

RESEARCH REPORT

Behavioural trial for consistent gambling messaging under the National Consumer Protection Framework



**Gambling Research
Australia**

A national research
partnership

January 2022

Supported by the



Gambling Research Australia (GRA) is a partnership between the Commonwealth, State and Territory Governments to initiate and manage a national program of gambling research.

The Secretariat is provided by the New South Wales Department of Customer Service. Further information about the national research program may be obtained from gamblingresearch.org.au

This study through Gambling Research Australia is supported by the following jurisdictions:

- Australian Capital Territory: Access Canberra
- Australian Government: Commonwealth Department of Social Services
- New South Wales: Department of Customer Service - Liquor, Gaming and Racing
- Northern Territory: Department of the Attorney-General and Justice - Licensing NT
- Queensland: Department of Justice and Attorney-General - Office of Regulatory Policy
- South Australia: Independent Gambling Authority
- Tasmania: Department of Treasury and Finance - Liquor and Gaming
- Victoria: Department of Justice and Regulation - Office of Liquor, Gaming and Racing
- Western Australia: Department of Local Government, Sport and Cultural Industries

© Copyright State of New South Wales for the Department of Customer Service, on behalf of Gambling Research Australia. For current information go to gamblingresearch.org.au

Disclaimer

The views expressed in this report are solely those of the author/s. The information, views and reference material in this report is provided solely on the basis that readers will be responsible for making their own assessment of the information provided. Gambling Research Australia make no warranty - express or implied - nor assume any liability or responsibility for use of or reliance on the contents of this report.

Print authorised by: Gambling Research Australia

BEHAVIOURAL TRIAL FOR CONSISTENT GAMBLING MESSAGING UNDER THE NATIONAL CONSUMER PROTECTION FRAMEWORK

COMMISSIONED BY:

Gambling Research Australia

PREPARED BY:

The Experimental Gambling Research Laboratory

Prof. Matthew Rockloff

Dr. Phillip Newall

Prof. Matthew Browne

Dr. Alex M T Russell

Dr. Tess Visintin (nee Armstrong)

Prof. Nerilee Hing

Hannah Thorne

JULY 2021

ACKNOWLEDGEMENTS

This is a Gambling Research Australia project funded by the Commonwealth, State and Territory Governments and published on their behalf by the NSW Department of Customer Service. The report has been independently peer reviewed.

Citing this report

Rockloff, Newall, Browne, Russell, Visintin, Hing, Thorne. (2021). Behavioural trial for consistent gambling messaging under the National Consumer Protection Framework. Sydney, NSW: Gambling Research Australia.

Contents

ACKNOWLEDGEMENTS	2
TABLE OF FIGURES AND TABLES	6
EXECUTIVE SUMMARY	7
Background Research	7
Focus Group Study	8
Quantitative Study: Randomised Control Trial (RCT)	8
Limitations	10
Recommendations.....	10
LITERATURE REVIEW	11
Comparisons with other public health domains	13
Potential safer gambling message themes.....	15
Teaching safer gambling practices.....	15
Correcting gambling misperceptions	16
Boosting conscious decision making.....	17
Norm-based messages	18
Emotional messages	20
Conclusion.....	21
FOCUS GROUP STUDY	22
Method.....	22

Participants.....	23
Exemplars of each message group presented to participants	24
Procedure.....	25
Results and Discussion.....	26
Theme #1: Messages thought insufficient to meaningfully change behaviour	26
Theme #2: Crafting messages to reflect the diversity of gamblers' situations.....	28
Theme #3: Messages should not increase perceived levels of gambling stigma	29
Theme #4: Harnessing hopefulness and other positive emotions.....	31
Theme #5: Improved norm-based messages	32
LIMITATIONS.....	34
Conclusions.....	34
RANDOMISED CONTROL TRIAL.....	36
Introduction	36
Mechanism of harm.....	36
A fly in the ointment.....	36
A multi-pronged solution.....	37
Methods.....	37
Randomised control trial (RCT).....	37
Participants.....	38
Stratified random assignment	39
Measures.....	39
Stimulus Materials: Message composition.....	41
Analyses.....	44
Results	45
Amount bet	47
Time spent gambling.....	48
Gambling Harm.....	49
Gambling Urges Scale (GUS).....	50
Gambler's belief questionnaire (GBQ).....	51

Helpfulness/understanding by message type	52
---	----

Discussion55

Caution on assuming popular options are “good”	56
--	----

Why are people improving over time?	56
---	----

Good subject effect	57
---------------------------	----

Hawthorne effect.....	57
-----------------------	----

Beneficial effects of self-reflection.....	57
--	----

Limitations of correlational findings	58
---	----

Future research.....	58
----------------------	----

Conclusion.....	59
-----------------	----

References.....60

APPENDIX A. INTERVIEW MATERIALS 70

APPENDIX B. SAFER GAMBLING MESSAGES 75

TABLE OF FIGURES AND TABLES

Figure 1. Amount bet.....	48
Figure 2. Time spent gambling	49
Figure 3. Short Gambling Harms Screen (SGHS) week 1 and week 5	50
Figure 4. Gambling Urges Scale (GUS) for weeks 1 through 5.....	51
Figure 5. Gambler's belief questionnaire (GBQ) for weeks 1 and 5	52
Figure 6. Helpfulness and ease of understanding for each message group	53
Table 1. Details of participants.....	23
Table 2. Messages for testing.....	42
Table 3. Demographic profile.....	46

EXECUTIVE SUMMARY

The proliferation of opportunities for online wagering is one of the most significant structural changes to the gambling industry in recent years, particularly with the popularity of gambling-apps accessed through mobile devices (Browne et al., 2019; Newall, Russell & Hing, 2021; Rockloff et al., 2018). Rates of problem gambling amongst online gamblers are higher than those of in-venue gamblers (Hing et al., 2014), which is indicative of the harm being experienced by this subset of gamblers. The *National Consumer Protection Framework for Online Wagering* (n.d.) established by the Commonwealth Government has a range of measures that are intended to address gambling harm experienced by people who wager on racing and sports online. One of these provisions is for safer gambling messaging as part of a broader effort for a “strong, nationally consistent minimum protections for consumers of interactive wagering services licensed in Australia, in line with international best-practice.” Gambling Research Australia contracted with the Experimental Gambling Research Laboratory at CQUniversity to undertake this present program of research to explore what types of messages may be most effective for a national rollout.

BACKGROUND RESEARCH

A literature review was conducted to understand how social marketing messages are conducted in gambling, and in related public health areas such as tobacco, alcohol and junk food consumption. Messaging currently used in gambling is often so generic that they may fail to properly warn consumers about the dangers of over consumption or provide meaningful information about products and calls to action. For instance, the message “gamble responsibly,” used in Australia, fails to provide advice about what “responsible” gambling behaviour looks like. It also suggests that gamblers who experience problems are necessarily “irresponsible,” which blames and stigmatises them for the damage done by an inherently risky product.

The literature review identified important lessons that were applied in subsequent phases of the research. First, messages should not be oversimplified and thus uninformative, or be repeated too often thereby risking habituation effects. Messages need to be tested to ensure that they do not produce “backfire” effects where a message counterproductively encourages more gambling amongst people at risk of harm. Last, the literature review suggested five types of messages that were worthy of further attention: teaching safer gambling practices, correcting gambling misperceptions, boosting conscious decision-making, norm-based messages, and emotional messages.

FOCUS GROUP STUDY

A series of three focus group discussions were held via video-conference technology with the purpose of a) identifying promising categories of messages with the help of interested expert groups, and b) understanding the dominant concerns of these groups in consideration of safer gambling messaging. The focus groups were conducted in three separate sessions with a) academic researchers (6 people), b) gambling-treatment providers (6 people), and c) gambling regulators (9 people), selected for the range of expertise they have relevant to the development of safer gambling messages. The inclusion of these groups, at a minimum, was part of the brief provided by Gambling Research Australia. Arguably, consumer groups might have been a useful addition to focus group discussion, although time and resource constraints prevented a broader focus. The focus group interviews were semi-structured around the five message types identified in the literature review as likely to be productive in helping gamblers to limit their financial losses and gambling harm. As noted above, message types discussed include teaching safer practices, correcting gambling misperceptions, boosting conscious decision-making, norm-based messages, and emotional messages. From the message types discussed, the greatest overall support was given to *norm-based* and also specifically *positive-emotional* messages. Interviewees were not supportive of negative-emotional messages, such as those used to emphasise the health risks of smoking. A thematic analysis of the transcribed focus group discussions further revealed themes of concern expressed across participants and message types. These emergent themes were: 1) messages are often insufficient to meaningfully change behaviour, 2) messages should be crafted to reflect a diversity of gamblers' situations (e.g., problem vs. non-problem gamblers), 3) messages should not increase stigma, 4) messages should harness hopefulness and other positive emotions, and 5) norm-based messages should be improved upon since poor wording used in the past produced stigmatisation. These themes were important for informing the design features of the subsequent quantitative study by directing authorship of the messages used as exemplars of norm-based and positive-emotional messages.

QUANTITATIVE STUDY: RANDOMISED CONTROL TRIAL (RCT)

A randomised control trial (RCT) was conducted with the purpose of gathering evidence on changes in the attitudes and behaviours of sports and race bettors as a result of exposure to safer gambling messages. This study took a structural form wherein some participants were exposed by random-assignment to view either a) norm-based messages, b) positive-emotional messages, or c) control messages (e.g., gambling responsibly). Exposure took place over 3 weeks in a five-week period, similar to repeated dosing of a drug, to gather data on attitudinal and behavioural change over the study period. Using lessons from the literature review and the focus group discussions, the researchers produced a large set ($n = 96$) of potential messages and subsequently winnowed the list to a smaller number for administration, where each participant viewed and evaluated just 9

messages from their assigned condition (i.e., norm-based, positive-emotional, or control). Nine messages were chosen to be enough to avoid habituation but too few to cause message fatigue.

The RCT was conducted through a series of online surveys of 2074 at least monthly sports and race bettors in Australia. Most participants bet weekly (70.4%). Participants were divided at random to 3 conditions, and outcome variables were measured across the 5 weeks to examine any desired effects on reduction in gambling risk outcomes. Proximal outcomes of interest were amounts bet, time spent betting and gambling-harm. The National Definition of Problem Gambling is specified as "...difficulties in limiting money and/or time spent on gambling which leads to adverse consequences..." (Neal et al., 2005) and thus these outcomes were chosen as being most directly relevant to the goals of messaging. Other motivational factors, however, were included for their relevance since attitudes often change more quickly than ingrained behaviours and thus are more sensitive in the context of a 5-week trial. Gambling urges and risky and fallacious beliefs about gambling were included for this second tier of evidence. Lastly, people have at least some introspective access to what messages should be most helpful for themselves and others like them, so the research also asked people directly to evaluate each message in terms of its likely helpfulness and the ease of understanding the message.

