs long odds). Choosing long odds increases the volatility of a gambler's bankroll, or amount of cash they have devoted to gambling, across time. Small losses are more frequent, while wins are less likely — albeit they are

relatively large when they do occur. An increase in volatility is likely to produce more losers, and relatively fewer, and richer, winners. Consequently, even when pricing of long odds is attractive, having gamblers persistently choose long odds can increase the pool of persons in a losing position. Moreover, when long odds are priced unattractively relative to short odds, there is even greater potential that many consumers will be worse off, as the greater profits flow to bookmakers.

The purpose of the experimental study was to test for the effects of inducements on gamblers' propensity to accept greater risks on their bets. In particular, we tested if more vulnerable gamblers — as indicated by the PGSI, who are already experiencing some degree of harm from gambling — were more likely to make riskier bets as a result of being offered an inducement. The study sought to identify whether, and how, different common wagering inducements change people's choice of long vs short odds bets, and whether these changes differ for more vulnerable high-risk gamblers.

This research was devised to draw conclusions about the causal role that wagering inducements play in sports betting. The analyses were oriented to find inducements with the highest likelihood of causing or exacerbating harm, and thereby, inform policy and regulations aimed at reforming their provision, marketing, and structural characteristics.

4.2 Methods

4.2.1 Recruitment and sampling

Approval for this research was granted by the Central Queensland University Human Research Ethics Committee (H16/09-257). The survey was completed online through the Qualtrics platform in two stages. A soft launch was conducted between the 9th and 16th of May 2017. The full survey was opened on 1 June and closed 18 June 2017.

Screening criteria for the study required participants reside in the state of Victoria, Australia, and be aged 18 years or older. If participants had not bet on the specific sports (AFL, cricket, or soccer) at least twice within the last 12 months they were also screened out.

Our sample was sourced with the assistance of two major sports betting companies operating in Australia. These two companies emailed their customers an invitation to complete the survey. The invitation contained a weblink to the Qualtrics survey platform containing the information sheet, consent form, and online survey. Both sports betting companies preferentially emailed recruitment advertisements to their most frequent sports bettors first (excluding horse race only bettors). The betting companies had no further involvement in the study or any access to resultant data.[5]

The soft launch (pilot study), which consisted only of Operator 1's customers, yielded 34 responses of which 28 had complete data that were added to the analyses. Six participants did not complete the survey. The hard launch resulted in a total of 386 responses, of which 271 were used in analyses, while the remaining 115 were discarded for the following reasons: Four participants did not live in Victoria, 1 had not bet on any sports in the last 12 months, and 110 provided incomplete responses. The final dataset contained 299 responses, including 28 from the soft launch and 271 from the hard launch. Response rates are provided in Table 19

[5] The betting company knew about, but had no control over, the nature and purpose of the research. We designed the sampling procedure and have no reason to think the betting company manipulated this, given the high proportions of respondents who met criteria for problem and at-risk gambling.

Table 19. Response rates

Sport bet on	Operator 1 Pilot 300 invited	Operator 1 Main 2,220 invited	Operator 2 1,500 invited
AFL	22.0%	11.8%	6.0%
Cricket	1.0%	7.0%	6.0%
Soccer	5.0%	7.1%	6.2%
Total	**9.3%**	**8.1%**	**6.1%**

Only one modification was made to the survey between the soft and hard launches. For the participant's sixth game, which involved them selecting an inducement condition, we removed the better odds / wins option during the hard launch. This modification is described and justified in further detail in the 'paradigm' section below.

Regular bettors, even those who report zero on the PGSI (Ferris & Wynne, 2001), may still be betting more than they can afford, placing them at risk for experiencing gambling-related harm (Browne et al., 2016). We aimed to recruit a large pool of regular sports bettors, defined here as betting at least fortnightly on cricket, AFL, or soccer within the previous 12 months. Preferentially recruiting the most frequent sports bettors provided 186 at-least fortnightly bettors in the sample, whereas the remaining 113 were less than fortnightly bettors. Table 20 presents a breakdown of sports bettor type by frequency (regular / fortnightly vs non-regular).

Table 20. Sport bet-on by betting frequency

Sport	Betting Frequency	Operator 1 Pilot	Operator 1 Main	Operator 2	Total
AFL	Regular	21	55	16	92
	Non-regular	1	4	14	19
	Sub-total	22	59	30	111
Cricket	Regular	0	19	12	31
	Non-regular	1	41	18	60
	Sub-total	1	60	30	91
Soccer	Regular	4	44	15	63
	Non-regular	1	17	16	34
	Sub-total	5	61	31	97
Total		**28**	**180**	**91**	**299**

4.2.2 Online survey and measures

The online survey / experiment was approximately 20 minutes in length and examined participants' betting choices, including long vs short odds, when they were offered different types of wagering inducements (Appendix F). The survey had several components with questions on:

Screening. Participants were asked questions on participation in/preferences for betting on AFL, cricket, and soccer and demographic screeners (18+ years and living in Victoria, Australia). Participants were asked what sports, including AFL, soccer, and cricket, they had bet on in the last 12 months. Participants were serially assigned to the lowest quota-filled sport, as long as they had also bet on that sport within the last 12 months.

Demographics. Participants were asked to provide their age, gender, postcode, main language spoken at home, annual household income, and annual personal income.

Gambling behaviour. Problem gambling status was assessed using the PGSI (Ferris & Wynne, 2001). The PGSI is routinely used in population surveys (Hare, 2015) and is a validated measure of problem gambling status. The PGSI contains nine items with four response options ('Never' = 0, 'Sometimes' = 1, 'Most of the time' = 2, and 'Almost always' = 3). These scores are summed and range between 0 and 27, where 0 = NPG, 1 or 2 = LR, 3 to 7 = MR, and lastly scores from 8 through to 27 = PG.

Betting-risk choices. Participants were required to place a bet (from a choice of short odds, medium odds, or long odds) on six games, representing different 'inducement' types, as described in further detail in the 'paradigm' section below. The final question required participants to rank different inducement types from 'most attractive' to 'least attractive'.

4.2.3 Participant characteristics

The majority of the sample were English speaking males, between the ages of 18 and 39 (Table 21). Using the PGSI, NPGs accounted for 15.7% (n = 47) of the sample, LRs 27.4% (n = 82), MRs 38.1% (n = 114), and PGs 18.7% (n = 56).

Table 21. Sample demographic characteristics

Characteristic	Categories	*n* (%)
Gender	Male	287 (96%)
	Female	12 (4%)
Age	18-29	82 (27.4%)
	30-39	122 (40.8%)
	40-49	58 (19.4%)
	50-59	32 (10.7%)
	60-64	5 (1.7%)
Main language spoken at home	English	287 (96%)
	Language other than English	12 (4%)
Personal income	Under $20,000	25 (8.4%)
	$20,000 — $39,999	24 (8.0%)
	$40,000 — $59,999	56 (18.7%)
	$60,000 — $79,999	58 (19.4%)
	$80,000 — $99,999	45 (15.1%)
	$100,000 — $119,999	28 (9.4%)
	$120,000 — $139,999	16 (5.4%)
	$140,000 — $159,999	7 (2.3%)
	$160,000 — $179,999	4 (1.3%)
	Over $180,000	8 (2.7%)
	Prefer not to say	28 (9.4%)
Household income	Under $20,000	6 (2.0%)
	$20,000 — $39,999	13 (4.3%)
	$40,000 — $59,999	32 (10.7%)
	$60,000 — $79,999	32 (10.7%)
	$80,000 — $99,999	23 (7.7%)
	$100,000 — $119,999	30 (10.0%)
	$120,000 — $139,999	22 (7.4%)
	$140,000 — $159,999	29 (9.7%)
	$160,000 — $179,999	15 (5.0%)
	Over $180,000	41 (13.7%)
	Prefer not to say	56 (18.7%)

4.2.4 Paradigm

The experimental paradigm used video-game technology to simulate three game-types: AFL, cricket, and soccer. Participants were assigned to one of these three games based on their past betting. During the pilot launch, if participants had bet on more than one sport in the last 12 months, they selected the sport they 'preferred' to bet on. During the hard launch, if a participant had bet on more than one sport in the last 12 months, they were serially assigned to one sport they bet on during the last 12 months, with the lowest quota filled first. This was done to achieve roughly equal sample sizes in all conditions. No participants were assigned to sports that they did not bet on.

Modern video-game technology produced highly engaging simulations of these sports. In the study, output from *previously recorded* 3D video games were used to generate highlight reels of simulated matches in a consistent format, which were presented to participants online to display the results / outcomes of each bet (see Figure 2).

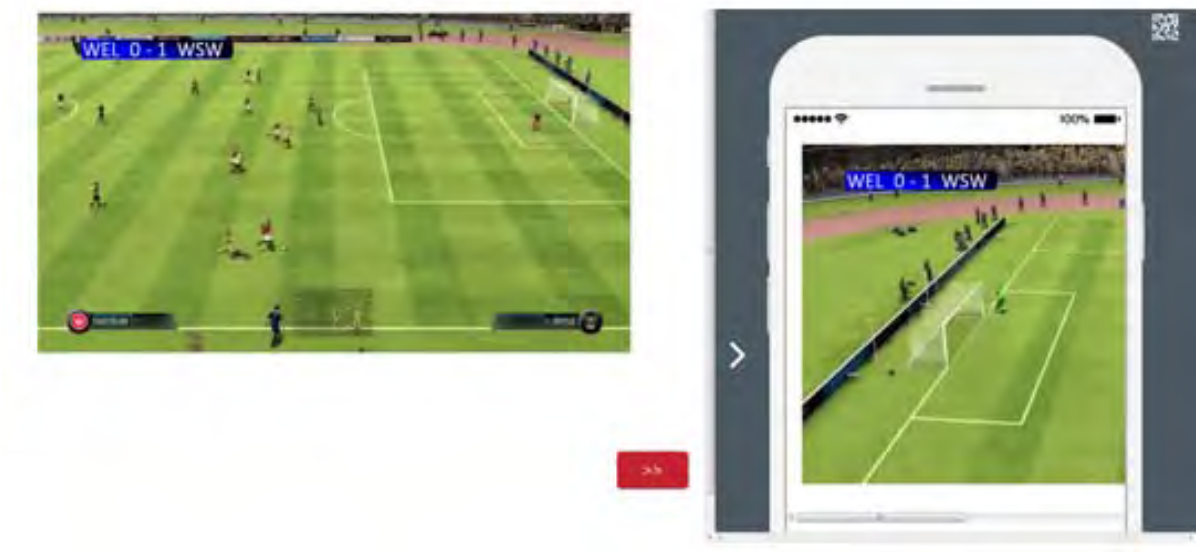


Figure 2. Screenshot example of soccer game

Wagering on 6 simulated games with varying incentives

After completing the demographic and sports betting questions, participants were asked to bet on six trials — one for each of the four inducements and one for the no-inducement condition (games 1 — 5), and one trial to assess the relative attractiveness of the inducements (game 6). For games 1 — 6, participants selected one of the two competing teams to back and one of three risk-levels (short odds, medium odds or long odds) for their bet. For game 6, participants also selected one of the inducement conditions for their bet (including the no inducement condition). For all games, participants bet with real money and took home any winnings at the end of the experiment, as explained in more detail below.

Games 1 — 5

Each participant viewed betting odds (which were always the same for each of the two competing teams), placed bets, watched a highlight reel, and was paid any winnings for the first five games, each consisting of four inducement trials and one baseline trial (i.e., a standard fixed-odds bet with no inducements offered). These measures were designed to provide participants with a strong sense, not

only of the outcome of the match, but also of the performance of the teams and identifiable individual players. Our intent was to obtain ecologically-valid responses from participants by providing stimuli that were sufficiently rich and complex, so as to engage the participants to the extent that they felt they could make an informed bet. We chose to simulate real teams that were approximately evenly matched to enhance the validity of offering balanced odds for each match-up.

Both the offered inducements and team match-ups were presented in a random order for every player, in order to prevent potential bias from order effects. Players were provided with a stake ($4) for each trial, with winnings not carried over into subsequent trials, in order to minimise additional carry-over effects. Rather, winnings directly accrued to the player's 'account' or final bank, contributing to their total take-home compensation. Each trial involved the player being offered different betting options, varying in the degree of risk and with an inversely proportional potential payoff (i.e., short, medium, or long odds; see Table 24).

The tendency of players to gamble relatively long odds represented the key (behavioural, repeated measures) dependent variable in the experiment. Risky 'long odds' betting increases the volatility of returns, and accordingly, creates more losing bettors in the population over the short to medium term. It may also increase average losses in the very long term, or equivalently, returns to the operator, if long odds are not well-priced compared to short odds.

For this study, four common classes of incentives were extracted from the 15 generic types of wagering inducements identified by Hing et al. (2015c). The incentives studied in this experiment (as well as in the subsequent psychophysiological stage) included: bonus bets, better odds/winnings, reduced risk, and cash rebates. These 'incentives' distil the important attractive features behind the varying inducements. Table 22 outlines how the 15 generic types of inducements logically relate to the four broader classes of incentives.

Table 22. Grouping of 15 inducements into a broader class of 4 incentives

Classes of incentive*	Type of inducement**
Bonus bet	Sign-up offer Refer-a-friend offer Mobile betting offer Match (or partially match) your stake/deposit (with bonus bets) Competitions (where the payout is bonus bets) Free bets (selected punters) Other free bets (e.g., predict the outcome of a match) (Some) Multi-bet offers
Better odds/ winnings	Happy hour or similar offer Bonus or better odds offer Bonus or better winnings offer Reduced commission (Some) Multi-bet offers
Reduced risk	Refund/stake-back offer Winnings paid even if you don't win (e.g., protest calls, video referee decisions) (Some) Multi-bet offers
Cash rebate	Cash rebate (no play-through required)

Note: * This is the 'hook' — what the bettor gets for taking up the inducement. ** See Hing et al. (2015c) for an explanation of the 15 generic types of inducements.

Hing et al. (2015c) noted that the broad class of the incentive, rather than the specific mechanics of the inducement, is likely most important in influencing player choices. Therefore, the experiment incorporated specific inducements to represent the different classes of incentives, rather than attempting an impractical task of modelling of all 15 inducements. The chosen simulation of these inducements is outlined in Table 23.

Table 23. Baseline and four inducements used in the experiment

Classes of Incentive	Representative inducement
No incentive / baseline	Bet $4 on your winning team!
1. Bonus bet	Receive a free bonus bet ($4) if your team is ahead at half-time!
2. Better odds/winnings	Boost your odds. Payout for winning bets are double!
3. Reduced risk	If your team wins the toss, but loses the game, get double your money back!
4. Cash rebate	$2 cash back. Win or lose!

Participants chose one of the two competing teams to win the match and simultaneously selected the level of risk/odds (low, moderate or high-risk/odds) they would take on the bet. Bets were made for a fixed amount of cash ($4) that formed part of the participants' compensation upon completion of the study. Immediately after each bet, the participant viewed the highlight reel of each game to learn of the outcome. Total compensation naturally varied, based on the bet type placed by participants and their betting success. Reimbursement was provided in the form of an electronic Coles shopping voucher, with ultimate payments ranging between $24 and $84.80 (including for game 6 below). To maintain the goodwill of participants, we set minimum compensation at $24, although we did not notify participants of this fact until after they had completed the experiment.

The risk or odds for their bets was determined by the schedule outlined in Table 24, which required participants to select a winning margin for the bet. All conditions had the same base $ win outcomes for low, moderate, and high-risk bets, which increased in $ won by risk level. However, the four inducement conditions had added $ compensation based on betting outcomes, consistent with the inducement being (presumably) funded by the operator as a true incentive. Each incentivised outcome was constructed to have the same expected value (an extra $2), either in cash or bets, to create an equivalency for validity of the later comparisons. The bonus bet is worth $2 on average for participants because the teams are evenly matched, therefore, the chance of the outcome (being ahead at halftime) is 50/50 (assuming no draw), so in the long run, the inducement is worth an average of $2 per person. Better odds/winnings is worth $2 on average for participants also because the teams are evenly matched, therefore, half of the participants will have (in essence) an additional $4 wagered on their bet, and the remaining half will have an additional $0 wagered on the bet (see the section below on why this inducement was removed from game 6). Reduced risk is worth $2, on average, for participants because it is based on two contingencies happening, each with 50% chance of coming true. Thus, the overall chance of the inducement requirements being met are 25%, and 25% of a doubling of the bet-size ($8) is $2. Lastly, the cash rebate is $2 back for all participants, and is therefore, by definition, worth $2 to everyone.

Table 24. Risk/odds for each bet, expressed as required margin, for each game

Risk/odds	AFL	Cricket	Soccer
Low	Outright win	Outright win	Outright win
Medium	+25 points	5 wickets or 21 run margin	+2 goals
High	+43 points	8 wickets or 41 run margin	+3 goals

The winning margins illustrated in Table 24 were based on a study of actual odds offered by bookmakers for (roughly) evenly-matched teams. These margins were constructed to be within the range of what gamblers might expect from bookmakers, rather than precise figures evenly-matched across the types of sport. Our key consideration for the validity of the experiment was to create a situation where at least some players might be tempted to choose a more risky bet within each type of sport, while at the same time remaining within the bounds of outcomes that would appear plausible to the participants.

Game 6

One final game allowed participants to select amongst all 5 different types of bets outlined in Table 23, above. This allowed us to understand the most attractive inducement for each participant, and which specific inducements are particularly attractive to vulnerable groups.

During the soft launch, over half of the sample selected the better odds / winnings conditions for their 6th game. All inducements were set so that they had equal expected-value, or cost, to the operator ($2). In this experiment, players were not operating a betting account, *per se*, and thus, any winnings or inducements were not able to be used on subsequent bets. The experiment was designed in this way so that each bet was independent of previous bets. However, this meant that the 'better odds/winnings' inducement was potentially more attractive because, even though the value of the inducement was the same as the value of the other inducements ($2), the highest total could be won assuming a winning outcome (that is, assuming the participant correctly chose the winning team). Respondents are effectively betting $2 worth of inducements with the original bet, and it thus, has the chance to be multiplied by the odds on offer for that bet. In contrast, in the real world, a bettor would usually be able to use such inducements on subsequent bets. The better odds / winnings inducement was, thus, removed as an option that participants could select for their 6th game in the hard launch. Accordingly, any results pertaining to game 6 are only presented with the four inducements (baseline [no inducement], bonus bet, reduced risk, and cash rebate).

Lastly, we asked players to rank-order the inducements they encountered in the course of the experiment, from 'most favourite' to 'least favourite'. This ranking allowed us to compare, for the entire set of subjects, the concordance between the attractiveness of each bet type and the risk they assume when placing each bet type. It was our testable hypothesis that favourite, incentivised bets contributed to taking greater risks.

4.3 Results

The results are organised according to the research questions originally proposed for the study, as illustrated in bold below.

4.3.1 Q1: Are any of the inducements associated with more risk taking (in the form of a higher proportion of people selecting long odds)?

The baseline condition, bonus bet, better odds/winnings, and reduced risk inducements all demonstrated the same decreasing stepwise trend in choices of risky bets. That is, proportionately fewer participants' selected the riskier bets, regardless of the incentive offered. Importantly, this result

may only be a feature of the relatively unattractive odds offered for rarer events. Better odds (see Table 23), or more likely long outcomes (see Table 24), might have altered these choices. Nevertheless, it is worth noting that participants frequently chose the safest option of outright wins for their chosen team.

For the cash rebate inducement, as an exception, more participants selected the moderate-risk bet, compared to the low-risk bet. High-risk bets were the least selected option across all conditions (see Table 25).

Table 25. Frequency of risk across the inducement conditions

Risk	Inducement type				
	Baseline (no inducement)	Bonus bet	Better odds/winnings	Reduced risk	Cash rebate
Low	153 (51.2%)	146 (48.8%)	146 (48.8%)	146 (48.8%)	123 (41.1%)
Medium	129 (43.1%)	125 (41.8%)	132 (44.1%)	123 (41.1%)	154 (51.5%)
High	17 (5.7%)	28 (9.4%)	21 (7.0%)	30 (10.0%)	22 (7.4%)

Betting risk significantly differed across the inducement conditions, $\chi^2(4) = 9.35$, $p = .05$. To further examine these differences, a Wilcoxon Signed-Ranks test indicated that bettors placed significantly riskier bets in the cash rebate inducement ($M = 1.66$, $SD = .61$) compared to the baseline condition ($M = 1.55$, $SD = .60$), $Z = -2.664$, $p < .05$, $r = -.10$. None of the other three individual inducements (better odds/winnings, bonus bet, and reduced risk) significantly differed from the baseline condition. These findings were replicated using a cumulative link ordinal mixed ANOVA, incorporating main effects for condition and PGSI status. We specified a second model incorporating an interaction between condition and PGSI category, which did not significantly improve the likelihood: log-likelihood ratio (12) = 12.27, $p = .42$, ns. Accordingly, we concluded that there was no evidence for the proposition that PGs responded differently to the different inducement types. Nevertheless, a planned-contrast showed that the entire set of inducements, taken as a whole, showed significantly higher risk-taking (selection of longer odds) than the baseline, $p < .05$. Furthermore, it is notable from Table 25 that every incentivised condition had a larger proportion of high-risk bets than the baseline (at 5.7%). Moreover, Figure 3 below shows that the mean risk choice is also higher for every incentivised condition.

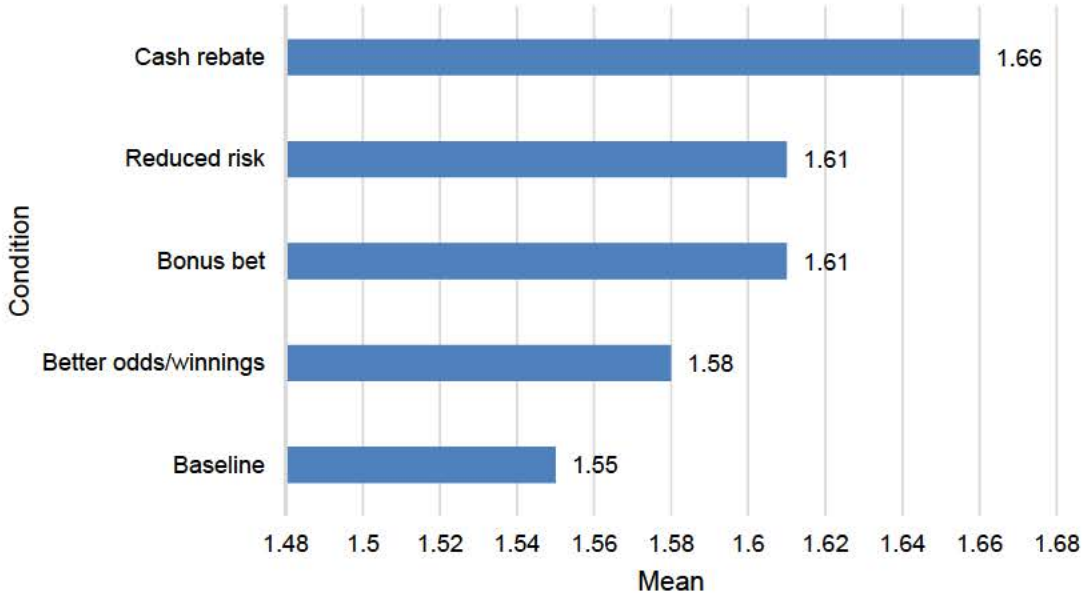


Figure 3. Means risk (1-3) for each condition

4.3.2 Q2a: Which inducements do sports bettors select when given a choice (Game 6)?

Excluding the better odds/winning inducement, the bonus bet inducement was the most selected preferred inducement for the 6th video overall, followed by the baseline (standard fixed-odds bet), and then reduced risk. It was unexpected that the baseline was selected by some participants, since all of the incentivised conditions are objectively better, by virtue of offering an expected $2 in expected extra value.

A one sample chi-square test found significant differences between the inducement type selected by participants for their 6th match based on game-type, $\chi^2(3) = 9.78$, $p < .05$. AFL and soccer sports bettors selected the bonus bet inducement as their most preferred 6th game, whereas cricket bettors most frequently chose the reduced risk inducement (see Table 26).

We conducted a multinomial logistic regression to determine whether the selection made on the final game was dependent on problem gambling severity. The overall model fit was not a significant improvement over the null, LR = 2.11, $p = 0.71$. Table 27 summarises the model. Accordingly, we found no evidence that PGSI status influences choice of inducement.

Table 26. Frequency of inducement condition selected by participants for their 6th game

Condition	AFL (n = 89)	Soccer (n = 92)	Cricket (n = 90)	Total (n = 271)
Baseline	27 (30.3%)	22 (23.9%)	22 (24.4%)	71 (26.2%)
Bonus bet	30 (33.7%)	31 (33.7%)	24 (26.7%)	85 (31.4%)
Reduced risk	19 (21.3%)	18 (19.6%)	29 (32.2%)	66 (24.4%)
Cash rebate	13 (14.6)	21 (22.8%)	15 (16.7%)	49 (18.1%)

Table 27. Summary of multinomial logistic model predicting chosen Game 6 inducement by PGSI

Inducement	(Intercept)	log(PGSI+1)
Bonus bet	0.19 (0.31)	-0.06 (0.19)
Better odds/winnings	-1.20* (0.50)	-0.33 (0.34)
Reduced risk	0.10 (0.32)	-0.15 (0.20)
Cash rebate	-0.47 (0.36)	0.09 (0.22)

Note: * p < .05

4.3.3 Q2b: Are specific inducements associated with higher risk taking (Game 6)?

A Kruskal-Wallis H Test revealed no statistically significant difference between the inducement chosen (out of the four possible inducements) and the level of associated risk on the bet placed ($H(3) = 3.61$, $p > .05$, ns.).

4.3.4 Q3: What inducements do participants rank as most attractive?

Figure 4 illustrates the mean attractiveness ratings for all inducements on a 5-point Likert scale.

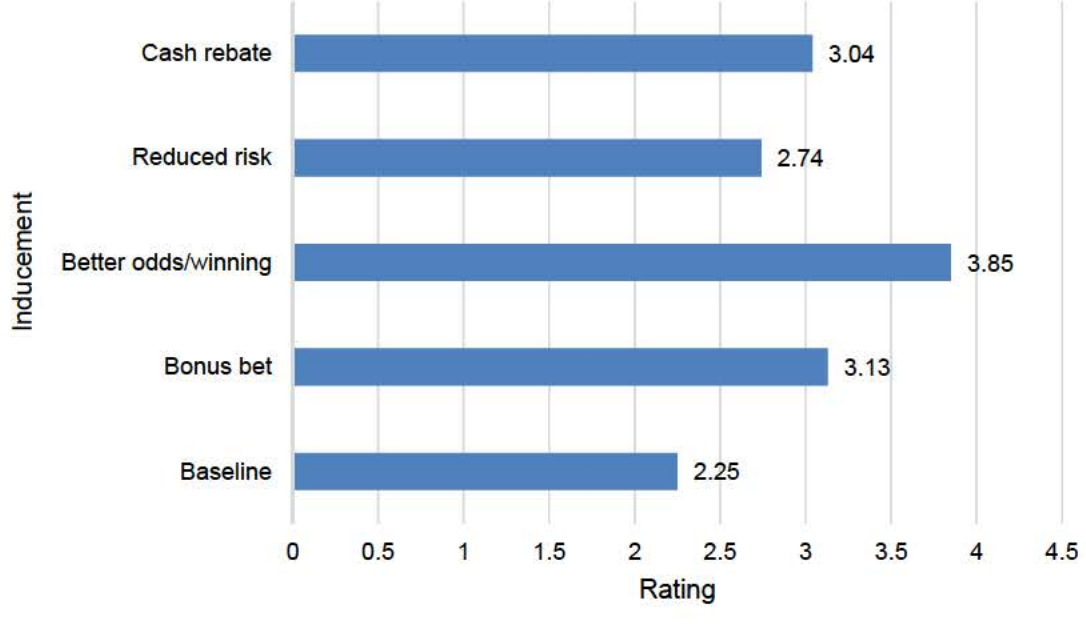


Figure 4. Mean attractiveness ratings (1-5 Likert scale)

Overall, the most attractive condition was the better odds/winning inducement and the least attractive was the baseline (no inducement) condition (Table 28). There were no significant differences between PGSI groups in terms of rated attractiveness of any of these inducements (largest $F(3,295) = 1.48$, $p = .221$ for bonus bet; $F < 1.20$ for all other inducements).

Table 28. Ranking of inducement conditions

Inducement	Least attractive (1)	2	3	4	Most attractive (5)	Mean (*SD*)
Baseline	130 (43.5%)	52 (17.4%)	54 (18.1%)	39 (13%)	24 (8%)	2.25 (1.34)
Bonus bet	26 (8.7%)	79 (26.4%)	72 (24.1%)	74 (24.7%)	48 (16.1%)	3.13 (1.22)
Better odds/winning	24 (8.0%)	26 (8.7%)	43 (14.4%)	85 (28.4%)	121 (40.5%)	3.85 (1.27)
Reduced risk	79 (26.4%)	64 (21.4%)	58 (19.4%)	52 (17.4%)	46 (15.4%)	2.74 (1.41)
Cash rebate	40 (13.4%)	78 (26.1%)	72 (24.1%)	49 (16.4%)	60 (20.1%)	3.04 (1.33)

Attractiveness of the inducements significantly differed across the inducement conditions, $\chi^2(4) = 163.69$, $p < .001$. To further examine these differences, each of the inducements were compared against the baseline condition. The results of Wilcoxon Signed-Rank tests are presented in Table 29.

Table 29. Wilcoxon Signed-Ranks tests comparing inducements against baseline condition

Inducements	*Z*	*p*	*r*
Bonus bet — Baseline	-6.985	<.001	-0.4
Better odds/wins — baseline	-10.519	<.001	-0.6
Reduced risk — baseline	-3.602	<.001	-0.2
Cash rebate — baseline	-5.985	<.001	-0.3

The baseline condition ($M = 2.25$, $SD = 1.34$) was ranked significantly less attractive than the bonus bet ($M = 3.13$, $SD = 1.22$), better odds/wins ($M = 3.85$, $SD = 1.26$), reduced risk ($M = 2.74$, $SD = 1.41$), and cash rebate conditions ($M = 3.04$, $SD = 1.32$).

4.4 Limitations

The findings from the experimental study are subject to the following limitations:

- Gambling on simulated matches may *not* have been perceived by participants to operate similarly to gambling on 'real' matches. Real matches operate according to team-skill and other factors, whereas the simulated games in the experiment had preconfigured outcomes produced by the researchers.
- The size of bets on individual matches, at $4, was typically below the average bet size for real matches and commercial betting.
- The inducements, at an expected value of $2, were large relative to the bet size. More often, real inducements have a lower expected-value relative to the size of the bet.
- Gamblers often shop multiple bookmakers for the best incentives, whereas we only offered one incentive type for each of the first 5 games. Risk-choice may be altered when several incentives are considered simultaneously, and only one perceived 'best' incentive is chosen.

5. Play-Through Study

Key findings

- Explaining the play-through conditions, and how to calculate the true cost of a bonus bet offer directly below its promotional advertisement, impacted negatively on its perceived attractiveness.
- When presented with the play-through conditions on a promoted bonus bet and asked to estimate the cost of taking up this offer, nearly three-fifths of participants underestimated the amount they would need to bet in order to withdraw any winnings from the bonus bet. On average, participants estimated the offer would cost them only two-thirds of its true cost.
- Even frequent and highly involved bettors were likely to underestimate the true cost of the offer.
- Play-through conditions are often not contained within promotional advertisements for these inducements, and may be difficult to locate. A lack of clearly written and accessible explanations of play-through conditions is likely to cause consumers to overestimate an inducement's attractiveness and to take up an offer that costs more than they expected.

5.1 Introduction and aims

Play-through conditions are applied to many types of wagering inducements where bonus bets are offered as an incentive. These conditions require an amount to be wagered at least once — but sometimes multiple times — before the bettor can withdraw any winnings from the bonus bet; and that this amount is equivalent to the bonus bet and/or the initial stake and/or any winnings from the bonus bet. Some inducements require their play-through conditions to be met before bettors can make *any* withdrawals from their betting account with that operator (Hing et al., 2017d).

Hing et al.'s audit of wagering inducements (2015c) found that play-through conditions on bonus bets tend to be complex, not usually explicit in the advertisement, difficult to locate on operator websites, sometimes buried within a raft of general terms and conditions, expressed in legalistic language, and potentially misleading about their true cost. This lack of transparency undermines informed choice if bettors do not understand the true cost of taking up inducements with bonus bets, which may then result in them having to bet more money than intended and experiencing consequent harm from doing so. The true cost of bonus bets with play-through conditions can be substantial. One example from Hing et al.'s (2015c) audit showed that it would cost consumers $1,000 of their own money to use (i.e., have a chance to win from) a $200 bonus bet with play-though requirements.

To investigate bettors' understanding of, and response to, play-through conditions, this study aimed to assess the following in relation to sports betting inducements with bonus bets:

1. whether their perceived attractiveness varies with the amount and type of information provided about their play-through conditions;
2. bettors' comprehension of their true cost; and
3. whether bettors' comprehension of their true cost varies with problem gambling severity and betting frequency.

5.2 Method

5.2.1 Procedure

This play-through study was based on a small number of questions included at the end of the survey conducted for the experimental study (see Chapter 4 for associated methods). No inducements presented in the experimental survey sections had the same wording or instructions as the inducement presented in the play-through study, so we expected minimal or no carryover effects. The play-through component of the survey took about 5 minutes to complete.

5.2.2 Design and measures

The study was designed to investigate the effects of exposure, to varying levels of information, about the play-through conditions associated with bonus bets. It used a hypothetical AFL promotional offer, modelled on common betting inducements advertised on the websites of sports betting operators in Australia at the time. Three stimuli were used (Figure 5). Mirroring a frequently used format to advertise betting inducements, *promo1* noted only that 'terms and conditions apply'. *Promo2* provided extra information immediately below the offer, specifically the terms and conditions, modelled on those typically associated with these inducements. A separate ancillary question then asked respondents, 'If you placed $200 on this bet at $1.50 odds, how much of your own money would you have to bet before you could withdraw the bonus bet or any winnings from the bonus bet?' The correct answer was $300[6]. In addition to the information provided in *promo1* and *promo2*, *promo3* provided a worked example calculating the correct amount needed to bet in order to withdraw the value of the promotion. All promotions were rated on a six-point scale ranging from 1 (extremely unattractive) to 6 (extremely attractive).