The results of the RCT revealed no significant differences between conditions in the amounts wagered and time spent gambling. That is, there was no identifiable message type, including norm-based, positive-emotional, or control messages, that was relatively more (or less) effective. However, on average there was a strong trend for improvement on all measured outcome variables over the course of the 5-week trial. Therefore, one cannot conclude that the messages were ineffective, but rather that the broad types of messages were not reliably indicative of the rate of improvement in measured behavioural outcomes. Due to constraints on the number of recruitable participants, a no-message control condition was not included.

There were significant differences, however, in the rated helpfulness and ease of understanding for the messages. As a group, positive-emotional messages were rated the highest on both helpfulness and ease of understanding, followed by control messages and lastly norm-based messages. The pattern of responses to individual messages was also revealing. The highest rated message overall was one of the control messages, "only bet what you can afford." Furthermore, the highest rated messages for both positive-emotional and normative messages were related to the benefits of keeping control of expenditures. For instance, the highest rated positive-emotional message was "your family will appreciate you keeping your gambling spend to a reasonable level." Similarly, the highest rated normative message was "wise bettors stick to a budget."

LIMITATIONS

In interpreting the present results, it is important to recognise that only rated helpfulness and ease of understanding were outcomes that responded to the experimental manipulation. Other observations made in this study provide only suggestive rather than causal evidence for identifying the best messages. Moreover, the focus group discussions were limited by the perceptions of people involved and their shared expertise. Even experts may have only limited understanding of what messages should perform best.

RECOMMENDATIONS

The RCT failed to show group differences in the types of messages; positive-emotional, normative or control; with respect to improvements on measured behavioural outcomes. Nevertheless, people improved significantly on all outcomes during the 5-week trial. Outcomes that were measured every week, such as amounts bet and gambling urges, improved steadily and progressively week-by-week. Consequently, it is reasonable to conclude that self-reflection on expenditure is implicated as a reason for broad improvements observed during the trial. Backing up these observations, messages that directly relate to the control of expenditure, inclusive of the benefits of exercising such control, were rated highest in both helpfulness and ease of understanding. The best evidence from the RCT, although correlational at this point, is that self-reflection on levels of gambling expenditure, and the willingness to control those expenditures, is the active ingredient in witnessed improvements. These improvements extend to psychological determinants of behaviour, such as gambling urges as well as risky and fallacious beliefs about gambling. Therefore, evidence from this study indicates that safer gambling messages should focus on positive messages that encourage people to think about their expenditures and the benefits they might gain from a consideration of spending less.

LITERATURE REVIEW

Gambling is increasingly being seen by many researchers as a public health issue, which means adopting a range of strategies to reduce population levels of risk (Bowden-Jones, Dickson, Dunand, & Simon, 2019; Browne et al., 2016; Korn & Shaffer, 1999; van Schalkwyk, Cassidy, McKee, & Petticrew, 2019; Wardle, Reith, Langham, & Rogers, 2019). Safer gambling messaging is one potential input to a public health approach toward reducing gambling-related harm (Gambling Commission, 2019), similar to the messages used across related public health issues of tobacco and alcohol. Electronic gambling machines (EGMs) are one gambling product which largely contributes to the public's gambling losses in many jurisdictions (The Economist, 2017), and which have been associated with a range of research into safer gambling messaging (Ginley, Whelan, Pfund, Peter, & Meyers, 2017). By contrast, race and sports betting are growing contributors to the Australian public's gambling losses (Queensland Government, 2019), and have been associated with much less research on safer gambling messaging. Consequently, evidence needs to be sourced from other gambling activities and related public health literature on areas such as problem drinking. In Australia, race and sports betting have seen large increases in recent interest, as these are some of the only gambling forms allowed via online and mobile devices. Racing and sports betting were therefore less affected by COVID-19 in-venue closures across Australia in 2020 than other gambling forms such as EGMs. In fact, recent research suggests that 1 in 3 Australian gamblers signed up for a new online wagering account in 2020 (Jenkinson, Sakata, Khokhar, Tajin, & Jatkar, 2020). The purpose of this review is to consider what can be learned from previous gambling and public health literatures with respect to the design of improved marketing messages for race and sports betting.

In Australia there is no consistent national approach to safer gambling messages for race and sports betting. The most common message might well be a message that is common internationally too: "Gamble responsibly". At least initially, this message was broadly endorsed and adopted by industry. A recent eye-tracking study suggests that these messages are either repeated identically so often or take up such a small part of Australian gambling advertisements that regular sports bettors rarely look at them (Lole et al., 2019). It might therefore be proposed that these "gamble responsibly" messages should be made larger in size, just as Australian tobacco warnings have grown larger over time (Borland & Hill, 1997).

However, some researchers doubt the effectiveness of "gamble responsibly" because of the message's implications. A plea to gamble responsibly implies that some fraction of gamblers gamble irresponsibly (Reith, 2008), and that gambling-related harm is therefore a consequence of a lack of individual responsibility. Such an implied message may have negative effects on gambling-related stigma (Miller & Thomas, 2017), which could lead to the message backfiring (e.g., prompting reactance amongst people who feel unjustly accused); thereby reducing the likelihood of gamblers

seeking help. This backfiring has been observed experimentally in the alcohol literature. The corresponding “drink responsibly” message counterproductively encouraged more drinking amongst those who viewed the message compared to those who did not (Moss et al., 2015).

Although we know of no research on whether “gamble responsibly” has any positive or negative effects on help-seeking or other gambling behaviours, there is one robust psychological reason to consider a range of safer gambling messages. The frequent repetition of identical messages has been shown by social psychologists to lead to psychological reactance and subsequently message backfiring (Cacioppo & Petty, 1979). This psychological reactance may well have in part led to the backfire effects observed with the “drink responsibly” message, given the similar ubiquity of that message in the alcohol domain. That is, people may feel the message attempts to restrict their freedom and/or makes an unfair accusation. The avoidance of potential psychological reactance is one reason to consider a range of alternative safer gambling messages for race and sports betting.

Potential individual differences in effectiveness are another reason to consider multiple potential safer gambling messages. In fact, many studies show that generic slogans, particularly delivered on signage within venues, are largely ignored by gamblers (Monaghan & Blaszczynski, 2010; Hing, 2003; Schrans, Grace & Schellinck, 2003). Some gamblers may be more impacted by specific safer gambling tips or strategies, whereas other gamblers may be more impacted by a message with a certain emotional content. Such stable individual differences in specific warning effectiveness have been observed in the graphic health warning tobacco literature (Romer, Peters, Strasser, & Langleben, 2013). Some other research suggests that safer gambling messages can also backfire, if delivered to the wrong part of the population (Armstrong, Donaldson, Langham, Rockloff, & Browne, 2018; Mizerski et al., 2012). It is important to search for potential individual differences --- either positive or negative --- amongst different gambling groups, given the wide range of motives given by gamblers (Stewart & Zack, 2008).

Safer gambling messages are in use in other jurisdictions beyond Australia. In a European context, “gamble responsibly” is also used in Spain (Mouneyrac, Le Floch, Lemerrier, Py, & Roumegue, 2017). Other messages commonly used may be critiqued on similar grounds as the “gamble responsibly” message. For example, “keep the fun in the game” in Ontario, Canada (Newall, Weiss-Cohen, Singmann, Walasek, & Ludvig, 2021), and “so that gambling remains a game” in Switzerland (Mouneyrac et al., 2017). These messages, that implicitly highlight that gambling is a “game”, are similar to the gambling industry’s preferred term of “gaming”, in replacement for “gambling” (Reith, 2008). A safer gambling message which highlights that gambling is a game, and therefore creates connotations of play, has arguably poor face validity. The Canadian message’s additional use of the word “fun” is also not an isolated example of the use of this word in safer gambling messages. “When the fun stops, stop” has been the most common UK safer gambling message since its inception in 2015. The only set of independent evaluations of that message, using contemporaneous gambling behaviour as a dependent variable, observed evidence consistent with a small backfire effect,

whereby participants gambled slightly more often in the presence of the main version of that message, where the word “fun” is written in larger font than the rest of the text (Newall et al., 2021). There are few credible safer gambling messages from international contexts that may be used for the present study, therefore, based on either sound face validity or demonstrably positive behavioural effects.

The remainder of this review will proceed as follows, by first reviewing related literature from other public health domains, before considering five potential message themes based on previous gambling research: teaching safer gambling practices, correcting gambling misperceptions, boosting conscious decision making, norm-based messages, and emotional messages.

COMPARISONS WITH OTHER PUBLIC HEALTH DOMAINS

The most effective messages on consumer behaviour have perhaps been developed in tobacco: prominent health warnings on tobacco packages can help consumers to quit smoking (Hammond, 2011). In tobacco, warning prominence has been shown to be relevant, with larger warnings, and in particular larger graphic warnings of smoking’s consequences, being the most effective (Hammond, 2011; Noar et al., 2016). However, it has also been suggested that daily smokers, who consume the most tobacco, might pay the least attention to tobacco warnings (Maynard, Munafò, & Leonards, 2013; Munafò, Roberts, Bauld, & Leonards, 2011), suggesting that product warnings are only one part of a public health approach to tobacco (Chapman, 1993).

Alcohol containers also have to contain health warnings in many jurisdictions, including in the US warnings about alcohol and pregnancy and drinking and driving (Hilton, 1993). However, these warnings have been critiqued for their lack of prominence (Hilton, 1993; Kersbergen & Field, 2017), the extent to which the alcohol industry has failed to promote effective warnings (Pettigrew et al., 2016; Stockwell, Solomon, O'Brien, Vallance, & Hobin, 2020), and current warnings’ lack on influence on consumers (Hilton, 1993). Cancer health warning have also been investigated experimentally in alcohol (Pettigrew et al., 2014). Out of the various text-based cancer health warnings tested, “Alcohol increases your risk of bowel cancer” was found to be the most effective in one study (Pettigrew et al., 2016). Graphic warnings around alcohol’s health risks have also been trialled to mimic the graphic warnings in current use in tobacco. For example, one experiment tested the addition of a picture of a diseased liver to a tobacco-style warning saying “alcohol causes fatal liver cancer” (Wigg & Stafford, 2016). The addition of this diseased liver picture was associated with greater levels of fear arousal, and an intention to reduce and quit consuming alcohol compared to a text-only warning, replicating the results from tobacco (Hammond, 2011).