[6] This was calculated based on the following: 1) The initial bet has been placed, and is not counted in the calculations; 2) The bonus bet of $200 is not considered your own money, because you cannot withdraw it; 3) The bonus bet is placed at exactly $1.50, and winnings are therefore $100; 4) Only the $100 needs to be turned over, not any subsequent winnings of winnings; 5) Therefore $100 winnings turned over 3 times = $300; 6) Winnings are considered "your own money". We note that other interpretations of these terms and conditions may be possible depending on what people view as their 'own money'. We also note that the research team, in consultation with some experienced bettors, spent many hours debating this, highlighting the confusing nature of these terms and conditions. We also note that, if all bets to turn over the winnings are placed at $1.50 odds, then the actual turnover is $200 (initial bet) + $200 (bonus bet) + $100 x3 (winnings turnover bets) = $700 for a minimum of $250 winnings (depending on whether or not the initial bet wins).

Promo1

Promo2

Promo3

Figure 5. Stimuli provided for promo1, promo2, and promo3

Potential order effects were important in the design. For example, respondents could not evaluate *promo2* after *promo3,* as they would then be aware of the extra information provided in *promo3*. Also, presenting *promo1* before *promo2*, and *promo2* before *promo3*, could potentially influence respondents' evaluation of the latter stimuli. Between-subjects comparisons, with random allocation of respondents to one of three groups, was therefore central to the design. However, we also incorporated some repeated-measures. As shown in Figure 6, the three groups were presented with *promo1*, *promo2*, or *promo3* first (shaded grey) that enabled comparisons free of any order-effects. Groups 2 and 3 were also asked to subsequently evaluate the more informative version(s) of the promotion.

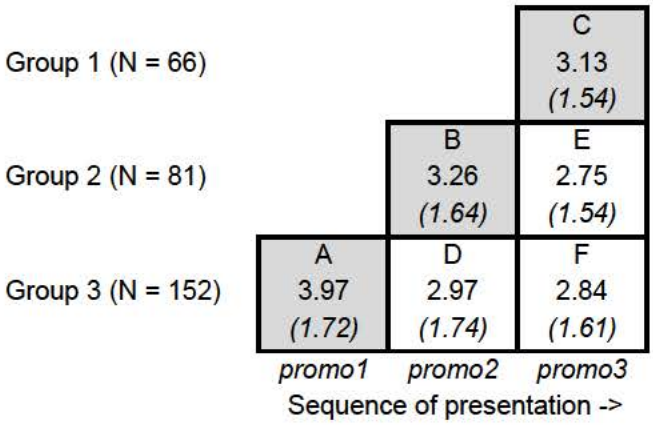


Figure 6. Design of the promotion conditions with labels (A-F) and mean (*SD*) attractiveness of each cell

Three other types of variables measured in the larger survey were used in the play-through study analyses — frequency of betting on AFL, cricket, or soccer; problem gambling severity; and demographics. Their measurement is explained in Chapter 4.

5.2.3 Analysis

As Figure 6 indicates, the mean attractiveness of the offer tended to decrease as information about the promotion increased: A > B > C. This decrease was somewhat more marked with progressive presentations: A > D > F and B > E. Given the unbalanced design, a mixed factorial ANOVA would be problematic to implement and interpret. We therefore implemented one-way repeated-, and between-subjects ANOVAs, supplemented by t-tests, using Tukey's HSD to adjust p-values, where appropriate. A Greenhouse-Geisser correction for (lack of) sphericity was applied to repeated measures ANOVA.

Both the original distribution of attractiveness ratings, and model residuals showed a platykurtic tendency — a violation of normality to which normal-distribution based models are known to be relatively robust. Nonetheless, we replicated our analysis using non-parametric versions, which produced an identical pattern of significant / non-significant results. Accordingly, only parametric versions are reported. Estimates of the amount needed to bet to withdraw winnings were not normally distributed, and were compared to the correct answer of $300 using a one sample non-parametric Wilcoxon signed-rank test. Differences between estimates across PGSI categories were evaluated using the Kruskal-Wallis rank-sum test. PGSI scores were also not normally distributed, and we therefore, used a log(PGSI+1) transformation on PGSI scores.

5.3 Results

5.3.1 Perceived attractiveness of the promotions

A one-way between-subjects ANOVA, comparing cells A-B-C, was significant, $F(2,296) = 7.95$, $p < .001$. Mean rating of attractiveness of *Promo2* (B) was not significantly different from that of *promo3* (C), $p_{HSD} = 0.896$, but *promo3* (C) was rated as significantly less attractive than *promo1* (A), $p_{HSD} = .002$, and *promo2* (B) was rated as significantly less attractive than *promo1* (A), $p_{HSD} = .006$. In a second step, age, gender, and log(PGSI+1) were added as covariates. However, this did not yield a significant improvement in model fit, $F(3,293) = 2.34$, $p = .073$. Employing un-transformed PGSI as a predictor did not change this null result, $F(3,293) = 2.44$, $p = .068$. An interaction model, between promotion and each of the covariates, was also non-significant, $F(9,287) = 0.92$, $p = .504$. Additionally, exploratory stepwise regression analyses were run in order to determine whether other factors (demographics, general gambling consumption, frequency of play on AFL, cricket, and soccer; and income) could explain attractiveness ratings of each promotion. No meaningful individual differences effects were detected.

A one-way within-subjects ANOVA, comparing cells A-D-F, was significant, $F(2,302) = 37.41$, $p < .001$. Post-hoc comparisons showed a similar pattern to the one-way ANOVA. *Promo2* (D) was not rated as significantly different in attractiveness from *promo3* (F), $p_{HSD} = 0.624$. However, *promo3* (F) was rated as significantly less attractive than *promo1* (A), $p_{HSD} < 0.001$, and *promo2* (D) was viewed as significantly less attractive than *promo1* (A), $p_{HSD} < 0.001$.

To check whether prior presentations affected subsequent assessments, we compared means of *promo3* across the three groups (cells C-E-F). The one-way ANOVA was non-significant, $F(2,296) = 1.17$, $p = 0.312$.

5.3.2 Estimated cost of the inducement

Participants' median estimate of the amount they would have to bet before being able to withdraw any bonus bet winnings was $200. This amount was significantly lower than the correct answer of $300, $W = 5482.5$, $p < .001$. No significant differences in estimates were found amongst PGSI categories, $\chi^2(3) = 0.309$, and there was no significant correlation with frequency of AFL betting, $\varphi = 0.02$, $p = 0.78$. Excluding non-respondents ($n = 68$), the correct answer of $300 was submitted by 23.3% ($n = 54$) of participants, 57.6% ($n = 133$) underestimated, and 19.0% ($n = 44$) overestimated the amount they would have to bet to access winnings.

5.4 Limitations

In addition to the limitations associated with the sample (see Chapter 4), the play-through study tested only one inducement, and further research is needed to confirm the results and to test a wider variety of inducements.

6. Psychophysiological Study

Key findings

- Amongst the regular sports bettor participants, wagering advertisements were associated with both greater appeal (desire to engage with the product in in the future) and higher excitement levels, compared to car advertisements offering similar types of inducements. Conversely, the NG participants rated wagering advertisements as both less appealing and less exciting.
- Preference for the different inducement types varied amongst PGSI groups. Reduced risk inducements were the most appealing type for NPGs, LRs and MRs, whereas PGs reported cash back inducements as most appealing. The NG control group did not report a preference for any of the inducement types.
- LRs, MRs and PGs also reported increased excitement after viewing inducements they rated as appealing (i.e., in response to reduced risk advertisements for LRs and MRs, and following cash back advertisements for PGs). However, for NGs and NPGs, none of the inducement types were associated with greater-than-baseline increases in excitement.
- All participants (regardless of gambling status) paid more attention to inducement information in the wagering advertisements, compared to the terms and conditions/responsible gambling (TC/RG) messages presented therein, despite the latter being presented on-screen for a longer period of time. Moreover, inducements presented on-screen for the longest proportion of time within the advertisements attracted a greater number of fixations, indicating that participants were, indeed, paying attention to the inducement information contained within these advertisements.
- Analysis of the relative exposure for each inducement type (based on weighted eye-tracking data) revealed that reduced risk and cash back inducements are more effective at attracting the attention of vulnerable gamblers, despite being presented on the screen for less time than other inducement types. This pattern of results was closely related to self-reported ratings of appeal, compared to the measures of actual exposure (i.e., the non-weighted eye-tracking data).

6.1 Introduction and aims

It is widely recognised that excitement is involved in the gambling experience to some extent, with some researchers postulating that experiencing the 'buzz' elicited by gambling activity is a main motivator to gamble (Blaszczynski & Nower, 2002; Boyd, 1976; Brown, 1986; Jacobs, 1986; McConaghy, 1980; Zuckerman, 1969); perhaps even more so than monetary incentives (Brown, 1986; Dickerson, 1984). Empirical research has demonstrated that gambling is consistently associated with increased excitement levels (e.g., autonomic arousal) when compared to pre-gambling baseline levels, and that winning outcomes are particularly exciting in the gambling experience of regular gamblers (see Lole, Gonsalvez, Blaszynski & Clarke, 2012 for a summary of previous research findings). One of the main reasons excitement is closely associated with the gambling experience involves behavioural conditioning processes, whereby gambling rewards are repeatedly paired with the feeling of excitement and increased arousal levels (Boucsien, 1992). Over

time, this 'winning feeling' is so closely associated with gambling, that excitement or arousal-inducing stimuli, may lead to higher intensity gambling behaviours in regular gamblers.

The role of excitement in the gambling experience of vulnerable adults (at-risk and PGs) is complex, with research showing that the 'winning feeling' may be more closely associated with the anticipation of reward, rather than the actual receipt of it (see Lole, Gonsalvez & Barry, 2015; Rockloff, 2007). Moreover, it is believed that different subtypes of gamblers are differentially sensitive to the excitement associated with gambling, with sports bettors thought to be particularly attracted to attaining the stimulation afforded by gambling activity (Blaszczynski & Nower, 2002). These findings provide an important indication that the excitement, arousal, or 'buzz', associated with winning (and/or the *potential* of winning), may play a central role in the development and maintenance of harmful gambling behaviours, particularly for vulnerable sports bettors.

Whilst the viewing of sports-betting marketing is associated with increased desire to gamble amongst PGs, MRs and LRs (Sproston et al., 2015), the mechanisms driving this phenomenon are unclear. In addition to other cognitive, attitudinal, and emotional factors, it is possible that the anticipatory excitement elicited by viewing such material may also contribute to the desire to gamble. Moreover, these advertisements, which emphasise the positive aspects of the gambling experience (perhaps, most notably, that gambling is exciting and that winning is easy; see Binde, 2014), may be more appealing to vulnerable adults through their association with excitement and anticipated reward.

The study described in this chapter sought to examine the influence wagering advertising has on the desire to bet and feelings of excitement for both sports bettors and NGs. It also sought to examine the impact of different inducements in this context, as well as to use psychophysiological indices of attention to explore what marketing variables, within this type of advertising, are particularly appealing to vulnerable adults (see Binde, 2014). Increases in physiological arousal are widely considered to be an objective indicator of excitement, and physiological arousal has been measured in several psychophysiological studies of gambling (Boucsien, 1992; Diskin & Hodgins, 2003; Goudriaan, Oosterlaan, de Beurs, & van den Brink, 2006; Lole et al., 2012; 2014; Sharpe, 2004; Sharpe, Tarrier, Schotte, & Spence, 1995). With this focus, the following research questions were articulated.

6.1.1 RQ1: Does wagering marketing make vulnerable adults more likely to engage with gambling products?

This question involved examining whether viewing wagering advertising in general induces greater reports of engagement, in the form of an increased desire to bet and higher ratings of excitement, compared to other non-gambling advertisements. It also sought to examine whether vulnerable sports bettors tend to be more engaged with such advertising materials compared to NGs. Based on previous research, the sports bettors were expected to report greater likelihood of taking up offers presented in the wagering advertisements, and greater excitement in response to such advertisements when compared to the non-gambling advertisements. We did not expect that wagering advertisements would entice NGs to participate in gambling activity or result in increased excitement levels, since they have not been subjected to the same reinforcement schedule for gambling as regular gamblers (Sharpe & Tarrier, 1993).

6.1.2 RQ2: Are particular marketing approaches associated with correspondent increases in potentially harmful gambling behaviours?

This question involved exploring whether certain inducements are deemed to be more appealing, in terms of desire to gamble with that inducement in a future gambling situation, the amount of excitement they elicit, and their ability to attract the attention of the viewer (using objective psychophysiological indices). Again, a focus was on between-group differences in these measures; specifically, whether vulnerable sports bettors report a greater desire to bet after being presented with certain inducements, whether they are more excited by advertisements that contain inducements, and whether they pay more attention to certain types of inducements. Due to the paucity of information regarding the effect of different inducements on the gambling experience, these analyses were exploratory in nature.

6.2 Method

6.2.1 Participants

Participants were recruited through two recruitment agencies, Stable Research and Qualtrics, who invited potential participants to complete a screening questionnaire to determine their eligibility for the study. Eligibility criteria were: aged 18 years or over; English native speakers; were not taking certain medications known to interfere with psychophysiological readings; were willing to be video-recorded during the sessions; lived in Victoria and were willing to attend CQUniversity Melbourne campus for testing for a one hour session; and were willing to have pulse rate, skin conductance and eye movements measured during testing. We also set quotas by gambling group. To be eligible to participate, participants in the PG, MR and LR groups were required to on average have bet on sports at least once a fortnight in the previous 12 months. We found it difficult to recruit enough at-least fortnightly sports bettors who were NPGs; we therefore relaxed the inclusion criteria to at-least monthly sports bettors for this group. Eleven people who had not gambled on any gambling form in the past 12 months formed a NG control group.

Sixty eligible participants were selected and attended our research laboratory at the CQUniversity Melbourne campus for testing (one additional participant also showed up, but failed the eligibility check). All participants were provided with a form of compensation (e.g. electronic gift voucher) equivalent to $50. Of the 60 participants, 12 were classified as NPGs, ten as LRs, 18 as MRs, and nine as PGs, based on the PGSI (Ferris & Wynne, 2001). Participants were aged between 19 and 65 (M = 39.7, SD = 10.2). The majority were male (78.3%). Most (80%) had undertaken further education after year 12: 25.0% had a trade, technical certificate, or diploma, 38.3% had a university or college degree, and 16.7% had postgraduate qualification/s as their highest level of education. Most participants (66.7%) were born in Australia, and 95.0% spoke English as their native language. Age (p = .280), income (p = .422), and level of education (p = .297) did not significantly differ between PGSI groups.

All participants were fully informed of the study protocol before participating, all were advised they were free to withdraw from the study at any time, and all provided their consent to participate before testing commenced. As per required protocols, none of the participants reported using nicotine, alcohol, certain types of prescription drugs, or illicit drugs in the 12 hours prior to testing. These substances can affect autonomic nervous system activity (Boucsein, 1992). All participants had normal or corrected-to-normal vision.

6.2.2 Advertisement stimuli

Twelve different advertisements, recorded from television broadcasts, were presented to each participant on a computer screen using *Tobii Studio 3.3.2 1150, Professional Edition* software. Table 30 shows details of each advertisement. The presentation of the advertisements was counterbalanced across participants to offset order effects. Attempts were made to keep the length of the advertisements uniform, but due to the limited control over experimental parameters when using stimuli with high ecological validity, this was not possible; thus, the advertisements ranged between 15 and 31 seconds. Six advertisements were wagering advertisements; four of these featured one type of inducement (better odds/winnings, reduced risk, bonus bet, or cash rebate), while the other two were brand awareness advertisements that did not feature any inducement. We attempted to find advertisements from one single wagering operator to control for differences between the advertisements (i.e., that were not related to inducement type), but were unable to do so. Consequently, all advertisements came from different wagering operators.

We also sourced six car advertisements that featured similar inducements to the wagering advertisements to serve as a control stimuli comparison. Although the obvious limitation is the discrepancy in price point for the products on offer, car advertisements were chosen because they present one of very few products that offer types of inducements similar to the ones offered by wagering operators. Furthermore, cars are a product category that tends to have broad appeal among the target demographic. These were matched to the wagering advertisements: two car advertisements were brand awareness advertisements with no inducements, and the other four featured the same type of inducements as those offered by wagering operators (e.g., 'extended warranty' offers, corresponding to reduced risk inducements; 'factory cashback' offers, corresponding to cash rebate inducements). While buying a car is different to wagering, particularly in terms of cost, the car advertisements were included to determine whether or not respondents reacted to audio/visual stimuli in general, advertisements in general, and/or inducements in general, regardless of what product the advertisements are for.

Table 30. Details of the advertisements

Ad Id	Product category	Inducement type	Length of advertisement (seconds)	Length of inducement (seconds)	Length of RG/TC information (seconds)
A	Gambling	Bonus bet	30	10	17
B	Car	-	25	-	-
C	Gambling	-	25	-	-
D	Car	Bonus bet	30	-	-
E	Gambling	Better odds	15	2	6
F	Car	Cash rebate	30	-	-
G	Car	Reduced risk	30	-	-
H	Car	Better odds	18	-	-
I	Gambling	-	31	-	-
J	Gambling	Reduced risk	30	2	21
K	Car	-	30	-	-
L	Gambling	Cash rebate	15	3	8

Note: The advertisements were presented in one of four orders (HJDIGLKFEBAC; DACKLBGJIHFE; KBJDEGLCIAFH; or DFCGAJIHEBLK), to reduce order effects. RG = respons ble gambling. TC = terms and conditions.

6.2.3 Measures

Data collection and quantification for physiological measures

Eye-tracking equipment (*Tobii X2-30 Compact Edition*, using *Tobii Studio 3.3.2 1150, Professional Edition* software) was used to confirm that participants were, indeed, paying attention to the inducement information presented in the advertisements, as well as their relative interest in such. This device measured participants' binocular eye movements (at a rate of 30 Hz) during the viewing of each advertisement, in an unrestrained set up, where participants were seated approximately 900 mm from the eye-tracker. These data were recorded to an Acer laptop (*Aspire V5-431 Series*, model *MS2360*). The data obtained from this device were quantified by two members of the research team, who watched the recorded eye-tracking videos, and coded the events of interest that occurred within each advertisement, for each participant. Two pieces of information were particularly pertinent to the research questions being addressed: the first was the number of fixations on the inducement information (if one was offered); and the second was the number of fixations on the related *Terms and Conditions* and/or *Responsible Gambling* (TC/RG) information featured in each wagering advertisement. Before the data were coded, the two raters reached agreement on what constituted relevant inducement and TC/RG information in each advertisement. For example, in the screenshot displayed in Figure 7, the inducement information included the sentence '*GET YOUR CASH BACK.*', as well as the red bars immediately above and below it. An example of TC/RG information included the sentence '*$100 MAX BET.*'*, as well as the red bar directly below it, and the small print at the bottom of the screen.

For each of the four advertisement presentation orders, the two raters randomly chose one participant, and discussed with each other their respective codes for these advertisements. The remaining participants were coded by both raters without further discussion. Inter-rater reliability was analysed through intraclass correlation coefficients based on a mean-rating (k = 2), absolute-agreement, and two-way mixed model. From Table 31, it is evident that the 95% confidence intervals of all intraclass correlation coefficient estimates for all ten fixation number variables were greater than .90. Hence, these indicated excellent inter-rater reliability (Koo & Li, 2016), and that the average fixation numbers (of the values coded by the two raters) were suitable for use in the subsequent analyses. Among the 60 eligible participants, one encountered some eye-tracking calibration issues. However, exclusion of that single participant did not change the outcomes of the inter-rater reliability analyses or the paired-samples t-tests (see Table 31) substantively. Hence, this participant was retained in our analyses.

Figure 7. Screenshot of a wagering advertisement used in the study

Table 31. Inter-rater reliability for the number of fixations on the inducement and TC/RG information in each wagering advertisement

Number of fixations on:	Intraclass correlation coefficient estimate
Inducement in Ad A	0.998 [0.996,0.999]
TC/RG in Ad A	0.996 [0.993,0.998]
TC/RG in Ad C	0.998 [0.996,0.999]
Inducement in Ad E	0.993 [0.988,0.996]
TC/RG in Ad E	0.986 [0.977,0.992]
TC/RG in Ad I	0.989 [0.982,0.993]
Inducement in Ad J	0.987 [0.974,0.993]
TC/RG in Ad J	0.997 [0.995,0.998]
Inducement in Ad L	0.991 [0.985,0.995]
TC/RG in Ad L	0.991 [0.986,0.995]

Note: Upper and lower bounds for 95% confidence intervals presented in square brackets

Psychophysiological indices of electrodermal (skin conductance) activity and blood volume pulse (a measure of heart activity, from which indices such as heart rate can be derived) were recorded from each participant while they watched the series of advertisements, with *Procomp Infiniti* equipment (model *T7500M*, using *Biograph Infiniti* software, version *6.0*; Thought Technology Ltd), set up according to system specifications[7]. Previous research has shown that the subjective experience of excitement is reflected by increased physiological arousal levels to significant psychological stimuli, and for these psychophysiological measures of arousal to be highly robust and reliable measures of a person's autonomic nervous system (ANS) activity. One element within the ANS is electrodermal activity, the increase in which can be experienced by the sensation of clammy hands (i.e., perspiration) given new and highly stimulating, or exciting, stimuli (Boucsein, 1992).

Originally, we intended to examine the relationship between physiological arousal (recorded using this equipment) and self-reported levels of excitement to assess their comparability, and whether certain inducements were associated with higher levels of physiological stimulation, using objective, phasic skin conductance responses. However, upon inspection of these data, repeated and unsystematic error was found in the physiological data, caused by failure of the Biograph Infiniti software to accurately record the start and end times of the physiological recordings, as per the computer's internal clock (as advised by the equipment manufacturer). Because the recorded data was going to be matched to the start and end time of each advertisement, as recorded by the stimulus-presentation software (also based on the computer's internal clock), the electrodermal and cardiac activity in response to each advertisement (and the features within them) could not be accurately matched with the actual presentation times for each advertisement (i.e., as presented and recorded on the same computer by the eye-tracking software). Accordingly, only a very broad indication of between-group

[7] After cleaning the volar surface of the non-dominant hand with warm soapy water, three electrodes were placed on the surface of the skin. Two silver/silver-chloride (Ag/AgCl) dry electrodes, 8 mm in diameter, were placed on the distal phalanx of the third and fourth digits skin surface to measure electrodermal activity. Skin conductance was recorded at a constant voltage of 0.5 V, and sampled at 256 Hz. Blood volume pulse was measured using a photoplethysmography sensor placed on digit one of the non-dominant hand. BVP was sampled at a rate of 2048 samples per second.

differences in physiological arousal (i.e., across the entire session) is included in this report, and not the differences elicited by the different *product categories* and *inducement types*. This equipment has been used successfully in past research examining tonic skin conductance measures (Rockloff & Greer, 2010; Rockloff, Signal & Dyer, 2007), and it may be useful for other purposes and/or in other settings. However, unless an external source (such as a camera with a high frame rate) is used to independently record the timing of events, it is deemed unsuitable by the research team for use in psychophysiology-based research that requires accurately inserting multiple markers to indicate events of interest throughout the testing session.

Individual differences and subjective report questionnaires

The survey (included in Appendix G) was completed online through the Qualtrics platform and contained the following measures:

Problem gambling severity: the PGSI (Ferris & Wynne, 2001) was used to classify gambling participants into NPGs (score of 0), LRs (1-2), MRs (3-7), and PGs (≥ 8).

Individual differences questionnaire: before viewing the advertisements, a battery of questionnaires was completed by participants. This included questions on demographic variables (including age, gender, country of birth, highest level of education, personal annual pre-tax income, native language); sports betting behaviours over the past 12 months[8] (because most of these questions were only applicable to gamblers, NGs received a slightly shorter version of this questionnaire); preference of and exposure to different gambling, sports, and car companies[9]; as well as medical and illicit/recreational drug use. Participants also completed several other previously-validated questionnaires, including the Attitudes Towards Gambling Scale (ATGS; Orford, Griffiths, Wardle, Sproston & Erens, 2009), the Depression, Anxiety, and Stress Scales (DASS; Lovibond & Lovibond, 1995), and the Barratt Impulsiveness Scale-Brief (BIS-Brief; Steinberg, Sharp, Stanford & Tharp, 2013).

Subjective experience questionnaire: Following each of the 12 advertisements, participants completed a short subjective experience questionnaire. One question assessing subjective feelings of excitement was asked following all advertisement types: '*How stimulating did you find the advertisement?*' (rated on a 100-point sliding scale that ranged from 0 = *not at all stimulating* to 100 = *extremely stimulating*). If the advertisement contained an inducement, its appeal was assessed with the question: '*How likely would you be to take up the offer in the advertisement?*' (rated on a 100-point sliding scale ranging from 0 = *extremely unlikely* to 100 = *extremely likely*).

[8] Questions related to both the nature and frequency of sports betting (as well as other forms of gambling), expenditure on sports betting, number of days in the last month on which they bet on sports, and number of bets placed per typical day of betting on sports in the last month. They were asked how frequently they watched or listened to events they bet on, as well as what sources of information to inform their betting,

[9] Questions included: which sports betting operators they had an account with, their preferred operator, how much they liked or disliked watching each of a number of sports, which AFL team they supported, and car brands that they had owned and that they preferred.

6.2.4 Procedure

All data were collected in an air-conditioned testing laboratory, with participants positioned so that air vents were not blowing directly onto them, to reduce the occurrence of eye-blinks. Upon arrival at the testing location, participants read the study's *Information Sheet* and provided consent to participate. Once the physiological recording equipment was fitted and calibrated, participants filled out the demographic and individual differences questionnaires, as mentioned above. Following this activity, a two-minute baseline recording of the participant's resting ANS activity was taken. Each participant then watched 12 short advertisements, while their physiological activity was recorded. A two-minute break followed each advertisement, which allowed time for participants to answer the subjective experience questionnaire for the preceding advertisement, and for ANS activity to return to baseline, before viewing the subsequent one. During each two-minute interval, a countdown signalling the onset of the next advertisement appeared on the screen, so that participants were prepared to watch it, and would not be startled by unexpected stimuli. This stage of the project was approved by the CQUniversity Human Research Ethics Committee (H16/09-256).

6.2.5 Statistical analyses

Preliminary data modelling with individual differences

We conducted a series of regression analyses and repeated-measures ANOVAs; with *product category* and *inducement type* included as within-subjects independent variables; to determine whether any covariates needed to be included in the analyses outlined below. These tests assessed variables including the order of advertisement presentation; scores of impulsiveness, depression, anxiety and stress; as well as attitudes towards gambling.

Analyses for Research Question 1

To test the impact of wagering marketing on vulnerable adults, we conducted mixed-model repeated-measures ANOVAs that tested the impact the independent variables of *product category* (within-subjects in nature, with two levels, *car advertisements* and *wagering advertisements*) and *PGSI group* (between-subjects in nature, based on vulnerability risk-level), had on the dependent variables of inducement appeal and self-reported feelings of excitement.

Analyses for Research Question 2

To test if particular marketing approaches (i.e., different inducement types) are associated with increases in potentially harmful gambling behaviours, we conducted a series of mixed-model repeated-measures ANOVAs, using the independent variables of *inducement type* (within-subjects in nature, as each participant watched all advertisements) and *PGSI group* (between-subjects in nature, based on vulnerability risk-level).

Do vulnerable adults find certain inducements more appealing?

To assess whether inducements differentially affect the desire to gamble in vulnerable adults, as well as those at lower risk of gambling problems, we conducted a mixed-model repeated-measures ANOVA; with *inducement type* (within-subjects in nature, with *better odds, bonus bet, reduced risk*, and *cash rebate* inducement types) and *PGSI group* (between-subjects in nature, based on vulnerability risk-level) serving as independent variables; and self-reported likelihood of taking up the inducement as the dependent variable. Post-hoc pairwise comparisons, with Bonferroni corrections, were conducted between all pairs of inducement types to determine whether certain inducements are more appealing for different PGSI groups, in terms of increased likelihood of taking up that inducement.

Do vulnerable adults find certain inducements more exciting?

To test the impact that wagering marketing has on excitement/arousal levels for people vulnerable to gambling problems, two separate analyses were conducted: one testing between-group differences in tonic physiological arousal levels over the entire session, and the other testing the effect of different inducement types on self-reported excitement. For the first analysis, we conducted a one-way ANOVA, with *PGSI group* as the independent variable (between-subjects in nature, comparing *gambling groups* with the *NG control group*), and average tonic skin conductance level as the dependent variable. For the second comparison, we conducted a mixed-model repeated-measures ANOVA to test for the effect of *inducement type* (within-subjects in nature, with *better odds, bonus bet, reduced risk*, and *cash rebate* inducement types, as well as advertisements, in which *no inducements* were present) and *PGSI group* (between-subjects in nature, indicating vulnerability risk) on the dependent variable of self-reported excitement. Planned contrasts, with Bonferroni corrections, were conducted to examine whether excitement levels elicited by each inducement-containing advertisement were significantly different from the no-inducement baseline advertisement, for each PGSI group.

Do vulnerable adults pay more attention to certain inducements?

To objectively assess whether participants were actually engaging with the inducement information within each advertisement, analyses were conducted using the psychophysiological data recorded from the eye-tracker as a dependent variable. A recent literature review noted that the application of eye-tracking methodology to examine what elements within complex advertising messages are most appealing (e.g., the inducement information presented therein) is a priority for gambling advertising research (Binde, 2014). The basic premise for using such methods is that there is an association between the number of fixations on a stimulus and the amount of attention given it; thus, this psychophysiological measure involves recording how many times a participant fixes their eyes on certain visual stimuli, with a greater number of fixations reliably indicating more attention placed on that stimulus (Sandberg et al., 2011). The ecologically-valid nature of the advertisement stimuli used in the current study meant that meaningful comparisons in marketing variables, such as *potential exposure* (i.e., the amount of time that the information was visible on the screen)*, actual exposure* (the total number of fixations, indicating the amount of visual attention participants paid to certain information)*, and relative exposure* (the amount of visual attention based on the total amount of time the information was available, which is a common indicator of the advertisements' efficiency; Binde, 2014), could be made between each *inducement type* and *PGSI group*. Moreover, in addition to inducement-related text, each wagering advertisement used in the study contained TC/RG

information. This information was presented on the screen for longer periods compared to inducement-related text (Table 30), and was often presented on the screen at the same time as the inducement. Accordingly, the number of fixations to these events served as an effective internal control condition, allowing us to assess whether inducements were, indeed, more attention-grabbing than this other form of text-based information within the advertisements. We tested for this with paired-samples t-tests.

Both *actual exposure* and *relative exposure* can provide insight into the effect inducements have on participants. Specifically, they help determine whether inducements presented for a greater proportion of the total advertisement time are associated with a greater desire to bet with that inducement; or if the nature of the inducement offered is inherently appealing to sports bettors, regardless of the amount of time the inducement is available for viewing on screen. Thus, in order to test the significance of *inducement type* (a within-subjects independent variable) for different *PGSI groups* (a between-subjects independent variable), two separate repeated-measures mixed model ANOVAs were conducted: one which used the total number of fixations on inducements (*actual exposure*) as the within-subjects dependent variable, and one that used a weighted value, calculated by dividing the total number of fixations on the inducement information within each advertisement by the proportion of time that this information was available (*relative exposure*). Post-hoc pairwise comparisons with Bonferroni corrections were conducted to examine the impact different inducement types have on both these measures, for each PGSI group.

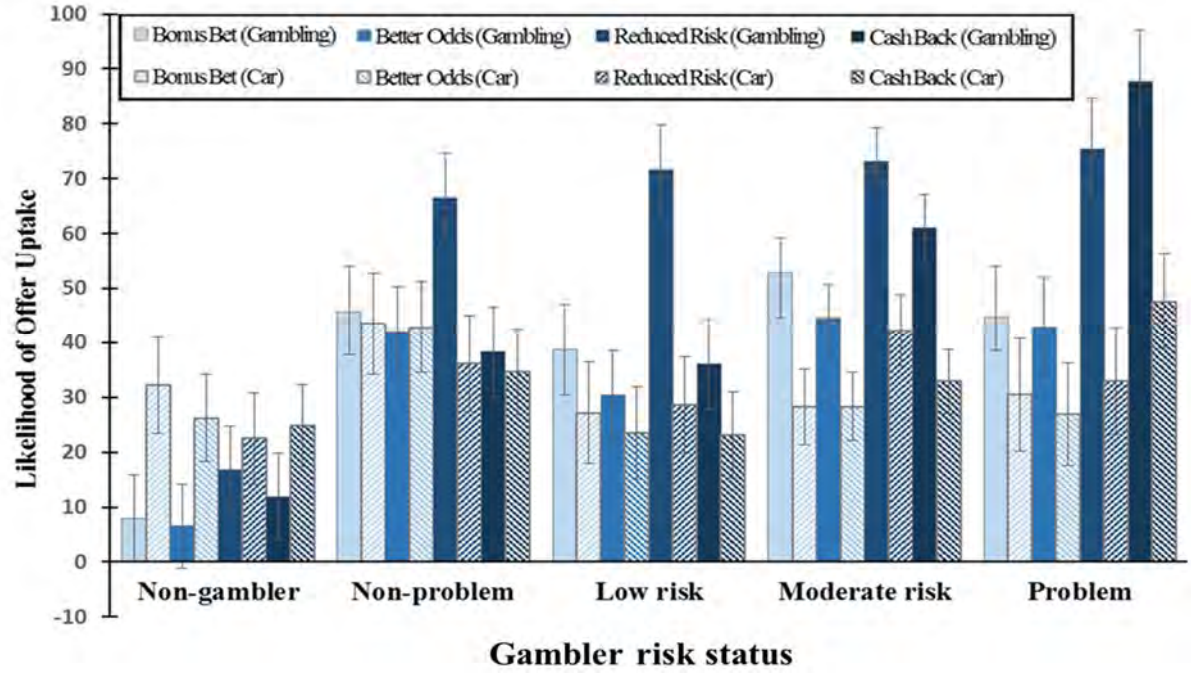
6.3 Results

6.3.1 Data modelling with advertisement sequence and individual differences variables

As mentioned above, participants watched one of four different advertisement sequences. The sequence watched did not significantly impact self-reported likelihood of taking up the inducement (p = .298) or excitement levels (p = .643), so this potential nuisance variable was not included in subsequent analyses. Participants' attitudes to gambling score (ATGS) was a significant predictor of inducement uptake, $F(1,25) = 2.00$, p = .034. Somewhat surprisingly, but consistent with previous research (Hing, Russell & Browne, 2017b), individuals with more negative attitudes to gambling were more likely to report a greater likelihood of taking up the inducement. However, because *PGSI group* was also found to significantly predict ATGS (higher risk PGSI groups had less favourable attitudes toward gambling, $r(58) = -.34$, p = .008), ATGS was not included as an additional predictor variable in the analyses of the impact of advertising material on vulnerable adults, as it contributed unreasonably to multicollinearity in the model. Self-reported likelihood of inducement uptake was not associated with any of the other trait variables for any group, including impulsivity (p = .602), depression (p = .810), anxiety (p = .520), or stress (p = .627). Likewise, self-reported excitement was not associated with impulsivity (p = .418), depression (p = .687), anxiety (p = .561), stress (p = .437), or gambling attitudes (p = .133). Accordingly, none of these variables were examined further.

6.3.2 RQ1: Does wagering marketing make vulnerable adults more likely to engage with gambling products?

This section assesses whether vulnerable adults are more likely to report increased engagement with wagering advertisements, and whether they rate these as more exciting, compared to other non-gambling related marketing material. Figure 8 shows the mean ratings of the likelihood of inducement uptake in response to each *inducement type* within each *product category* (i.e., car and wagering advertisements) by *PGSI group*. A significant interaction between *product category* and *PGSI group*, $F(4,52) = 8.30$, $p < .001$, $\eta^2 = .39$, revealed that the NG group reported being more likely to take up the car inducements, compared to the wagering inducements. In contrast, all gambler groups (regardless of risk level) reported being more likely to take up the wagering inducements, compared to the car inducements.



Note: Scores represent the self-reported l kelihood of taking up each type of inducement, within each product category (wagering advertisements in block colours, with the corresponding ratings for car advertisements that contained the same inducement type to the right, in diagonal stripes). Error bars indicate ±1 standard error from the mean.

Figure 8. Mean desirability ratings for each wagering and car inducement by PGSI group

The omnibus analysis of tonic physiological arousal levels revealed a trend (although non-significant) toward different arousal levels between *PGSI groups* ($p = .055$). The planned comparison for this measure revealed that the *gambling groups* displayed significantly higher arousal levels ($M = 3.35$µS, $SD = 2.73$) over the entire recording session, compared to the *NG control group* ($M = 1.39$µS, $SD = 1.04$; $p = .024$). However, due to the above-mentioned equipment problems, whether these higher arousal levels were due to greater feelings of excitement in response to the wagering advertisements is the subject of speculation. Nevertheless, analysis on self-reported excitement revealed that, in general, wagering advertisements elicited higher levels of self-reported stimulation ($M = 54.05$, $SE = 2.27$) compared to car advertisements ($M = 46.67$, $SE = 2.39$), $F(1,55) = 10.55$, $p = .002$, $\eta^2 = .16$. However, the *product category* and *PGSI group* interaction was not significant ($p = .353$); likewise, the main effect of *PGSI group* failed to reach statistical significance for this measure ($p = .056$).

6.3.3 RQ2: Are particular marketing approaches associated with increases in potentially harmful gambling behaviours?

Do vulnerable adults find certain inducements more appealing?

As Figure 8 indicates, the effect of different inducements on the likelihood of uptake was more varied within the wagering advertisement category than the car advertisement category. This was confirmed by a significant interaction between *product category* and *inducement type*, $F(3,156) = 9.45$, $p < .001$, $\eta^2 = .15$. Within the gambling advertisements, reported likelihood of inducement uptake was dependent on the type of inducement presented, as well as vulnerability risk-level as indicated by a significant interaction between *PGSI group* and *inducement type*, $F(12,156) = 2.94$, $p = .001$, $\eta^2 = .18$ (the three-way comparison between *product category*, *inducement type*, and *PGSI group* was not found to be significant, $p = .679$). Pairwise comparisons revealed that the *NG control group* did not report greater appeal (in terms of likelihood of uptake) for any one *inducement type* compared to the others . For the *NPG group*, *reduced risk* inducements were associated with greater likelihood of uptake, compared to *cash back* inducements ($p = .020$). *Reduced risk* inducements were also more appealing than all other inducement types for the *LR group* (> *bonus bet*, $p = .012$; > *better odds*, $p = .003$; > *cash back,* $p = .002$), and compared to *better odds* inducements for the *MR group* ($p = .006$; the *reduced risk* > *bonus bet* inducement effect failed to reach statistical significance for this group, $p = .060$). For *PGs*, *cash back* inducements were associated with higher likelihood of inducement uptake, compared to *bonus bet* ($p = .001$) and *better odds* inducements ($p = .001$). There was also a trend toward *PGs* rating *reduced risk* inducements as more appealing than *bonus bet* ($p = .054$) and *better odds* ($p = .063$) inducements; however, these effects failed to reach statistical significance.

Do vulnerable adults find certain inducements more exciting?

Levels of excitement in response to different inducement types varied more within the wagering advertisements, compared to the car advertisements — as indicated by a significant interaction between *product category* and *inducement type* for this dependent variable, $F(3,165) = 5.39$, $p = .001$, $\eta^2 = .09$. While the main effect of *inducement type* failed to reach statistical significance ($p = .071$), different levels of self-reported excitement, in response to different inducement types, were found for low and high-risk gamblers, as indicated by a significant interaction between *inducement type* and *PGSI group*, $F(1,55) = 1.86$, $p = .045$, $\eta^2 = .12$ (the three-way comparison between *product category*, *inducement type*, and *PGSI group* was not significant, $p = .154$). Figure 9 shows the mean difference in excitement scores (i.e., from the baseline of the *no-inducement* control advertisement) for each PGSI group. Planned contrasts revealed that, for the *non-gambling control group* and the *NPG group*, none of the wagering inducements was associated with greater-than-baseline increases in self-reported excitement. *Reduced risk* inducements were associated with significant increases in excitement for *LRs* ($p = .010$) and *MRs* ($p = .001$). Significantly greater excitement levels were found in response to the *bonus bet* inducement for *LRs* ($p = .049$), and in response to the *cash back* inducement for *PGs* ($p = .042$).

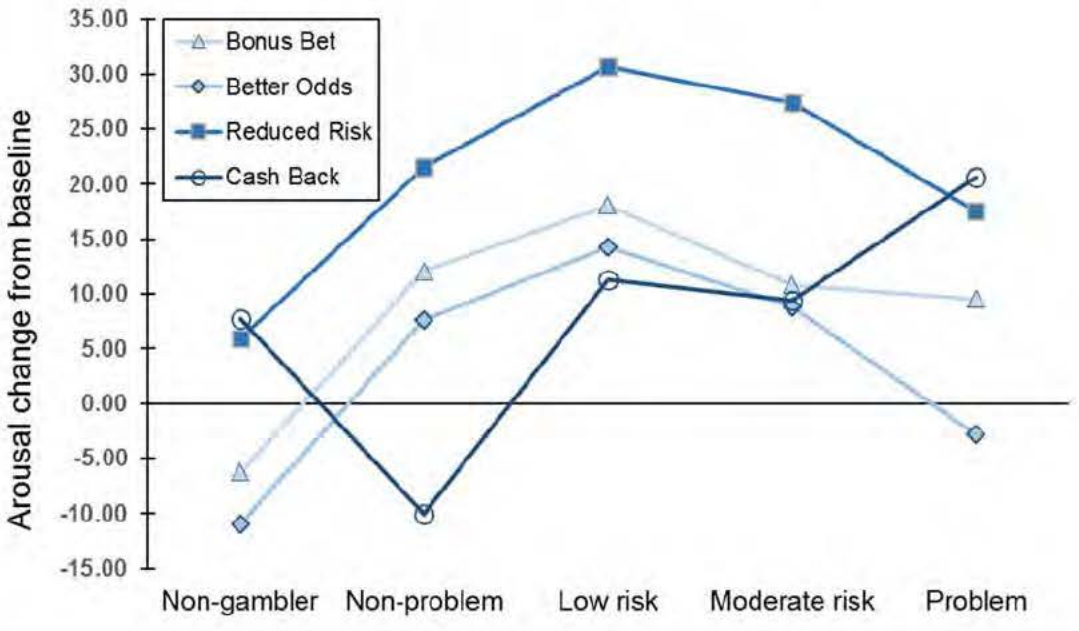


Figure 9. Mean differences in self-reported excitement from the non-inducement baseline condition for each wagering inducement type by PGSI group

Do vulnerable adults pay more attention to certain inducements?

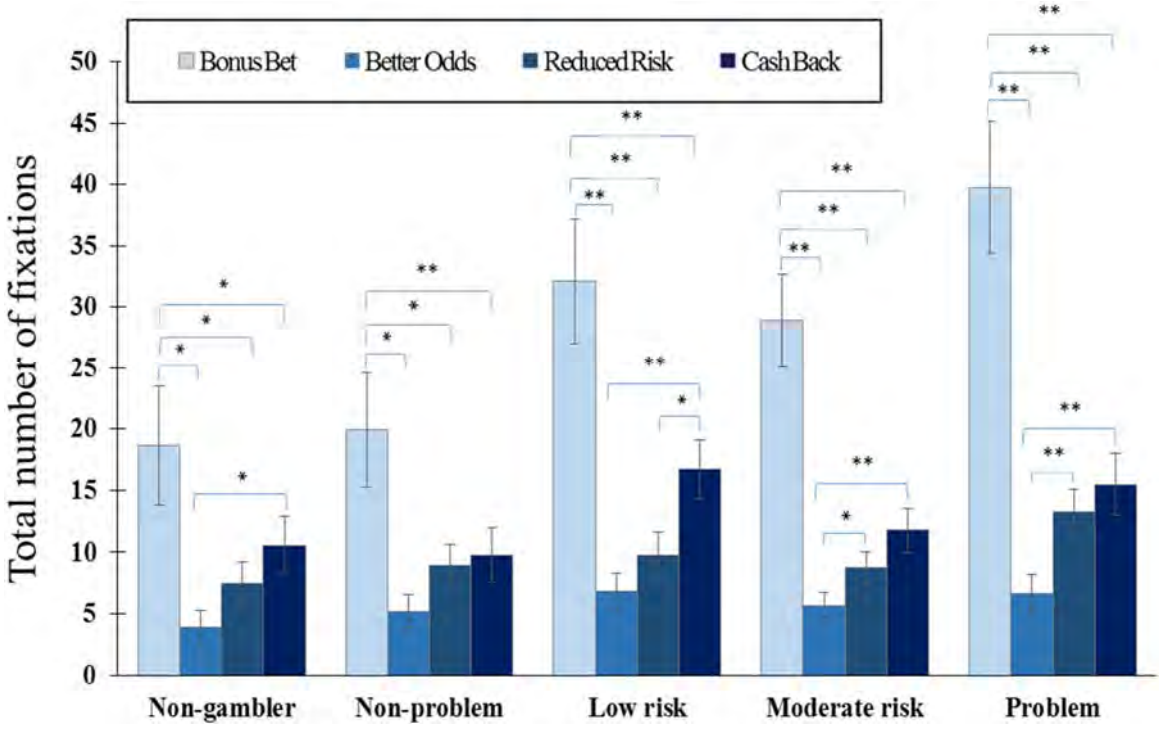
Table 32 presents results from the paired-samples t-tests, which compared the attention paid to inducement and terms and conditions (TC) / responsible gambling (RG) information. Participants made significantly more fixations on the *inducement information*, compared to the *TC/RG information*, across all four advertisements containing wagering inducements. Although generally presented at the same time, compared to the *inducement information*, the *TC/RG information* was typically smaller, placed towards the bottom of the screen, and static in nature; however, the *TC/RG information* was always presented on-screen for longer than the *inducement information* (see Table 30). The results suggest that the greater attention paid to the *inducement information* was due to how the inducement information was displayed and/or the significant meaning conveyed by the inducement information.

Table 32. Average number of fixations on the inducement information to the average number of fixations on the TC/RG information within each wagering advertisement

Inducement type	Mean for average number of fixations on the inducement information	Mean for average number of fixations on the TC/RG information	*t*(59)	*p*-value (2-tailed)
Bonus Bet	27.3833	4.5167	9.285	< .001
Better Odds	5.6000	0.2750	9.003	< .001
Reduced Risk	9.3833	1.6917	10.290	< .001
Cash Back	12.5333	1.4917	11.529	< .001

Figure 10 shows the average number of total fixations each *PGSI group* placed on the different wagering inducements. The omnibus effects for the ANOVA revealed that, while the main effect for

PGSI group did not reach statistical significance (p = .063), a statistically significant main effect for *inducement type*, $F(3,165) = 108.02$, p < .001, η^2 = .66, and an interaction effect between *inducement type* and *PGSI group*, $F(12,165) = 2.81$, p = .002, η^2 = .17, were found. Figure 10 also shows results for the planned contrasts between each pair of inducement types, within each *PGSI group*. These contrasts revealed that, for all PGSI groups, *bonus bet* inducements attracted a greater number of total fixations, compared to *better odds, reduced risk,* and *cash back* inducements. *Reduced risk* inducements attracted a greater number of fixations compared to *better odds* inducements for the *MR and PG group*. *Cash back* inducements attracted a greater total number of fixations compared to *better odds* for *NGs*, as well as those experiencing some level of gambling problems, and compared to *reduced risk* inducements for *LRs*. These measures of *actual exposure* indicate that participants were paying attention to all inducement types at some level, with a greater number of total fixations associated with those inducements presented on-screen for a longer period of time (see Table 30).

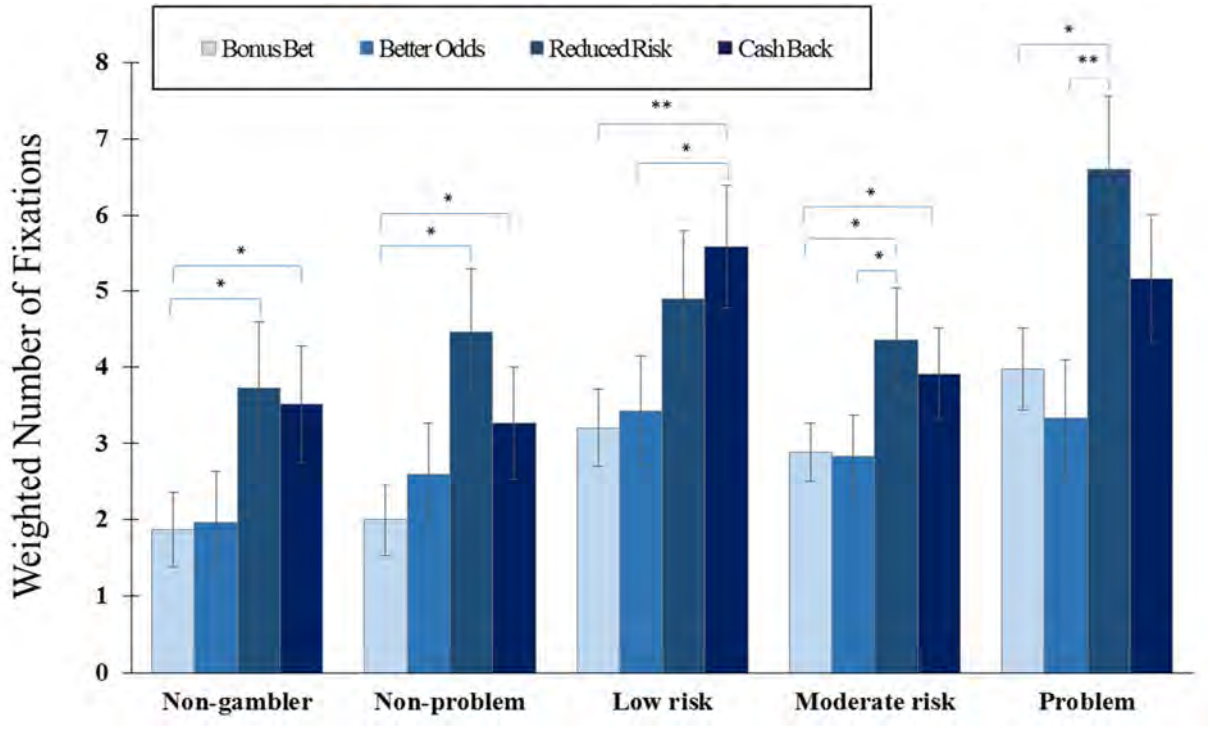


Note: Significant differences between the number of total fixations between inducement types at an alpha level (α) of < .05 are indicated by a single asterisk (*); significant differences at an alpha level (α) of < .001 are indicated by a double asterisk (**).

Figure 10. Average number of total fixations on each type of wagering inducement by PGSI group

Figure 11 depicts the number of fixations on each *inducement type* proportionate to the amount of time that the inducement information was available on-screen (i.e., the amount of *relative exposure* for each gambling *inducement type*), for each *PGSI group*. The omnibus effects for the ANOVA on these data revealed a main effect for *inducement type*, $F(3,165) = 26.15$, p < .001, η^2 = .32;. However, the main effect for *PGSI group* (p = .143), and the interaction effect between *inducement type* and *PGSI group* were not statistically significant (p = .535). Pairwise comparisons for this weighted fixation data showed that more attention was paid to *reduced risk* inducements than *bonus bet* inducements for the *NG*, *NPG*, *MR* and *PG* groups, and compared to *better odds* inducements for the *MR* and *PG* groups. *Cash back* inducements were associated with greater *relative exposure* than *bonus bets* for

the *NG*, *NPG*, *LR* and *MR* groups, but surprisingly, not for the *PG* group. *Cash back* inducements were also associated with a greater intensity of fixations than *better odds* inducements for the *LR group* (p = .036).



Note. Significant differences between the number of total fixations between inducement types at an alpha level (α) of < .05 are indicated by a single asterisk (*); significant differences at an alpha level (α) of < .001 are indicated by a double asterisk (**).

Figure 11. Average number of fixations on each type of wagering inducement by PGSI group, based on the proportion of time that the inducements were presented within the advertisement

6.4 Limitations

The following limitations apply to the results from the psychophysiological study:

- The discrepancy in price point between the two categories of advertisements (wagering and car) may have affected gamblers' responses to the inducements they contained, limiting the validity of comparisons.
- The cross-sectional design could not test causal links between the variables examined and behavioural outcomes.
- While this study provided useful information on the ability of gambling advertisements to elicit excitement in NGs, NPGs and at-risk gamblers, examining this relationship was limited by the usual biases of subjective self-report measures (e.g., Sudman, 2001).

7. Interview Study

Key findings

This chapter aimed to develop a grounded theory of the factors that influence how wagering advertisements and inducements affect sports and race betting behaviours. In developing the theoretical model, it was important to move beyond descriptive summaries of participants' initial self-reports about the influence of wagering advertising and inducements, to explore processes occurring below the surface.

- Participants initially rejected being vulnerable to wagering advertising and inducements; and claimed agency in their use of inducements to assist in *minimising losses* from their sports and race betting. Their belief in the utility of wagering inducements in *minimising losses* influenced their betting behaviours, extended their play, and reinforced their identity as either a recreational or serious bettor.

- Wagering advertising and inducements do not operate to influence betting behaviour via a single causal pathway. Using relational mapping, and reflected in the theoretical model, we identified the process of influence as a complex interaction of situational, structural, and individual factors that occur within a saturated environment for sports and race bettors — consistent with public health approaches to understanding influences on health behaviours, specifically social and commercial determinants of health.

- This saturated environment is created by four elements: the *constant availability* of betting opportunities; *constant access* to those betting opportunities; *social facilitation* of betting through connections within bettors' social networks; and *intrinsic* association between betting and sports and/or racing.

- Situational, structural, and individual factors interact within this saturated environment to shape how wagering advertisements and inducements influence participants' betting behaviours. *Influential situational factors* comprise: the *normalisation of betting; environmental factors; information management; concealability*; and *discursive constructions*. *Structural factors* comprise: *time pressure; misperception of value; intensity of contact; prolonging engagement; and missing information.* Key individual factors of influence are: *fear of missing out; cognitive distortions; misperceptions of skill*; and *gambling identity*.

- All of these influences tend to be amplified as gambling severity increases, and when individuals consider themselves to be a serious bettor.

7.1 Introduction and aims

This interview study builds on the EMA study (Chapter 3), and aimed to theorise the factors that determine the influence, or effect, of wagering advertisements and inducements on betting behaviours. In analysing the interview data, we developed a theoretical model using constructivist grounded theory and situational analysis methods (Charmaz, 2014; Clarke, Friese & Washburn, 2018). The process and findings are reported consistent with both the Consolidated Criteria for Reporting Qualitative Research (COREQ; Tong, Sainsbury, & Craig, 2007) and the American Psychological Association reporting standards for qualitative primary research (Levitt et al., 2018).

7.2 Methods

7.2.1 Design, setting, and sample

Data were obtained from semi-structured interviews, conducted in two waves to align with the two phases of the EMA study. The first wave of interviews was conducted during May 2017, and the second wave in July/August 2017. A theoretical sample of 31 regular race and sports bettors was recruited from participants in the EMA study, who had indicated their willingness to be interviewed for a later stage. Sixteen participants were recruited from the race betting EMA sample, and 15 from the sports betting sample. The original intention was to analyse the two as different samples, but all participants identified as both race and sports bettors. Analysis was therefore conducted based on a single sample.

Both cohorts were recruited soon after completing the relevant EMA phase, in order to reduce potential for recall bias when discussing the influence of advertising and inducements during the observation period. Recruitment for both cohorts was based on the same selection criteria, including that the participant:

- lived in the state of Victoria;
- had consented to be contacted for an interview;
- had completed the baseline survey for the EMA study and at least 10 of the daily surveys;
- had higher instances (compared to the broader EMA sample) of betting more than intended, as identified in the EMA study data; and
- had reported being influenced in some way by wagering inducements or advertisements they had seen during the EMA study.
- These criteria generated a large pool of potential participants from each cohort. After initial interviews were conducted, we amended our recruitment criteria to prioritise more NPG or LR bettors (based on PGSI scores); more female bettors; and more people who had not bet as often, in order to determine if the emerging theoretical model (see below) retained its explanatory power. Demographic characteristics, including PGSI category (Ferris & Wynne, 2001), are outlined in Table 33.

Table 33. Participant characteristics

Characteristic	Category	*n*
Gender	Male	24
	Female	7
Age (years)	18 — 25	1
	26 — 35	9
	36 — 45	9
	46 — 55	4
	56 — 65	6
	66 and above	2
Employment status	Retired	3
	Sick or disability	4
	Unemployed	3
	Home duties	1
	Student	1
	Work part time or casual	5
	Work full time	14
Living arrangements	Live alone	5
	Live with parents	1
	Share house	3
	Couple living alone	12
	Couple with at least one dependent child	8
	Single parent with at least one dependent child	1
	Other	1
Personal income	$0-$29,999	4
	$30,000-$59,999	9
	$60,000-$89,999	7
	$90,000-$119,999	5
	$120,000-$149,999	1
	$150,000-$179,999	2
	Not given	3
PGSI category	NPG	6
	LR	7
	MR	12
	PG	6

7.2.2 Procedure

Ethical approval for this study was granted by CQUniversity Human Research Ethics Committee (H1608_234). Potential participants were contacted by phone or email by a male research assistant, who also scheduled the interviews. In-person interviews were conducted at researchers' work premises. Telephone interviews were conducted at a time and setting chosen by each participant. All participants provided informed consent prior to being interviewed, and were compensated for their time with a $70 gift card from a national supermarket chain. Each cohort was interviewed by one of two female academic researchers. Both researchers have experience in gambling research and backgrounds in public health, and thus view advertising and inducements by wagering companies as

a commercial determinant of health (Hastings, 2012; Kickbusch, Allen & Franz, 2016) within a broader interplay of social determinants of health (Baum, 2016).

An initial interview schedule was prepared to provide a framework for the interview (Appendix H). Prompts were adjusted throughout the process, in order to probe further explanations and enhance the theoretical model. Participants were initially asked about how they became interested in race or sports betting to provide historical and personal context, as well as establish trust and rapport; after which the interviews moved on to the more focused, and/or sensitive, questions about their experiences of wagering advertisements and inducements, and their typical betting behaviour. Interviews lasted between 15 and 80 minutes, with a mean length of 33 minutes, and were digitally audio recorded. The interviewers captured any important non-verbal data, or comments made, that were pertinent to the study in field notes after the interview was completed and the recording was finished.

The interview recordings were transcribed using a quality-assured, external transcription service, consistent with the procedural guidelines from McLellan et al. (2003), which preserved the naturalness of the transcript. Consistent instruction and guidelines on key terms and colloquialisms, specific to the context, were provided by the interviewers in order to reduce transcription error (Poland, 2003). On receipt of the transcripts, each was checked for accuracy by the researcher who conducted the interview, and anonymised. Whilst participant checking of transcripts (Mero-Jaffe, 2011) was offered to all participants, none elected to do so.

7.2.3 Analysis

Data were analysed by one researcher using constructivist grounded theory methods (Charmaz, 2014; Clarke et al., 2018). Analysis began with close reading and listening of each transcript, with initial observations annotated and captured in analytic memos. Open coding was then conducted using gerunds, a verb form that functions as a noun. The use of gerunds is an analytic tool that enables the researcher to: detect processes; interact with the data from the respondent's perspective; identify implicit meanings and actions; and assists in identifying patterns within the data (Charmaz, 2014). Data were coded to identify both the recurrent themes and theoretical constructs (Charmaz, 2014; Dye, Schatz, Rosenberg & Coleman, 2000). An iterative modelling process, using constant comparison (Dye et al., 2000) and relational mapping (Clarke et al., 2018) to generate categories and progressively identify the relationships between them, was repeated until the theorist was satisfied that the constructed model explained the majority of the data, and she had identified the core mechanism driving betting-related responses to wagering advertisements and inducements. The model developed from the grounded data was then corroborated by the other interviewer and the project's chief investigator. The constructed model, and supporting qualitative data, are presented below. Theoretical concepts are italicised, and participant characteristics of gender, age group, and PGSI classification are provided. PGSI classification is indicated as NPG, LR, MR and PG.

7.3 Results and Discussion

The core mechanism of the constructed theoretical model for betting-related responses to wagering advertisements and inducements was controlling the outcome by *minimising losses*. The outcome of interest was the bet placed, rather than the event being bet on. Participants engaged with, and were influenced by, wagering advertisements and inducements as part of a process to improve the likelihood of them achieving a favourable outcome from a bet they placed, thus, minimising their financial loss[10].

Minimising losses was influential on participants' *betting behaviours,* that included: whether to bet; who to bet with; what to bet on; when to bet; how to bet; how much to bet; and whether to chase losses. *Minimising losses* was also a way of participants *extending play,* either within, or between, sessions. If participants could minimise their losses or expenditure, they would either be able to bet for longer or on more events on that occasion, or retain funds (including account credits) to be used on another occasion. The third effect of *minimising losses* was *reinforcing identity* as either a recreational or serious bettor. Recreational bettors engaged in the activity for entertainment, whilst the serious bettors saw sports or race betting as a skilled and purposive activity, from which they could secure benefits, either financial or personal (Stebbins, 1982). The level of belief in their capacity to minimise their losses varied between participants, dependent primarily on their betting identity, rather than PGSI category; however, the majority of serious bettors were classified as MR or PG on the PGSI. Whilst the primary outcome of interest for participants was the gaining of financial reward, or reducing financial loss, those who considered themselves serious bettors were also motivated by *reinforcing their identity* as a serious bettor.

The influence of wagering advertisements and inducements on participants' ability to, or beliefs about, *minimising losses* was both developed and sustained by the interaction of factors relating to: the saturated environment in which wagering advertisements and inducements occur; broader situational factors in which wagering advertisements and inducements are experienced; the structural aspects of the advertisements and inducements; and individual effects in relation to advertisements and inducements. The proposed theoretical model is illustrated in Figure 12, and each factor is explored in relation to what the factor is; how participants experienced this factor; and why it had an effect on the influence of wagering advertising and inducements on participants' betting behaviours.

[10] Bettors may see their actions as aimed at optimising wins or minimising gambling risk, rather than minimising losses. However, we have used the term 'minimising losses' because most bettors lose over the longer term.

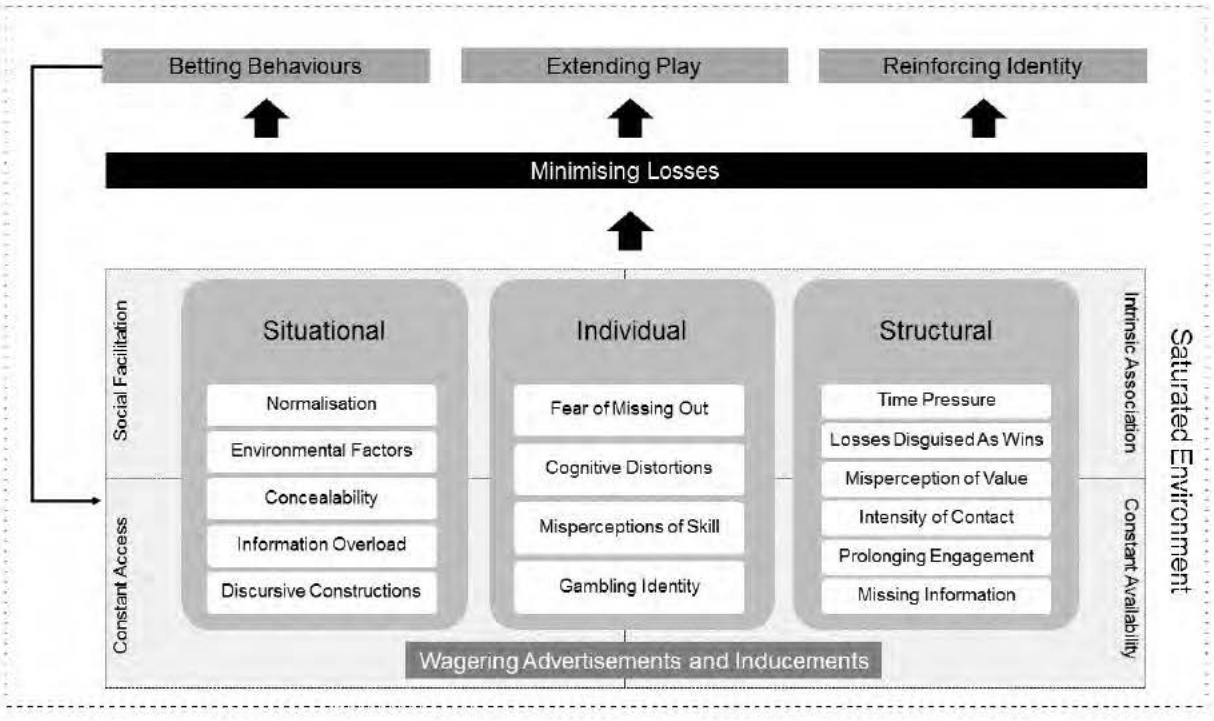


Figure 12. Proposed theoretical model of the influence of wagering advertisements and inducements on betting

7.3.1 The saturated environment

Wagering advertisements and inducements are not experienced in isolation. They are experienced within a broader environment of social processes and influences that impact how they are received and the effect they have. One of the key differences identified in the data between participants was the *social world* in which they engaged in sports and race betting (Strauss, 1978). Social worlds consist of 'groups with a shared commitment to certain activities' (Clarke et al., 2018, p. 148); in this instance, sports or race betting. Consistent with Strauss' *social worlds theory* (Strauss, 1978), our participants 'generate shared perspectives that form the basis for both individual and collective identities' as race or sports bettors (Clarke et al., 2018, p. 148).

We identified that the *saturated environment* in which race and sports bettors exist is created by four elements: the *constant availability* of betting opportunities; *constant access* to those betting opportunities; *social facilitation* of betting, through connections within their social networks; and *intrinsic association* between betting and sports or racing. Whilst previous work by Lopez-Gonzalez and colleagues (2017b) classified these four elements as situational factors, our findings differed. The boundaries between these four factors were, at times, blurred, as aspects of each were entwined with others. Importantly, they differed for our participants from their non-betting family and friends. The saturated environment is theorised as a social world for sports and race bettors that differs between people not engaged in this betting, recreational or casual bettors, and serious bettors. The key difference is the level of saturation of sports or race betting, including wagering advertisements and inducements within that environment, ranging from lower levels for people who do not engage in betting, to higher for those who engage as a serious pursuit. The collective effect of these four elements is more influential than just a situational factor which increases the comfort with which a person can engage in gambling (Griffiths, 1999; Lopez-Gonzalez et al., 2017b); it represents a

description by participants of the broader context, in which wagering advertising and inducements are not only experienced, but an integral element.

Sports and race betting occurs within a *saturated environment,* which is underpinned by both the *constant availability* and *constant accessibility* of 'bettable' sports and racing events. We distinguish availability as the occurrence of sports, racing, and other events on which people can wager. The expansion of available betting opportunities has been described by other authors as ubiquitous with a 'seamless availability' (Lopez-Gonzalez et al., 2017b, p. 260), corresponding with the ease and speed of access to betting, facilitated by the use of smart devices, as well as the effortlessness of the betting process on apps and websites (Hing et al., 2017, 2018b). These events are not only available for wagering, but can be, and are, watched or listened to for entertainment through online streaming services, pay-television, and even on the betting apps and websites themselves. The combined effect of *constant availability* and *constant access,* underpinning the saturated environment, is exemplified in the description of a female participant's betting patterns:

> *'So, sports would come down to, I'll just probably go the top five. So it would be AFL, tennis, soccer, American football, and baseball. So, they're the five that I'd probably bet on. Depending on the tournaments. Like, for instance, NFL is not back yet. So, that's September, so yeah, obviously it's pre-season at the moment, so I'm not betting on that. AFL obviously (laughs). Cricket season is not really happening yet at the moment. That's still, what, a month away or so? Then what else is there? Soccer, so Premier League is back, obviously, recently. Baseball is every day, just about.'* Participant 25, F, 26-35yrs, MR

A seamless connection to the Internet (often supplied by Wi-Fi access) facilitated continuous engagement with events and betting providers, as wagerers moved between home, work, and other commitments. All participants were conscious of these opportunities and access; however, the response to this *constant availability* and *constant accessibility* varied between participants. NPGs would often comment, with humour or wonder, at the magnitude of opportunities to bet in terms of timing, event types, and location. However, for those experiencing problems with gambling, the combination of *constant availability* and *constant accessibility* was often recounted with a sense of tiredness or defeat, the descriptions often framed around an assault, with words such as 'bombarded', 'unrelenting', and something they cannot escape.