Evidence on warnings about gambling-related harm is noticeably absent by comparison. This could potentially be due to a combination of two factors: the evidence base and causal mechanisms for gambling-related harm. Tobacco’s health effects have been documented over decades of

epidemiological research, and alcohol is also in the top five risk factors for disease and disability worldwide (Hobin et al., 2017). Second, tobacco's health effects are viscerally evident, which simplifies the production of impactful graphic tobacco warnings, and a similar argument can be made for graphic alcohol warnings (Wigg & Stafford, 2016). By comparison, rigorous empirical evidence around gambling-related harm has only begun to emerge in the last few years (Browne et al., 2016; Markham, Young, & Doran, 2016; Muggleton et al., 2021). Gambling-related harm's pathways are also much more indirect, by comparison to the effects that tobacco and alcohol have on the body. It appears that financial losses are the core driver of gambling-related harm, but can then affect health and wellbeing through multiple channels (Langham et al., 2016), including via effects on non-gamblers (Goodwin, Browne, Rockloff, & Rose, 2017), for example through via increases in domestic violence (Markham, Doran, & Young, 2016). The multiplicity of types of gambling-related harm may mean that the average disordered gambler has only experienced a fraction of gambling's possible harmful effects (Browne & Rockloff, 2018; Delfabbro & King, 2019).

The indirect nature of gambling-related harm may make it harder to construct safer gambling messages analogous to health warnings in tobacco and alcohol that gamblers find believable and personally relevant. One proposed textual message for the potential effects of gambling-related harm is, 'Gambling is associated with significant harms including increased risks of physical and mental health problems, separation, divorce, financial difficulties and bankruptcy, intimate partner violence and fraud' (Livingstone et al., 2019), p.10. However, such a severe warning may be ignored by the many gamblers who have not experienced such effects (Browne & Rockloff, 2018), and may be an insufficiently strong intervention for those who have (Delfabbro & King, 2020).

Tobacco and alcohol messages may also influence behaviour via effects mediated by emotion. The graphic alcohol warning that was tested experimentally was shown to also increase levels of fear (Wigg & Stafford, 2016). A recent meta-analysis from the tobacco literature suggests that effective graphic warnings use the channels of fear and negative emotions (Noar, Rohde, Barker, Hall, & Brewer, 2020), a view that an even more recent study supports (Sillero-Rejon et al., 2020). It has also been suggested in the wider behaviour change literature that these negative emotion fear appeals have the strongest effects when they also maintain perceptions of self-efficacy, that people have the power to change (Witte & Allen, 2000). Contrastingly, messages can also attempt to leverage the power of positive emotions, such as hope or humour. In tobacco, anti-smoking campaign adverts using humour were rated as being less effective by smokers, non-smokers, and smokers planning to quit than adverts eliciting sadness and fear (Biener, McCallum-Keeler, & Nyman, 2000). By contrast, a study on alcohol messaging suggests that campaigns targeting positive emotions such as happiness and love have a better chance of supporting intentions to reduce alcohol consumption than negative emotion campaigns (Previte, Russell-Bennett, & Parkinson, 2015).

These contrasting effects of emotional messages in tobacco and alcohol complicate the potential use of emotional safer gambling messages. There are plenty of possible negative effects of gambling (Langham et al., 2016; Muggleton et al., 2021), and a message harnessing these which maintains high levels of self-efficacy could be effective (Witte & Allen, 2000). Contrastingly, gambling is associated with low levels of help-seeking (Suurvali, Hodgins, Toneatto, & Cunningham, 2008), perceived social stigma (Horch & Hodgins, 2008), and feelings of shame (Yi & Kanetkar, 2011). It could therefore be that negative-emotion gambling messages will lead to avoidance and fail to encourage positive behavioural impacts. This view would suggest that positive-emotion gambling messages may be more effective.

Although alcohol messaging is generally considered helpful, researchers have illustrated ways that alcohol messaging might backfire and provide a result that is opposite from what is intended (Moss et al., 2015). For example, in one experiment drinkers and non-drinkers selectively viewed alcohol warnings from the US Surgeon General, and found that those viewing the warnings were ironically more likely to discount the risk of drinking (Snyder & Blood, 1992). As another example, “licensing effects” that encourage higher levels of consumption can occur when a given container is described as “low alcohol.” These labels might encourage consumers to consume more of the product than they otherwise would, potentially leading to an overall increase in pure ethanol consumed (Shemilt, Hendry, & Marteau, 2017). Standard drink information, which informs about the alcohol content of a given container meanwhile, could help teenagers to find the most cost-effective drinks to get drunk, and therefore help them to consume as much alcohol as they possibly can (Wells, Graham, & Purcell, 2009).

POTENTIAL SAFER GAMBLING MESSAGE THEMES

TEACHING SAFER GAMBLING PRACTICES

One logical input for safer gambling messages is to provide information on the behaviours correlated most strongly with non-harmful gambling. Some previous research has investigated the safe gambling practices highlighted in previous gambling research and in gambling information online (Hing et al., 2019). In all, 51 safer gambling practices were found. These 51 safer gambling practices were then used to predict actual levels of gambling-related harm in a sample of 577 gamblers who were susceptible to harm. This procedure led to nine safer gambling practices that best predicted low levels of gambling-related harm, including ‘I have a dedicated budget to spend on gambling’, ‘If I’m feeling depressed or upset, I don’t gamble’, and ‘When I gamble, I always set aside a fixed amount to spend.’

These items therefore are potentially valid as candidate safer gambling messages. However, their actual effectiveness as a part of safer gambling messages is not guaranteed. The procedure for

selecting candidate safer gambling messages may have missed some effective safer gambling practices. Any safer gambling practices endorsed by gamblers experiencing low levels of harm may simply be correlates of harm, and if they have no causal influence in reducing gambling-related harm, may therefore not be effective strategies to teach to gamblers. And the effectiveness of any safer gambling practice depends not only on the gambler but also on their decision environment. Setting aside a dedicated budget to spend on gambling, for example, may only work in a setting where a gambler has access to a binding precommitment option; if other gambling funds can be readily accessed, for example in online betting, then it may be hard to put this action into practice. And, not gambling when depressed or upset may be possible only in environments with low levels of gambling marketing; exposure to marketing cues may prompt some gamblers to bet even when they intend not to (Hing, Russell, Thomas, & Jenkinson, 2019).

Moore, Thomas, Kyrios and Bates (2011) similarly examined 27 self-management techniques that they found were more often used with people experiencing gambling problems. Exploratory factor analysis discovered 5 factors, including Cognitive Approaches (e.g., think about consequences), Direct Action (e.g., getting help), Social Experience (e.g., avoid gambling alone), Avoidance (e.g., avoiding casinos), and Limit Setting. To the extent that these practices are logically or verifiably related to a reduction in gambling-related harm, they are useful source materials for messaging.

CORRECTING GAMBLING MISPERCEPTIONS

Corrective thought messaging emerged from the cognitive perspective on gambling, the observation that disordered gamblers tend to have many incorrect beliefs about luck and random chance (Raylu & Oei, 2004; Walker, 1992). The cognitive perspective has successfully informed effective clinical psychological treatments for disordered gamblers (Ladouceur et al., 2001; Petry et al., 2006). The cognitive perspective has also informed the design of corrective thought messages, which aim to correct gamblers' incorrect thoughts during gambling to hopefully modify their behaviour. Corrective thought messages have mainly been applied thus-far to EGMs. As with the tobacco literature, research on corrective thought messages highlights the importance of having salient messages, which in the case of EGMs means messages in the centre of the display, occurring during a break in play, which require active engagement to restart play (Ginley et al., 2017).

One issue with corrective thought messaging is that there is a multiplicity of incorrect thoughts that any gambler can have. A successful corrective thought message must therefore target an incorrect thought that the gambler actually has, be taken on board by the gambler, and then lead to a subsequent behavioural change. This can be demonstrated via the number of items in gambling misperception self-report scales, which one review demonstrates can have between 10 and 56 individually scored items (Leonard, CA, Williams, & Vokey, 2015). However, some frequently-occurring gambling misperceptions are that many gamblers are motivated "to win money" (Gambling

Commission, 2018), and that systems or strategies can help a gambler to achieve this aim (Raylu & Oei, 2004; Walker, 1992).

However, one issue with attempting to correct such potential misperceptions is that gambling forms differ with respect to the balance between skill and luck. Sports and race wagering are potentially some of the highest potential skilled forms of gambling, with one estimate suggesting there is more skill involved in being a successful sports bettor than in being a successful mutual fund manager (Getty, Li, Yano, Gao, & Hosoi, 2018). It is possible that a message which downplays the potential for sports bettors to make money in the long run could be received negatively by a fraction of the audience. More broadly, it has been highlighted that the research base on gambling misperceptions is largely built on luck-based gambling forms such as EGMs (Russell, Hing, & Browne, 2019). This means that any translation of the gambling misperception literature to sports and race wagering should be performed cautiously.

Additionally, it has been highlighted that although corrective thought messages are effective at altering gamblers' knowledge, they are less effective at improving gamblers' behaviours, even within the EGM domains (Monaghan & Blaszczynski, 2009). A recent largescale prospective study analysed the time course of gambling misperceptions, gambling engagement, and disordered gambling (Leonard, C. A., Williams, & McGrath, 2021). Importantly, that study found that although gambling misperceptions co-occur with disordered gambling, they do not appear to be the main driver of disordered gambling. That study concluded by stating that correcting gambling misperceptions should not be the sole aim of gambling treatment. It is therefore reasonable to consider that they should also not be the main content type of safer gambling messages.

BOOSTING CONSCIOUS DECISION MAKING

Given the potential limited effectiveness from correcting gamblers misperceptions (Monaghan & Blaszczynski, 2009), other related approaches should also be considered. One recent proposal is to try to boost gamblers levels of conscious decision making by encouraging analytical thinking (Armstrong, Rockloff, Browne, & Blaszczynski, 2020). This proposal was tested in an experimental 4-week intervention ($N = 94$), investigating the effect of providing gamblers with feedback on responses to a total of 50 gambling fallacies questions. Each question had a normatively correct response based on statistical logic. The intervention involved providing treatment-group participants (i.e., those getting the feedback) with the correct response and the statistical logic underlying that response.

For example:

“Tracey likes to bet on the winner of the local football match. Her last three picks have all won the game. In the next game, the 2 teams are equally matched. All else being equal, what are the odds that her pick for the next match will also win the game?