The *constant access* also contributed to the expansion of participants' betting activity, stimulated by wagering advertisements and inducements that increased their awareness of opportunities for betting. This was evident across all PGSI categories. It increased overall betting, and provided additional opportunities to sustain betting. Participants recounted examples of extending betting due to the ability to bet across time zones — beginning with Australian time zones, then onto South African events, and different sports being played in European or North American time zones. For a number of serious gamblers, the National Basketball League in the United States was a popular sport, due to the timing of the season, the number and timing of matches, and the number of betting opportunities within each match. Inducements and advertising also encouraged gambling expansion to include different activities. Participants at MR and PG levels were particularly vulnerable to advertising and inducements encouraging the expansion of gambling. When asked directly, many would reject that wagering advertising and inducements influenced them to increase their betting, but later reveal experiences that demonstrated it had. This influence of wagering advertising was described by a participant with MR gambling, who had only taken up sports and race betting in the last six months, in response to his friend's betting on mixed martial arts:

> *'So, mixed martial arts definitely went to racing. I've noticed an influence of the local radio station [which] covers mainly football. I listen to that in the morning for weather and stuff, and*

> *they're big on advertising for betting for AFL. That reminds me to, you know what I mean? So, I've found the advertising for other things link to racing.'* Participant 11, M, 26-35yrs, MR

Similarly, a participant experiencing problems with gambling shared how wagering inducements had increased his betting:

> *Yeah, well, when the World Cup of soccer comes up and you, I've got an interest in sport, and if they have a promotion, well, yeah, that will make you sort of have a bet on where you might not have if there was no promotion, that sort of thing.'* Participant 14, M, 46-55yrs, PG

This expansion of betting due to *constant availability* and *accessibility* similarly affected those reporting no gambling problems, with data showing this group betting beyond the end of a season or carnival, due to new opportunities within a global market, or expanding betting within a season or carnival to include other bettable events. It was seen as a continuation, or transition, as described by one participant, who continued to bet his weekly budgeted expenditure that had become a habit by the end of the football season:

> '*So, footy season generally finishes and then I'll translate that into the spring carnival. Then, during the summer, I suppose in the AFL off season, the English Premier League and the A League are the other things I don't mind a bit of a flutter on*.' Participant 26, M, 36-45yrs, NPG

Although he was not betting every week, he had started actively seeking out additional opportunities to bet through the advertisements and inducements he received, as he describes:

> '*Occasionally, very occasionally, once every couple of months, I may venture off into a different sport, like motor racing, or something like that. But that's usually just because I'm just looking for a bet.'* Participant 26, M, 36-45yrs, NPG

A similar pattern of extension, moving from passively receiving wagering advertisements and inducements to actively seeking out other available options, was reported by a female participant. She had recently started betting in support of a girlfriend, who had taken race betting up as a distraction from a relationship breakup, and the initial interest in racing had already extended to other sports of interest, influenced by the *constant availability* and *accessibility*. She explained:

> '*Like I said, with my friend, we'd have a look, and then she's like, "do you realise all you can bet on is ice hockey?" because I like ice hockey. Or she goes, "I've found these ones we can random bet on," Oscars, or that sort of stuff. So, sometimes I have a look at other stuff, then we'll have a bet on something that I'm interested in outside of gambling where I think I'm an expert on Oscars or hockey, or something so then I'll have a crack at putting a bet on that.'* Participant 10, F, 36-45yrs, NPG

Wagering advertising and inducements serve as a reminder of the *constant availability* and *constant accessibility* of betting opportunities. The move from passively receiving these communications and not engaging with all of them, to passively receiving them and responding to all of them, to actively seeking out opportunities, may represent a spectrum of behaviour consistent with the escalation of gambling severity.

Also contributing to the *saturated environment* is the growing *intrinsic association* between sport and gambling, which is reinforced by the *constant availability and constant access.* The *intrinsic association* between the event and gambling occurred earlier in relation to race than sports betting, and participants' introduction to race betting was often a childhood experience of school or family sweepstakes, or being allowed to choose a bet on the Melbourne Cup (Saugeres, Thomas, & Moore,

2014). Betting was seen as a central component of the horse racing experience that extended beyond just attending race meets. The interest in any race was fundamentally linked to betting on it. This sentiment was shared by most participants, and succinctly expressed by one participant:

> '*Well, I probably wouldn't watch a race if I wasn't betting on it.'* Participant 31, F, 26-35yrs, NPG

The *intrinsic association* for sports bettors was grounded more in the additional excitement or enjoyment that betting added to the match, rather than betting being seen as part of supporting 'your team'. The potential for the thrill of the win also added an 'extra buzz' for many bettors watching sporting events, even if the potential winnings were not substantial. Participants felt that the way advertising and inducements were presented contributed to the feelings of excitement. Betting against your team was seen by many as a way of ensuring there would still be a win, regardless of the outcome of a match. If your team wins, you are happy for your team, if your team loses, you are happy with the bet. This was expressed mostly about AFL, where team identity and loyalty are deeply entrenched in Victoria where this study was conducted. For serious sports bettors, and for bets on sports that had less emotional investment, bets were chosen purely on the potential to win. The *intrinsic association* and role that sports betting plays in enhancing excitement or enjoyment was expressed by one participant as follows:

> '*Personally, a lot of it is I love sport. I always have. On a lot of occasions it's* [betting] *something extra that adds a little bit of excitement to the match. So, it's one thing when betting on your own team, that's probably just dumb (laughs). But if there's a Friday night game of footy on, and I'm not particularly concerned as to who wins because my team's not playing, it just adds that little bit of extra interest in the match for me.*' Participant 26, M, 36-45yrs, NPG

Wagering advertisements, again, both contributed to, and sustained, the *intrinsic association* between sport and gambling through the framing of the bet as an event that could be won. The bettor is no longer the observer of a competition or event, but a competitor seeking to win a betting event. The saturation of event coverage with betting advertising drives this *intrinsic association*.

The final element of the *saturated environment* is *social facilitation*. Differences in *social facilitation* were clearly evident between recreational and occasional bettors, and those who took their betting more seriously, or were at higher levels of PGSI severity. This is unsurprising, given recent findings that social networks of people who gamble tend to contain higher proportions of other people who gamble, and this increases with gambling severity (Meisel et al., 2013). Whilst all participants were influenced to some extent by those around them, the number of people, and time, involved in discussing betting was substantially higher for participants with higher levels of gambling severity. Wagering advertisements and inducements were a substantial part of participants' interactions with friends and colleagues around betting. Receiving an advertisement or inducement, for example, would be a reason to instigate communication, either electronically or in person, with friends or colleagues.

This was particularly apparent in male-dominated workplaces, with betting central to workplace conversation, connection, and shared experiences. In some workplaces, productivity declined, or even ceased, during critical sporting events; work time was spent sharing betting strategies; and work resources were used for both placing bets and monitoring events and inducements. One participant described the *social facilitation* processes within his workplace:

> '*I mean, there's a lot of people I work with who are keen punters. It seems that it's a daily activity, talking about NBA betting, and things like that. I mean, in terms of where our workplace productivity has gone in the last year and a half, and these guys are absolute fiends, in terms of the amount [of money] they're betting, it's not that much, but they are fully hooked*.' Participant 2, M, 26-35yrs, MR

Interest in race and sports betting had been facilitated through workplace relationships. He explained:

> *'When I started there, there wasn't [interest]. Then, I got one of the guys into horse racing during the carnival, and then, all of sudden, we're talking about NBA betting everyday. So, yeah, I've probably done that workplace a disservice (laughs… During daylight savings hours, it's up to 5 o'clock in the afternoon that NBA is on, so it's pretty much your full working day you're talking about NBA and betting.'* Participant 2, M, 26-35yrs, MR

The participant believed this had become a common workplace culture. His description reflected the lifestyle consumption communities identified in previous research (Gordon et al., 2015). The '*never ending conversation*' was mostly around betting, rather than the sport itself, and the participant had little interest in the sport beyond how it affected betting.

Social facilitation was enhanced through changes in the way people communicate, particularly through the seamless connection between communication channels and betting apps on smart devices. Whilst betting was a topic of in-person communication, discussion was facilitated for most participants through text messaging, social media communication, email, and private betting-related websites. Some participants had set up special group chats in different social media apps to discuss betting strategies using inducements with friends, colleagues, and family. The consistent role of smart devices in *social facilitation* is illustrated in the descriptions below from a low-risk bettor and one experiencing problems with his gambling:

> *'I'm part of a punters' club with the cricket club. So, we all put in $10 a week, half of us, there's 12, half of it gets put in a bank account, half of it gets bet on, each week. Then we've got Facebook chat groups which we discuss, we've got a little group of four people who go, "what are you thinking this week?" A couple of the blokes are a bit more knowledgeable than I am in EPL, say, and he'll say, "don't touch Man United this week."'* Participant 28, M, 18-25, LR

> '*It'd be a text, maybe leading up to the weekend. Last weekend we, there's three of us that are pretty close. One friend sent a text saying, "oh what do you think about this bet?" "Yeah, looks good, do you want me to punt it?" "yep, that's great, $20 each no problems." Then we end up going look, or we'll just do a $20 bet each, rather than transfer the money, and then we'll share whatever comes out of it. So it starts that way. Then, through the weekend, we're constantly texting based on what bets we've got on.'* Participant 7, M, 36-45yrs, PG

Similar practices were noted at all levels of gambling severity, and were more common in those under 45 years of age. *Social facilitation* was more evident in relation to betting-related events and in male dominated spaces. Both female and male participants tended to be most influenced by other males. Betting was a topic of conversation for the female participants with other females only when they were actually attending an event such as the races; whilst males reported betting being a topic of conversation at work, home, and social events unrelated to the betting. Advertising and inducements were central to discussions of betting, as information was shared to improve the outcomes within social groups.

Wagering advertising and inducements both contribute to, and are received within, a *saturated environment* of sports and race betting. The level of saturation exists on a spectrum, increasing for those actively engaging in sports or race betting, and particularly for those who consider themselves serious bettors. The *saturated environment* increases not only exposure to wagering advertisements and inducements, but also the ability and social acceptance of responding to them which increases their influence on betting behaviours.

7.3.2 Situational factors

The interaction between the *saturated environment* and *situational factors* of race and sports betting shapes how wagering advertisements and inducements influence participants' betting behaviours. Lopez-Gonzalez and colleagues (2017b) identified new situational factors of online betting to include: easier and faster accessibility; ubiquity of bettable opportunities; anonymity; greater social facilitation; and enhanced intrinsic association of betting and sporting values. Our findings differed; for our participants, four of these factors created a saturated environment (discussed above), in which situational factors exist. We identified additional situational factors that explain the influence of wagering advertising and inducements: the *normalisation of betting*; *environmental factors*; *information management*; and *discursive constructions*. We also found that *concealability,* rather than anonymity, was a more salient factor in explaining situational factors of influence. Novelty, which was previously identified by Griffiths (1999), did not emerge as a situational factor of importance for our participants, who were all regular bettors.

Normalisation

Griffiths (1999) has previously defined situational factors as those aspects that might contribute to a person feeling at ease whilst they are gambling. Sports betting was viewed by all participants as a normal, socially-acceptable leisure activity. This *normalisation* of sports betting was reinforced by the *social facilitation* and *intrinsic association* within the *saturated environment*. Many participants had grown up in families where parents, or other influential relatives, had participated in betting, and participants either engaged in betting, or shared discussion of betting, within their social networks.

Normalisation contributed to the influence of wagering advertisements and inducements through the increased social acceptance of responding to inducements, and a bi-directional interaction with *social facilitation*. This was evident in participants' descriptions of betting as a shared activity, something they were able to engage in openly and without fear of judgement within their social networks. Only one participant, who was experiencing problems with gambling, mentioned concealing his interest in sports and race betting during the early stages of potential relationships, due to fears it would be considered undesirable.

Environmental factors

Environmental factors relating to gambling have traditionally referred to the physical environment in which gambling occurs, such as the size, light, and sounds within a venue. Sports and race betting within the context of this study was comfortably undertaken in multiple physical locations by participants, ranging from their homes and workplaces, to sporting events and public transport, due to *constant accessibility* facilitated by smart devices. Two specific *environment*s contributed to an

increased effect of wagering advertisements and inducements: those characterised by either experiences of boredom or the consumption of alcohol.

Many participants reported responding to wagering advertisements and inducements when they were bored. One participant explained:

> '*Actually, I've never thought about it, but I think mood can definitely influence you. I've actually been, I'm not working because I've been ill for about five years now, so boredom is massive. Yeah, that's quite an influence I'd say*.' Participant 30, M, 56-65yrs, MR

This had a strong relationship to the *saturated environment* factors of *constant availability* and *constant accessibility,* something which coheres with other qualitative research in relation to gambling on electronic gaming machines (EGMs; Thomas, Sullivan, & Allen, 2009). For some participants, a response to even short moments of boredom within their day was to play with their smart device. Wagering-related push notifications or text messages received on smart devices were particularly effective in relation to boredom. Participants with higher levels of gambling severity had become habituated to opening the betting apps they had available to actively seek out current offers, explore new opportunities, or watch events being broadcast when they were unoccupied or bored.

Alcohol consumption also influenced participants, although this was often related to *constant accessibility* and *social facilitation*, rather than responding to specific inducements. The instances discussed related to alcohol being consumed at either a betting-related event, or where participants were socialising with people with whom they regularly bet and discussed betting. Nearly all participants who consumed alcohol reported having increased their betting, engaging in more risky, larger or impulsive betting, or betting for longer at some stage whilst drinking.

> *'I'll speak for myself, but when I have a drink, when I have a few drinks, I tend to not give two hoots if I win or lose. (Laughs) I'm not as strict as I would normally be with the amounts I'm betting.'* Participant 18, M, 46-55yrs, PG

This is consistent with previous findings on male lifestyle consumption communities relating to sports betting (Gordon et al., 2015; Raymen & Smith, 2017), but we also found this pattern reported by the female participants:

> '*But horse racing, it's just being down the pub, having a drink with some friends, and they were doing it, and then it was just kind of here and there, chucking on some money every now and then, winning some.'* Participant 15, F, 36-45yrs, PG

These environmental factors did not enhance participants' beliefs that inducements could help them *minimise losses*, but they reduced self-regulation in relation to responding to wagering advertisements and inducements. One participant, whose betting was closely linked with his social interaction, described a particularly 'wild night' when recently out with friends drinking and betting:

> *'Well, this was 3 or 4am. We were just out of the club, and it was just very boozy, and I was betting on overseas horse races, as you do, and knew absolutely nothing about any of the horses I was betting on.'* Participant 24, M, 26-35yrs, PG

He reports spending $4,000 that night (on a reported income of between $60,000 and $80,000). He was chasing losses and tried to place a $5,000 bet on an overseas league sporting event, but, due to his inebriation, put in the wrong security code when transferring funds from his credit card. The bank locked him out and he was unable to bet. The combination of boredom and alcohol was particularly problematic for that participant, as he describes the impact on his efforts to control his betting:

> '*Well, I'm in the position where I'm trying to consolidate it, and cut it out. But, obviously, I live by myself, so I'll get a bit bored and, if I have a couple of drinks, I'll fire something up [sports betting apps].'* Participant 24, M, 26-35yrs, PG

In addition to increasing the likelihood of responding to either general wagering advertising, or directly received inducements or prompts, environments characterised by alcohol consumption also saw participants actively seeking betting opportunities without using inducements to *minimise the losses;* chasing losses; or using inducements that they normally did not consider worthwhile.

Concealability

Due to the nature of the participant sample, concealability, rather than anonymity, was an influential situational factor. All participants reported being open about their betting with people close to them; however they were less comfortable with people who did not also bet. Despite these levels of comfort, it was the ability to disguise their actions that influenced their response to wagering advertising and inducements, particularly in spaces where they expected less acceptance, such as work or social events not related to betting. Constant attention to, and interaction with, smart devices was identified as socially acceptable behaviour, and some participants reported concealing their time spent betting on computers, due to the nature of their work and study habits. This allowed participants to more easily respond to wagering advertisements and inducements, or even actively seek them out throughout the day, rather than limiting their response or engagement to a particular time of day.

Information management

We identified two elements of the situational factor of *information management,* and a threshold where some participants started to feel overwhelmed, or overloaded, by the amount of information they were trying to manage in relation to their betting. The first element relates to the volume of wagering advertisements and inducements received; the second relates to the availability of information used by some participants to influence their betting choices. Both factors are influenced by all elements of the *saturated environment,* in which sports and race bettors exist, and were more influential in how serious bettors responded to wagering advertisements and inducements.

Marketing, both through direct advertising and other forms of incidental brand encounters, such as sponsorship and betting discussion within sports broadcasts, has a significant effect on the amount of information participants receive and try to manage in relation to sports and race betting. Sports and race bettors were aware of the inundation of marketing, both generally and during events, but were often unable to either distinguish or remember which gambling brand or product was being marketed. Advertising by betting operators that participants already use would sometimes command more attention to a particular offer or inducement, although brand loyalty was low, even when betting companies sponsored favoured sports teams.

Participants at both ends of the spectrum of gambling severity could identify advertising strategies and claimed not to be influenced by them. However, this was often contradicted within their data, which revealed various ways these strategies had been influential. Strategies such as increased advertising leading up to weekend sporting events, media coverage of sponsored events, targeted social media advertising, and the inclusion of betting in sports shows, were all recognised by participants. Even the more subtle targeted advertising was noticed, as one participant described:

> '*I think it spirals because with Facebook, if they see that you're liking and commenting on horse racing type events, then all your advertising is then geared towards that*.' Participant 5, M, 36-45yrs, NPG

Most participants, despite their comfort with betting as a legitimate leisure activity, were quite negative about the amount of marketing within the community. Advertising was seen by most participants as excessive, and descriptions such as 'overload' and 'bombarded' were used to describe it. Some participants even claimed that gambling advertising was ruining sport, even though they bet on it:

> '*If it's on your TV you don't get a choice. It's up and in your face before you get a chance to flick it over or turn it off if you don't want to see it*.' Participant 12, M, 26-35yrs, NPG

> '*Yeah, well, they're everywhere all the time, so yeah, it gets a bit boring with them really because it's just saturation. Ridiculous, I think. It's never far from your mind because, as I say, there's so much advertising on the radio and TV and your emails and yeah, it's just a complete saturation.'* Participant 14, M, 46-55yrs, PG

Despite being critical of the volume of wagering advertising, many participants actively sought out information on offers, promotions, and betting opportunities to support them *minimising losses* from betting. Time and effort were invested in actively monitoring emails, websites, text messages, social media, betting exchanges, push notifications, and even second party apps that offer summaries and comparisons of wagering offers and promotions. This information seeking was described in positive terms as a desirable attribute of a serious bettor, as one participant shared:

> *'But, me and my friends and colleagues are probably more proactive, in that we regularly check all the sites and often. So we're aware that they've got a deal coming up this weekend, for example, before they even send out an email saying they've got one coming up.'* Participant 5, M, 36-45yrs, NPG

Such was the belief in the importance of wagering inducements in *minimising losses,* that many serious bettors, and those with higher gambling severity, invested significant time gathering as much information as possible on the different wagering inducements available to inform their betting strategy. The competitive nature of betting success for serious bettors, due to the *social facilitation* and *intrinsic association* of sports and race betting, created a need to be the most informed about wagering inducements to ensure both success and social standing. To meet this need, some serious bettors utilised specialised apps and websites that reported and compared available inducements for any event, referred to as 'the Trivago of betting.'

Similar effort was put into the other element of *information management*, the background information to inform betting choices regarding team, coach (trainer), athlete, or animal performance; venue-related factors; and betting strategies to maximise participants' use of wagering inducements to *minimise the losses.* This type of information was seen as critical in distinguishing sports and race betting as a skilled and serious activity. Inside information from credible sources, such as trainers or jockeys, or successful betting advisors was valued, although the criteria for credibility was fluid. The amount of effort invested in seeking the information was directly related to participants' gambling identity. Those who considered themselves serious bettors invested substantial resources into seeking more information than was freely or easily available to give them a competitive advantage. A female race bettor explained her process for gathering information to guide her betting:

> '*So, I'll look at their previous form and their win and weights and jockeys, as well. The trainer, you know it's a mixture of things, and then I'll look and see what the professional tips are. I'm*

> *also on a couple of fan pages and tipping pages on Facebook, so I'll look at that as well and see if there's some feedback through those.'* Participant 14, F, 36-45yrs, PG

Several participants had outsourced their information, seeking to commercial tipping sites, spending up to $3,000 dollars per year (4% of their reported income). Another participant had commercialised his knowledge and was running a tipping site that provided not only tips on particular events, but betting strategies that allowed members to maximise the utility of wagering inducements.

Information management was a very influential situational factor in understanding the mechanisms of influence from wagering advertising and inducements. Gathering large amounts of information was both directly and indirectly linked to *minimising losses*. There were repeated and consistent contradictions throughout participants' explanations of their experiences with both the advertising and inducements and background information for race and sports betting. For all participants, some information about offers and promotions, or background factors to guide betting, provided comfort to their engagement in gambling. Sports and race bettors can use wagering inducements and background information to assist in *minimising losses* of the bet to an extent. However, for serious bettors already gambling at MR or PG levels, the influence the information had on *minimising losses* was over-emphasised, and the contribution of luck was discounted, contributing to *cognitive distortions.* The need for information to maintain perceived success at gambling was creating a cycle of behaviour they found hard to break. On one hand, they believed they needed more information to be able to break even, make a profit, or maintain their identity as skilled among their betting peers. However, the effort required to source and manage all information available, on both inducements and background information to create a successful betting strategy, was overwhelming, tiring, and even described as exhausting. These participants described the effort required, comparing it to a job that was tiring and not enjoyable. Some participants were starting to question the value of the information available, and whether it really offered them any advantage. It was described by one participant who was doubtful of its value:

> *'Generally, I'd say it's a lot of noise out there that distracts a lot of people, I think'.* Participant 23, M, 56-65yrs, LR

Discursive constructions

The words used to describe activities relating to sports and race betting were important indicators of participants' comfort with this betting, and of their belief in the influence wagering advertisements and inducements had on them *minimising losses*. Use of the term 'gambling' itself made many participants uncomfortable, some rejecting it as an appropriate descriptor of sports and race betting. 'Gambling', for many participants, represented an activity where they had no influence on *minimising losses.* One participant described his rejection of the label 'gambling' when responding to his wife's displeasure with his betting:

> *'She's against gambling. I've tried to tell her it's not gambling and I don't really want to go into gambling. I don't like losing money, which gamblers sort of are partial to that, I guess. So yeah, but it's good that I tell her because she can keep tabs if I lose control or whatever. I sort of haven't met any incentives for me to stop gambling on websites if you're thinking about that.'* Participant 3, M, 36-45yrs, MR

One female participant was comfortable referring to sports betting as 'gambling', but expressed betting on the Oscars with the same betting company as 'not gambling'. The term 'betting' was acceptable to all and, when referring to more casual or light-hearted betting, the term 'flutter' was

often used. The term 'punter', or 'having a punt', was often used to distinguish less planned, informed, or serious betting, either by the same person, or people they saw as lacking the skill and expertise they themselves had.

Other terms used to describe betting activity, particularly by those who saw it as a skilled and serious endeavour, drew heavily from banking and finance. Several participants, particularly serious bettors, including some with MR and PG, used 'investing' to describe their betting behaviour; doing 'research' when reading tips or other information gathering; 'insurance' when using betting exchanges; and 'risk reduction' for strategies or choices made to improve the chance of a bet winning. Similarly, consideration of tips and odds was described as 'analysis', requiring 'mathematical' and 'statistical' skills to be successful. One participant described his favourite inducement:

> '*The ones where there's a positive or negative reinforcements, so whether that be insurance that, if your horse bet loses, you get a bonus bet up to $50 back.'* Participant 5, M, 36-45 yrs, NPG

Discursive constructions were not just created by the bettors. Participants reported that similar terms were used by betting companies and tipping sites (which are often commercially linked to the betting companies). Reflecting the terms used by the sports and race bettors not only works as a marketing strategy, it reinforces their ability to *control the outcome.* Some direct advertising was also reported to include phrases such as 'diversify your betting', consistent with this pattern of investment-related terms. The repeated and common use of these terms by sports and race bettors, reinforced by betting companies and tip providers, contributes to a *discursive construction* of sports and race betting as a rational and informed financial choice, and wagering inducements as a tool for *minimising losses,* which contributes to their influence on betting behaviours.

7.3.3 Structural factors

Structural factors interact with *situational factors*, the *saturated environment*, and *individual factors* to shape how the wagering advertisements and inducements influence betting behaviour. Structural factors refer to the specific characteristics, or design, of a gambling product or activity (Griffiths, 2005a). Lopez-Gonzalez et al. (2017b) identified five structural factors relating to online betting. These were: increased frequency of bets; in-play betting; contextual betting; greater illusion of control; and the gamification of the betting experience. Our findings differ, which may be due to the focus on sports and race betting. For our participants, five structural factors of influence were identified: *time pressure*; *misperception of value*; *intensity of contact*; *prolonging engagement*; and *missing information*.

Time pressure

Whilst *time pressure* influences responses to wagering advertisements and inducements directly, it also interacts with the situational factor of *information management*. Most inducements include *time pressure* characteristics, such as short offer expiry in the lead up to an event. Participants reported influential push notifications for offers relating to horses or teams that they had recently successfully bet on, being sent with a 30 minute window of opportunity to bet on them again. *Time pressure* also reduced participants' ability to attend to *information management* of their tipping sources and websites, or the terms and conditions of any inducement they received. As odds changed leading into

an event, participants reported needing to monitor these sources to revise their betting strategy, with some using betting exchanges to reduce the risk of loss by 'laying off' their bets.

The influence of *time pressure* differed with gambling severity, having most effect on responses to limited-time inducements amongst those at MR or PG levels. These participants were more likely to make impulse bets that they would not otherwise have made. For serious bettors in this group, *time pressure* would reduce the background information checking they might normally engage in. Features offered by some betting companies, such as a 'black book' of teams or horses that bettors wanted to follow, supported more impulsive responses to advertising or inducements[11].

Misperception of value

Bonus bets and money back offers were popular inducements for most participants who felt they reduced the risk of loss, thus, *minimising losses.* However, often hidden in the terms and conditions that sports and race bettors do not read carefully, due to normalisation of this practice, or *time pressure*, were characteristics of these offers that were likened by some participants to losses-disguised-as-wins on EGMs. Many bonus bets and money back offers potentially provided credits to the bettor's account that could not be withdrawn until they had been 'recycled' through one or more successful betting cycles. Whilst it was theoretically possible to recycle the credit through a successful betting cycle, more experienced participants reported that this most often resulted in a loss of some, if not all, of the credit value. As one participant explained:

> *'Well, basically there is a good chance that I will win the bonus, which is money back, or any bonus bet. Once you get a bonus bet, you still have to use it and you lose, you only get 80, maximum 80 per cent of it and you can win a lot less and if you make a mistake you don't win anything.'* Participant 3, M, 36-45yrs, MR

Many of these offers included conditions, such as ability to be used only on specific events, usually expanding the type of events the participants bet on, or receiving cash back as reward points, not credit. Another participant described this type of inducement, demonstrating its effect:

> *'Well, see some of them, on the AFL, they offer promotions, you can back four teams, and if you get three out of the four you get your $50 back as a bonus. So whilst it's not $50 cash, it's nearly.'* Participant 17, M, 56-65yrs, MR

Similarly, some losses were compensated in reward points, rather than credit. For example, if you bet $100 and lost, you were credited with 100 reward points that could be used in the wagering operator's other commercial ventures, or exchanged for betting credit. The reward points however, are worth substantially less than the dollar value, with one participant reporting his 70,000 reward points had a value of approximately $700 '*real dollars'* (Participant 5, M, 36-45yrs, LR). Both of these types of wagering inducements created a sense of risk avoidance, or a *cognitive distortion* of free money, that suggested the gambler had 'won' when s/he had actually lost, and appeared to enhance participants' ability to *minimise losses* and encouraged them to increase or extend their betting.

Serious bettors reported matched deposits as influential, especially those with MR or PG. As one participant explained, he would '*always take advantage of that*' (Participant 13, M, 26-35yrs, PG). For

[11] Black book is a colloquial term used in betting to refer to a book or online function where bettors record details of their favourite horses, trainers, jockeys, and sports team including their performance and betting history. Operators offering this function then notify bettors by SMS and email when these favourites are running or competing.

this group, the *misperception of value* was grounded in the framing of the deposit match as free money, or a chance to get something back from the betting companies.

> *'Well, it gives you money to play with, so you're not playing, psychologically, you're not playing with your own money. Well, you are because you've given them more money over the years, so it's still your money, but it just means you don't have to put money into the account so it's there*.' Participant 30, M, 56-65yrs, MR

The relationship with the betting companies ranged from competitive to adversarial for this group, and the thrill of the win was often not just about the outcome of the bet, but also the win against the betting company. For some participants, the funds deposited to achieve the deposit match were additional to their planned or budgeted amount. As one participant shared:

> *Participant: What I did recently, like one of the sites that I don't use much I thought, look they were offering one of those deposit an amount they'll match it. I put in $100. They gave me $100 to put on one thing. I instantly lost that*. *So I thought, what I'm going to do is I'm going to just bet on the old certainties rather than, so I'm going to take the safe bets and I'm going to see how long I can last. I lasted two weeks and I lost it just like that. That cost me.*
>
> *Interviewer: Was that $100 extra than what you would have put in?*
>
> *Participant: Yeah, that was $100 from nowhere. That was $100 that wasn't part of my normal betting. You look at that. If you went over the year, I possibly do that four or five times a year.* Participant 8, M, 56-65yrs, MR

Intensity of contact

Many participants reported their sense of being overwhelmed or irritated by the direct, targeted, and deliberate wagering advertisements or inducements through push notifications, emails, text messaging, social media advertising, and pop up ads on other websites. For some bettors, this *intensity of contact* was contributing significantly to the *saturated environment* of race and sports betting, as one participant relayed:

> *'Well they just hammer you with unlimited amounts of texts and emails about different offers or money back things or put money in and we'll give you free bets and all that sort of thing. So that never stops, you just get completely hammered with that all the time which, you know what I mean. Yeah, well I don't know what to say about it, but yeah, it's full on and never stops.'* Participant 14, M, 46-55yrs, PG

The *intensity of contact* was reported by many participants experiencing problems with gambling with terms like 'hammered', 'bombarded', 'relentless.' It was clear they found it quite distressing. Further, it was a reminder, or trigger, for many who were trying to reduce or control their betting:

> '*They get a bit annoying when you want to get away from it. Like the other weekend when I just didn't want to think about punting, and you can't really just sit down and watch sport without it jamming in your face.'* Participant 24, M, 26-35yrs, PG

But, even for those who did take active steps to opt out of various modalities to reduce the *intensity of contact*, this was not always enough to stop contact from some operators, who appeared to be using fairly unscrupulous and predatory tactics to encourage continued betting:

Participant: I was nearly going to ring up and report it but I don't think there's any point. But yeah, it says at the bottom of the text you know type STOP to this number and then a week later they're sending you the same text from a different number.

Interviewer: So it's the same company?

Participant: Yeah, same company. Participant 14, M, 46-55yrs, PG

There was however, often a contradictory stance by participants in relation to the level of contact. Despite opposition expressed to the push factors fuelling the intensity of contact from wagering companies, serious bettors would still invest time and effort actively monitoring or seeking out information about inducements for fear of losing an opportunity to improve their betting outcomes. Recreational bettors also reported seeking out inducements when they were bored.

Prolonging engagement

Several characteristics of wagering inducements are structured to encourage sports and race bettors to *prolong their engagement* within the betting app or website, either within or between sessions. *Prolonging engagement* is also linked to *losses disguised as wins* and *misperception of value,* due to the need to recycle bonuses and refunds to access funds. These inducements included encouraging people to commence betting on earlier races using a range of mechanisms that also influenced participants' belief in *minimising losses*, such as *information overload*, linking to prior wins (*misperceptions of skill*, and *misperception of value)* in terms of the offer. Some participants were aware of the motivation behind these promotions:

'My cynical view says usually it's the early races in the day, so what they're trying to do is to get people betting early in the day, and whether they are then winning and are betting on with those winnings, or whether they're losing and trying to recover, that's their strategy. I understand that. When they say they do the first four horses of the day I will usually have a bet in those four races because of that promotion. But it will usually be a small bet, and I'm quite conscious of the fact that's what they're doing.' Participant 9, M, 36-45 yrs, LR

A number of participants at higher levels of problem gambling severity extended their gambling either within or between sessions, often gambling away refunds or payouts to extinction.

Missing information

The final structural characteristic that affects the influence of wagering advertisements and inducements differs from the others because it is the absence, rather than the presence, of the feature that creates the effect. More controlled bettors, mostly at NPG or LR levels, kept careful records of their betting outcomes, particularly money lost and money won. Those classified as MR or PG did not. Some had kept records when they first started betting, but had given it up as 'too much effort' as they increased the amount of betting they engaged in, increased the number of companies they had accounts with, or expanded the range of events they bet on.

Complete net position statements within the account details on most betting websites or apps was identified as *missing information*. Account details and statements lacked a progressive total that

would allow sports and race bettors to easily see their overall net position, in terms of money spent against wins and losses across different time frames (month, year, overall).

> '*I've always thought it's always hard to see. I've tried to do it before. Where you can quickly figure out within a certain timeframe how much money you have put in, versus how much money you've taken out, to quit while you're ahead. You sort of have to go through manually, and I've tried it, but it doesn't go back far enough to see.'* Participant 22, M, 26-35yrs, MR

This type of information was thought to be unlikely to be provided willingly due to the effect it would have on people's gambling and the companies' profits as their '*business relies on people losing*' (Participant 8, M, 56-65yrs, LR).

Many participants were cynical of the 'gamble responsibly' messages, and believed net position statements were *missing information* that would better support people to make more informed choices about their betting in response to wagering advertising and inducements.

> *'Or it would perhaps make them think, you know? I think perhaps, you know, look at how much I've lost. What could I have done with that money? I could have bought a new car, I could have saved a deposit for a house, I could have taken a holiday overseas, or around Australia, or whatever. You know? If people actually did stop and think, well how much am I actually, how much is this pastime of mine actually costing me? I think that would be a very good thing. I understand why the betting companies don't want people to know.'* Participant 23, M, 56-65yrs, LR

7.3.4 Individual factors

Individual factors have a strong influence on the extent to which people think they can *minimise losses,* through their interaction with situational and structural factors. Individual factors are both driven by, and interact with, the *saturated environment*. We identified four individual factors of influence for wagering advertisements and inducements: *fear of missing out; cognitive distortions; misperceptions of skill; and gambling identity.*

Fear of missing out

Betting can become a habit for more serious or heavier bettors, including those at higher problem gambling severity. This can lead to an extension of betting beyond the season of the original events of interest, such as a football season. In addition to the actual betting, the behaviours of information seeking, such as reading form guides, following tipping advice, and monitoring wagering inducements, are also part of the habituated behaviour. For several participants, this created a *fear of missing out* similar to the lottery player who is convinced their lucky numbers will 'come up' if they miss lodging their entry one week. For these participants, *minimising losses was* produced by habituated information gathering, which generated such strong opinions on event outcomes it created a *fear of missing out* on a potential win. This, in turn, would motivate them to bet in response to wagering advertisements and inducements, even when they had not planned to. As one participant explained:

> *'So therefore I will [bet]. I'll put some money on it, just so I can say yeah, I backed it. I might be kicking myself because it would win and I didn't back it, and then because I've lost out there.'* Participant 23, M, 56-65yrs, LR

This *fear of missing out* on a win was identified throughout the data as participants prioritised and discussed at length their potential winnings, or the 'one that got away', in terms of a bet not placed that would have won. Any missed opportunities (to win) of this type were recounted with a detailed narrative, whilst money lost was minimised or not mentioned. The participant who had lost $4,000 in a single evening's betting and was locked out of his bank account unable make a $5,000 bet, was more focused on the fact that the team he wanted to back had won the game. The win he 'missed out on' was more important than the money actually lost. *Fear of missing out* interacted with wagering advertisements and inducements to increase participants' belief that the risk of loss was reduced as they were *minimising losses*, and meant that for some, the lost potential winnings were another form of loss to chase.