- a. 50%
- b. More than 50%
- c. Less than 50%

Feedback: While Tracey may be knowledgeable on football, in this instance the teams are evenly matched and therefore, it is irrelevant whether or not Tracey has some football expertise. Each gamble is independent from the last so for her next gamble, the odds of picking a winner out of two otherwise equal opponents is still 50/50.” (Armstrong et al., 2020), pp. 781-782.

By comparison, participants in the control condition simply answered gambling trivia questions without receiving any feedback at all. Analysis of the intervention suggested that treatment-group participants saw a significantly greater improvement in scores on the predictive control subscale of the Gambling Related Cognition Scale (Raylu & Oei, 2004) than control-group participants. Plausibly, a safer gambling message could be constructed based on this example item that informs gamblers that being on a “lucky streak” does not improve the odds of winning on their next bet.

NORM-BASED MESSAGES

Social psychology has shown repeatedly that other people’s behaviour can be a strong influence on how we act. For example, one classic example of how this motivation can backfire was a finding that around 8% of visitors to a national park stole petrified wood chips from a national forest when given a sign that read, ‘Many past visitors have removed the petrified wood from the park, changing the state of the petrified forest’, compared to under 2% when the sign read, ‘Please don’t remove the petrified wood chips’ (Cialdini et al., 2006). This is because the first sign normalised the undesired behaviour; the effect of any individual’s actions was therefore diluted by the perception of the crowd’s behaviour.

Some research has explored related social messages in field studies run in collaboration with online wagering operators. In one study, feedback that gamblers were spending more time than others gambling online, e.g., “You have spent more than X hours playing over the last Y days. Most customers played for no more than Z hours in that time” (Behavioural Insights Team, 2018), p.67. This could be seen as a norm-based intervention, which Behavioural Insights Team field studies have found effective in changing other aspects of consumer behaviour (Behavioural Insights Team,

2012). This message was added to an email sent to actual betting account owners from their online operator. The norm-based messages on time spent gambling were not effective in increasing participants' uptake of safer gambling tools, however (Behavioural Insights Team, 2018). Another study using data collected with online operators investigated the effects of a social message highlighting the popularity of deposit limiting tools, "Most people who use deposit limits find this helps them manage their spending". Although this message led to more wagering customers setting deposit limits, it was no more effective than a control message merely informing them about the presence of a deposit limit setting tool (Heirene & Gainsbury, 2021).

However, another trial also initiated via an online operator found better results. This intervention was a message delivered to gamblers who played 1,000 spins on an online slots product. Control-group participants were simply told that they had played 1,000 spins, whereas treatment-group participants were further told that:

"Only a few people play more than 1,000 slot games. The chance of winning does not increase with the duration of the session. Taking a break often helps, and you can choose the duration of the break." (Auer & Griffiths, 2015), p.3.

Results showed that this message doubled the proportion of gamblers quitting from 0.67% to 1.37%, a significant increase over the sample size of 1.6 million sessions. The norm-based element of this message is the first sentence, that only a few people play more than 1,000 slot games. This message does however contain other information, such as information to potentially correct a gambling misperception ("The chance of winning does not increase with the duration of the session."), and information on a safer gambling practice ("Taking a break often helps, and you can choose the duration of the break"). Furthermore, although the result was statistically significant, the absolute proportion of gamblers quitting was still small (1.37%).

Results of one study showed that personalised feedback on how an at-risk gambler's expenditure compares to their peers' expenditure led to a significant reduction in gambling frequency (Larimer et al., 2012). A meta-analysis on the effect of providing personalised feedback on how a gambler's behaviour differs from that of their peers' behaviour also showed significant effects (Peter et al., 2019). However, these interventions were heterogenous and could each contain multiple elements, introducing a confounding issue. Of relevance to safer gambling messages, the element of personalisation must be absent from any population-based messaging approach. Therefore, a norm-based safer gambling message can only provide information on population averages and must depend on an individual to know their own situation well enough to make an accurate comparison with the average.

One solution to this inability to provide personalised comparisons is to provide particularly extreme population averages. This extreme average can therefore be inferred to apply to most gamblers

receiving the message. For example, the Chief Executive of a large UK-based gambling operator gave the following evidence in a House of Lords Select Committee: “99% of the customers who play on our sites will lose, so you’re probably losing more if you play more.” (Alexander, 2020). Although more than 1% of gamblers are likely to think that they are in the 1% of gamblers that do not lose, this extreme population figure should still appear relevant to many gamblers. Similarly, population averages on gambling expenditure could be given, which when provided on an aggregate level can amount to large amounts, and which will appear relevant to most gamblers. Current figures put the Australian public’s gambling losses at \$24.8 billion a year (Wallace, 2021).

Another approach may be to use norm-based information that may be surprising to many recipients of the information. For example, it has been found that a problem gambler affects on average six of their close family and friends (Goodwin et al., 2017). Similarly, population-based prevalence surveys typically find that the problem gambling base rate is around 1% (Collins, Shaffer, Ladouceur, Blaszczynski, & Fong, 2020), and so many gamblers may think that is an appropriate base rate for gambling-related harm, as well. However, some recent estimates suggest this proportion might be much higher --- potentially as high as one in five gamblers (Rockloff, M, Browne, M, Hing, N, Thorne, H, Russell, A, Greer, N, Tran, K, Brook, K and Sproston, K, 2020) or around 10% of the overall population.

A benefit to using either extreme or surprising norm-based information is that these may help reduce the likelihood of these messages backfiring. Remember that the social psychology study found that a message that implied that an undesired behaviour was nonetheless common led to increases in the behaviour (Cialdini et al., 2006). It is possible with norm-based messages that a gambler may, for example, see that their expenditure is below population averages, and therefore look to gamble more. However, the messages proposed over the previous two paragraphs should lessen the possibility of this backfire effect occurring.

EMOTIONAL MESSAGES

One previous experimental study has suggested that EGM gambling is motivated by a desire to escape negative self-reflection (Rockloff, Greer, Fay, & Evans, 2011). Previous research has also investigated the effects of safer gambling messages leveraging negative emotions. In one study (Munoz, Chebat, & Suissa, 2010), the highly-threatening message, ‘Excessive gambling may drive you to intense distress and suicidal thoughts’ was compared to a control condition message of, ‘gambling should remain a game’, which mimics some of the safer gambling messages in current use (Mouneyrac et al., 2017). This study found that the message did induce fear and was able to make gamblers think more deeply about their behaviour (Munoz et al., 2010). A follow-up study explored the effects of adding a graphic warning label to the fear-inducing text also intending to induce fear (Munoz, Chebat, & Borges, 2013). The graphic used involved a cartoon of a gambler

being eaten by an EGM --- which is quite different to the graphic warnings used in tobacco (Noar et al., 2020) and which have been trialled in alcohol use (Wigg & Stafford, 2016). Results of this study supported the previous gambling study, suggesting that the addition of a graphic to fear-inducing text helped to further increase feelings of fear and the extent to which gamblers thought about their behaviour (Munoz et al., 2013). However, one qualitative study revealed that many gamblers thought that excessively fear-inducing stimuli may be experienced as stigma-inducing and may be ineffective due to avoidance (De Vos, Crouch, Quester, & Illicic, 2017). This is a plausible alternative explanation, at least for some groups, which the earlier studies' lack of behavioural measures of help-seeking or gambling reduction cannot rule out (Munoz et al., 2010; Munoz et al., 2013).

By contrast, there does not appear to be any empirical research on the role of safer gambling messages which induce positive emotions. One recent opinion piece states that gambling researchers should attempt to address this, given that positive emotional messages have had some success in other public health domains (Harris, Parke, & Griffiths, 2018). In particular, one suggested message was as follows, 'save the rest of your money for that family trip next month' (Harris et al., 2018), p.271.

CONCLUSION

This review has considered the relevant lessons that can be applied for safer gambling messages in race and sports wagering from alcohol, tobacco, and previous gambling research. Lessons from previous research included avoiding very simple messages which are repeated often, and the importance of testing messages in order to show that they do not lead to backfire effects either across the whole population or within certain subgroups. Finally, the review concluded with five potential message themes based on previous gambling research as worth consideration in the next phase of the project: teaching safer gambling practices, correcting gambling misperceptions, boosting conscious decision making, norm-based messages, and emotional messages.

FOCUS GROUP STUDY

The literature review highlighted several potential message themes from the previous gambling and public health messaging literatures. However, to ensure sufficient statistical power, it was not possible to include messages from all these potential message types in the randomised controlled trial (RCT). Therefore, candidate message group exemplars from the literature review were used as prompts in this stage of the project, with three focus groups including stakeholder groups of academics, treatment providers, and regulators. These groups were sought for their range of expertise relevant to the development of safer gambling messages. The feedback from these groups was used to narrow the list of potential message themes into a smaller number of candidate message themes to serve in the RCT. The focus group discussions were further used to explore an expanded universe of potential messages that might be used in the trial.

The design of safer gambling messages must reflect the diversity of gamblers' situations. Analysis of UK bank data suggests that the median gambler uses just 1.2% of their spending on electronic gambling transactions, whereas the 99th percentile gambler uses 71.9% of their spending on electronic gambling transactions (Muggleton et al., 2021). Any population-based approach must make trade-offs between messages catered toward the large number of gamblers who may be experiencing a small amount of harm, versus the smaller number of gamblers who may be experiencing a lot of harm (Browne & Rockloff, 2018; Delfabbro & King, 2017). Those experiencing a lot of harm might seem to be a logical group to intervene on, but as a relatively unintrusive intervention, safer gambling messages may fail to have much impact on their behaviour. Gamblers experiencing a small amount of harm may be more receptive to change, and there are more of these gamblers that a safer gambling messaging campaign can reach. However, a safer gambling messaging campaign should still be sensitive to the situations of gamblers experiencing a lot of harm and strive to avoid content that might trigger backfire effects amongst them (see the Introduction for more on the topic of message backfiring).

METHOD

The focus group interviews were conducted by a group of researchers from the project, and then transcribed by a professional service. Interview scripts were then analysed via thematic analysis, where the interview scripts were examined iteratively to uncover emergent themes from the data (Braun & Clark, 2006). Given the scope and size of the interview data, thematic analysis was conducted on the whole dataset rather than subsets of participants. This stage of the study was approved by the CQUniversity Human Research Ethics Committee (22416). Participants were not compensated for their time.

PARTICIPANTS

The three groups were comprised of the following numbers of participants: academics (six), treatment providers (six), and regulators (nine). Anonymised details of the participants' roles are summarised in Table 1. Each participant was chosen for their expertise in gambling by virtue of their professional involvement in gambling-related research, treatment or regulation. The inclusion of these groups, at a minimum, was part of the brief provided by Gambling Research Australia. Arguably, consumer groups might have been a useful addition to focus group discussion, although at least some participants had lived-experience of gambling-related problems. Moreover, there arguably could have been some value in mixing members from these groups, although it would be impractical under such arrangements to uniquely identify the membership of each speaker.

Table 1. Details of participants

Academics	Treatment providers	Regulators
Senior Lecturer	Peer Support Worker, Gambling Support Services	A/Director Gambling and Racing
Supervising Clinical Psychologist	Financial Counsellor	Senior Officer, Regulation
Senior Research Fellow	Principal Solicitor	Liquor & Gambling Commissioner
Professor	Senior Social Justice Advocate	Manager - Policy
Senior Industry Engagement Coordinator	Clinical lead	Principal Policy Officer
Senior Research Fellow	Gamblers Help Therapeutic Counsellor	Director
		Executive, Responsible Gambling
		Assistant Director Gambling Harm Prevention
		Manager, Gambling Policy

EXEMPLARS OF EACH MESSAGE GROUP PRESENTED TO PARTICIPANTS

This section shows exemplars of each message group that were presented to participants, which were chosen to increase an understanding for each message type. A full copy of the interview materials is provided in *Appendix A*. Participants were told that these messages were intended to help gamblers appraise their wagering behaviour, including the amount of time and money spent wagering. All participants were encouraged to contribute to the discussions with the interviewer asking, “does anyone have something more to add?” prior to moving on to the next part of the discussion.

Teaching safer gambling practices

- When you gamble, always set aside a fixed amount you can spend.
- Have a dedicated budget for your gambling and stick to it.
- Gambling when you are feeling depressed or upset can lead to spending more money than you mean to.

Correcting gambling misperceptions

- Gambling is not a good way to make money - the house always wins in the end.
- Systems or strategies will not make you successful at gambling.
- Australians lose \$24.8 billion a year gambling - the house always wins in the end.

Boosting conscious decision making

■ Tracey likes to bet on the winner of the local football match. Her last three picks have all won the game. In the next game, the 2 teams are equally matched. All else being equal, what are the odds that her pick for the next match will also win the game?

- a. 50%
- b. More than 50%
- c. Less than 50%

Feedback: While Tracey may be knowledgeable on football, in this instance the teams are evenly matched and therefore, it is irrelevant whether or not Tracey has some football expertise. Each

gamble is independent from the last so for her next gamble, the odds of picking a winner out of two otherwise equal opponents is still 50/50.

■ Going to the races, Belinda noticed she's won every time she brought her partner to the track. Her chances of winning next time are:

- a. Better if she brings her partner
- b. Worse if she brings her partner
- c. About the same, regardless of whether or not she brings her partner

Feedback: In gambling, no one person is more or less lucky than anyone else. Similarly, despite many superstitions suggesting otherwise, there is no strategy or ritual that is likely to help you win. Belinda is incorrectly attributing her wins to the presence of her partner. Her good fortune when accompanied by her partner is nothing more than a coincidence.

Norm-based messages

- On average, one person's gambling problem hurts six of their close family and friends.
- One in five people who gamble experience harm from their gambling.
- Many gamblers have relationship conflict as well as feelings of regret and anger about their gambling.

Emotional messages

- How is gambling hurting your relationships?
- Have you ever been late to pick up your child because of your gambling?
- What else could you be doing with this money?

PROCEDURE

Focus groups were conducted online in a 2-hour session using the Zoom platform during the month of September 2020. Some participants joined via computer videoconference, although others joined the zoom sessions via telephone. To aid in their preparation for the discussions, participants were provided with the draft literature review 2 weeks prior to the scheduled session. Group members introduced themselves at the start of the session. The discussion was free-form without specified rules for participation (e.g., muted mics, interruption).

RESULTS AND DISCUSSION

THEME #1: MESSAGES THOUGHT INSUFFICIENT TO MEANINGFULLY CHANGE BEHAVIOUR

Safer gambling messages are a relatively unobtrusive intervention, compared to other potential ways of reducing gambling-related harm such as limitations on product characteristics availability (Livingstone et al., 2019). Participants from all groups thought that messages could be insufficient to meaningfully change behaviour, at least with respect to certain groups of gamblers (with between-group differences amongst gamblers covered more extensively in the second theme). One of the regulators said:

If people are already in a situation and I've dealt with a few people who were betting on about a second division Belgium tennis because that was the next thing on. A message saying gambling is bad for you, that's probably beyond that, we want to catch them before that point. (Regulator 1)

One of the academics speculated that safer gambling messages may fail to impact behaviour due to gamblers not recognising the risk that they are exposed to:

I'm just thinking if we're really thinking about sports and race betting as well and in my experience in the research we've done a lot of people who gamble on these products who maybe experiencing or at risk of problems [and] don't perceive themselves to be at risk of experiencing problems. (Academic 4)

I keep going back to young men and thinking about them and I keep going back to harm and it really is about: I really feel like so many of them don't perceive they're at any risk of harm, and from our research people who gamble regularly, people who bet regularly, a lot of them are. So, it's awareness raising. We need them to understand they might be at risk and then, I guess, moderating their behaviour to reduce and minimise risk. So how do we do that? (Academic 4)

This opinion was also shared by the treatment providers, who highlighted the multiple barriers towards help-seeking:

Well, as an organisation, the reason that they employed me, because a lot of organisations, you'll have a building and then people and you can have as many hotline numbers as you want and messages as you want, to have people, whether it be alcohol addiction, drug addiction, to have people come to you is always going to be a barrier. (Treatment provider 4)

Treatment providers also highlighted the potential difficulty of attracting sufficient attention from a gambler to help them to contemplate the behaviour they were engaged in:

It's grabbing their attention, because people just get into a rhythm of gambling and you've got to do something that just says, "Hey, rethink," and then start the other part about, "There's help out there for you." But it's grabbing their attention that we've found to be probably one of the hardest things, to say, "Stop. There is an alternate way. There are other things that you can do." (Treatment provider 6)

This opinion also appeared specifically related to the *teaching safer gambling practices* message type. Academics felt that this message bore similarities with the 'gamble responsibly' message in terms of being too vague to meaningfully guide gamblers' behaviour:

Have a dedicated budget - the second part of that problem is most of our research has said just giving a notice like that is insufficient because all it is - is another slogan. It actually doesn't say anything about how you set a budget. Has nothing on that. (Academic 1)

Meanwhile, treatment providers felt that this message type was insufficient to change the behaviour of high-spending gamblers:

It's good practical advice, but for my clients, it wouldn't hit the mark. So, the ones that I see, and at the moment it's worse than it's ever been at the moment, the matters we have, like we've got a couple of matters at \$7 million, so these people are gambling at a furious rate if you look at their player statements, every couple of seconds, like it's just manic, absolutely manic. So, saying that they should've set a budget, or you should set a budget is just not going to hit the target. (Treatment provider 3)

As a gambler, and I would agree with [Participant 3], is that it doesn't matter. If I set a budget, I don't care about budgets. I mean, budgets are great when I walk to the track or if I want to go and bet something and I can walk in with great intentions. I can get access to money. If I want money, I'll get access to it and that's the thing. (Treatment provider 4)

This opinion was also held by treatment providers with respect to the *correcting gambling misperceptions* message type:

I actually suspect there are better areas for messaging than this particular one. This feels like trying to slam a square peg in a round hole, thinking you might be able to make it work if you use a big enough hammer. (Treatment provider 2)

The *boosting conscious decision-making* message type was also thought by academics to be unlikely to meaningfully change behaviour. From this group, it was felt that this message type would not succeed in its aim of increasing deliberate thought:

I don't think it would be effective and people don't like to think over advertisements. They just want to see it and get a message shoved down their throat - whether they want it or not. So, yes, I think you're asking a consumer to think about something they don't want to think about with those ones. (Academic 2)

A similar opinion was held by treatment providers, who focused on the difficulty of getting disordered gamblers to leave the 'in the zone' gambling state (Schüll, 2012):

People say they're in the zone, they're in a bubble, they're in a trance, they're robotic. They're just not aware. They can't think critically, they can't self-observe or learn. (Treatment provider 3)

It might work at school level where you're trying to teach children to look at the odds or to understand the odds, but certainly when the money has gone, they know that they're not going to win. Like we were saying before, [Participant 3] was saying, people who are caught up in that, they don't see it until the last dollar they've got to spend is spent, before they see the reality of what they're doing. (Treatment provider 1)

THEME #2: CRAFTING MESSAGES TO REFLECT THE DIVERSITY OF GAMBLERS' SITUATIONS

In part, the treatment providers' negative reactions to multiple message types may reflect their focus on gamblers who are experiencing high levels of harm. Given that safer gambling messages are a relatively light-touch intervention, any message may fail to have much impact on gamblers experiencing high levels of harm. This was acknowledged by one of the treatment providers:

I think it seems to be that not all the messages is going to fit everybody. Our organisation, along with probably [another participant's], we see mostly people that have been gambling a long time and have a very big amount of debt or have a lot of consequences. So, it seems to be that when you're trying to get messages across to people in that situation, it might be different to the messages that in your research, you've also pointed out with low harm. But of course, that's very important, to try and get messages across to them as well. (Treatment provider 5)

Regulators were cognisant that safer gambler messages might only be effective on gamblers experiencing lower levels of harm:

Where this should be pitched is at people who are at risk of gambling harm, some would say that's everybody ... So I think it is anyone who is potentially at risk and you're not going to capture everybody. People will say, I'm fine I'm under control that doesn't apply to me, it applies to others who are in such a phase that they don't actually want to listen to anything. But there's a big band in the middle that we should be targeting these at, I think. (Regulator 1)

Regulators were also worried that a message designed to encourage a gambler experiencing high levels of harm to seek help may fail to strike a chord with other gamblers. In this sense, a safer gambling message may fail to have any effect, by being directed to the group most resistant to messages' effects on behaviour, and therefore appearing irrelevant to potentially more-receptive gamblers:

I suppose that might speak to your point but if we're wanting to talk about help seeking when we're targeting that as a very specific group that perhaps the majority of consumers won't engage with. So, I think we also need to think a bit about what do people actually want to know and see if we can find some intersect between that and what we want to say. (Regulator 6)

An academic had the same thought, stating their thoughts in terms of the Problem Gambling Severity Index (PGSI), a measurement of disordered gambling that is commonly used as a proxy for gambling-related harm (Markham, Young, & Doran, 2016):

Is it to reduce harm in people with problem gambling or to reduce harm from problems developing or is it to get people to stick to their limits so that they're over - across the board it's about reducing gambling? Again, our research has shown that when you look at PGSI score and these messages, they score differently according to levels of PGSI. (Academic 1)