Cognitive distortions

A substantial body of research links *cognitive distortions* to harmful gambling (Goodie & Fortune, 2013). *Cognitive distortions* play an important role in understanding the influence of wagering advertisements and inducements on betting behaviour. The data contained consistent examples of *cognitive distortions*, evident in the contradictions within participant's recounts of their betting experiences, particularly around prioritising wins over losses; their rejection of the influence of wagering advertisements and inducements, even though their narrative would later disclose impact; their explanations about the betting process and what influences outcomes; and the construction of their gambling identity, despite the revealed evidence that contradicted it, even within the same sentence:

> *'It's usually a thing where I'll keep a running tally and I'll be like, I might be a few hundred up one weekend and the next weekend you might be one thousand down and it keeps rolling. So that, everything's pretty balanced with my punting.'* Participant 24, M, 26-35, PG

Situational and structural factors influence the development and sustainment of *cognitive distortions*. The *saturated environment* contributes to their sustainment, especially through *social facilitation,* where erroneous beliefs and stories are shared and reinforced through interaction with other sports and race bettors.

Cognitive distortions more strongly influence those experiencing problematic gambling. Matching deposits were framed as 'putting money in to get free bets' (Participant 14, M, 46-55yrs, PG). Within this group, even a standard offer sent to a large cohort of customers, might be interpreted in a way that increases gambling behaviour:

> *'Well when I say personalised, I get a text message. So it might not say my name, but it might say you've qualified so I'm considering that personalised. It's being sent to me. Yeah, that, it does. It's usually with an offer, and as I said, depending on what the offer is that attracts me, but if it's being physically sent to you by a phone rather than just advertised on their website, it definitely influences. So it'd encourage me more to look at it and then most likely bet if I think that it's something worthwhile to take advantage of basically.'* Participant 7, M, 36-45yrs, PG

Misperceptions of skill

Misperceptions of skill, in relation to sports and race betting, was particularly noticeable when participants discussed 'luck' based gambling, such as EGMs or casino games. Some saw the critical difference between those types of gambling and their sports or race betting as their '*knowledge',* '*skill',* or '*form*' which had been enhanced through the time and effort spent gathering information, analysing that information, and developing strategies. Whilst sport and race betting outcomes can benefit from knowledge and skill of both the event and the betting strategy, *misperceptions of skill*, in terms of its contribution to betting outcomes combined with discounting of the effect of chance, were apparent and influenced the effect of wagering advertisements and inducements. One participant believed that 95% of the outcome of any bet was determined by the bettor's skill in sports or race betting:

> *'I have no interest in the pokies, just because I feel that's, to me it's luck based. I guess I see the gambling I do is skill based and I guess that's the challenge. Even though you have no real say in it, in my mind I guess I feel its skill based in some sense. You've got to analyse all the factors and I hopefully get that right.'* Participant 7, M, 36-45yrs, PG

Misperceptions of skill, combined with what were perceived to be low-risk inducements, such as money back or deposit matching, contributed to changes in betting behaviour, including increased impulse bets, increased size of bets, increased risk of bets, and chasing losses:

> '*I guess on the flipside if I'm feeling like things are really tight I might see gambling as a way to try and boost it, but I'd never, for instance, as an example. If my rent's due tomorrow and I've got $1,600 in my bank and the rent's $1,500 I'd never go under it. I'd never put my, but I might think, alright, I'm going to take a risk here and try and use that $100 that I know is excess and try and get it up to a few hundred and then I can be a bit more relaxed.'* Participant 7, M, 36-45yrs, PG
>
> '*If I lose I'll always have a calculated way that I'll get that back.'* Participant 24, M, 26-35yrs, PG

Misperceptions of skill was closely related to *cognitive distortions*, although there are sports and race bettors who display cognitive distortions without having *misperceptions of skill*. They were reflected in the *discursive constructions* and *gambling identity*. *Misperceptions of skill* increased as gambling severity increased, but was most apparent in participants who considered themselves serious bettors. NPG participants, and some at LR framed their experiences around luck; money spent on gambling was expenditure; and any winnings were a bonus.

Gambling identity

The participants in this study could be categorised into two distinct identities. Some participants viewed themselves as recreational bettors, who engaged in sports and race betting as a leisure activity that did not create financial gain, but saw their occasional wins as a source of enjoyment and celebration. The other group, with a higher proportion of males, identified themselves as skilled bettors, who were able to 'break even' financially on their betting, or even fund occasional purchases of luxury items, such as holidays or large household items. These participants engaged in substantial amounts of presentation work (Denzin, 1997) during the interviews, to support a shared identity as being capable, considered, and methodical in their betting behaviours. This identity was often asserted more by those screened as having risky or problematic levels of gambling severity.

Gambling identity is strongly related to *misperceptions of skill*, reflected in *discursive constructions*, and sustained through *social facilitation*. The process of betting was often the real source of enjoyment for many of these self-identified serious bettors, rather than the sport or event itself:

> '*Something I did work out at one stage, I really enjoy the process, and the study, and trying to work things out, and the betting itself. But I found that if I had the same sort of size of bet on everything that I wanted to bet on, that was too much. I did work out a two level, I've got an amount which is a bet that I have studied and I think is a good bet and that's something I want to do. Then I have a much smaller bet if I just want to have a bet. That's a much smaller amount, and I do try to stick to that.'* Participant 9, M, 36-45yrs, LR

However, some serious bettors were losing the enjoyment of betting but continued to gamble, due to their *intrinsic association* of betting with sport and discomfort with the notion of giving up something that had become a serious part of their identity. What was supposed to be a leisure activity had become a habituated behaviour, and was spoken about using terms normally describing unpleasant employment, such as being 'tasked by it' or 'having to do it'. Some participants even stated outright that they did not enjoy betting anymore.

> '*But now, it's sort of becoming more like work. There's not much enjoyment in it. You just have to match the numbers and make it work, and if it doesn't, it doesn't. I don't really care. I'm losing the fun factor.'* Participant 3, M, 36-45, MR

> *'I'd love to be the girl who didn't really know all this.'* Participant 25, F, 26-35, MR

Whilst all participants expressed a preference for wagering inducements that reduced the risk of financial loss, serious gamblers were drawn to inducements that reinforced their identity through complexity and the need for more extensive knowledge of the event, such as multi-bets. This contrasted to more recreational bettors, who preferred simpler inducements.

7.4 Limitations

The findings from the interview study are subject to the following limitations:

- The sample was self-selected, mostly male, and purposively skewed towards regular sports and race bettors who had previously reported being influenced by wagering advertisements and inducements. Results are, therefore, not representative of the broader population of these bettors, but, instead, reflect the range of experiences of participants within the sample.
- The analysis is limited to the data gathered via interviews, which were conducted by two researchers, with some interviews conducted face-to-face and some via telephone. These variabilities may have affected the information shared by participants during the interviews. Further, gambling is a sensitive topic, and participants may not have shared all relevant information, or shared it honestly, during interviews.
- In developing grounded theory, the analyst has considerable agency in data construction and interpretation; and these may vary amongst different analysts.

8. Discussion and Conclusions

Key findings and conclusions

We considered the results across all stages of the study to reach the following key conclusions:

- Wagering advertisements and inducements are prolific and frequently viewed by regular bettors.
- Wagering inducements encourage riskier betting.
- Wagering advertisements and inducements increase betting expenditure.
- Advertisements for wagering inducements elicit attention, excitement, and desire to bet amongst vulnerable gamblers.
- Aggregate exposure across all types of wagering advertisements and inducements increase betting expenditure, suggesting a cumulative or carryover influence.
- The most influential advertisements on betting behaviour are: direct messages from wagering operators; advertisements on betting websites/apps; betting brands promoted during live and televised race/sports events; and commentary promoting betting or betting odds during live and televised events. The most influential inducements are: stake-back offers for race bettors; and multi-bet and rewards program offers for sports bettors.
- Most bettors will underestimate the cost of bonus bets with play-through conditions and therefore overestimate their attractiveness.
- Inducement information in wagering advertisements overrides attention to responsible gambling information.
- Wagering advertisements and inducements have negative effects on all gambler groups.
- Wagering advertising and inducements interact with situational, structural, and individual factors to influence betting behaviours.
- These findings have numerous implications for policy, practice and the regulation of wagering advertisements and inducements.
- Consistent with a public health approach, measures to reduce and regulate wagering advertisements and inducements need to be supplemented by measures to reduce the environmental, structural and situational factors that interact with wagering marketing to normalise betting and contribute to betting-related harm.
- Reducing betting-related harm is critical to improving public health, given that two-fifths of at-least monthly sports and race bettors currently meet criteria for at-risk or problem gambling.

8.1 Introduction

The aim of this study was to examine how approaches to wagering marketing, including inducements, impact vulnerable adults. The study was guided by three research questions:

1. What is the impact of wagering marketing on vulnerable adults?
2. Are particular marketing approaches associated with increases in potentially harmful gambling behaviours?
3. Do gambling inducements change gambler behaviour and attitudes?

These research questions have some inherent overlap. Therefore, instead of summarising the results for each, which would require considerable repetition, we summarise and discuss the results according to key topic areas. A conclusion to this chapter also highlights the implications of the findings.

8.2 Key results of the study

8.2.1 Wagering advertisements and inducements are prolific

Our results confirm the proliferation of wagering advertisements — including those promoting wagering inducements — across a wide range of media, and indicate that they are frequently viewed by regular bettors. Our EMA study assessed daily exposure to nine types of wagering advertisements and 11 types of wagering inducements during 15 assessment periods over each of the sporting and racing seasons — thereby capturing longitudinal data and minimising recall bias. While numerous studies have previously documented the pervasiveness of this marketing in Australia (Hing et al., 2015b; Lamont et al., 2011; Pitt et al., 2016; Sproston et al., 2015), our EMA study particularly highlighted the degree to which frequent bettors are *regularly* exposed to a wide array of wagering advertisements and inducements.

On average, the EMA race and sports betting participants saw each of the nine types of wagering advertisements every 1-3 days during the EMA survey period — and this does not include the actual number of individual exposures to each type of advertisement each day. Television advertisements for betting brands, betting brands promoted during live and televised sports/race events, advertisements on betting websites/apps, and direct messages from wagering operators were the most frequently viewed and recalled types of advertising — with each type seen every 1-2 days.

The EMA participants were also frequently exposed to promotions for numerous types of wagering inducements. The most commonly seen were multi-bet offers and stake-back offers, which the race and sports bettors were likely to see every 1-2 days. Match your stake or deposit offers, cash out early on a multi-bet, sign-up bonuses, rewards programs, and better odds/winnings offers were seen every 3 days, on average. Again, these figures do not include the number of individual exposures to each inducement type on any particular day. This marketing contributes to the ‘saturated environment’ for sports and race betting highlighted in our interview study.

While bettors may purposefully seek out some of these advertisements and inducements, such as when visiting betting websites and apps, participants reported viewing many incidentally, while watching televised sport, viewing sports entertainment shows, and while engaging with other media,

such as print, radio, and unrelated websites. Push marketing also arrives uninvited, through emails, texts, and phone calls, with most direct messages promoting specific wagering inducements (Hing et al., 2018a). While bettors can opt out of receiving direct messages, the interview study indicated this may be difficult. A fear of missing out and a desire to stay informed kept serious bettors opted in, despite this intense, and sometimes unwelcome, contact.

8.2.2 Wagering inducements encourage riskier betting

Our experimental study was designed to draw conclusions about the *causal effects* of wagering inducements on betting, specifically, on bettors' propensity to accept greater risks on their bets, and whether this varied with gambling risk severity. Importantly, the study maximised ecological validity by having sports bettors view betting odds, place bets on real sports teams, watch a match highlight reel based on high quality video game technology, and be paid any winnings.

Participants perceived bets with inducements (bonus bet, better odds/winnings, reduced risk, cash rebate) as more attractive than bets without inducements. Further, when bets were accompanied by an inducement, bettors tended to choose riskier bets than when no inducement was present. The cash rebate inducement elicited the most risky bets. No differences in results were observed between PGSI groups. Thus, the results indicate that wagering inducements increase the appeal of betting and the tendency to place riskier bets amongst all gambler groups (NPG, LR, MR, PG) — not just vulnerable gamblers.

This result aligns with Newall's (2017) experimental research demonstrating that sports bettors typically overestimate the odds of winning when presented with complex bets. Wagering operators tend to incentivise complex bets whose odds are difficult to estimate (such as those with combined contingencies), and risky bets, which are associated with low odds of winning and increased gambling losses and operator profits (Newall, 2015). The tendency to choose bets with longer odds when accompanied by an inducement, as found in our study, necessarily increases the proportion of bettors likely to lose the bet, with only a smaller proportion of gamblers enjoying higher wins — compared to bets with shorter odds. That is, betting on riskier propositions increases the number of losing bettors. The fact that inducements encourage more risk-taking is non-obvious, and practically very important. In a commercial environment where the expected returns from gambling are negative for the gambler, high-risk bets lead to greater gambling losses. It may be that inducements effectively pay for themselves where they encourage riskier bets, and thereby amplify operators' profits and gamblers' losses.

Perversely, while wagering inducements encourage more risk-taking, their promotion appears to lower the perceived risk of betting — at least amongst some bettors. Our interview study revealed that taking up inducements was seen as a way to help minimise losses. This is consistent with prior research finding that inducements can be perceived as 'something for nothing' and a risk reduction strategy (Hing et al., 2014a, 2014b; Sproston et al., 2015; Thomas et al., 2012b). This belief that taking up inducements is a way to minimise losses influenced the betting behaviour of our interviewees, extended their play, and reinforced their identity as either a recreational gambler or serious bettor. In the EMA study, sports bettors in particular tended to report that inducements resulted in them placing safer, rather than riskier, bets. Certainly, many types of inducements are promoted as providing better value (e.g., through bonus bets, better odds, cash rebates, rewards points) or reduced risk (e.g., refunds, cash out early). However, these incentivised bets are only less risky if bettors do not unduly increase the riskiness, size, and/or frequency of their bets in response, and if using the inducement does not incur extra or unexpected costs. Our experimental study

demonstrated that inducements do encourage bettors to bet differently (take riskier bets), while our play-through study showed that some inducements, specifically bonus bets with play-through conditions, incur extra costs which are usually unanticipated. Thus, gamblers' perceptions that bets with inducements result in safer, or less risky, betting appear misguided.

8.2.3 Wagering advertisements and inducements increase betting expenditure

Because wagering inducements encourage riskier bets, as discussed above, they also increase betting expenditure through amplifying losses. This is because riskier betting increases the volatility of betting returns, which increases the magnitude of player losses over reasonable time-frames, and creates a larger pool of losing bettors (at the population level). Thus, the experimental study demonstrated that wagering inducements increase net betting expenditure.

Results from the EMA study also support this finding, based on the longitudinal data analysis over the 15 assessment periods for sports and race betting. For both forms of betting, greater aggregate exposure to wagering inducements and advertisements was accompanied by: increased likelihood of betting (compared to not betting); increased intended and actual expenditure on betting; and, for race betting, spending more on betting than originally intended. Further, these relationships were apparent amongst all PGSI groups.

The statistical relationships identified in the longitudinal EMA analysis are correlational, not causal. Nevertheless, it is likely that increased *intended* expenditure on betting (in the subsequent period) does not cause greater exposure to wagering marketing (in the current assessment period). Therefore, this indicates that exposure to wagering marketing leads to higher intended betting expenditure.

However, causal directions for the remaining relationships are less certain. Increased exposure to wagering marketing might trigger or encourage betting, thus increasing the likelihood of betting, and of higher betting expenditure. Alternatively, increased likelihood of betting and higher betting expenditure may increase exposure to some types of wagering marketing, as the act of betting in itself increases the likelihood of seeing wagering advertising and inducements on betting websites and apps. Betting on an event also increases the likelihood of watching (or listening to) the event, which further increases advertising exposure.

Support for the first of these relationships is provided by the self-report EMA data. Both race bettors and sports bettors tended to report placing more bets in response to both wagering advertisements and inducements. On average, race bettors also placed larger bets as a result of viewing wagering advertisements (although this did not apply to sports bettors). Both sports and race bettors were more likely to report placing larger bets in response to wagering inducements. In the interview study, participants also described increasing their betting frequency and expenditure, and betting more than intended, in response to wagering advertisements and inducements. These self-reports, in both the EMA and interview studies, align with similar reports in prior research (Hing et al., 2014a; Hing et al., 2015b; Sproston et al., 2015). Additionally, as noted above, inducements encourage riskier betting, which increases net expenditure. This consistent pattern of results across studies, using different methodologies, supports our conclusion that, on average, exposure to wagering advertising and inducements increases betting expenditure.

8.2.4 Advertisements for wagering inducements elicit attention, excitement, and desire to bet amongst vulnerable gamblers

The psychophysiological study illuminated the role of wagering inducements in eliciting attention, excitement, and the desire to bet — and enabled comparisons amongst NGs and the four PGSI groups of sports bettors. In the seminal stimulus-response AIDA model of advertising persuasion (Rawal, 2013), engaging the consumer's attention, gaining their interest in the product, and eliciting their desire for the product are precursors to the action stage of purchasing. In the current study, the attention, excitement, and desire aroused by wagering marketing, therefore, help to explain the behavioural responses to this marketing (as discussed above).

Amongst all PGSI groups of bettors, the wagering advertisements elicited greater attention, excitement, and desire to take up the advertised wagering inducements, compared to similar types of car inducements. Conversely, the NG group reported being more likely to take up the car inducements. Additionally, NGs did not report a preference for any of the types of wagering inducements, consistent with their low interest in the wagering advertisements. These results are consistent with previous research, suggesting that gambling advertisements are unlikely to entice NGs to take up gambling, but have most impact on people who already gamble (Binde, 2009; Hing et al., 2014a; Sharpe & Tarrier, 1993).

Attention to each of the four types of wagering inducements (bonus bet, better odds, reduced risk, cash back) was assessed using eye-tracking data, specifically, relative exposure to each type of inducement contained within the wagering advertisements. Relative exposure was measured by the number of fixations on each inducement type, proportionate to the amount of time that the inducement information was available on-screen. Consistent with the appeal and excitement measures amongst the four inducement types (see below), reduced risk and cash back inducements were most effective at attracting the attention of LRs, MRs and PGs, despite being presented on the screen for less time than the other inducement types. This finding is also consistent with previous research (Binde, 2014), and indicates that the amount of attention paid to inducements is more dependent on the type of inducement, than merely being exposed to an inducement for a longer amount of time.

While the wagering advertisements were attractive to all PGSI groups, relative appeal (desire to take-up the offer) of the four different types of wagering inducements that were advertised varied amongst some gambler groups. NPGs, LRs and MRs found reduced risk inducements to be most appealing, which may reflect a priority on minimising losses (as highlighted in the interview study). PGs also found reduced risk inducements attractive but considered cash back inducements more appealing. This may reflect PGs' desire or need for cash to sustain their gambling, and to lower the substantial financial harms typically associated with problem gambling (Browne et al., 2016; Langham et al., 2016).

LRs, MRs and PGs also reported increased excitement after viewing inducements they rated as appealing (i.e., reduced risk inducements for LRs and MRs, and cash back inducements for PGs). The NGs and NPGs did not report greater-than-baseline excitement in response to any type of inducement. This finding suggests a complex, yet fascinating, interplay between excitement and harmful gambling behaviours in the context of wagering advertising. Specifically, while individuals who gamble regularly but without subsequent problems find certain inducements appealing, they do not report a corresponding increase in excitement. This suggests a dissociative role of excitement in the desire to gamble between LRs/MRs/PGs and NPGs, with wagering inducements appearing to be particularly exciting for LRs, MRs and PGs.

8.2.5 Some types of wagering advertisements and inducements particularly influence betting behaviour

Various types of advertisements and inducements were identified as having the *most* influence on betting behaviour, across the different stages of the study. Nonetheless, other types of wagering marketing may also be influential. Importantly, aggregate exposure across *all* types of wagering advertisements and inducements was found to increase betting expenditure (discussed earlier), suggesting a cumulative or carryover influence. The aggregate and carryover effects of advertising are well recognised in the general field of advertising research (Leone, 1995), such that responses to specific advertisements or inducements cannot be completely isolated from the legacy effects of previous exposures. Thus, the types of advertising and inducements discussed below as most influential on betting behaviour should be considered as components of the broader mix of marketing for race and sports betting in Australia, which has a combined influence on betting behaviour.

Additionally, completely isolating the effects of wagering advertisements, compared to wagering inducements, is not possible, given that many advertisements actually promote specific inducements (although some advertisements may promote just the brand or other product features). This explains why the EMA participants saw advertisements more frequently than inducements, as the latter is a subset of the former. Similar to advertising, the promotion of wagering inducements may have aggregate and carryover effects — although these inducements are typically short-term offers, to which a more immediate behavioural response can be expected (Hing et al., 2015c, 2017d). Many types of wagering advertisements frequently promote wagering inducements. These include the types of advertisements identified below as most influential on wagering behaviour — direct messages from wagering operators, advertisements on betting websites and apps, betting brands promoted during live and televised events, and commentary promoting betting, or betting odds during live and televised events. Relationships between each of these types of advertising and betting behaviour are now discussed.

The longitudinal EMA analysis found that, amongst race bettors, greater exposure to direct messages from wagering operators (via emails, texts, and phone calls) was accompanied by increased likelihood of betting in the current period, and increased intention to bet in the subsequent period. Logically, the causal direction of this relationship is that exposure to direct messages influences these betting decisions, rather than vice versa[12]. EMA study participants also reported that these direct messages were particularly influential on their betting. Based on self-reports, direct messages influenced the betting of 38% of the race bettors exposed to this advertising, reportedly prompting most of those exposed (64%) to place more bets. Interview study participants also discussed the intensity of contact that wagering operators maintain with them, via frequent direct messaging. Hing et al. (2018a) found that race bettors receive direct messages much more frequently than sports bettors, and this may help to explain their greater influence on race betting expenditure. They also found that the vast majority of these messages promote a specific inducement to bet.

The EMA longitudinal analysis identified greater exposure to advertisements on betting websites and apps as being associated with increased likelihood of betting, and increased likelihood of spending more on betting than intended. The act of placing bets online necessarily exposes bettors to this type of advertising; however, the self-reported EMA data suggest that this advertising can also influence betting behaviour. Based on these self-reports, advertisements on betting websites and apps influenced the betting of around one-quarter of the race and sports bettors exposed to this type of advertising, reportedly prompting around 60% of those exposed to place more bets, and 40% to place

[12] A recent study of direct wagering messages found no relationship between the number of direct messages received and the betting frequency or PGSI status of account-holders (Hing et al., 2018a).

larger bets. The placement of these advertisements on the betting platforms themselves, that is, at the point-of-sale, is likely to trigger impulsive betting decisions (Hing et al., 2018b), and these may result in placing unplanned bets or exceeding planned betting expenditure.

In the longitudinal EMA analysis, greater exposure to betting brands promoted during live and televised race/sports events was associated with increased likelihood of betting amongst both race and sports bettors, and increased betting expenditure amongst race bettors. Both potential causal pathways are possible. Betting on an event increases the likelihood of watching the event, and thus, being exposed to the associated advertising; however, the EMA self-report data also provide some support for the alternative pathway. Brand advertising during these events reportedly influenced the betting of around one-fifth of bettors exposed to this type of advertising, prompting a little over half of them to place more bets.

Amongst race bettors, the longitudinal EMA analyses found that greater exposure to commentary promoting betting or betting odds during live and televised events was associated with increased likelihood of betting, increased betting expenditure, and increased spending more than intended. These relationships are potentially bidirectional. Those who have bet on a racing event are more likely to watch or listen to the event, and thus be exposed to the associated betting commentary. Supporting the opposite causal direction, the self-report EMA data suggest that exposure to this commentary can influence these types of betting behaviours. On average, commentary reportedly influenced the betting of one-quarter of race bettors exposed to it during each daily EMA assessment period, prompting 58% of them to place more bets, and 47% to place larger bets.

Amongst race bettors, the longitudinal EMA analysis indicated that the only type of wagering inducement associated with increased betting expenditure was the stake-back offer (i.e., some money back if the bet doesn't win). Specifically, greater exposure to the stake-back offer was associated with increased likelihood of race betting and increased race betting expenditure. The self-reported EMA data identified the stake-back offer as the most frequently seen by race bettors, and also the most influential, reportedly affecting the betting of 44% of race bettors exposed to its promotion, and prompting 58% to place larger bets and 50% to place more bets.

Amongst sports bettors, the longitudinal EMA analysis indicated that two types of wagering inducements were associated with increased betting expenditure — multi-bet offers (bonus bet, refund, or cash if multi-bet fails by one leg), and rewards program offers. Specifically, greater exposure to multi-bet offers was associated with a higher likelihood of sports betting. Rewards program inducements were accompanied by increased intended sports betting expenditure. These inducements were also highlighted as influential in the self-reported EMA data. Multi-bet offers were the most frequently seen inducement amongst sports bettors, and reportedly influenced the betting of 39% of those exposed to them during the EMA, prompting 53% to place more bets. Rewards program offers were also frequently seen during the EMA period, and reportedly influenced the betting of 38% of sports bettors exposed to them, prompting 58% of these participants to place more bets.

While increased betting expenditure might increase exposure to wagering inducements (because inducements are promoted on betting website and apps, and during events that bettors are more likely to watch if they have bet on them), the self-reported EMA data provide support for the opposite causal pathway, as discussed above. The psychophysiological study also highlighted that inducements that reduce risk by refunding some or all of the bet, and those that provide cash rebates elicit most attention, excitement, and desire to bet when advertised. The experimental study identified the cash rebate inducement as the most likely to encourage riskier bets. Reduced risk and cash rebate incentives are present in stake-back offers and multi-bet offers, and may explain why they were found to increase betting expenditure in the longitudinal EMA analyses. These types of

inducements change the structural characteristics of the betting product, and may increase their potential to encourage harmful gambling behaviours, through engendering a greater illusion of control over betting outcomes (Lopez-Gonzalez et al., 2017b), thereby encouraging their uptake in an attempt to reduce risk and minimise losses.

In summary, this study has identified certain types of advertisements and inducements as having the most influence on betting behaviour. Specifically, greater exposure to the following types of marketing positively influences betting expenditure:

- Direct messages from wagering operators increase intention to bet on races, and the likelihood of actually betting on races.
- Advertisements on betting websites and apps can increase the likelihood of race and sports betting, and the likelihood of spending more on race and sports betting than originally intended.
- Betting brands promoted during live and televised race/sports events can increase the likelihood of race and sports betting, and race betting expenditure.
- Commentary promoting betting or betting odds during live and televised events can increase the likelihood of race betting, race betting expenditure, and spending more than intended on race betting.
- Stake-back offers can increase the likelihood of race betting and race betting expenditure.
- Multi-bet offers can increase the likelihood of sports betting.
- Rewards program inducements can increase intended sports betting expenditure.

8.2.6 Most bettors will underestimate the cost of bonus bets with play-through conditions and therefore overestimate their attractiveness

Explaining the play-through conditions, and how to calculate the true cost of a bonus bet offer, reduced the perceived attractiveness of bonus bets. When presented with the play-through conditions on the promoted bonus bet, nearly three-fifths of participants underestimated the amount they would need to bet in order to withdraw any winnings from the bonus bet. On average, participants estimated the offer would cost them only two-thirds of its true cost. Even frequent and highly involved bettors were likely to underestimate the true cost of the offer.

These findings demonstrate that typical explanations of play-through conditions are likely to cause consumers to overestimate an inducement's attractiveness and to take up an offer that costs more than they expected — even amongst highly experienced bettors. Our eye-tracking study also demonstrated that bettors pay little visual attention to references to inducement terms and conditions within wagering advertisements, compared to the attention they pay to information on the inducement itself. Further, play-through conditions are usually not contained within promotional advertisements for these inducements, and may be difficult to locate on the operator's website (Hing et al., 2017d). Current approaches to promoting and explaining these inducements do not provide a realistic means

for consumers to exercise informed choice — which is a fundamental principle of responsible gambling (Hing et al., 2015c, 2017d).

8.2.7 Inducement information in wagering advertisements overrides attention to responsible gambling information

The eye-tracking study demonstrated that relatively little visual attention is paid to responsible gambling information presented in broadcast wagering advertisements promoting an inducement, even though this information was displayed on-screen for longer than such inducements. The static nature, small font, placement at the bottom of the screen, and faint colour of the responsible gambling messages may partly explain why this information attracts such little attention — especially when presented in the context of dynamic, appealing, and exciting inducements. Several studies have documented considerable consumer scepticism about the purpose and efficacy of these 'gamble responsibly' messages (Lamont et al., 2016; Sproston et al., 2015), and the current results highlight their likely limited utility as a consumer protection or harm minimisation measure.

8.2.8 Wagering advertisements and inducements have negative effects on all gambler groups

The EMA study indicated no consistent differences amongst PGSI groups in their level of exposure to wagering advertisements and inducements. All participants were regular bettors, suggesting that exposure may be related more to betting frequency than gambling problems. There were also few differences in PGSI groups in terms of their responses to these advertisements and inducements. The experimental study found that wagering inducements elicited riskier betting by all four PGSI groups. The longitudinal EMA analysis found that wagering advertisements and inducements are associated with increased betting expenditure amongst all four groups. The self-reported EMA data did not reveal any significant differences amongst gambler groups in terms of self-assessed influence of different advertisements and inducements on betting behaviour. In the psychophysiological study, all PGSI groups found the wagering advertisements to be more attractive than the car advertisements that contained similar inducements. All PGSI groups found wagering inducements with a reduced risk incentive to be particularly appealing, although PGs considered cash rebate incentives as even more attractive.

As noted earlier, one key difference was identified between PGSI groups. In the psychophysiological study, NGs and NPGs did not report greater-than-baseline excitement in response to any type of inducement. In contrast, LRs, MRs and PGs paid most visual attention to reduced risk and cash rebate inducements, and these types of inducements also elicited the greatest increases in reported excitement amongst these groups.

Overall, this study has found that exposure to wagering advertisements and inducements has negative effects on all gambler groups. Exposure promotes riskier betting and increased betting expenditure amongst all PGSI groups. These effects may be elevated for vulnerable adults (LRs, MRs and PGs), particularly in relation to reduced risk and cash rebate inducements. This marketing therefore contributes to the significant harms associated with gambling, including harms to lower risk groups, as well as harms to those with severe gambling problems (Browne et al., 2016; Langham et al., 2016).

8.2.9 Wagering advertising and inducements interact with situational, structural, and individual factors to influence betting behaviours

Wagering advertisements and inducements are experienced within, and contribute to, a saturated environment for sports and race betting in Australia — where betting is constantly available and accessible, embedded within bettors' social networks, and intrinsically associated with sports and racing. Within this environment, numerous situational, structural, and individual factors also shape how wagering advertisements and inducements influence betting behaviour. Relevant situational factors include the social acceptance of betting within the peer group, contextual factors such as boredom and alcohol consumption, and the ability to conceal betting activity on digital devices. Structural aspects of inducements were also influential, such as time limits placed on using them, (mis)perceptions of their value, intensity of direct messaging promoting inducements, and whether offers require extended betting with the wagering operator. Key individual factors shaping bettors' responses to marketing offers included: fear of missing out, cognitive distortions, misperceptions of skill, and the importance of gambling to the individual. These influences may be amplified with increased wagering involvement.

8.3 Limitations of the study

The individual results chapters of this report detail the limitations associated with each stage of the study, and these should be considered when interpreting the results. Overall, the key limitations relate to:

- the use of non-representative samples, as preference was given to over-sampling regular sports and race bettors, and gaining adequate numbers from each PGSI group for the required analyses;
- small samples of females and people from CALD communities, which prevented analysis specific to these groups;
- the focus only on regular bettors (to adhere to the requirement to focus on vulnerable adults), which means that the effects of wagering marketing on non-regular bettors have not been considered;
- the self-report nature of some data (subjective measures in the EMA and psychophysiological studies, interview data), although the limitations of these data were offset by the addition of experimental, longitudinal, and eye-tracking data;
- inherent difficulties in accurately measuring exposure to advertising and inducements (given their proliferation), and in isolating the effects of each type on betting behaviour (given cumulative and carryover effects);
- limits to some aspects of the ecological validity of the studies conducted under laboratory conditions (experimental study, psychophysiological study); and

- inherent difficulties involved in assigning causality, given that wagering marketing can influence betting behaviour but betting behaviour can also influence exposure to some types of wagering marketing.

8.4 Suggestions for further research

Based on the findings and limitations of this study, we offer the following suggestions to guide further research into the effects of wagering advertisements and inducements.

Longitudinal cohort studies are needed to establish the causal effects of wagering advertising and inducements over time. This research could draw on methodologies in alcohol and tobacco studies that have clearly established links between exposure to advertising and hazardous product consumption. Given that longitudinal cohort consumer studies in alcohol and tobacco research have had a strong influence on policy, similar research in gambling may also catalyse stronger measures to prevent and reduce gambling-related harm. Cohorts for longitudinal studies should include children and young people, given their high exposure to wagering advertising and concerns about its normalising effects over time.

Explanatory research is needed to better understand the persuasive process of wagering advertising in affecting gambling behaviour, and how this may vary for different types of advertisements and inducements, and for different demographic and gambler risk groups. Such research could test existing models of advertising persuasion, to identify or develop a model that best explains the effects of wagering advertising on gambling behaviour.

Research could also examine how wagering advertisements and inducements interact with important personal, social-cultural, and environmental factors to influence gambling behaviours. This research could draw on the variables identified in our interview study to test or advance the grounded theory model.

Studies of the effects of wagering marketing on particular sub-populations are also warranted. The small number of female participants in the current study did not allow for gender analyses. Young women, in particular, are an emerging market for online betting yet little is known about their characteristics and behaviour, how these might differ compared to males, and how they are impacted by wagering advertisements and inducements.

Similarly, research is needed to understand how wagering marketing impacts on Indigenous and CALD peoples and communities. Qualitative research may be best suited, given the inherent limits of attainable sample sizes.

Importantly, studies are needed into the effects of wagering marketing on adolescents. While longitudinal cohort studies are optimal to understand causal effects over time, cross-sectional and qualitative studies could also advance our understanding of how young people engage with, and respond to, different types of media where wagering is promoted, and the messages conveyed.