THEME #3: MESSAGES SHOULD NOT INCREASE PERCEIVED LEVELS OF GAMBLING STIGMA

The three groups unanimously emphasised the importance of using messages that would not contribute to potential negative perceptions around gambling and gambling-related stigma. Regulators emphasised the potential for this from previous gambling messaging campaigns:

Just in terms of some of our previous campaigns we have actually found that in some of the results where we had a previous around EGM [electronic gambling machine] gambling. Around things saying like, oh you know, basically the kids can have cereal for dinner and things like that. We found in the testing of that later on that really label avoidance was the main sort of consequence from that type of messaging. (Regulator 3)

Another regulator specifically mentioned the potential for *safer gambling practices* messages to be stigmatising:

Messages like 'Set a limit and don't exceed it,' actually are quite stigmatising as well. As of course is 'Gambling Responsibly' because the messages if you are a problem gambler is because you can't take these very common-sense steps. So, while I agree that messages – we had a famous campaign that was about someone who couldn't pay at the supermarket and we definitely saw that that was a problem for stigma. Those kinds of behavioural messages can also be quite stigmatising as well. (Regulator 8)

These concerns were echoed by treatment providers, who emphasised that such material could trigger the avoidant state mentioned under the first theme which may reduce receptivity to safer gambling messages:

One of the main reasons people relapse is because of negative emotions. And when we re-looked at gambling help online, we had to change the way we were actually connecting with people. And we've found that if we make people feel more guilty or more ashamed, even when I was supervising people on the help line, listening in to calls, is that if we ask for these confessionals, "How much have you gambled? How long have you been gambling for," people just get really guilty, they get really ashamed and they just go back to that behaviour, that erratic behaviour where they can't think critically. (Treatment provider 1)

In fact, treatment providers' concerns about potentially contributing to gambling-related stigma was perhaps the key theme to come out of that focus group. There was only one potential message type that they thought might be helpful, and that type will be discussed under the next theme. For reasons stated earlier, gamblers experiencing high levels of harm might not be the most natural audience for safer gambling messages, but safer gambling messages should still be carefully designed to avoid backfire effects amongst this group. The following additional quote highlights how overriding this concern was amongst treatment providers:

It's just going to cause more domestic relationship problems. You've got to be very careful how you put the message out there. It's really got to encourage help seeking. It's got to reduce shame and stigma and provide hope. Those messages don't work. We know the methamphetamine messages in Melbourne made people use more methamphetamine. It was triggering. You have to be careful. (Treatment provider 1)

Academics also raised a number of concerns about gambling stigma. Echoing what one of the regulators said, this concern was thought to be particularly relevant to *safer gambling practices* messages:

The third one for me sticks out and it's a bit similar to what participant one said. Often when people are depressed that's why they go and gamble, particularly pokies. We know that a fair bit. So, would that be potentially stigmatising someone who is depressed? It's possible. [Academic 2]

Another academic raised a similar concern with the norm-based message that, “On average, one person’s gambling problem hurts six of their close family and friends.”:

I think probably whilst - I guess you'd have to do empirical work to see which way this would go but it does raise the risk that when you're really emphasising that if you gamble, you're causing harm to other people it could potentially increase the stigma that gamblers are these people who are hurting their families. [Academic 6]

THEME #4: HARNESSING HOPEFULNESS AND OTHER POSITIVE EMOTIONS

The emotional message examples in the focus group materials were primarily focused on the power of negative emotions to harness behavioural change, similar to the graphic health warnings on cigarettes. However, as the literature review highlighted, some gambling researchers have suggested that positive emotional messages should also be given further consideration (Harris, Parke, & Griffiths, 2018). Stakeholders in each of the three focus groups brought up the potential utility of safer gambling messages that harness hopefulness and other positive emotions.

Participants in the regulator focus group had reached this perspective from their experiences in designing population-based campaigns:

Something that we've tried in [one jurisdiction] is a positively framed emotional message. So as in, if you're gambling too much you might feel stressed and if you were to reduce your gambling you would actually feel better. There's an ad that the [unclear] did with the blowing up the balloon and it reducing the stress with a reduction in gambling. So, there is a way to frame emotional messages to focus on positive emotions. (Regulator 8)

So, one of the things that our research has shown with developing our campaigns is around showing people what they might be missing out on. So, it really does only work when you've got imagery so it's tricky with the message, but it's sort of around what gambling is really costing you. So, you know, things that really resonated with people were family, children, the time with friends, those sorts of things, rather than always focusing on the negatives around financial, negatives and those sorts of things, so that was one area. (Regulator 5)

A very similar perspective was brought forward by a participant in the academic focus group:

Certainly, in our messaging the [organisation]'s found that trying to put a more positive spin on things or you will feel better by doing X or there's a positive outcome from what you're doing people seem to support that a bit more. Admittedly when we were doing that - that was in the PG [problem gambler] harms group. That was who we were trying to talk to and that kind of stuff. But certainly, the idea of rather than going with what damage have you done it's how much better will things be if you do X or you can do Y to feel better. (Academic 5)

This perspective was echoed by participants in the treatment providers focus group, whose experience of dealing with gamblers experiencing high levels of harm reinforced the benefits of this approach:

I think it's really important to give them some hopeful messages, because they are going to be distressed. Despair is what people I talk to say. So, we need to say, "You know what? It's okay to feel upset, or it's normal to be upset. With the right help, you can get better. We can help you stop." Really giving those messages to pull them out of that despair is really important. That's what I've found all the years I've worked with people and from my research. (Treatment provider 1)

And that sort of positive message, and I know that [Participant 1], you keep talking about that hope, that's something that I've said again, and I'll say it again, is that I'm actually building on that hope, that people need to have a look at that. (Treatment provider 4)

Furthermore, one of the treatment providers felt that messages from other categories, such as messages aiming to correct gambling misperceptions, could be made more effective if altered to provide a more hopeful message to the gambler:

And they're not going to get it unless you somehow break that cycle, that manic gambling, and then you can get them into treatment. So, something like, "How much have you spent today? Contact gambling help. We want to help you", is still a positive message, but it makes them stop and think. Rather than actually talking about statistics and about the harms of gambling, you just need them to actually stop in that moment and think about how much they've spent or how long they've been sitting there. (Treatment provider 3)

THEME #5: IMPROVED NORM-BASED MESSAGES

As the Introduction highlighted, norm-based messages can be constructed in ways that are successful, or in ways that encourage undesired behaviours and backfire (Cialdini et al., 2006). The norm-based message type was overall received positively, although focus group participants

provided a number of pieces of feedback which informed the subsequent design of these for the RCT.

A participant from the regulator group highlighted how a norm-based message based around harms to others could also undesirably increase feelings of stigma:

Look I really like the normative stuff. I think the impact on others again has that potential to be stigmatising and has to be handled really carefully. (Regulator 6)

An academic also raised the issue of how a poorly worded norm-based message could normalise and potentially reinforce gambling-related harm on affected others; similar to how one of the original social psychology norm-based messages encouraged the undesired behaviour (Cialdini et al., 2006):

I agree. Because one of the things you could interpret these as if you hurt your family and friends, you're pretty much a normal gambler because one in six do it. So, if you're trying to change subjective norms - that's not going to do it. That's going to reinforce those norms. (Academic 1)

Other participants in the regulator group were enthusiastic about norm-based messaging around gambling expenditure:

I think there might be value in putting out a normative message about how much people actually spend on gambling because most people spend quite a small amount like \$20 a week. If you put that out as a message it can encourage people to realise that them spending \$200 a week is actually a lot more than is normal. (Regulator, unknown)

That's one issue, if we're going to be able to explore harms or whether or not we try and normalise it, I love that example of the \$20 versus \$200 that starts to have people thinking a little bit comparatively about their behaviours as opposed to others. (Regulator 7)

One of the academics highlighted that a norm-based message that truthfully communicated the rarity of winning in sports and race wagering could be effective:

But what we find is the one thing actually for most clients that actually is quite shocking for them and gives them a bit of a step back is just how few people do actually run a profit from gambling. So, a few years ago we were speaking to some executives from TAB Corp and they were saying that out of the 500,000 accounts that TAB Corp has in New South Wales the number that managed to make a profit over a 12 month period is 50.

That statistic is the one that most of our problem gamblers are most taken aback by as opposed to sort of some of the specifics about how much money is lost overall. So, it's really

about drumming home that even if you win today the chance of you actually making money from this is infinitesimally small even if you have systems and strategies. They're almost certainly useless - the systems and strategies you have. The sort of systems and strategies you need to make a profit are well beyond the capability of 99.9 per cent of the population. (Academic, unknown)

One way to reduce potential backfires from norm-based messaging around gambling expenditure was highlighted by one of the participants in the academic focus group, who highlighted how the skewed nature of gambling distributions affect the population mean more than the population median:

One of the things we found in looking at this you just need to be a little bit careful talking about average frequency and spend and stuff because if you do it as a group obviously your heavy outliers, your [problem gamblers] stuff tend to push up those averages. So, you've just got to be careful in the way you express it otherwise you can start to normalise levels of expenditure that are still potentially harmful. (Academic 5)

Given that gambling expenditure and time spent gambling are positively skewed, with some large outliers towards the right of the distribution, population means will be above more than what 50% of gamblers experience. Population means may therefore normalise and reinforce undesirably high levels of engagement with sports betting and race wagering. Given this skewness, population medians will be lower than these population means. Norm-based messages might therefore be best expressed as, for instance, "50% of gamblers spent less than x hours gambling a week."

LIMITATIONS

It is important to recognise that although focus group participants were experts within their respective areas, how to communicate messages effectively is an open area of investigation. In fact, the present set of studies would be unnecessary if the science was settled. Therefore, it is important to recognise that opinions expressed should not be taken as a set of facts. Moreover, discussions were guided by a set of questions developed by the researchers. Necessarily, these questions narrowed the scope of discussion. A more free-flowing conversation about messages, or conversations based on other questions, may have delivered different results. Lastly, the present questions were not oriented towards a discussion about the medium of the messages, such as TV, radio or internet ads, and thus these questions remained largely unexplored.

CONCLUSIONS

The thematic analysis uncovered five emergent themes from the three focus groups: That many messages may be insufficient to influence behaviour; that messages should be designed with

different gamblers' situations in mind; that messages should not contribute to gambling stigma; that positive emotional messages could be effective at encouraging behaviour change; and that thoughtfully designed norm-based messages could also be successful. Therefore, the RCT was designed to compare status quo safer gambling messages against novel positive emotional and norm-based messages. Both message types received the greatest overall support from interviewees, and the emergent themes were design properties that were taken as suggestions to maximise value of exemplar messages within each theme.

RANDOMISED CONTROL TRIAL

INTRODUCTION

The focus group discussions outlined in the prior chapter were devised to narrow the field of potential messages that might be effective in shielding race and sports bettors from some gambling harm. This evidence, gathered from regulators, treatment professionals and researchers, derives value from tapping a deep well of professional experience. Nevertheless, empirical investigation of the attitudes and behaviours of gamblers is the most pertinent and direct form of evidence on the utility of messaging.

MECHANISM OF HARM

Arguably the best source of evidence for harm reduction can be derived from understanding the mechanism that is intrinsic to gambling problems. As stated in the national definition of problem gambling, gambling problems result from “difficulties in limiting money and/or time spent on gambling which leads to adverse consequences for the gambler, others, or for the community.” (Neal et al., 2005). Thus, primary evidence for message effectiveness can be sought directly from the outcome of interest, that is “adverse consequences” (or harm), and the immediate antecedent causes of “time and/or money spent gambling.” Effective messages should curb time and money spent on gambling, particularly in excess of a person's capacity to sustain these limited resources, which ultimately should reduce gambling harm. Presenting people with a variety of protective messages and gauging how they affect their gambling is the best demonstration of relative effectiveness.

A FLY IN THE OINTMENT

One of the limitations of messaging strategies is that, like all other forms of persuasion, it often takes multiple impressions before a person is nudged into action. A psychology literature on the “intention-behaviour gap” illustrates that many people may fail to enact desired changes in behaviour (Sheeran, 2002), such as reductions in time or money spent wagering. Moreover, people may not even be aware of how a successful messaging campaign is affecting their decision-making process, so they cannot always tell you about it. These limitations create some headwinds against a simple presentation of one message and the hopeful outcome of reduced gambling time, expenditures, and harm amongst those who are over committed.

A MULTI-PRONGED SOLUTION

First, it is important to create multiple impressions for messages to create an environment for action. Psychological research suggests that the repetition of one message, such as “gamble responsibly,” can lead to habituation, whereby people fail to attend to a message they have seen many times before, or even negative reactance, where the message starts to backfire from its intended purpose (Cacioppo & Petty, 1979). Thus, it is necessary to present a variety of messages grouped together into themes with the hope of motivating change. Moreover, attitudinal and behavioural change may take some time, even with successful repeated impressions. Both factors suggested that a longitudinal design was likely to be most effective in producing a positive outcome.

Second, the outcomes of time-spent-gambling, money-bet and gambling harm are not the only variables of interest. Motivational factors are also key contributors to behavioural change and may realistically change over shorter periods of time than these outcomes. Most behavioural change models of health, such as the Theory of Reasoned Action (Fishbein, 1980) and the Theory of Planned Behaviour (Ajzen, 1991), propose that attitude change precedes and motivates behavioural change. Consequently, it is helpful to explore how messaging affects psychological motivating factors, such as gambling urges (Potenza et al., 2003). Moreover, gambling is often supported by fallacious gambling beliefs that at least some messages may correct. Thus, a measure of such fallacious gambling beliefs is another outcome for evaluating effective messaging.

Third, it is important to also explore gamblers’ attitudes towards messaging. Behavioural change is difficult to achieve, even by seasoned advertisers. Department store pioneer and marketer, John Wanamaker (1838-1922), famously remarked “Half the money I spend on advertising is wasted; the trouble is I don’t know which half.” (Reiley, 2011). The solution to this dilemma, arguably, is assuming that it is likely that messages that gamblers *perceive* to be helpful likely are helpful. Gamblers have at least some introspective access to motivations surrounding their own behaviours, and therefore their subjective judgements about which messages are helpful are a useful, if more distal, source of evidence for message effectiveness.

METHODS

RANDOMISED CONTROL TRIAL (RCT)

To measure the effectiveness of messages, a longitudinal trial was conducted that followed the structure of a random-control drug trial. The study was composed of 5 weekly surveys, starting February 15, 2021, and included a baseline survey, 3 follow-up surveys where participants viewed and commented on protective messages, and a final survey to capture follow-on outcomes. The composition of the trial

allowed for the assessment of 2 types of messages that were determined to be the best candidates for improving gambling outcomes from the prior chapter: positive emotional messaging and norm-based messaging. An additional (i.e., 3rd) control condition was employed using protective messages sourced from jurisdictions around the world, such as “gamble responsibly” (Australia) and “when the fun stops, stop” (UK). In principle, an effective new messaging strategy should employ message types that perform reliably better than the current standards.

To maintain a reasonable survey length and to minimise bias potentially introduced by carryover effects (e.g, repeated questions about gambling-harm, for instance, could cause people to give falsely rosy assessments), some outcomes were only measured in weeks 1 and 5 as indicated below. Other outcome measures, such as gambling urges, were recorded each week. Lastly, basic demographics, outlined in Table 2, were surveyed at week 1.

PARTICIPANTS

Survey respondents were recruited with the assistance of Qualtrics, a service that aggregates a number of online panel providers. Participants, 18 years or older, were recruited based on having bet on sports at least monthly prior to survey administration. Recruiting semi-regular gamblers was necessary in order to (potentially) detect week-by-week changes in gambling behaviour. More specific requirements, such as insisting on only online wagerers, were not made in order to control costs. Potential participants were further filtered by Qualtrics to ensure that the same participants were not recruited through multiple panels for this one study. A total of 2,248 people completed the week 1 baseline survey. However, 174 participants were removed from the study (not analysed) based on week 1 responses for the following reasons:

- 14 responses removed for being duplicate responders
- 45 respondents flagged for speeding through the survey, indicating inattention
- 11 flagged for flatlining/straightlining through responses
- 10 flagged as having IPs outside of Australia, despite the survey only being open to Australian residents
- 3 flagged for suspicious open-ended responses
- 1 flagged for suspiciously high gambling expenditure
- 4 flagged for entering their mobile number into total amount bet each week
- 118 flagged for entering the same amount for multiple gambling expenditure questions, a form of open-ended flatlining

From the above, 206 potential problems in data quality were flagged, but some participants had multiple problems. Consequently, there were 174 unique participants who were removed from the study entirely. Potentially errant responses were also removed from weeks 1 (174), week 2 (51), week 3 (32), week 4

(55) and week 5 (81) for a multitude of reasons outlined above, although only that single week's data was removed. Participants could complete the rest of the study after having provided acceptable data in week 1. A total of 2,074 participants provided valid data for the analyses. Retention (after removals) for each week were: 2,074 (week 1), 1,425 (week 2), 1,325 (week 3), 1,353 (week 4) and 1,116 (week 5).

STRATIFIED RANDOM ASSIGNMENT

To maximise the comparability of the 3 groups, participants were randomly assigned to condition from pre-established strata gathered in the week 1 baseline survey. To establish the strata prior to random assignment, participants were categorised into cells by:

- Age (0-39 vs 40+)
- Gender (male vs female/other)
- Whether they bet on racing and/or sports on a weekly basis (yes, no)
- PGSI (non-problem and low risk vs moderate risk and problem, i.e., scores of 0-2 vs. 3+)

This process ensured that a roughly equal number of participants from each stratum variable (age, gender, weekly betting, PGSI status) would be contained within each group. However, the procedure also retained the desirable feature that each participant had an equal chance of being assigned to any group.

MEASURES

The principal independent variable in the trial was the assigned condition (i.e., positive emotional, norm-based, control). Our hypotheses were that the assigned condition would have a differentially protective effect on risk from gambling as defined by several outcome measures. In particular, the most effective type of messages should improve upon the performance of the control condition messages that are standard practice throughout the world (e.g., Australia, UK, Canada). The outcome measures were:

- Amount bet (weeks 1-5)

Survey Question:

"Please do not worry about wins or losses, just how much money you've placed on bets. For example, if you placed \$20 worth of bets, and won \$50, you would say \$20 here.

Please do NOT consider any other forms of gambling, like pokies.

(Please enter in total dollars, to the nearest dollar.)"

- Time spent gambling (weeks 1-5)

Survey Question:

“In the last 7 days, how much total time did you spend betting on sports, racing, esports or novelty bets (e.g., elections)?

Please include any time you spent thinking about your betting as well as watching sports or races that you had placed a bet on.

(Please enter your answer in minutes. So if you spent 2 hours, you would say 120 minutes.)”

- Gambling harm (SGHS) (week 1 and week 5 only)

The Short Gambling Harms Screen (SGHS) is a 10-item checklist (y,n) of common harms experienced as a result of gambling. Items include “increased credit card debt” and “Felt distressed about your gambling.” Checked items are summed to form a total score (0-10) (Browne et al., 2017).

- Gambling Urges Scale (GUS) (weeks 1-5)

The Gambling Urges Scale has 6 items that measure temptations to gamble felt in the present. Items include “having a gamble now would make things seem just perfect” and “nothing would be better than having a gamble right now.” Answer stems are on a 7-point Likert scale from “strongly agree” to “strongly disagree.” (Raylu & Oei, 2004).

- Gamblers’ Beliefs Questionnaire - revised (GBQ) (week 1 and week 5 only)

The Gambler’s belief questionnaire (GBQ) measures common cognitions related to gambling that are associated with gambling-risk and gambling problems (Steenbergh et al., 2002). Items include “I think of gambling as a challenge” and “If I am gambling and losing, I should continue because I don’t want to miss a win.” The answer stems use a 7-point Likert scale ranging from “strongly agree” to “strongly disagree”, and the 20 items are summed to create a total score ranging from 20 to 140.

- Helpfulness/Understanding of safer gambling messages (week 2, 3 and 4)

Survey Question:

“Please evaluate the following safer-gambling message:

‘Think your gambling may be a problem?’¹

This statement is:

Easy to understand (strongly agree, agree, disagree, or strongly disagree)

Helpful to gamblers (strongly agree, agree, disagree, or strongly disagree)”

Safer gambling messages were presented in weeks 2, 3 and 4. The first presentation of messages took place in week 2 after stratified random assignment. The last presentation was in week 4, since there was no chance for messages in week 5 to change behaviour in a way that we could measure, since the study had ended. Different messages were presented in weeks 2, 3 and 4 to prevent habituation, and messages were counterbalanced for order of presentation.