Young adult men are the main at-risk group for wagering problems and harm, and should remain a key focus of research efforts. Evidence is needed of how consumer education, social marketing and other interventions might best be employed to build their resistance to wagering advertising and inducements, and to encourage safe betting practices.

Research is needed to support evidence-based changes to wagering policies and practices, and evaluation of the effects of these changes, particularly the tracking of their effects on wagering-related harm.

8.5 Conclusions and implications

Regular sports and race bettors are exposed on a daily basis to numerous types of wagering advertisements and inducements, most commonly on television, betting websites and apps, and via direct messages from wagering operators. Many of these advertisements promote inducements to bet, most commonly multi-bet offers and stake-back offers, and also match your stake or deposit offers, cash out early on a multi-bet, sign-up bonuses, rewards programs, and better odds/winnings offers.

Consistent with the seminal stimulus-response AIDA model of advertising persuasion (Rawal, 2013), this study found that advertisements for wagering inducements engage the *attention* of existing bettors, are particularly effective at eliciting *interest* (excitement) amongst LRs, MRs and PGs, and trigger *desire* to take up inducements considered exciting — all precursors to the action stages of betting. Exposure to wagering advertisements and inducements was found to affect betting *intentions*, with greater aggregate exposure linked to higher intended betting expenditure. Heightened aggregate exposure also influences betting *behaviour*, by increasing the likelihood of betting, actual betting expenditure, and, amongst race bettors, spending more on betting than intended. When placing bets with inducements, bettors tend to place riskier bets.

Apart from the elevated excitement levels found amongst LRs, MRs and PGs, these results did not differ amongst the four PGSI groups of gamblers. Thus, wagering marketing appears to have an effect on all gambler groups, through encouraging riskier betting and increased betting expenditure. Given that 41% of all regular (at-least monthly) sports bettors and race bettors in Australia experience one or more gambling-related problems (Armstrong & Carroll, 2017a, 2017b), wagering marketing negatively affects substantial numbers of bettors already at-risk of, or currently experiencing severe gambling problems. These are predominantly young adult males who are the target group for this marketing, and who are increasingly reporting betting-related problems and harm (Hing et al., 2016).

Inducements implicated as having most influence on betting behaviour are those incentivised by cash rebate and reduced risk offers, which refund or match part or all of the bet (under certain conditions) via cash, bonus bets, deposits, or reward points. Reduced risk through cash rebates or refunds are particularly attention-grabbing and exciting for at-risk and PGs, and are associated with increased betting expenditure. Cash rebates are especially appealing to PGs and encourage riskier betting. Stake-back, multi-bet, and rewards points offers with these incentives were particularly linked to increased betting expenditure.

A targeted approach to reducing at-risk and problem gambling would be, therefore, to ban or otherwise restrict inducements with these types of incentives. These include stake-back, multi-bet, match your stake/deposit, cash out early, rewards program, and various bonus bet offers. The appeal of these inducements is explained by their overriding use to minimise betting losses, as found in the interview study. However, these inducements actually *increase* losses by encouraging riskier bets and increased betting expenditure.

Misperceptions about the likely returns from wagering inducements indicate that consumer education is needed to discourage riskier betting when an inducement is offered, to advise consumers of the

(typically low) chances of winning, and that using inducements is not a safer betting strategy. Operators should also ensure that inducements are not promoted in ways that can mislead bettors into thinking they are a safer betting option that is likely to minimise losses (where this is not the case). Particular care is needed in terms of how bets with cash rebates and reduced risk incentives are promoted to avoid misperceptions of their odds, cost, and likely value.

Given the high potential for confusion about the play-through conditions placed on some bonus bets, these conditions should be banned. Alternatively, more prescriptive regulation is needed so that bettors using these inducements do not inadvertently spend more than they intend or can afford. For example, operators could be required to provide one or more worked examples of the play-through requirements for each inducement, specifying their exact cost. If the latter option is chosen, these explanations should be prominently displayed on the same page as the promotion and in similar sized font.

Aggregate exposure to wagering advertising is linked to increased betting expenditure. Particularly implicated are direct messages from wagering operators, advertisements on betting websites and apps, betting brands promoted during live and televised race/sports events, and commentary promoting betting or betting odds during live and televised racing events. These results suggest that a reduction in wagering advertising would be likely to reduce betting expenditure and betting more than intended, including amongst at-risk and PGs. On 30 March 2018, gambling advertising was banned from live sports broadcasts on television and radio in Australia between 5am and 8.30pm in order to reduce exposure of children to sports-related gambling. It is possible that this ban could also assist in reducing harmful gambling behaviours amongst adults, given the association between exposure to wagering advertising during event broadcasts and increased betting expenditure. However, given this ban generally does not extend to the end of broadcasts of evening sports matches, and does not encompass advertising through other media, it is likely to have limited effectiveness in isolation. The results of this study suggest stronger restrictions are required to reduce harm. Further, these new restrictions may not result in a net reduction of wagering advertising, but instead encourage a transition to less restricted online, social media, and mobile platforms, as has occurred with the introduction of previous advertising restrictions (Gainsbury et al., 2015; Sproston, Hanley, Brook, Hing, & Gainsbury, 2015).

The most problematic form of wagering advertising is direct messaging via emails, texts, and phone calls from wagering operators. The majority of these direct messages promote specific wagering inducements (Hing et al., 2018a), and bettors report that this marketing is intense and particularly influential on their betting, by encouraging them to place more bets. Greater exposure to direct messages increased betting intentions and the actual likelihood of betting, including amongst vulnerable bettors. A prudent regulatory measure would be to ban this type of push advertising or to mandate a rigorous opt-in requirement to receive these targeted inducements, rather than the current opt-out system. Wagering operators could also be required to limit the frequency of these messages, particularly to at-risk and PGs — who could be reliably identified through algorithmic behavioural analysis of wagering data. Messages to at-risk and PGs could then be designed to assist them to maintain control over their betting, instead of tempting them with wagering inducements likely to exacerbate the gambling-related harm they are already experiencing. However, reluctance from operators might be expected given that 46% of sports betting expenditure, and 41% of race betting expenditure, is derived from MRs and PGs (Armstrong & Carroll, 2017a, 2017b). Government regulation is therefore likely to be needed to effectively restrict this form of advertising, and/or the types of inducements it promotes.

Other forms of advertising linked with increased betting expenditure — advertisements on betting websites and apps, and commentary during racing events — are less obvious targets for restrictions, given they are likely to be actively sought out and valued by bettors for providing useful information.

More visible responsible gambling information is needed in wagering advertisements. The eye-tracking study confirmed the ineffectiveness of these messages as consumer protection or harm minimisation measures in their current form, as they attract minimal visual attention. This supports several prior studies that have documented considerable consumer scepticism about the purpose and efficacy of these 'gamble responsibly' messages, given their static presentation, small font, faint colours, and placement at the bottom of the screen (Lamont et al., 2016; Sproston et al., 2015).

Finally, consistent with a public health approach, measures to reduce and regulate wagering advertisements and inducements (such as those suggested above) need to be supplemented by measures to reduce the environmental, structural and situational factors that interact with wagering marketing to normalise betting and contribute to betting-related harm. Reducing this harm is critical to improving public health, given that two-fifths of at-least monthly sports and race bettors currently meet criteria for at-risk or problem gambling (Armstrong & Carroll, 2017a, 2017b).

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Appendices

Appendix A. Baseline survey for the EMA study

Effects of wagering marketing on regular bettors in Victoria

Project Team: Professor Nerilee Hing (Chief Investigator), Dr Anna Thomas, Dr Rebecca Jenkinson, and Dr Alex Russell.

INFORMATION SHEET

Thanks for your interest in this important project examining the effects of marketing on betting behaviour. It is funded by the Victorian Responsible Gambling Foundation (VRGF) and is being conducted by Central Queensland University and the Australian Gambling Research Centre.

Taking part

To participate you must:

- Be 18 years or over
- Gamble at least once a fortnight on sports
- Be willing to answer multiple short surveys over the next couple of months
- Have a smartphone and mobile data plan (3G or 4G), so that you can fill in the short surveys Have access to a computer or tablet and the internet for the first survey and the Sunday surveys
- Provide your contact details (first name, mobile number, and email address) to be sent links to surveys and compensation

What you will be asked to do

We are inviting people who bet regularly on sports to take part in our study. We are looking into the effects of advertising and promotions on sports betting. Participation involves completing several short online surveys during the next couple of months.

You will initially complete this online survey which should take about 15 minutes and will ask you about betting, advertising and promotions, and some questions about alcohol use, mood and how you react to certain situations. After that, we will ask you to register your mobile phone number and email address with us so we can send you some short surveys to complete on your smart phone over the next couple of months.

Over three separate weeks (starting 22 May; 12 June; and 3 July) we will ask you to fill in four very short surveys on your smart phone. They will each take 3-5 minutes to complete and will be sent to you on the Monday, Wednesday, Friday and Saturday evenings of each of these three weeks. We are doing it this way so you don't have to remember too far back. The surveys ask about wagering ads and promotions you may have seen in the previous day or so and any sports betting you have done or plan to do. Then on the Sunday evening we will send a 10 minute survey that you can complete on a smart phone, tablet or computer asking a bit more about marketing and your betting during that week. The table below provides the dates you will be required to complete the other surveys.

	First week	Second week	Third week
Monday	20/02/2017	13/03/2017	03/04/2017
Wednesday	22/02/2017	15/03/2017	05/04/2017
Friday	24/02/2017	17/03/2017	07/04/2017
Saturday	25/02/2017	18/03/2017	08/04/2017
Sunday	26/02/2017	19/03/2017	09/04/2017

Compensation for your time and effort

Your time is valuable. We would like to offer you some compensation for your time and effort in the form of an electronic Coles voucher up to a maximum of $110. There are a total of 16 surveys to complete. Most of them are only 3-5 minutes long.

Everyone who completes this first 15-minute baseline survey will immediately be offered $10 compensation for the time and effort. Then, more compensation will be offered depending on how many additional surveys you complete - we will keep track and reimburse you in July **after the series of surveys are finished.**

People who complete another 4 surveys will be eligible for $30 more compensation.
People who complete a total of 9 additional surveys will be elig ble for $70 more compensation
People who complete a total of at least 13 more surveys will be eligible for $100 more compensation.

Compensation will be through an electronic Coles voucher and will be emailed out to you.

How your confidentiality will be protected

We will protect the confidentiality of your responses to the fullest possible extent, within the limits of the law. We will need you to provide your first name and contact details so we can text or email you to remind you to take part in each survey and to send you compensation. Your email address will be entered in the Coles Giftcard Registry in order for you to receive your compensation. All personal details will be stored in a password protected computer file **separate from any data you supply** . However, we will assign a unique code to your identity and survey responses so that the research team can link these again. This is so we can invite respondents who agree to be recontacted and who meet certain criteria to a later stage of this study that involves telephone interviews. The interviews would draw on your survey data to discuss the effects of marketing on your sports betting. Please be assured that your name will not appear in the research report or any associated publications or presentations. We will also remove any references to personal information that might allow someone not on the research team to guess your identity.

The data will be kept securely by CQUniversity. As soon as all survey data for this project has been collected and the interviews are completed, your personal details will be destroyed so that your data can never be linked back to you. In accordance with the Productivity Commission's recommendations to improve research into gambling, the de-identified data (the data collected without any way of identifying you) will be data warehoused and may be used by other researchers in the future. These researchers would need to supply an appropriate research proposal and have obtained approval from the Human Research Ethics Committee before access to the de-identified data would be given.

Participation will not prejudice you in any way

Please be advised that your participation in this study is completely voluntary. Should you wish to withdraw at any stage you are free to do so without prejudice or penalty.

How you will receive feedback

This research is being conducted for the Victorian Responsible Gambling Foundation. The final report will be publicly available on their website at the end of the project (www.responsiblegambling.vic.gov.au).

Where you can get further information

Should you require any further information or have some questions about participation please contact Nancy Greer on wageringstudy@cqu.edu.au or 03 9616 0512. If you have broader queries or concerns about the research, please do not hesitate to contact the Chief Investigator (Nerilee Hing) on n.hing@cqu.edu.au. You are also welcome to contact the Ethics and Compliance Officer at the Office of Research on 07 4923 2603.

Some of the questions we ask will be about your gambling behaviour. If you experience discomfort at any point during the surveys, you can contact Gambler's Help on 1800 858 858 or www.gamblinghelponline.org.au. These are free and confidential telephone/online help services that operate 24 hours a day, 7 days a week.

Taking part

If you would l ke to participate CLICK NEXT. You will be asked to indicate that you are 18 years of age or over, bet on sports at least once a fortnight, are willing to complete multiple short surveys over the next few months, and have read and understood this information by checking the acknowledgement accompanying the consent form. You will also be asked to provide your contact details (first name, mobile, email) to be sent the surveys. You can then complete the first online survey.

Consent to participate

1. I consent to participation in this research project and agree that:

- I have read and understood the Information Sheet that describes this study;
- Any questions I had about the project were answered by either the Information Sheet or the researchers;
- I understand I have the right to withdraw from the project at any time without penalty;
- The research findings will be included in the researchers' publication(s) on the project; and this may include conference presentations and research articles as well as other media described in the Information Sheet;
- To protect my privacy, my name will not be used in publication(s);
- I am providing informed consent to participate in this project;
    - o Yes
    - o No

2. I am 18 years of age or over
    - o Yes
    - o No

3. I gamble at least once a fortnight on sports
    - o Yes
    - o No

4. I am willing to answer multiple short surveys over the next couple of months
    - o Yes
    - o No

5. First name _____

Firstly, we need to collect contact information so we can contact you for the remaining surveys. We take your confidentiality very seriously and will only use your name to get in touch with you if needed.

6. Please enter your primary mobile number without any spaces in between (survey links will be sent to this number) _____

You will need to complete the remaining short online surveys on your smart phone, so please make sure you provide a working mobile number above.

7. Secondary landline or mobile number (if available) _____

We will only use your secondary landline or mobile number if we are unable to maintain contact through your primary mobile number.

Please also provide us with an email address so we can send you compensation at the end of the project.

8. Email address _____

Your electronic Coles voucher will be emailed to you, so please make sure you provide a valid email address above.

9. What is your age (years)? _____

10. What is you gender?
- o Male
- o Female
- o Other

11. In which country were you born?
- o Australia
- o Other (please specify) _____

12. What language do you mainly speak at home?
- o English
- o Other (please specify) _____

13. In which state or territory do you live?
- o Australian Capital Territory
- o New South Wales
- o Northern Territory
- o Queensland
- o South Australia
- o Western Australia
- o Victoria
- o Tasmania

14. What is your postcode? _____

15. What is the highest level of education you have achieved?
- o Year 10 or below
- o Year 11 or equivalent
- o Year 12 or equivalent
- o A trade, technical certificate or diploma
- o A university or college degree
- o Postgraduate qualifications

16. What sort of living arrangement best descr bes your household?
- o Live alone
- o Couple (living alone)
- o Couple with at least one dependent child
- o Couple living with independent child(ren)
- o Single parent living with at least one dependent child
- o Single parent living with independent child(ren)
- o Share house with other adults
- o Live with parents
- o Other (please specify) _____

17. Which of the following best describes what you mainly do?

- o Work full-time
- o Work part-time or casual
- o Student (you may also be working part time to support your study)
- o Unemployed and looking for work
- o Full-time home duties
- o Retired
- o Sick or on a disability pension
- o Other (please specify) _____

18. About what age were you when you started betting regularly (i.e. fortnightly) on sports? _____

19. About how many **days** in the last month did you bet on sports? _____

20. When you were betting on sports in the last month, about how many bets did you place on a typical day? _____

21. Roughly how much money did you place on sports bets in the past month? $ _____ AUD

22. Still thinking about the last month:

	Never	Sometimes	Often	Almost always
How often did you plan in advance how much money you would spend on sports betting on a typical day of betting?				
How often did you watch or listen to the sports events you had bet on?				
How often did you bet on sports when you were affected by alcohol?				
How often did you bet on sports when you were affected by illicit drugs (e.g. cannabis, cocaine, methamphetamine)? (Remember that this survey is confidential)				

23. How often did you use the following sources of information to inform your sports betting in the last month?

	Never	Sometimes	Often	Almost always
Face-to-face chats with individuals or groups (e.g. friends, family, colleagues)				
Online, text-based or telephone chats with individuals (e.g. texting or messaging a friend)				
Online or text-based groups chats (e.g. Facebook, WhatsApp or email group chats)				
Purchased tips from experts / professional bookies / paid for a form guide				
Sourced free tips from experts via TV / radio / websites / social media (including free online form guide information)				

24. How many sports betting operators do you currently have a wagering account with? _____

25. To what extent do you keep in touch with what's going on in the world of sports? (e.g. talking about sporting games/events at work or with friends, watching the footy show, checking injury lists, watching games/events, keeping an eye on the odds)

- o Not at all
- o A small amount
- o A moderate amount
- o A large amount

26. In the last month, how often have you seen or heard the following types of advertising for sports betting?

	Never – did not see/hear this at all over the last month	Sometimes – once a week or less	Often – several times a week	Very often – daily or almost daily	Extremenly often – several times a day
Betting brands promoted during live and televised sports events (e.g. logos, signage)					
Commentary promoting betting or betting odds during live and televised sports events					
Betting/odds related discussions in sports entertainment shows (e.g. The Footy Show)					
TV advertisements for betting brands					
Radio or print advertisements for betting brands					
Advertisements on sports betting websites or apps (e.g. promoting particular bets)					
Sports betting advertisements on unrelated websites or apps					
Personal emails, text messages or phone calls from sports betting companies					
Social media posts by sports betting companies (e.g. on Facebook, Twitter, etc.)					

27. How much did these advertisements **influence your sports betting** (e.g. to place more bets, riskier bets or bet more money)?

	Not at all	Somewhat	A lot
Betting brands promoted during live and televised sports events (e.g. logos, signage)			
Commentary promoting betting or betting odds during live and televised sports events			
Betting/odds related discussions in sports entertainment shows (e.g. The Footy Show)			
TV advertisements for betting brands			
Radio or print advertisements for betting brands			
Advertisements on sports betting websites or apps (e.g. promoting particular bets)			
Sports betting advertisements on unrelated websites or apps			
Personal emails, text messages or phone calls from sports betting companies			
Social media posts by sports betting companies (e.g. on Facebook, Twitter, etc.)			

28. In the last month, how often have you seen or heard the following types of promotions for sports betting?

	Never – did not see/hear this at all over the last month	Sometimes – once a week or less	Often – several times a week	Very often – daily or almost daily	Extremely often – several times a day
Sign up bonus offers (to open a betting account)					
Refer a friend offer					
Click to call bonus (for using this technology to place in-play bet)					
Mobile betting bonus (for betting via mobile phone or tablet)					
Multi bet offer (bonus bet, refund or cash if multi bet fails by one leg)					
Stake back offer (some money back if bet doesn't win)					
Match your stake or deposit (with bonus bets)					
Better odds or winnings (for certain combined bets)					
Happy hours with better odds or winnings					
Cash out early on a mult bet					
Rewards programs run by gambling companies					

29. How much did these promotions **influence your sports betting** (e.g. to place more bets, riskier bets or bet more money)?

	Not at all	Somewhat	A lot
Sign up bonus offers (to open a betting account)			
Refer a friend offer			
Click to call bonus (for using this technology to place in-play bet)			
Mobile betting bonus (for betting via mobile phone or tablet)			
Multi bet offer (bonus bet, refund or cash if multi bet fails by one leg)			
Stake back offer (some money back if bet doesn't win)			
Match your stake or deposit (with bonus bets)			
Better odds or winnings (for certain combined bets)			
Happy hours with better odds or winnings			
Cash out early on a mult bet			
Rewards programs run by gambling companies			

30. Roughly how much money did you place (bet) on each of the following activities in the past month?

Instant scratch tickets (scratchies) $ _____
Bingo $ _____
Lotto / lottery games like Powerball $_____
Keno $ _____
Poker $ _____
Poker machines (pokies) $ _____
Horse or dog races $ _____
Other casino table games (such as roulette, but not poker) $ _____

31. Thinking about the last 12 months, how often:

	Never	Sometimes	Most of the time	Almost always
Have you bet more than you could really afford to lose?				
Have you needed to gamble with larger amounts of money to get the same feeling of excitement?				
When you gambled, did you go back another day to try to win back the money you lost?				
Have you borrowed money or sold anything to get money to gamble?				
Have you felt that you might have a problem with gambling?				
Has gambling caused you any health problems, including stress or anxiety?				
Have people criticized your betting or told you that you had a gambling problem, regardless of whether or not you thought it was true?				
Has your gambling caused any financial problems for you or your household?				
Have you felt guilty about the way you gamble or what happens when you gamble?				

32. For each of the following statements, select the response which indicates how well it describes you:

	Rarely/never	Occasionally	Often	Almost always
I act on the spur on the moment				
I do things without thinking				
I say things without thinking				
I plan tasks carefully				
I am a careful thinker				
I concentrate easily				
I don't pay attention				
I am self-controlled				

33. During the past 30 days:

	None of the time	A little of time	Some of the time	Most of the time	All of the time
About how often did you feel nervous?					
About how often did you feel hopeless?					
About how often did you feel restless or fidgety?					
About how often did you feel that everything was an effort?					
About how often did you feel so depressed that nothing could cheer you up?					
About how often did you feel worthless?					

34. How often did you have a drink containing alcohol in the past year?

- o Never
- o Monthly or less
- o 2-4 times a month
- o 2-3 times a week
- o 4 or more times a week

35. How many drinks containing alcohol do you have on a typical day when you are drinking?

- o 1 or 2
- o 3 or 4
- o 5 or 6
- o 7 to 9
- o 10 or more

36. Thinking about the past year:

	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
How often do you have six or more drinks on one occasion?					

37. Now, just a couple of questions about your income.

What do you estimate your personal annual income was last year, before taxes?

- o $0 to $9,999
- o $10,000 to $19,999
- o $20,000 to $29,999
- o $30,000 to $39,999
- o $40,000 to $49,999
- o $50,000 to $59,999
- o $60,000 to $69,999
- o $70,000 to $79,999
- o $80,000 to $89,999
- o $90,000 to $99,999
- o $100,000 to $109,999
- o $110,000 to $119,999
- o $120,000 to $129,999
- o $130,000 to $139,999
- o $140,000 to $149,999
- o $150,000 to $159,999
- o $160,000 to $169,999
- o $170,000 to $179,000
- o $180,000 or more
- o Prefer not to say
- o Don’t know

38. During a **normal week** how much money do you have per week for recreational activities? (That is, after you’ve paid your bills, rent/mortgage and groceries, along with other expenses). If you are unsure, please take your best guess.

- o $0
- o $1-$25
- o $26-$50
- o $51-$75
- o $76-$100
- o $101-$150
- o $151-$200
- o $201-$250
- o $251-$300
- o $301-$400
- o $401-$500
- o $501-$750
- o $751-$1,000
- o More than $1000
- o Prefer not to say
- o Don’t know

39. We will invite some survey respondents to be part of a follow up interview regarding marketing and sports betting. Please indicate if you are happy for us to contact you to invite you to take part. This does not obligate you in any way and you would be compensated for your time if you elect to take part.

- o Yes
- o No

40. Would you be willing to be invited to participate in any future research studies we conduct, including paid surveys? This does not obligate you in any way.

- o Yes
- o No

That brings us to the end of the survey. Thanks for taking part in this important study looking at marketing and sports betting. We will now email you a $10 Coles voucher to the email address you provided us to thank you for your time so far. **Please allow a few weeks for the voucher to arrive.**

We will email you a reminder one week before the short online surveys start in May. Remember that they are all much shorter than this survey and most will only take 3-5 minutes to complete. We will of course compensate you for your additional time.

If your mobile number, secondary phone number, or email address changes during the study, please contact Nancy Greer (wageringstudy@cqu.edu.au or 03 9616 0512) as soon as possible to update your details.

If you experienced discomfort at any point during the survey, you can contact Gambler's Help on 1800 858 858 or www.gamblinghelponline.org.au. These are free and confidential telephone/online help services that operate 24 hours a day, 7 days a week. This help service is not affiliated with this survey.

Please click the SUBMIT button below to submit your responses and close the survey.

Appendix B. Daily and end of week surveys for the EMA study

Daily Surveys: Monday-Saturday

Effects of wagering marketing on regular bettors.

Click on the next arrow to begin.

Q1: Roughly how much money did you place on sports bets in the 24 hours prior to 5pm today (DAY)?

Enter $ [RANGE 0-50,000]

Q2: Thinking about the 48 hours prior to 5pm today (DAY), how often did you see or hear any of the following types of promotions for sports betting?

Promotions	1=Never	2=A few times	3=Often
1) Sign up bonus (to open a betting account)			
2) Refer a friend offer			
3) Click to call bonus (for using this technology to place in-play bet)			
4) Mobile betting bonus (for betting via mobile phone or tablet)			
5) Multi bet offer (bonus bet, refund or cash if multi-bet fails by one leg)			
6) Stake back offer (some money back if bet doesn't win)			
7) Match your stake or deposit (with bonus bets)			
8) Better odds or winnings for certain combined bets			
9) Happy hours with better odds or winnings			
10) Cash out early on a multibet			
11) Rewards program run by betting companies			

Q1 & Q2 NOTE: Saturday survey: "24 hours prior"

Q3: Regarding the promotions that you saw/heard. How much did they influence your betting?

Promotions	1=Not at all	2=Somewhat	3=A lot
List all promotions chosen in Q2 (1-11 = 2 or 3)			

Ask for all chosen in Q3 (1-11 = 2 or 3)

Q3.1: Thinking now about the *Sign up bonus (to open a betting account).*
In what way did this promotion influence your betting?

Q3.2: Thinking now about the *Refer a friend offer.*
In what way did this promotion influence your betting?

Q3.3: Thinking now about the *Click to call bonus (for using this technology to place in-play bet).* In what way did this promotion influence your betting?

Q3.4: Thinking now about the *Mobile betting bonus (for betting via mobile phone or tablet).*
In what way did this promotion influence your betting?

Q3.5: Thinking now about the *Multi bet offer (bonus bet, refund or cash if multi-bet fails by one leg).* In what way did this promotion influence your betting?

Q3.6: Thinking now about the *Stake back offer (some money back if bet doesn't win).*
In what way did this promotion influence your betting?

Q3.7: Thinking now about the *Match your stake or deposit (with bonus bets).*
In what way did this promotion influence your betting?

Q3.8: Thinking now about the *Better odds or winnings for certain combined bets.*
In what way did this promotion influence your betting?

Q3.9: Thinking now about the *Happy hours with better odds or winnings.*
In what way did this promotion influence your betting?

Q3.10: Thinking now about the *Cash out early on a multibet.*
In what way did this promotion influence your betting?

Q3.11: Thinking now about the *Rewards program run by betting companies.*
In what way did this promotion influence your betting?

Responses for Q3.1-Q3.11

	1=Yes	2=No
1) I bet smaller amounts		
2) I bet larger amounts		
3) I placed fewer bets		
4) I placed more bets		
5) I placed safer bets		
6) I placed riskier bets		
7) Other influence (please specify) _____		

Q4: Thinking about the 48 hours prior to 5pm today (DAY), how often did you see or hear the following types of advertising for sports betting?

Advertisements	1=Never	2=A few times	3=Often
1) Betting brands promoted during live and televised sports events (e.g., logos, signage)			
2) Commentary promoting betting or betting odds during live and televised sports events			
3) Betting/odds related discussions in sports entertainment shows (e.g., The Footy Show)			
4) TV advertisements for betting brands			
5) Radio or print advertisements for betting brands			
6) Advertisements on sports betting websites or apps (e.g., promoting particular bets)			
7) Sports betting advertisements on unrelated websites or apps			
8) Personal emails, text messages or phone calls from sports betting companies			
9) Social media posts by sports betting companies (e.g., on Facebook, Twitter, etc.)			

Q4 NOTE: Saturday survey: "24 hours prior"

Q5: Regarding the advertisements that you saw/heard. How much did they influence your betting?

Advertisements	1=Not at all	2=Somewhat	3=A lot
List all promotions chosen in Q4 (1-9 = 2 or 3)			

Ask for all chosen in Q5 (1-9 = 2 or 3)

Q5.1: Thinking now about the *Betting brands promoted during live and televised sports events (e.g., logos, signage)*. In what way did this advertisement influence your betting?

Q5.2: Thinking now about the *Commentary promoting betting or betting odds during live and televised sports events.* In what way did this advertisement influence your betting?

Q5.3: Thinking now about the *Betting/odds related discussions in sports entertainment shows (e.g., The Footy Show)*. In what way did this advertisement influence your betting?

Q5.4: Thinking now about the *TV advertisements for betting brands.*
In what way did this advertisement influence your betting?

Q5.5: Thinking now about the *Radio or print advertisements for betting brands.*
In what way did this advertisement influence your betting?

Q5.6: Thinking now about the *Advertisements on sports betting websites or apps (e.g., promoting particular bets).* In what way did this advertisement influence your betting?

Q5.7: Thinking now about the *Sports betting advertisements on unrelated websites or apps.* In what way did this advertisement influence your betting?

Q5.8: Thinking now about the *Personal emails, text messages or phone calls from sports betting companies.* In what way did this advertisement influence your betting?

Q5.9: Thinking now about the *Social media posts by sports betting companies (e.g., on Facebook, Twitter, etc.).* In what way did this advertisement influence your betting?

Responses for Q5.1-Q5.9

	1=Yes	2=No
1) I bet smaller amounts		
2) I bet larger amounts		
3) I placed fewer bets		
4) I placed more bets		
5) I placed safer bets		
6) I placed riskier bets		
7) Other influence (please specify) _____		

Q6: Roughly how much money do you intend to place on sports bets in the next 48 hours after 5pm today (DAY**)?**

Enter $ [RANGE 0-50,000]

Q6 NOTE:

- Friday survey: "next 24 hours"
- Saturday survey: "next 24 hours"

Survey Submitted!

Thanks for taking the time to complete the survey. We really appreciate your time and effort. We'll text you a link to the next short survey on [DAY**] [**DATE**].**
Remember, every survey you complete is valuable!

• Complete 4 surveys and you will be eligible for $30 compensation
• Complete 9 surveys and you will be eligible for $70 compensation
• Complete at least 13 surveys and you will be eligible for $100 compensation

If you experienced discomfort at any point during the survey, you can contact Gambler's Help on 1800 858 858 or www.gamblinghelponline.org.au These are free and confidential telephone/online help services that operate 24 hours a day, 7 days a week.

End of Week Survey: Sunday

Effects of wagering marketing on regular bettors.

Click on the next arrow to begin.

Q1: Roughly how much money did you place on sports bets in the 24 hours prior to 5pm today (Sunday)?

Enter $ [RANGE 0-50,000]

Q2: Thinking about the 24 hours prior to 5pm today (Sunday), how often did you see or hear any of the following types of promotions for sports betting?

Promotions	1=Never	2=A few times	3=Often
1) Sign up bonus (to open a betting account)			
2) Refer a friend offer			
3) Click to call bonus (for using this technology to place in-play bet)			
4) Mobile betting bonus (for betting via mobile phone or tablet)			
5) Multi bet offer (bonus bet, refund or cash if multi-bet fails by one leg)			
6) Stake back offer (some money back if bet doesn't win)			
7) Match your stake or deposit (with bonus bets)			
8) Better odds or winnings for certain combined bets			
9) Happy hours with better odds or winnings			
10) Cash out early on a multibet			
11) Rewards program run by betting companies			

Q3: Regarding the promotions that you saw/heard. How much did they influence your betting?

Promotions	1=Not at all	2=Somewhat	3=A lot
List all promotions chosen in Q2 (1-11 = 2 or 3)			

Ask for all chosen in Q3 (1-11 = 2 or 3)

Q3.1: Thinking now about the *Sign up bonus (to open a betting account).*
In what way did this promotion influence your betting?

Q3.2: Thinking now about the *Refer a friend offer.*
In what way did this promotion influence your betting?

Q3.3: Thinking now about the *Click to call bonus (for using this technology to place in-play bet).* In what way did this promotion influence your betting?

Q3.4: Thinking now about the *Mobile betting bonus (for betting via mobile phone or tablet).*
In what way did this promotion influence your betting?

Q3.5: Thinking now about the *Multi bet offer (bonus bet, refund or cash if multi-bet fails by one leg).* In what way did this promotion influence your betting?

Q3.6: Thinking now about the *Stake back offer (some money back if bet doesn't win).*
In what way did this promotion influence your betting?

Q3.7: Thinking now about the *Match your stake or deposit (with bonus bets).*
In what way did this promotion influence your betting?

Q3.8: Thinking now about the *Better odds or winnings for certain combined bets.*
In what way did this promotion influence your betting?

Q3.9: Thinking now about the *Happy hours with better odds or winnings.*
In what way did this promotion influence your betting?

Q3.10: Thinking now about the *Cash out early on a multibet.*
In what way did this promotion influence your betting?

Q3.11: Thinking now about the *Rewards program run by betting companies.*
In what way did this promotion influence your betting?

Responses for Q3.1-Q3.11

	1=Yes	2=No
1) I bet smaller amounts		
2) I bet larger amounts		
3) I placed fewer bets		
4) I placed more bets		
5) I placed safer bets		
6) I placed riskier bets		
7) Other influence (please specify) _____		

Q4: Thinking about the 24 hours prior to 5pm today (Sunday), how often did you see or hear the following types of advertising for sports betting?

Advertisements	1=Never	2=A few times	3=Often
1) Betting brands promoted during live and televised sports events (e.g., logos, signage)			
2) Commentary promoting betting or betting odds during live and televised sports events			
3) Betting/odds related discussions in sports entertainment shows (e.g., The Footy Show)			
4) TV advertisements for betting brands			
5) Radio or print advertisements for betting brands			
6) Advertisements on sports betting websites or apps (e.g., promoting particular bets)			
7) Sports betting advertisements on unrelated websites or apps			
8) Personal emails, text messages or phone calls from sports betting companies			
9) Social media posts by sports betting companies (e.g., on Facebook, Twitter, etc.)			

Q5: Regarding the advertisements that you saw/heard. How much did they influence your betting?

Advertisements	1=Not at all	2=Somewhat	3=A lot
List all promotions chosen in Q4 (1-9 = 2 or 3)			

Ask for all chosen in Q5 (1-9 = 2 or 3)

Q5.1: Thinking now about the *Betting brands promoted during live and televised sports events (e.g., logos, signage)*. In what way did this advertisement influence your betting?

Q5.2: Thinking now about the *Commentary promoting betting or betting odds during live and televised sports events*. In what way did this advertisement influence your betting?

Q5.3: Thinking now about the *Betting/odds related discussions in sports entertainment shows (e.g., The Footy Show)*. In what way did this advertisement influence your betting?

Q5.4: Thinking now about the *TV advertisements for betting brands*.
In what way did this advertisement influence your betting?

Q5.5: Thinking now about the *Radio or print advertisements for betting brands*.
In what way did this advertisement influence your betting?

Q5.6: Thinking now about the *Advertisements on sports betting websites or apps (e.g., promoting particular bets).* In what way did this advertisement influence your betting?

Q5.7: Thinking now about the *Sports betting advertisements on unrelated websites or apps.* In what way did this advertisement influence your betting?

Q5.8: Thinking now about the *Personal emails, text messages or phone calls from sports betting companies.* In what way did this advertisement influence your betting?

Q5.9: Thinking now about the *Social media posts by sports betting companies (e.g., on Facebook, Twitter, etc.).* In what way did this advertisement influence your betting?

Responses for Q5.1-Q5.9

	1=Yes	2=No
1) I bet smaller amounts		
2) I bet larger amounts		
3) I placed fewer bets		
4) I placed more bets		
5) I placed safer bets		
6) I placed riskier bets		
7) Other influence (please specify) _____		

Q6: Roughly how much money do you intend to place on sports bets in the next 24 hours after 5pm today (Sunday)?

Enter $ [RANGE 0-50,000]

Q6a: Roughly how much money did you place on sports bets in the past week, which includes from 5pm last Sunday to 5pm today (Sunday)?

Enter $ [RANGE 0-50,000]

Ask Q6a only if Q1 on all surveys (Monday-Sunday) = $0 or any surveys missing.

If Q6a answer=0 skip to survey end.

Q7: Thinking about the past week, on a typical day that you were betting on sports, about how many bets did you place?

Enter bets per day [RANGE 1-10,000]

Q8a: Thinking about the past week, about what percentage your sports bets were…

1) Placed before match commencement ___ %
2) Placed during the match you were betting on, that is, after the match had started ___ %

Total 100%

(Enter amounts to total 100%)

Q8b: Thinking about the past week, about what percentage of your sports bets were made on..

1) The final outcome of the match ___ %
2) Key events within the match (exotic bets), e.g. who will score the first goal ___ %
3) Micro events within the match (micro bets), e.g. the outcome of the next ball in cricket or the next point in tennis ___ %

Total 100%

(Enter amounts to total 100%)

Q8: Thinking about the past week, about what percentage of your sports bets would you describe as..

1) Planned in advance ___ %
2) Made on impulse ___ %

Total 100%

(Enter amounts to total 100%)

Q9: Thinking about the past week, what percentage of your sports betting was done…

1) Online using a smart phone ___ %
2) Online using a computer, tablet or laptop or TV ___ %
3) Telephone call (not using internet) ___ %
4) At a land-based venue (e.g., TAB, pub, club, sporting venue, casino, etc.) ___ %

Total 100%

(Enter amounts to total 100%)

Q10: Over the past week, did you place any bets from these locations?

	1=Yes	2=No
1) Home		
2) Friend or family member's house		
3) Work/uni/school		
4) Licenced venue (e.g. pub, club, casino)		
5) Land based TAB (separate to pub/club/casino)		
6) Sporting venue		
7) Somewhere else (please specify) _____		

Q11: Over the past week, where were you when you placed most of your sports bets?

Display responses chosen in Q10 (1-7 = 1)

1) Home
2) Friend or family member's house
3) Work/uni/school
4) Licenced venue (e.g. pub, club, casino)
5) Land based TAB (separate to pub/club/casino)
6) Sporting venue
7) Somewhere else (please specify)

Q12: Thinking about the past week, what percentage of your (betting) time was spent betting...

1) Alone ___ %
2) With friends, family or colleagues ___ %
3) With acquaintances/other people you don't know well ___ %

Total 100%

(Enter amounts to total 100%)

Q13: Thinking about the past week, how often did you bet on sports when you were affected by alcohol?

1) Never
2) Sometimes
3) Often
4) Almost always

Q14: Thinking about the past week, how often did you bet on sports when you were affected by illicit drugs (e.g., cannabis, cocaine, methamphetamine)?

1) Never
2) Sometimes
3) Often
4) Almost always

Q15: Still, thinking about the past week, how often did you bet because you saw or heard sports betting promotions or advertisements and …

	1=Never	2=Some-times	3=Often	4=Almost always
1) It offered you a good deal				
2) You were winning				
3) You were losing				
4) You had extra money available				
5) You needed extra money				
6) You were in a particularly good mood				
7) You were in a particularly bad mood				
8) It involved particular affiliations (e.g., your favorite athlete/team)				
9) It was a special sports event (e.g., signature event)				
10) You were encouraged to bet by someone				
11) It was convenient and easy to place the bet				

In one or more surveys this week you indicated that the following sports promotions influenced your betting in some way.

Q16 Display responses chosen in Q3 Monday – Sunday (1-11 = 2 or 3). If none chosen skip to Q18

Q16: Select the promotion that was the MOST influential on your betting over the past week.

1) Sign up bonus (to open a betting account)
2) Refer a friend offer
3) Click to call bonus (for using this technology to place in-play bet)
4) Mobile betting bonus (for betting via mobile phone or tablet)
5) Multi bet offer (bonus bet, refund or cash if multi-bet fails by one leg)
6) Stake back offer (some money back if bet doesn't win)
7) Match your stake or deposit (with bonus bets)
8) Better odds or winnings for certain combined bets
9) Happy hours with better odds or winnings
10) Cash out early on a multibet
11) Rewards program run by betting companies

Regarding [Q16 RESPONSE**]**

Q17: How did this promotion influence your betting?

	1=Yes	2=No
1) I bet smaller amounts		
2) I bet larger amounts		
3) I placed fewer bets		
4) I placed more bets		
5) I placed safer bets		
6) I placed riskier bets		
7) Other influence (please specify) _____		

In one or more surveys this week you indicated that the following sports advertisements influenced your betting in some way.

Q18 Display responses chosen in Q5 Monday – Sunday (1-9 = 2 or 3). If none chosen skip to Q20

Q18: Select the advertisement that was MOST influential on your betting over the past week.

1) Betting brands promoted during live and televised sports events (e.g., logos, signage)
2) Commentary promoting betting or betting odds during live and televised sports events
3) Betting/odds related discussions in sports entertainment shows (e.g., The Footy Show)
4) TV advertisements for betting brands
5) Radio or print advertisements for betting brands
6) Advertisements on sports betting websites or apps (e.g., promoting particular bets)
7) Sports betting advertisements on unrelated websites or apps
8) Personal emails, text messages or phone calls from sports betting companies
9) Social media posts by sports betting companies (e.g., on Facebook, Twitter, etc.)

Regarding [Q18 RESPONSE**]**

Q19: How did this advertisement influence your betting?

	1=Yes	2=No
1) I bet smaller amounts		
2) I bet larger amounts		
3) I placed fewer bets		
4) I placed more bets		
5) I placed safer bets		
6) I placed riskier bets		
7) Other influence (please specify) _____		

Q20: Now, thinking about the LAST sports BET you placed this week. How much money did you place on this bet?

Enter $ [RANGE 1-50,000]

Q21: Was this bet...

1) Planned in advance
2) Made on impulse

Q22: How much was your LAST sports bet influenced by any of the promotions that you saw/heard during the past week?

Q22 Display responses chosen in Q2 Monday – Sunday (1-11 = 2 or 3). If none chosen skip to Q23

Promotions	1=Not at all	2=Some-what	3=A lot
1) Sign up bonus (to open a betting account)			
2) Refer a friend offer			
3) Click to call bonus (for using this technology to place in-play bet)			
4) Mobile betting bonus (for betting via mobile phone or tablet)			
5) Multi bet offer (bonus bet, refund or cash if multi-bet fails by one leg)			
6) Stake back offer (some money back if bet doesn't win)			
7) Match your stake or deposit (with bonus bets)			
8) Better odds or winnings for certain combined bets			
9) Happy hours with better odds or winnings			
10) Cash out early on a multibet			
11) Rewards program run by betting companies			

Ask for all chosen in Q22 (1-11 = 2 or 3)

Q22.1: Thinking now about the *Sign up bonus (to open a betting account).*
In what way did this promotion influence your LAST sports bet?

Q22.2: Thinking now about the *Refer a friend offer.*
In what way did this promotion influence your LAST sports bet?

Q22.3: Thinking now about the *Click to call bonus (for using this technology to place in-play bet).* In what way did this promotion influence your LAST sports bet?

Q22.4: Thinking now about the *Mobile betting bonus (for betting via mobile phone or tablet).* In what way did this promotion influence your LAST sports bet?

Q22.5: Thinking now about the *Multi bet offer (bonus bet, refund or cash if multi-bet fails by one leg).* In what way did this promotion influence your LAST sports bet?

Q22.6: Thinking now about the *Stake back offer (some money back if bet doesn't win).* In what way did this promotion influence your LAST sports bet?

Q22.7: Thinking now about the *Match your stake or deposit (with bonus bets).* In what way did this promotion influence your LAST sports bet?

Q22.8: Thinking now about the *Better odds or winnings for certain combined bets.* In what way did this promotion influence your LAST sports bet?

Q22.9: Thinking now about the *Happy hours with better odds or winnings.* In what way did this promotion influence your LAST sports bet?

Q22.10: Thinking now about the *Cash out early on a multibet.* In what way did this promotion influence your LAST sports bet?

Q22.11: Thinking now about the *Rewards program run by betting companies.* In what way did this promotion influence your LAST sports bet?

Responses for Q22.1-Q22.11

	1=Yes	2=No
1) I bet smaller amounts		
2) I bet larger amounts		
3) I placed fewer bets		
4) I placed more bets		
5) I placed safer bets		
6) I placed riskier bets		
7) Other influence (please specify) _____		

Q23: How much was your LAST sports bet influenced by any of the <u>advertisements</u> that you saw/heard during the past week?

Q23 Display responses chosen in Q4 Monday – Sunday (1-11 = 2 or 3). If none chosen skip to Q25

Advertisements	1=Not at all	2=Some-what	3=A lot
1) Betting brands promoted during live and televised sports events (e.g., logos, signage)			
2) Commentary promoting betting or betting odds during live and televised sports events			
3) Betting/odds related discussions in sports entertainment shows (e.g., The Footy Show)			
4) TV advertisements for betting brands			

5) Radio or print advertisements for betting brands			
6) Advertisements on sports betting websites or apps (e.g., promoting particular bets)			
7) Sports betting advertisements on unrelated websites or apps			
8) Personal emails, text messages or phone calls from sports betting companies			
9) Social media posts by sports betting companies (e.g., on Facebook, Twitter, etc.)			

Ask for all chosen in Q23 (1-9 = 2 or 3)

Q23.1: Thinking now about the *Betting brands promoted during live and televised sports events (e.g., logos, signage).*
In what way did this advertisement influence your LAST sports bet?

Q23.2: Thinking now about the *Commentary promoting betting or betting odds during live and televised sports events.*
In what way did this advertisement influence your LAST sports bet?

Q23.3: Thinking now about the *Betting/odds related discussions in sports entertainment shows (e.g., The Footy Show).* In what way did this advertisement influence your LAST sports bet?

Q23.4: Thinking now about the *TV advertisements for betting brands.*
In what way did this advertisement influence your LAST sports bet?

Q23.5: Thinking now about the *Radio or print advertisements for betting brands.*
In what way did this advertisement influence your LAST sports bet?

Q23.6: Thinking now about the *Advertisements on sports betting websites or apps (e.g., promoting particular bets).*
In what way did this advertisement influence your LAST sports bet?

Q23.7: Thinking now about the *Sports betting advertisements on unrelated websites or apps.*
In what way did this advertisement influence your LAST sports bet?

Q23.8: Thinking now about the *Personal emails, text messages or phone calls from sports betting companies.* In what way did this advertisement influence your LAST sports bet?

Q23.9: Thinking now about the *Social media posts by sports betting companies (e.g., on Facebook, Twitter, etc.).* In what way did this advertisement influence your LAST sports bet?

Responses for Q23.1-Q23.9

	1=Yes	2=No
1) I bet smaller amounts		
2) I bet larger amounts		
3) I placed fewer bets		
4) I placed more bets		
5) I placed safer bets		
6) I placed riskier bets		
7) Other influence (please specify) _____		

Note: Due to programming change Q24 does not exist.

Q25: Was your LAST sports bet influenced by any of the following...

	1=Yes	2=No
1) A tip from a friend/ family/ colleague?		
2) A free tip from an expert?		
3) A purchased tip from an expert?		

Q26: How did you place your LAST sports bet?

1) Online using a smart phone
2) Online using a computer, tablet, laptop or TV
3) Telephone call (not using the internet)
4) At a land-based venue (e.g., TAB, pub, club, sporting venue, casino etc.)

Q27: Where were you when you placed your LAST sports bet?

1) Home
2) Friend/family member's house
3) Work/uni/TAFE/school
4) Licensed venue (e.g. pub, club, casino)
5) Land-based TAB (separate to pub/club/casino)
6) Sporting venue
7) Somewhere else (please specify)

Q28: Who were you with when you placed your last sports bet?

1) Alone
2) With friends, family or colleagues
3) With acquaintances/other people you don't know well

Q29: Were you affected by alcohol when you placed your LAST sports bet?

1) No
2) Yes, a little
3) Yes, a lot

Q30: Were you affected by illicit drugs (e.g., cannabis, cocaine, methamphetamine) when you placed your LAST sports bet?

1) No
2) Yes, a little
3) Yes, a lot

Ask in Sunday survey Week 1. If not answered Sunday survey week 1: ask Sunday survey week 2. If not answered Sunday survey week 1 and 2: ask Sunday survey week 3.

Q31: Are you currently having any of the following restrictions placed on your sports betting by any betting operator?

	1=Yes	2=No
1) Operator-imposed limits on how much money you can place on a bet		
2) Operator-imposed limits on the number of bets you can make		
3) You have had bets refused by an operator		
4) An operator has notified you that you can no longer access particular promotions		
5) An operator sends you fewer promotions than previously or your friends get more promotions from them than you do		
6) An operator has explicitly offered you shorter odds (than the general public)		
7) You think odds are being shortened when you log into your account		
8) An operator has notified you that you are no longer able to access particular odds (e.g., fixed odds)		
9) An operator has closed your account without you requesting this		
10) Other (please specify)		

END

Appendix C. Demographics of respondents in the EMA study

Characteristic	Race Bettors (n = 402)		Sports Bettors (n = 320)	
	n	%	n	%
Gender				
Male	354	88.1%	296	92.5%
Female	48	11.9%	24	7.5%
Age (years)				
18-24	43	10.7%	28	7.0%
25-34	92	22.9%	107	26.6%
35-44	110	27.4%	69	17.2%
45-54	77	19.2%	54	13.4%
55-64	54	13.4%	38	9.5%
65+	26	6.5%	24	6.0%
Country of birth				
Australia	354	88.1%	258	80.6%
Overseas	48	11.9%	62	19.4%
Main language spoken at home				
English	398	99.0%	307	95.9%
Other	4	1.0%	13	4.1%
State/Territory				
Australian Capital Territory	7	1.7%	5	1.6%
New South Wales	76	18.9%	83	25.9%
Northern Territory	0	0.0%	2	0.6%
Queensland	49	12.2%	37	11.6%
South Australia	13	3.2%	17	5.3%
Western Australia	23	5.7%	25	7.8%
Victoria	224	55.7%	146	45.6%
Tasmania	10	2.5%	5	1.6%
Highest Education Level				
Year 10 or below	48	11.9%	22	6.9%
Year 11 or equivalent	27	6.7%	19	5.9%
Year 12 or equivalent	80	19.9%	57	17.8%
Trade, technical certificate or diploma	113	28.1%	87	27.2%
A university or college degree	96	23.9%	95	29.7%
Postgraduate qualifications	38	9.5%	40	12.5%
Household Structure				
Live alone	49	12.2%	32	10.0%
Couple (living alone)	101	25.1%	97	30.3%
Couple with at least 1 dependent child	120	29.9%	91	28.4%
Couple living with independent child(ren)	36	9.0%	23	7.2%
Single parent living with at least 1 dependent child	16	4.0%	4	1.3%
Single parent living with independent child(ren)	2	0.5%	4	1.3%
Share house with other adults	37	9.2%	30	9.4%
Live with parents	37	9.2%	35	10.9%
Other	4	1.0%	4	1.3%
Employment Status				
Work full-time	267	66.4%	217	67.8%
Work part-time or casual	50	12.4%	46	14.4%
Student	11	2.7%	10	3.1%
Unemployed and looking for work	9	2.2%	7	2.2%
Full-time home duties	7	1.7%	5	1.6%
Retired	33	8.2%	19	5.9%
Sick or on a disability pension	12	3.0%	7	2.2%
Other	13	3.2%	9	2.8%
Personal income				
$0 to $9,999	8	2.0%	7	2.2%

$10,000 — $19,999	19	4.7%	13	4.1%
$20,000 — $29,999	26	6.5%	17	5.3%
$30,000 — $39,999	22	5.5%	17	5.3%
$40,000 — $49,999	32	8.0%	19	5.9%
$50,000 — $59,999	43	10.7%	30	9.4%
$60,000 — $69,999	35	8.7%	33	10.3%
$70,000 — $79,999	40	10.0%	34	10.6%
$80,000 — $89,999	31	7.7%	30	9.4%
$90,000 — $99,999	22	5.5%	19	5.9%
$100,000 — $109,999	22	5.5%	20	6.3%
$110,000 — $119,999	8	2.0%	9	2.8%
$120,000 — $129,999	17	4.2%	10	3.1%
$130,000 — $139,999	6	1.5%	7	2.2%
$140,000 — $149,999	15	3.7%	5	1.6%
$150,000 — $159,999	10	2.5%	9	2.8%
$160,000 — $169,999	4	1.0%	1	0.3%
$170,000 — $179,999	3	0.7%	0	0.0%
Over $180,000	17	4.2%	9	2.8%
Prefer not to say	17	4.2%	28	8.8%
Don't know	5	1.2%	3	0.9%
Weekly recreational expenditure				
$0	2	0.5%	1	0.3%
$1-$25	1	0.2%	7	2.2%
$26-$50	10	2.5%	5	1.6%
$51-$75	21	5.2%	16	5.0%
$76-$100	53	13.2%	30	9.4%
$101-$150	48	11.9%	40	12.5%
$151-$200	47	11.7%	37	11.6%
$201-$250	48	11.9%	39	12.2%
$251-$300	28	7.0%	35	10.9%
$301-$400	27	6.7%	19	5.9%
$401-$500	33	8.2%	16	5.0%
$501-$750	28	7.0%	26	8.1%
$751-$1,000	12	3.0%	10	3.1%
More than $1000	19	4.7%	11	3.4%
Prefer not to say	11	2.7%	22	6.9%
Don’t know	14	3.5%	6	1.9%

Appendix D. Demographics of respondents to who completed 10 or more EMA surveys

Characteristic	Race Bettors (n = 233)		Sports Bettors (n = 203)	
	n	%	n	%
Gender				
Male	212	91.0	190	93.6
Female	21	9.0	13	6.4
Age (years)				
18-24	7	3.0	11	5.4
25-34	45	19.3	65	32.0
35-44	68	29.2	48	23.6
45-54	57	24.5	39	19.2
55-64	39	16.7	24	11.8
65+	17	7.3	16	7.9
Country of birth				
Australia	204	87.6	166	81.8
Overseas	29	12.4	37	18.2
Main language spoken at home				
English	231	99.1	193	95.1
Other	2	0.9	10	4.9
State/Territory				
Australian Capital Territory	1	0.4	3	1.5
New South Wales	43	18.5	55	27.1
Northern Territory	0	0.0	1	0.5
Queensland	26	11.2	24	11.8
South Australia	7	3.0	13	6.4
Western Australia	18	7.7	17	8.4
Victoria	132	56.7	89	43.8
Tasmania	6	2.6	1	0.5
Highest Education Level				
Year 10 or below	19	8.2	13	6.4
Year 11 or equivalent	16	6.9	9	4.4
Year 12 or equivalent	40	17.2	36	17.7
Trade, technical certificate or diploma	58	24.9	55	27.1
A university or college degree	69	29.6	66	32.5
Postgraduate qualifications	31	13.3	24	11.8
Household Structure				
Live alone	33	14.2	18	8.9
Couple (living alone)	68	29.2	61	30.0
Couple with at least 1 dependent child	76	32.6	70	34.5
Couple living with independent child(ren)	22	9.4	13	6.4
Single parent living with at least 1 dependent child	5	2.1	2	1.0
Single parent living with independent child(ren)	0	0.0	2	1.0
Share house with other adults	16	6.9	14	6.9
Live with parents	11	4.7	19	9.4
Other	2	0.9	4	2.0
Employment Status				
Work full-time	158	67.8	138	68.0
Work part-time or casual	27	11.6	22	10.8
Student	3	1.3	7	3.4
Unemployed and looking for work	5	2.1	5	2.5
Full-time home duties	4	1.7	5	2.5
Retired	22	9.4	14	6.9
Sick or on a disability pension	6	2.6	6	3.0
Other	8	3.4	6	3.0
Personal income				
$0 to $9,999	1	0.4	5	2.5

$10,000 — $19,999	8	3.4	8	3.9
$20,000 — $29,999	10	4.3	11	5.4
$30,000 — $39,999	11	4.7	8	3.9
$40,000 — $49,999	19	8.2	11	5.4
$50,000 — $59,999	20	8.6	22	10.8
$60,000 — $69,999	20	8.6	18	8.9
$70,000 — $79,999	24	10.3	20	9.9
$80,000 — $89,999	23	9.9	20	9.9
$90,000 — $99,999	12	5.2	13	6.4
$100,000 — $109,999	16	6.9	13	6.4
$110,000 — $119,999	6	2.6	7	3.4
$120,000 — $129,999	13	5.6	6	3.0
$130,000 — $139,999	3	1.3	4	2.0
$140,000 — $149,999	11	4.7	4	2.0
$150,000 — $159,999	7	3.0	7	3.4
$160,000 — $169,999	2	0.9	0	0.0
$170,000 — $179,999	1	0.4	0	0.0
Over $180,000	12	5.2	5	2.5
Prefer not to say	12	5.2	20	9.9
Don't know	2	0.9	1	0.5
Weekly recreational expenditure				
$0	0	0.0	0	0.0
$1-$25	1	0.4	6	3.0
$26-$50	5	2.1	1	0.5
$51-$75	13	5.6	12	5.9
$76-$100	34	14.6	20	9.9
$101-$150	20	8.6	24	11.8
$151-$200	23	9.9	23	11.3
$201-$250	31	13.3	25	12.3
$251-$300	14	6.0	28	13.8
$301-$400	16	6.9	12	5.9
$401-$500	23	9.9	11	5.4
$501-$750	17	7.3	12	5.9
$751-$1,000	7	3.0	5	2.5
More than $1000	11	4.7	8	3.9
Prefer not to say	9	3.9	12	5.9
Don’t know	9	3.9	4	2.0

Appendix E. Demographics of respondents to who completed 1 or more EMA surveys

Characteristic	Race Bettors (n = 316)		Sports Bettors (n = 279)	
	n	%	n	%
Gender				
Male	281	88.9	259	92.8
Female	35	11.1	20	7.2
Age (years)				
18-24	18	5.7	24	8.6
25-34	70	22.2	94	33.7
35-44	90	28.5	61	21.9
45-54	69	21.8	47	16.8
55-64	44	13.9	31	11.1
65+	25	7.9	22	7.9
Country of birth				
Australia	277	87.7	226	81.0
Overseas	39	12.3	53	19.0
Main language spoken at home				
English	313	99.1	266	95.3
Other	3	0.9	13	4.7
State/Territory				
Australian Capital Territory	4	1.3	5	1.8
New South Wales	62	19.6	74	26.5
Northern Territory	0	0.0	1	0.4
Queensland	38	12.0	34	12.2
South Australia	9	2.8	14	5.0
Western Australia	20	6.3	23	8.2
Victoria	174	55.1	125	44.8
Tasmania	9	2.8	3	1.1
Highest Education Level				
Year 10 or below	35	11.1	15	5.4
Year 11 or equivalent	20	6.3	16	5.7
Year 12 or equivalent	53	16.8	49	17.6
Trade, technical certificate or diploma	86	27.2	74	26.5
A university or college degree	85	26.9	89	31.9
Postgraduate qualifications	37	11.7	36	12.9
Household Structure				
Live alone	43	13.6	28	10.0
Couple (living alone)	82	25.9	82	29.4
Couple with at least 1 dependent child	98	31.0	87	31.2
Couple living with independent child(ren)	29	9.2	16	5.7
Single parent living with at least 1 dependent child	12	3.8	4	1.4
Single parent living with independent child(ren)	1	0.3	2	0.7
Share house with other adults	28	8.9	24	8.6
Live with parents	20	6.3	32	11.5
Other	3	0.9	4	1.4
Employment Status				
Work full-time	216	68.4	189	67.7
Work part-time or casual	37	11.7	37	13.3
Student	4	1.3	9	3.2
Unemployed and looking for work	7	2.2	6	2.2
Full-time home duties	5	1.6	5	1.8
Retired	27	8.5	18	6.5
Sick or on a disability pension	9	2.8	6	2.2
Other	11	3.5	9	3.2
Personal income				
$0 to $9,999	3	0.9	6	2.2

$10,000 — $19,999	13	4.1	11	3.9
$20,000 — $29,999	15	4.7	15	5.4
$30,000 — $39,999	15	4.7	15	5.4
$40,000 — $49,999	26	8.2	16	5.7
$50,000 — $59,999	36	11.4	27	9.7
$60,000 — $69,999	22	7.0	28	10.0
$70,000 — $79,999	34	10.8	28	10.0
$80,000 — $89,999	27	8.5	27	9.7
$90,000 — $99,999	18	5.7	17	6.1
$100,000 — $109,999	20	6.3	15	5.4
$110,000 — $119,999	8	2.5	8	2.9
$120,000 — $129,999	15	4.7	9	3.2
$130,000 — $139,999	4	1.3	7	2.5
$140,000 — $149,999	14	4.4	4	1.4
$150,000 — $159,999	10	3.2	8	2.9
$160,000 — $169,999	3	0.9	1	0.4
$170,000 — $179,999	2	0.6	0	0.0
Over $180,000	14	4.4	8	2.9
Prefer not to say	13	4.1	26	9.3
Don't know	4	1.3	3	1.1
Weekly recreational expenditure				
$0	0	0.0	1	0.4
$1-$25	1	0.3	7	2.5
$26-$50	6	1.9	3	1.1
$51-$75	17	5.4	15	5.4
$76-$100	43	13.6	26	9.3
$101-$150	29	9.2	36	12.9
$151-$200	38	12.0	30	10.8
$201-$250	38	12.0	34	12.2
$251-$300	22	7.0	33	11.8
$301-$400	22	7.0	17	6.1
$401-$500	31	9.8	14	5.0
$501-$750	24	7.6	21	7.5
$751-$1,000	8	2.5	8	2.9
More than $1000	15	4.7	10	3.6
Prefer not to say	9	2.8	18	6.5
Don’t know	13	4.1	6	2.2

Appendix F. Survey instrument for the experimental and play-through study

The Effects of Wagering Marketing on Regular Bettors in Victoria: Sports Betting Study

Project team: Professor Nerilee Hing (Chief Investigator), Professor Matthew Rockloff, Assoc. Prof. Matthew Browne, Dr Anna Thomas, Dr Alex Russell, and Nancy Greer

INFORMATION SHEET

Thank you for your interest in this study examining the effects of sports betting marketing on people's betting. It is funded by the Victorian Responsible Gambling Foundation (VRGF) and is being conducted by Central Queensland University and the Australian Gambling Research Centre.

What you will be asked to do

We are inviting people who bet on sports to help us examine the **effects of advertising and promotions on sports betting**. Participation involves completing an online survey and betting exercises which should take about 20 minutes to complete. First the survey will ask you a few questions about yourself and your participation and preferences on betting on AFL, Cricket, and Soccer. Then for 6 sports games, you will be asked to place a bet on the outcome of each game, and the game highlights and outcomes will be shown in a short video-reel. Lastly, the survey will ask you about your opinions about sports betting promotions. To view the video of sports games you will need a compatible web-browsers (Chrome, Safari, Explorer, Edge, or Firefox), an internet connection, and a small amount of download allowance. Data charges may apply when you are connected to a mobile network.

Compensation for your time and effort

Your time is valuable. We are offering you some compensation to the value the winnings from the 6 sporting events that we will ask you to bet on. We will give you $24 to bet with, and we expect that the average player will have a net winnings of about $33, although you may win more or less than this amount depending on your betting outcomes. We will compensate you with an electronic Coles/Myer gift-card that will be emailed to you.*

**Participants receiving a cash honorarium or reimbursement, or any form of gift voucher should seek independent financial advice as to whether it needs to be declared as taxable income.*

How your confidentiality will be protected

We will protect the confidentiality of your responses to the fullest possible extent, within the limits of the law. We will need you to provide your email to send your compensation. Your email will be entered in the Coles Giftcard Registry in order for you to receive your compensation. Your email will be stored in a password protected computer file **separate from any data your supply**.

We will assign a unique code to your identity and survey responses so that the research team can link these up again. Please be assured that should you provide personal details in the survey, we will de-identify or delete these once you have completed your survey. Your personal details will not

appear in the research report or any associated publications or presentations. We will also remove any references to personal information that might allow someone to guess your identity.

The de-identified data will be kept securely by CQUniversity. In accordance with the Productivity Commission's recommendations to improve research into gambling, the de-identified data (the data collected without any way of identifying you) will be data warehoused and may be used by other researchers in the future. These researchers would need to supply an appropriate research proposal and have obtained approval from the Human Research Ethics Committee before access to the de-identified data would be given.

Participation will not prejudice you in any way

Please be advised that your participation in this study is completely voluntary. Should you wish to withdraw at any stage you are free to do so without prejudice or penalty.

How you will receive feedback

This research is being conducted for the Victorian Responsible Gambling Foundation. The final report will be publicly available on their website at the end of the project (www.responsiblegambling.vic.gov.au).

Where you can get further information

Should you require any further information, have some questions about participation, or queries or concerns about the research, please email **wageringstudy@cqu.edu.au**. You are also welcome to contact the Ethics and Compliance Officer at the Office of Research on 07 4923 2603.

Some of the questions we ask will be about your gambling behaviour. If you experience discomfort at any point during the surveys, you can contact **Gambler's Help on 1800 858 858 or www.gamblinghelponline.org.au** or **Lifeline on 13 11 14**. These are free and confidential telephone/online help services that operate 24 hours a day, 7 days a week.

Taking part

To participate you must:

- Be 18 years or over
- Currently live in Victoria
- Have gambled at least twice in the last 12 months on AFL, Cricket, or Soccer
- Have access to a computer or tablet and an internet connection to complete the survey
- Have a compatible web-browser (Chrome, Safari, Explorer, Edge, or Firefox)

If you would like to participate, you will be asked to indicate that you have read and understood this information by indicating your consent below* before commencing the online survey.

Professor Nerilee Hing (Chief Investigator)

Consent

*I consent to participation in this research project and agree that:

- I have read and understood the Information Sheet that describes this study;
- Any questions I had about the project were answered by either the Information Sheet or by the researchers;
- I understand I have the right to withdraw from the project at any time without penalty;
- The research findings will be included in the researcher's' publication(s) on the project; and this may include conference presentations and research articles, as well as other media described in the Information Sheet;
- To protect my privacy, my personal details will not be used in publication(s);
- I am providing informed consent to participate in this project;
- I am 18 years of age or over.
    - o Yes
    - o No

Q1 **What is your age (in years)? _____**

Q2 **What is your gender?**

- o Male
- o Female
- o Other

Q3 **Do you live in Victoria?**

- o Yes
- o No

Q4 **What is your residential postcode? _____**

Q5 In the last 12 months and during the last season, on about how many days did you place bets on each of these sports?

	Everyday	A few times a week	Once a week	Once a fortnight	Once a month	A few times a year	Once a year	Not at all in last 12 months
AFL	•	•	•	•	•	•	•	•
Cricket	•	•	•	•	•	•	•	•
Soccer	•	•	•	•	•	•	•	•

Q6 **Which sport do you prefer to bet on the most?**

- o AFL
- o Cricket
- o Soccer

AFL Intro[13]

The next part of the survey involves placing a bet on the outcomes of **6 different simulated AFL games**, which will be shown in video highlights. Please make sure you have your sound enabled to hear the games. As mentioned previously, you will get to keep any winnings from your bets.

AFL Baseline - Vid

For this game, we offer you $4 to bet with. Select which type of bet you would place on this team winning. When selecting your bet, please choose as you would if you were gambling with your own money.

These teams are evenly matched and have equal odds of winning.

- Carlton Blues to win outright, by 1 point or more @ $1.90, for a payout of $7.60
- Gold Coast Suns to win outright, by 1 point or more @ $1.90, for a payout of $7.60
- Carlton Blues to win outright, by 25 points or more @ $4.00, for a payout of $16.00
- Gold Coast Suns to win outright, by 25 points or more @ $4.00, for a payout of $16.00
- Carlton Blues to win outright, by 43 points or more @ $6.50, for a payout of $26.00
- Gold Coast Suns to win outright, by 43 points or more @ $6.50, for a payout of $26.00

AFL Baseline - Vid Click the forward arrow to watch the highlights of the game outcomes.

Start of Block: AFL Bonus Bet - Video: St Kilda vs Melbourne

AFL BB – Vid

For this game, we offer you $4 to bet with. Select which type of bet you would place on this team winning. In addition, we will give you a free bonus bet ($4) if your team is ahead at half time. When selecting your bet, please choose as you would if you were gambling with your own money.

These teams are evenly matched and have equal odds of winning.

St Kilda Saints to win outright, by 1 point or more @ $1.90, for a payout of $7.60

- Melbourne Demons to win outright, by 1 point or more @ $1.90, for a payout of $7.60
- St Kilda Saints to win outright, by 25 points or more @ $4.00, for a payout of $16.00
- Melbourne Demons to win outright, by 25 points or more @ $4.00, for a payout of $16.00
- St Kilda Saints to win outright, by 43 points or more @ $6.50, for a payout of $26.00
- Melbourne Demons to win outright, by 43 points or more @ $6.50, for a payout of $26.00

AFL BB - Vid Click the forward arrow to watch the highlights of the game outcomes.

Start of Block: AFL Better O/Ws - Video: Port Adelaide vs Collingwood

AFL BOWs - Vid

For this game, we offer you $4 to bet with. Select which type of bet you would place on this team winning. In addition, your odds are boosted with payout for winning bets doubled. When selecting your bet, please choose as you would if you were gambling with your own money.

[13] For brevity we have only included the AFL component within this appendix. The questions and format were identical for the cricket and soccer versions, but instead of AFL matches and teams they referred to either cricket or soccer games/teams.

These teams are evenly matched and have equal odds of winning.

- Collingwood Magpies to win outright, by 1 point or more @ $1.90, for a payout of $7.60
- Port Adelaide Power to win outright, by 1 point or more @ $1.90, for a payout of $7.60
- Collingwood Magpies to win outright, by 25 points or more @ $4.00, for a payout of $16.00
- Port Adelaide Power to win outright, by 25 points or more @ $4.00, for a payout of $16.00
- Collingwood Magpies to win outright, by 43 points or more @ $6.50, for a payout of $26.00
- Port Adelaide Power to win outright, by 43 points or more @ $6.50, for a payout of $26.00

AFL BOWs - Vid Click the forward arrow to watch the highlights of the game outcomes.

Start of Block: AFL Reduced Risk - Video: Sydney Swans vs Geelong Cats

AFL RR - Vid

For this game, we offer you $4 to bet with. Select which type of bet you would place on this team winning. In addition, if your selected team wins the toss, but loses the game, you will get double your money back. When selecting your bet, please choose as you would if you were gambling with your own money.

These teams are evenly matched and have equal odds of winning.

- Sydney Swans to win outright, by 1 point or more @ $1.90, for a payout of $7.60
- Geelong Cats to win outright, by 1 point or more @ $1.90, for a payout of $7.60
- Sydney Swans to win outright, by 25 points or more @ $4.00, for a payout of $16.00
- Geelong Cats to win outright, by 25 points or more @ $4.00, for a payout of $16.00
- Sydney Swans to win outright, by 43 points or more @ $6.50, for a payout of $26.00
- Geelong Cats to win outright, by 43 points or more @ $6.50, for a payout of $26.00

AFL RR - Vid Click the forward arrow to watch the highlights of the game outcomes.

Start of Block: AFL Cash Rebate – Video: Carlton vs Gold Coast

AFL Cash R - Vid

For this game, we offer you $4 to bet with. Select which type of bet you would place on this team winning. In addition, you will receive $2 cash back whether your team wins or loses. When selecting your bet, please choose as you would if you were gambling with your own money.

These teams are evenly matched and have equal odds of winning.

- Carlton Blues to win outright, by 1 point or more @ $1.90, for a payout of $7.60
- Gold Coast Suns to win outright, by 1 point or more @ $1.90, for a payout of $7.60
- Carlton Blues to win outright, by 25 points or more @ $4.00, for a payout of $16.00
- Gold Coast Suns to win outright, by 25 points or more @ $4.00, for a payout of $16.00
- Carlton Blues to win outright, by 43 points or more @ $6.50, for a payout of $26.00
- Gold Coast Suns to win outright, by 43 points or more @ $6.50, for a payout of $26.00

AFL Cash R - Vid Click the forward arrow to watch the highlights of the game outcomes.

Start of Block: AFL 6th Condition Selection

The last 5 bets placed differed slightly from each other in the winnings they offered. Rank in order the 5 bet types from the 'most attractive' (1) to 'least attractive' (5).

_____ Bet $4 on your winning team

_____ Receive a free bonus bet ($4) if your team is ahead at half time

_____ Boost your odds. Payout for winning bets are double

_____ If your team wins the toss, but loses the game, get double your money back

_____ $2 cash back. Win or lose

AFL 6th Game Select

For the 6th and last game, we offer you $4 to bet with from one of the bet types below. Select the bet type for the game.

Image:AFL Baseline.png

Image:Bonus Bet - AFl and Soccer.png

Image:AFL Better Odds.png

Image:AFL Reduced Risk.png

Image:AFL Cash Rebate.png

Start of Block: AFL 6th Game - Video 1: Carlton vs Gold Coast

AFL 6th Game - Vid

For this final game, you've chosen to bet the $4 with the below bet type.

${AFL 6th Game Select/ChoiceGroup/SelectedChoices}

When selecting your bet, please choose as you would if you were gambling with your own money.

These teams are evenly matched and have equal odds of winning.

<6 OPTIONS PRESENTED BASED ON SELECTED GAME>

AFL 6th Game - Vid Click the forward arrow to watch the highlights of the game outcomes.

The next part of the survey involves showing you some promotional advertisements for sports betting and asking follow-up questions.

Q31 If the below advertisement appeared on a sports betting website/app, how unattractive or attractive would you find this offer? Please rate on the scale provided.

- o 1 - Extremely unattractive
- o 2
- o 3
- o 4
- o 5
- o 6 - Extremely attractive

Q32 If the below advertisement appeared on a sports betting website/app, how unattractive or attractive would you find this offer? Please rate on the scale provided.

- o 1 - Extremely unattractive
- o 2
- o 3
- o 4
- o 5
- o 6 - Extremely attractive

Q33. Please look at the advertisement again. If you placed $200 on this bet at $1.50 odds, how much of your own money would you have to bet before you could withdraw the bonus bet or any winnings from the bonus bet? $ _____

Start of Block: Display Ad 3

Q34. If the below advertisement appeared on a sports betting website/app, how unattractive or attractive would you find this offer? Please rate on the scale provided.

- o 1 - Extremely unattractive
- o 2
- o 3
- o 4
- o 5
- o 6 - Extremely attractive

The next questions are about your gambling in general. Please consider all types of gambling when responding.

Thinking about the last 12 months, how often:
(Please select one response for each item)

	Never	Sometimes	Most of the time	Almost always
Have you bet more than you could really afford to lose?	•	•	•	•
Have you needed to gamble with larger amounts of money to get the same feeling of excitement?	•	•	•	•
Have you gone back another day to try to win back the money you lost?	•	•	•	•
Have you borrowed money or sold anything to get money to gamble?	•	•	•	•
Have you felt that you might have a problem with gambling?	•	•	•	•
Have people criticised your betting or told you that you had a gambling problem, regardless of whether or not you through it was true?	•	•	•	•
Have you felt guilty about the way you gamble, or what happens when you gamble?	•	•	•	•
Has your gambling caused you any health problems, including stress or anxiety?	•	•	•	•
Has your gambling caused any financial problems for you or your household?	•	•	•	•

Q36 **How often did you gamble in the last 12 months?**
Do not include lottery tickets, instant scratch tickets or raffles, but include ALL other types of gambling such as Pokies, card games, racing, sports betting, day trading, bingo and casino games.

- o Monthly or less
- o 2 to 4 times a month
- o 2 to 3 times a week
- o 4 to 5 times a week
- o 6 or more times a week

Q37 **How much time did you spend gambling in a typical day in which you gambled in the past 12 months?**

- o Less than 30 minutes
- o More than 30 minutes but less than 1 hour
- o More than 1 hour but less than 2 hours
- o More than 2 hours but less than 3 hours
- o More than 3 hours

Q38 **How often did you spend more than 2 hours gambling (on a single occasion) in the past 12 months?**

- o Never
- o Less than monthly
- o Monthly
- o Weekly
- o Daily or almost daily

Finally, we would like to ask a few more questions about you.

Q39 **What language do you mainly speak at home?**

- o English
- o Other (please specify) _____

Q40 **What do you estimate your personal annual income was last year, before taxes?**

- o $0 to $9,999
- o $10,000 to $19,999
- o $20,000 to $29,999
- o $30,000 to $39,999
- o $40,000 to $49,999
- o $50,000 to $59,999
- o $60,000 to $69,999
- o $70,000 to $79,999
- o $80,000 to $89,999

- o $90,000 to $99,999
- o $100,000 to $109,999
- o $110,000 to $119,999
- o $120,000 to $129,999
- o $130,000 to $139,999
- o $140,000 to $149,999
- o $150,000 to $159,999
- o $160,00 to $169,999
- o $170,000 to $179,999
- o $180,000 or more
- o Prefer not to say

Q41 **What do you estimate your household annual income was last year, before taxes?**

- o $0 to $9,999
- o $10,000 to $19,999
- o $20,000 to $29,999
- o $30,000 to $39,999
- o $40,000 to $49,999
- o $50,000 to $59,999
- o $60,000 to $69,999
- o $70,000 to $79,999
- o $80,000 to $89,999
- o $90,000 to $99,999
- o $100,000 to $109,999
- o $110,000 to $119,999
- o $120,000 to $129,999
- o $130,000 to $139,999
- o $140,000 to $149,999
- o $150,000 to $159,999
- o $160,00 to $169,999
- o $170,000 to $179,999
- o $180,000 or more
- o Prefer not to say

{IF WINNINGS < $24}

Thank you for completing this survey.

As mentioned at the beginning of the study, the aim of this research is to investigate the effects of advertising and promotions on sports betting. The sports games that you bet on were designed to be experienced as if you were gambling on a real game. However, in order for us to compare how different people bet, all participants experienced the exact same games which were pre-programmed with a particular feature and win/loss sequence.

As a thank you for your time, we said that we would reimburse your winnings from the various game outcomes. Your total winnings are $ **${e://Field/TotalWin}**. We want to make sure that the survey was worth your time, **so we are increasing your winnings to $24**. This compensation will be emailed to you as an electronic Coles voucher.

Please make sure you provide a valid email address below so we can email you the electronic Coles voucher.

Email address: _____

Please confirm your email address below _____

Would you be willing to be invited to participate in any future research studies we conduct, including paid surveys? This does not obligate you in any way.

- o Yes
- o No

If you have experienced discomfort at any point during the surveys, you can contact Gambler's Help on 1800 858 858 or www.gamblinghelponline.org.au or Lifeline on 13 11 44. These are free and confidential telephone/online help services that operate 24 hours a day, 7 days a week.

If you would like to add any comments about the survey or the game please do so below

_____

{IF WINNINGS >$24}

Thank you for completing this survey.

As mentioned at the beginning of the study, the aim of this research is to investigate the effects of advertising and promotions on sports betting. The sports games that you bet on were designed to be experienced as if you were gambling on a real game. However, in order for us to compare how different people bet, all participants experienced the exact same games which were pre-programmed with a particular feature and win/loss sequence.

As a thank you for your time, you will receive your total winnings of $ **${e://Field/TotalWin}.** This compensation will be emailed to you as an electronic Coles voucher.

Please make sure you provide a valid email address below so we can email you the electronic Coles voucher.

Email address: _____

Please confirm your email address below _____

Would you be willing to be invited to participate in any future research studies we conduct, including paid surveys? This does not obligate you in any way.

- o Yes
- o No

If you have experienced discomfort at any point during the surveys, you can contact Gambler's Help on 1800 858 858 or www.gamblinghelponline.org.au or Lifeline on 13 11 44. These are free and confidential telephone/online help services that operate 24 hours a day, 7 days a week.

If you would like to add any comments about the survey or the game please do so below.

_____

Appendix G. Survey instrument for the psychophysiological study

Participant Information Sheet

The Effects of Wagering Marketing on Betting Behaviour: Psychophysiology Study

Thank you for your interest in this important project examining the effects of marketing on betting behaviour. The project is funded by the Victorian Responsible Gambling Foundation (VRGF) and is being conducted by Central Queensland University and the Australian Gambling Research Centre.

Taking part

This questionnaire will capture some brief demographic and behavioural information. To take part, you must:

- Be 18 years of age or over
- Speak English as your native language
- Have gambled at least fortnightly on sports over the last 12 months (or not gambled at all)
- Be willing to have your pulse rate, skin conductance, and eye movements measured while you watch 12 short advertisements (please see below for further details)

What you will be asked to do

We are looking at the effects of advertising and promotions on sports betting.

At the start of this session, you will be asked to complete a questionnaire, providing general demographic information (e.g., your age, gender, etc.), as well as information on your mood and gambling behaviours. You will then be fitted with two sensors that measure your skin conductance (placed on the surface of your fingers) and one sensor to measure your pulse rate (also placed on the surface of your finger). Your eye movements will be recorded using an eye tracker placed next to the computer monitor, on which you will view a series of short (around 30 seconds) advertisements. These advertisements will include those for gambling products and services, with a two-minute break between each advertisement.

Compensation for your time and effort

Your time is valuable. In appreciation of your time and effort, we would like to offer you $50 as compensation, which will be provided by the recruitment company after testing.

How your confidentiality will be protected

We have collected your contact details for testing, but these will not be stored with your data. Your data will be completely anonymous. Your name and contact details will not appear in any research reports, publications, or presentations. We will also remove any references to personal information that might allow someone to guess your identity. The anonymised data will be kept securely by CQUniversity.

In accordance with the Australian Government's Productivity Commission's recommendations, to improve research into gambling, the de-identified data (the data collected without any way of identifying you) will be warehoused and may be used by other researchers in the future. These researchers would need to supply an appropriate research proposal and have obtained approval from the Human Research Ethics Committee before access to the de-identified data would be given.

Participation will not prejudice you in any way

Please be advised that your participation in this study is completely voluntary. Should you wish to withdraw at any stage, you are free to do so without prejudice or penalty.

How you will receive feedback

This research is being conducted for the Victorian Responsible Gambling Foundation. The final report will be publicly available on their website (www.responsiblegambling.vic.gov.au) at the end of the project. The results will be published in journal articles and presented at conferences. Your individual data will in no way be identifiable in these articles and presentations.

Where you can get further information

Should you require any further information, or have any questions about participation, please contact Nancy Greer on (n.greer@cqu.edu.au). If you have broader queries or concerns about the research, please do not hesitate to contact the Chief Investigator (Professor Nerilee Hing) on email: n.hing@cqu.edu.au. You are also welcome to contact the Ethics and Compliance Officer at the CQU Office of Research on phone: 07 4923 2603. Some of the questions we ask will be about your gambling behaviour. If you experience discomfort at any point during the survey, you can contact Gambler's Help on phone: 1800 858 858, or on the website: www.gamblinghelponline.org.au. These are free and confidential telephone/online help services that operate 24 hours a day, 7 days a week. These services are not affiliated with this survey.

I consent to participation in this research project and agree that:

I have read and understood the Information Sheet that describes this study;

Any questions I had about the project were answered by either the Information Sheet or by the researchers;

I understand I have the right to withdraw from the project at any time without penalty;

The research findings will be included in the researchers' publication(s) on the project; and this may include conference presentations and research articles, as well as other media described in the Information Sheet;

To protect my privacy, my name will not be used in publication(s);

I am providing informed consent to participate in this project.

Yes - I consent

No - I do not consent

Consent_No You have said that you don't consent to taking part in the survey.

You are perfectly entitled to withdraw at any time. Please let the experimenter know so that the testing session can stop.

If this was a mistake, please let the experimenter know and we'll restart the survey.

Start of Block: Screening check

Part_ID The researcher will give you a participant ID code. This is so that your data are stored without any identifying details, and also so that we can match your answers in the questionnaire to your physiological data.

Please ask the researcher for this ID code now, and enter it into the box below.

Age What is your age (in years)? _____

LOTE What language do you speak as your native language?

English

A language other than English (please specify) _____

SportFreq During the last 12 months, have you bet on sports fortnightly or more frequently?

Yes

No

GamblAtAll During the last 12 months, have you gambled for money at all on any form of gambling?

This could include poker machines, bingo, keno, lotteries, instant scratch tickets, sports or race betting, or playing casino table games like poker, roulette, blackjack, etc.

Yes

No

Meds Are you currently taking medication for any of the following conditions?

	No	Yes
Respiratory issues (e.g., asthma, chronic bronchitis)		
Gastrointestinal issues (e.g., gastritis, nausea, vomiting)		
Genitourinary issues (e.g., cystitis, prostatitis)		
Sinus bradycardia		
Insomnia		
Dizziness (including vertigo and motion sickness)		
Have you used illicit or recreational drugs within the last 3 days?		

Start of Block: PGSI (not shown to non-gamblers)

PGSI **Thinking about the last 12 months**, how often:
(Please select one response for each item)

	Never	Sometimes	Most of the time	Almost always
Have you bet more than you could really afford to lose?				
Have you needed to gamble with larger amounts of money to get the same feeling of excitement?				
Have you gone back another day to try to win back the money you lost?				
Have you borrowed money or sold anything to get money to gamble?				
Have you felt that you might have a problem with gambling?				
Have people criticised your betting or told you that you had a gambling problem, regardless of whether or not you thought it was true?				
Have you felt guilty about the way you gamble, or what happens when you gamble?				
Has your gambling caused you any health problems, including stress or anxiety?				
Has your gambling caused any financial problems for you or your household?				

Start of Block: Caution screen

ResearcherText The researcher will now check your answers, to ensure that you are eligible for the study.

Consent (must be yes): ${Consent/ChoiceGroup/SelectedChoices}
Age (must be 18+): ${Age/ChoiceTextEntryValue}
Language (must be English): ${LOTE/ChoiceGroup/SelectedChoices}
Sports bettor (yes for SB, no for NG): ${SportFreq/ChoiceGroup/SelectedChoices}
Gambler (blank for SB, no for NG): ${GamblAtAll/ChoiceGroup/SelectedChoices}
Medications (if 'yes' is selected for any of these, please confirm details): ${Meds/ChoiceGroup/SelectedChoicesForAnswer/2}
PGSI (for SB only): ${gr://SC_dhCnkF1zwT18Cix/Score}

Researcher1 Researcher: If all is OK, please select the appropriate number to continue.

	1	2	3	4	5	6	7	8	9	10
Select the correct number to proceed										

Start of Block: Demogs

Gender What is your gender?

- Male
- Female
- Other (please specify) _____

CoB In which country were you born?

- Australia
- Other (please specify) _____

Educ What is your highest level of education?

- Year 10 or below
- Year 11 or equivalent
- Year 12 or equivalent
- A trade, technical certificate or diploma
- A university or college degree
- Postgraduate qualification/s

Income What do you estimate your personal annual income was last year, before taxes?

- $0 to $9,999
- $10,000 to $19,999
- $20,000 to $29,999
- $30,000 to $39,999
- $40,000 to $49,999
- $50,000 to $59,999
- $60,000 to $69,999
- $70,000 to $79,999
- $80,000 to $89,999
- $90,000 to $99,999
- $100,000 to $109,999

$110,000 to $119,999

$120,000 to $129,999

$130,000 to $139,999

$140,000 to $149,999

$150,000 to $159,999

$160,000 to $169,999

$170,000 to $179,000

$180,000 or more

Prefer not to say

Don't know

Start of Block: Gambling forms

GamblingFreq **During the last 12 months**, how often have you taken part in each of the following forms of gambling **for money**, whether on the Internet, via telephone, or in a venue?
(Please select one response for each form)

	4 or more times a week	2-3 times a week	Once a week	2-3 times a month	Once a month	Less than once a month	Not at all in the last 12 months
Pokies/electronic gaming machines							
Lottery, lotto, pools or instant scratch tickets							
Sports betting (not including tipping competitions)							
Horse or dog race betting							
Keno							
Bingo							
Casino table games, such as blackjack, poker, dice, roulette, craps, or baccarat							

Start of Block: Detailed gambling behaviour (not shown to non-gamblers)

GB2 Roughly how much money did you place on sports bets **in the past month**?

If you're not sure, please take your best guess.

Please enter a dollar value. There is no need to enter the dollar sign. _____

GB3 About how many days **in the last month** did you bet on sports? _____

GB4 **During the last month**, about how many bets did you place on a typical day when you bet on sports? _____

GB5 **In the last month**, how often did you watch or listen to the sporting event you had bet on?

- Never
- Sometimes
- Often
- Almost always

GB6 How often did you use the following sources of information to inform your betting **in the last month**?

	Never	Sometimes	Often	Almost always
Face-to-face chats with individuals or groups (e.g., friends, family, colleagues, etc.)				
Online, text-based, or telephone chats with individuals (e.g., texting, messaging a friend, etc.)				
Online or text-based groups chats (e.g., Facebook, WhatsApp, email group chats, etc.)				
Purchased tips from experts / professional bookies / paid for a form guide				
Sourced free tips from experts via TV / radio / websites / social media (including free online form guide information)				

GB7 Which sports betting operators do you have an account with?

	No	Yes
bet365		
Betfair		
Betstar		
Bookmaker		
Centrebet		
CrownBet		
Ladbrokes		

Luxbet
Palmerbet
Sportingbet
Sportsbet
TAB
Tom Waterhouse
TopBetta
Ubet
Unibet
William Hill
Other (please specify)

GB7a And which is your preferred company or companies?

If you have no preference, just leave this question blank.

- bet365
- Betfair
- Betstar
- Bookmaker
- Centrebet
- CrownBet
- Ladbrokes
- Luxbet
- Palmerbet
- Sportingbet
- Sportsbet
- TAB
- Tom Waterhouse
- TopBetta
- Ubet
- Unibet
- William Hill
- Other (please specify) _____

Start of Block: Sports watching behaviour

SportsWatch How much do you like or dislike watching each of these types of sports?

For the "other (please specify)" answer, the survey will request an answer even if you don't watch an "other" sport. If this is the case, just select "dislike extremely" for "other".

	Dislike extremely	Dislike	Neither like nor dislike	Like	Like extremely
AFL (Aussie Rules)					
NRL (Rugby League)					
Rugby Union					
Soccer/Football					
Tennis					
Golf					
Cricket					
Basketball					
Swimming					
Motor racing					
Other (please specify)					

AFL_Team Which AFL team(s) do you support?
Adelaide Crows
Brisbane Lions
Carlton Blues
Collingwood Magpies
Essendon Bombers
Fremantle Dockers
Geelong Cats
Gold Coast Suns
GWS Giants
Hawthorn Hawks
Melbourne Demons
North Melbourne Kangaroos
Port Adelaide Power
Richmond Tigers
St Kilda Saints
Sydney Swans
West Coast Eagles
Western Bulldogs
⊗I do not support an AFL team

Start of Block: Gambling attitudes

GamblAtt Please rate your agreement or disagreement with each item.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
There are too many opportunities for gambling nowadays					
People should have the right to gamble whenever they want					
Gambling should be discouraged					
Most people who gamble do so sensibly					
Gambling is a fool's game					
Gambling is dangerous for family life					
Gambling is an important part of cultural life					
Gambling is a harmless form of entertainment					
Gambling is a waste of time					
On balance, gambling is good for society					
Gambling livens up life					
It would be better if gambling was banned all together					
Gambling is like a drug					
Gambling is good for communities					

Start of Block: Car preferences

Car1 Have you owned cars that are made by any of these manufacturers?

	No	Yes
Audi		
BMW		
Ford		
Holden		
Hyundai		
Kia		
Mazda		
Mercedes-Benz		
Mitsubishi		

Nissan
Peugeot
Toyota
Volkswagen
Other (please specify)

Car2 And which is your preferred company or companies?

If you have no preference, just leave this question blank.

Audi
BMW
Ford
Holden
Hyundai
Kia
Mazda
Mercedes-Benz
Mitsubishi
Nissan
Peugeot
Toyota
Volkswagen
Other (please specify) _____

Start of Block: DASS

DASS Please read each statement and select a response that indicates how much the statement applied to you **over the last week**.

There are no right or wrong answers. Do not spend too much time on any statement.

	Did not apply to me at all	Applied to me to some degree, or some of the time	Applied to me to a considerable degree, or a good part of the time	Applied to me very much, or most of the time
I found it hard to wind down				
I was aware of dryness of my mouth				
I couldn't seem to experience any positive feeling at all				
I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical				

exertion)	
I found it difficult to work up the initiative to do things	
I tended to over-react to situations	
I experienced trembling (e.g., in the hands)	
I felt that I was using a lot of nervous energy	
I was worried about situations in which I might panic and make a fool of myself	
I felt that I had nothing to look forward to	
I found myself getting agitated	
I found it difficult to relax	
I felt down-hearted and blue	
I was intolerant of anything that kept me from getting on with what I was doing	
I felt I was close to panic	
I was unable to become enthusiastic about anything	
I felt I wasn't worth much as a person	
I felt that I was rather touchy	
I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat)	
I felt scared without any good reason	
I felt that life was meaningless	

Start of Block: Mood

Mood_Ple
What mood are you in **right now**?

Please rate your level of **Pleasure.**

	1	2	3	4	5	6	7	

Mood_Aro
What mood are you in **right now**?

Please rate your level of **Arousal (how stimulated you are)**.

	1	2	3	4	5	6	7	

Start of Block: Impulsivity

Impulse People differ in the ways they act and think in different situations. This is a test to measure some of the ways in which you can act and think. Read each statement and mark the appropriate number on the right side of each item. Do not spend too much time on any statement. Answer quickly and honestly.

	Rarely/Never	Occasionally	Often	Almost always/always
I do things without thinking				
I don't "pay attention"				
I concentrate easily				
I plan tasks carefully				
I am a careful thinker				
I am self-controlled				
I act on the spur of the moment				
I say things without thinking				

Start of Block: Exposure

Exp1 **In the last month**, how often have you seen or heard the following types of advertising for sports betting?

	Never - Did not see/hear this at all over the last month	Sometimes - once a week or less	Often - several times a week	Very often - daily or almost daily	Extremely often - several times a day
Betting brands promoted during live and televised sports events (e.g., logos, signage)					
Commentary promoting betting or betting odds during live and televised sports events					
Betting/odds related discussions in sport entertainment shows (e.g., The Footy Show)					

TV advertisements for betting brands
Radio or print advertisements for betting brands
Advertisements on sports betting websites or apps (e.g., promoting particular bets)
Sports betting advertisements on unrelated websites or apps
Personal emails, text messages or phone calls from sport betting companies
Social media posts by sport betting companies (e.g., on Facebook, Twitter, etc.)
Other (please specify)

Exp2 In the last month, how often have you seen or heard the following types of promotions for sports betting?

	Never - Did not see/hear this at all over the last month	Sometimes - once a week or less	Often - several times a week	Very often - daily or almost daily	Extremely often - several times a day
Sign up bonus (to open a betting account)					
Refer a friend offer					
Click to call bonus (for using this technology to place in-play bet)					
Mobile betting bonus (for betting via mobile phone or tablet)					
Multi bet offer (bonus bet, refund or cash if multi-bet fails by one leg)					
Stake back offer (some money back if bet doesn't win)					
Match your stake or deposit (with bonus bets)					
Better odds or winnings for certain combined bets					
Happy hours with better odds or winnings					
Cash out early on a multibet					
Rewards programs run by gambling companies					

Start of Block: Ad ratings

AdRateText We will now ask you to watch a series of advertisements.

Each participant will watch the advertisements in a random order. Each advertisement has a letter associated with it.

First, we will ask you to select the letter for the advertisement you just watched, so that we know which ad you are rating.

Then we will ask you to rate the advertisement, using a 0-100 point sliding scale.

On the next page, we will show you an example of these scales, so that you can try them out. You won't watch an ad for this practice example.

AdR_ex0_1 Please rate the advertisement using these sliding scales.

	0 = Not at all stimulating … 100 = Extremely stimulating 0 10 20 30 40 50 60 70 80 90 100
How stimulating did you find the ad?	

AdR_ex0_2

	0 = Extremely unlikely … 100 = Extremely likely 0 10 20 30 40 50 60 70 80 90 100
How likely would you be to take up the offer in this advertisement?	

PreAds Great! Thank you.

We'll now start the advertisements.

There will be a 2 minute pause before the first advertisement starts, with a countdown on screen.

Each advertisement will last for approximately 30 seconds. There will then be a 2 minute break between advertisements. During these breaks, please rate the advertisement you just watched. Please note that some of these ads may have expired. For example, some ads may refer to betting in the AFL season. For this study, we would like you to answer how likely you are to take up these offers if the offers were current (e.g., if we were in the AFL season).

If you have any questions, please ask the researcher before we begin.

Start of Block: Ad1

Ad1_text Please watch the first advertisement.

When the advertisement has finished, please advance to the next screen to rate it. Please do not rate the advertisement until it has finished.

Ad1_ID Which advertisement did you just watch?

(Please select the letter associated with the advertisement.)
A
B
C
D
E
F
G
H
I
J
K
L

Ad1_stim Please rate the advertisement using these sliding scales.

	0 = Not at all stimulating … 100 = Extremely stimulating 0 10 20 30 40 50 60 70 80 90 100
How stimulating did you find the ad?	

Ad1_offer

	0 = Extremely unlikely … 100 = Extremely likely 0 10 20 30 40 50 60 70 80 90 100
How likely would you be to take up the offer in this advertisement?	

Same set of questions as Ad1 above presented for the remaining 11 ads[14].

Start of Block: Finished

There are no more questions in this survey.
Please be sure to click on ">>" to submit your responses.

Thank you for completing the survey. Your time is greatly appreciated.
****

If you are experiencing problems with gambling, Gambling Help Online can provide free and confidential counselling, information and support, 24 hours a day, 7 days a week. The website for Gambling Help Online is: http://www.gamblinghelponline.org.au, or call the National Gambling Helpline on 1800 858 858. Please note that these help services are not affiliated with this survey.

[14] The process for the remaining 11 ads was identical to that illustrated above for ad 1: Participants watch the ad -> select the ad they watched -> and then use the two sliding scales to rate that ad. Therefore, for brevity in this appendix, ad1 is used as a representative set of questions for the remaining 11 ads.

Appendix H. Interview schedule for the interview study

NOTES FOR INTERVIEWERS

Background to tell interviewees

The study is funded by the Victorian Responsible Gambling Foundation.

It is being conducted by CQUniversity and the Australian Gambling Research Centre.

Thank interviewee for participating in the survey stage and for agreeing to an interview.

This study seeks to examine the influence of wagering marketing on betting. That is, how people respond to advertising and promotions for race/sports betting.

We're particularly interested in promotions, that is inducements to bet such as bonus bets, refunds/stake back offers, sign-up and refer-a-friend bonuses, etc.

We're also interested in more general advertising for race/sports betting, which you might see in the various media and during race/sports events and broadcasts.

Protocol

Ensure interviewee received and has read the Participant Information Sheet.

Ask interviewee to complete and sign Informed Consent Form if not already done so.

Ask interviewee for permission to record the interview.

Advise the interviewee that the interview will be de-identified and that the results of the study will be reported in aggregate only – participants will not be able to be identified.

We've allowed up to an hour for this interview.

Ask if they have any questions before you start.

Aim of the interviews

Advise that this stage seeks to explore: What factors influence how people respond to race/sports betting marketing.

We'd particularly like to focus on the last few months when you completed the surveys, and what may have influenced the betting decisions and choices that you reported in these surveys. We will therefore draw on some of your responses to these surveys.

Questions on influences on race/sports betting

Please think back over the last few months when you completed the surveys for us …

1. Can you please describe how you made your decisions and choices for betting? That is, what were the key influences on your betting decisions? (Prompt for as much detail as possible; **see prompts on last page and check especially to see that promos and adverts have been considered by interviewee as a possible influence)**

2. **(If response to Q1 indicates someone who plans carefully)**. Thinking back over the last X weeks, can you recall betting differently to how you planned? How did this differ? Can you tell me about what factors might have influenced this? **(see prompts on last page and check especially to see that promos and adverts have been considered by interview as a possible influence). Ensure use of probes to try and separate occasions where possible as participants likely to speak in generalities.**

3. **(If a more spontaneous bettor from response to Q1 or to expand on response to Q2 if their recall wasn't good)**. (Interviewer to identify a few occasions from interviewees' survey data where they bet more than they intended, and check which promos and adverts they reported as most influential on that occasion and how they influenced them (e.g. placed safer/riskier bets, smaller/larger bets, more/fewer bets). Looking at your survey data, you seem to have bet more than you intended at this point and were influenced by XX promos and XX adverts to place safer/riskier bets, smaller/larger bets, more/fewer bets. Take a moment to think back to those occasions if you like. Can you please tell me more about this occasion and what else was happening that may have influenced your betting? (Prompt for as much detail as possible, e.g. where were you, who with, type of event, etc; **see prompts on last page and check especially to see that promos and adverts have been considered by interviewee as a possible influence). Repeat for other occasions apparent from the survey data.**

Prompt: Explore if there was more than one scenario where this occurred or whether there have been different reasons.

Questions on wagering promotions and advertisements

I want to explore promotions and advertisements for wagering in a bit more detail now. From looking through your survey data you indicated that the following types of race/sports betting promotions or advertisements were most influential on your betting over the last few months.

(Read out types of promotions/advertisements they have endorsed one at a time – starting with the most influential, up to the 5 most influential types). For each type of promotion/advertisement endorsed, ask:

1. What do you find to be particularly appealing/influential about this type of promotion/advertisement? **Probe for details.**

2. How does this type of promotion/advertisement tend to influence your betting? E.g. place bets that you otherwise wouldn't, spend more money betting, place riskier bets, place these bets instead of other ones, bet more impulsively – or alternatively place smaller, safer or fewer bets? **Probe for details.**

3. Is there a specific example of when this type of promotion/advertisement has directly influenced your betting? How did it influence your betting (place safer/riskier bets, fewer/more bets, smaller/larger bets)? Probe for details of why this promotion/advertisement was so influential. And was there anything else happening that was also influential on your betting? (probe for circumstances and other possible influences on their decision to place this bet; **see prompts on last page.**)

Repeat Qs 4-6 for other types of promotions/advertisements endorsed as in the top 5 most influential in their survey data.

END: Thank participant. Provide shopping voucher and ensure participant signs for this and that the gift card register is completed.

Prompts to ensure interviewee has considered all situational factors.

- *Promotions (inducements) and advertisements for wagering.*
- *Where you were when you decided to place bets.* Any influence from location (e.g. home, work, friend's place, pub, etc.) and whether watching or planning to watch the race/sporting event?
- *Other people.* Any influence from friends, family, other people at the venue/event, experts through hot tips etc? What/Why/How? (e.g. they were betting as well, gave tips or advice, encouraged you to bet, encouraged you to not bet/stop betting, did you bet to "fit in" or be sociable?)
- *Type of event.* Any influence from special vs ordinary race/sporting event.
- *Horses/jockeys/teams/players in the event.* Any influence of favourite or preferred horse/jockey/team/players?
- *Your mood*. Any influence from your mood, personal circumstances?
- *Substance use*. Any influence from alcohol or any other substances?
- *Access to betting*. Any influence from accessibility of betting (e.g. online/mobile, telephone or in a venue; or from not being able to access gambling, e.g. at work?)
- *Time and money available*. Any influence from the need or desire to fill in time? And/or by having spare money? And/or by wanting or needing to raise money for necessities? Or from not having spare time or money to bet when you may have wanted to (e.g. working, family responsibilities, not enough spare money available. etc)?
- *Outcomes of previous betting*. Any influence from outcomes of your previous bets? E.g. previous winnings to bet with, on a winning streak, trying to win back losses?
- *Other inducements to bet.* Any influence from credit provided by the operator? Operator loyalty programs? Any other incentives to bet?
- *Personal motivations for betting.* Any influence from different motivations e.g., having a bet makes watching races/sport more interesting; I have a lot of experience/ knowledge of races/sport; I enjoy a punt; helps me socialise with others, etc.
- *Other factors*. Are there any other factors we haven't asked about that influenced your betting decisions?

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Victorian Responsible Gambling Foundation

RESEARCH REPORT

Effects of wagering marketing on vulnerable adults

August 2018

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