STIMULUS MATERIALS: MESSAGE COMPOSITION

To test the relative effectiveness of messages of differing types, including positive-emotional messages, norm-based messages and control messages, it was necessary to develop a suite of potential messages that were representative of these types. To accomplish this task, 6 members of the research team (MR, NH, MB, TA, PN and AR) authored a total of 34 original items for positive-emotional messages, 41 for norm-based messages, and additionally sourced 21 pre-existing control messages currently used by jurisdictions around the world. These messages can be found in *Appendix B*, and the answer stems are discussed in the next paragraph. Importantly, as suggested by Gambling Research Australia members, the messages were constructed to be potentially relevant to communications via multiple platforms, such as radio, newspapers and TV, rather than distinctly for online pop-up messaging or banner ads on gambling apps or websites.

The initial pool of 96 messages, including positive-emotion messages, normed-based messages, and control messages, were winnowed to a smaller set for use as stimulus materials (i.e., messages for display to, and for evaluation by, participants over the course of the trial in weeks 2, 3 and 4). This task

¹ This is only one example of 27 messages that were evaluated.

was accomplished by obtaining ratings of perceived “helpfulness” and “stigma” associated with each message. The 6 authors (MR, NH, MB, TA, PN and AR) each rated the helpfulness and stigma of all messages on a 4-point Likert scale graded: disagree (1), slightly disagree (2), slightly agree (3) agree (4). In addition, participants picked which category (positive-emotional, norm or control) each message best fit into. Table 2 shows messages that were picked to maximise helpfulness whilst keeping stigma no greater than “2” (i.e., slightly disagree) on average. Most chosen messages were correctly categorised by raters, with only 2 items having any misclassification. These 2 messages were nevertheless retained since they added diversity to the content of the message type (specifically, the norm-based messages). The wording of some messages was improved upon from the originals shown in *Appendix B* based on advice from experts at the Victorian Responsible Gambling Foundation (VRGF)². The foundation also agreed with our categorisation of the messages.

Table 2. Messages for testing

Positive Emotional

Gambling less makes it easier to pay for unexpected expenses

Your family will appreciate you keeping your gambling spend to a reasonable amount

Think of all the great things you could buy with money not lost on gambling

Betting less lets you spend more money on the important people in your life

Gambling less gives you more time to do well at work or study

You will have more time for important things in your life if you gamble less!

Less time gambling means more time with people you care about

Less money on gambling means more money for fun things like holidays and eating out

Think of all the money you'll save if you gamble less

² The authors of this report take sole responsibility for the final content of this survey.

Norm

Savvy bettors don't chase losses

Wise bettors stick to a budget

Most people play for fun, not to relieve boredom or stress

Most people who gamble every week experience some problems

Most people do not gamble as a way to make money

Most people who gamble only bet once a month or less

Most people who gamble bet \$10 or less a week

Gambling is not a way to make money: The house always wins in the end

Over 99% of bettors lose in the long run

Control

Gamble in a balanced way

Remain the master of the game

When gambling isn't fun anymore

Think your gambling may be a problem?

Only bet what you can afford

If you gamble, play it safe

Gamble responsibly

Keep the fun in the game

When the fun stops, stop

Messages were presented in blocks of 3 messages each for weeks 2, 3 and 4 for a total of 9 messages per participant. Each participant only received messages related to the condition to which they were assigned (i.e., positive emotional, normative or control). An approximately equal number of participants received each message, listed above, in either week 2, 3 or 4 to avoid any serial positioning effects. Thus, equivalently, each message appeared relatively evenly distributed amongst those weeks as viewed across participants (i.e., counterbalanced presentation of messages).

ANALYSES

The experimental design provided for a straight-forward approach to the statistical analysis. Using the *lme4* (Bates et al., 2007) package in the R statistical programming environment (R Core Team, 2013), we undertook what was essentially a mixed-design ANOVA for each of the outcome variables of interest. Both time and group were treated as categorical variables. In the case of time, this was because we did not wish to assume that changes would be linear. The repeated measures were handled by including a random intercept term for each participant, and a fully unconstrained covariance matrix between observations at the five different times was employed to handle the repeated measures. Certain measures, such as the SGHS, were measured only at the initial and last time point (i.e., weeks 1 and 5), but these were handled via the same framework.

In each model, the primary research question was whether there was a differential change over time in the outcome, across the three groups. This is captured by the interaction term and is robustly evaluated via a nested model comparison of the model with main effects plus the interaction, against the model with the main effects only.

We expected that stratified random assignment to groups should account for most confounding effects. However, as an additional check, we repeated the model comparison procedure using age, gender, and PGSI status as additional main effects.

We coded a completed dataset with a calculated variable indicating whether the respondent was missing for each wave. This binary outcome was then modelled using the same explanatory model used in the study:

$$\text{Missingness} \sim \text{wave} * \text{group} + \text{age} + \text{male} + \log(\text{pgs}+1) + (1 | \text{id})$$

We found no significant interaction between wave (time) and group, indicating that there was no differential attrition according to condition. However, we did find that those with gambling problems were more likely to drop out, and younger participants were slightly less likely to drop out. This has been noted in the limitations.

RESULTS

The demographic characteristics between the positive-emotional, norm-based and control conditions, as shown in Table 3, were highly homogeneous. Stratified random assignment was successful in equalising groups on age, gender, weekly betting [y,n], and problem-gambling status. It was also incidentally effective, however, in equalising the groups on factors such as personal income and education. It is notable that a relative high proportion of respondents had Aboriginal and/or Torres Strait Islander backgrounds (~12%).

Table 3. Demographic profile

	Positive N = 692	Norm N = 691	Control N = 691
% Female/other ¹	35.9%	36.2%	36.0%
Age ¹	M = 41.3 SD = 14.9	M = 41.4 SD = 15.0	M = 41.4 SD = 14.9
% LOTE	25.4%	26.0%	27.6%
% Aboriginal and/or Torres Strait Islander	11.7%	11.6%	11.9%
% at least some Tertiary Education	74.5%	71.5%	72.7%
Annual Income before taxes	Median = \$70 - \$80K	Median = \$70 - \$80K	Median = \$70 - \$80K
Annual disposable income after necessary expenses (e.g., housing, food, transport, medicine)	Median = \$4680	Median = \$4940	Median = \$4940
Bet weekly Sport	43.9%	42.3%	42.8%
Bet weekly Race	50.9%	53.8%	51.4%
Bet weekly Sport OR Race ¹	70.5%	70.8%	70.6%
PGSI ¹			
No risk	18.5%	18.4%	16.6%
Low-risk	14.6%	15.2%	16.6%

Moderate -risk	22.7%	23.2%	21.1%
Problem gambling	44.2%	43.3%	45.6%

1 Stratification variable used prior to random assignment

AMOUNT BET

As shown in Figure 1, there was a significant decrease in total amount bet across the course of the trial from weeks 2-5, $X^2(4) = 71.531$, $p < 0.001$, which were the weeks affected by the treatment of gambling messages. For context, the mean amount bet, trimmed at 10% to account for outliers, was \$44.80 in week 1 and \$42.40 in week 5. However, there was no significant difference in the rate of the decrease between people assigned to different messaging conditions, $X^2(8) = 5.055$, $p = .751$. Controlling for age, gender and PGSI status did not affect these results. Similar results were found for total spend as a proportion of income, and as a proportion of disposable income.

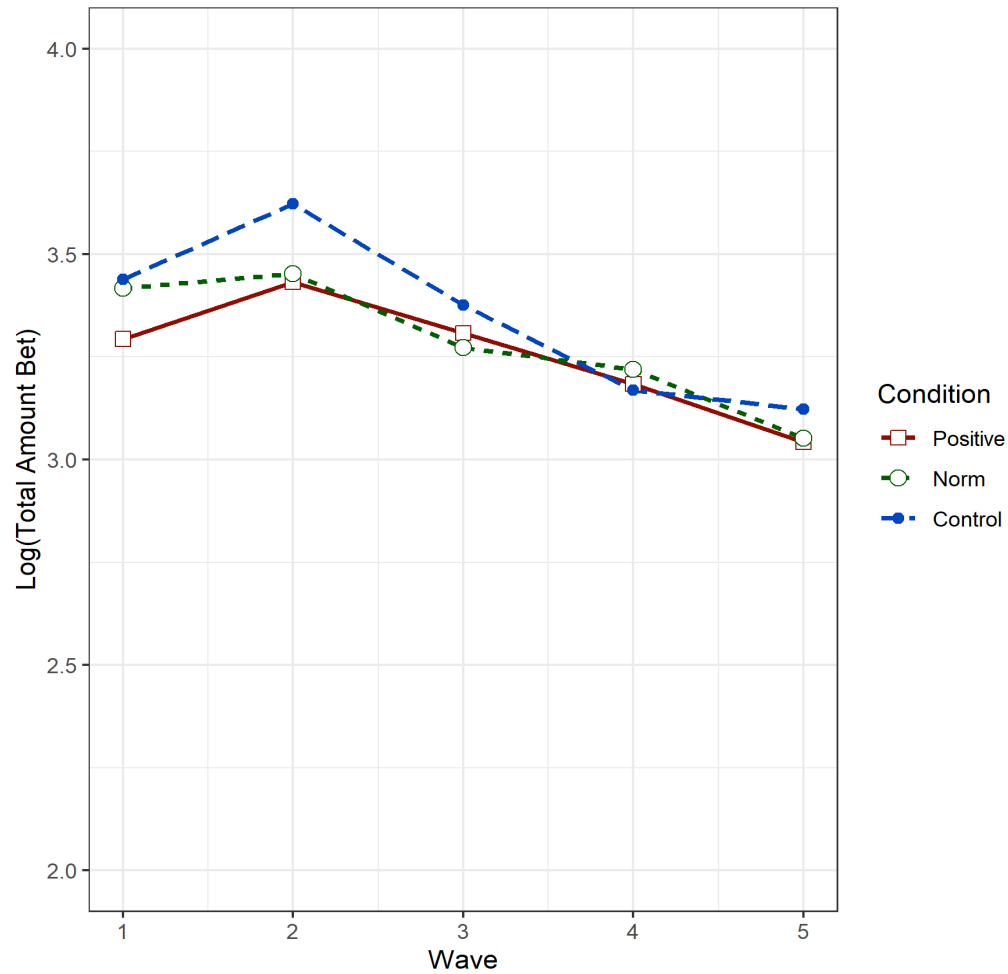


Figure 1. Amount bet

TIME SPENT GAMBLING

As shown in Figure 2, there was a significant decrease in the time spent gambling across the course of the trial from weeks 1-5, $X^2(4) = 146.02$, $p < 0.001$. For context, the mean of time spent gambling, trimmed at 10% to account for outliers, was 65 minutes in week 1 and 45 minutes in week 5. However, there was no significant difference in the rate of the decrease between people assigned to different messaging conditions, $X^2(8) = 2.6$, $p = .953$. Controlling for age, gender and PGSI status did not affect these results.

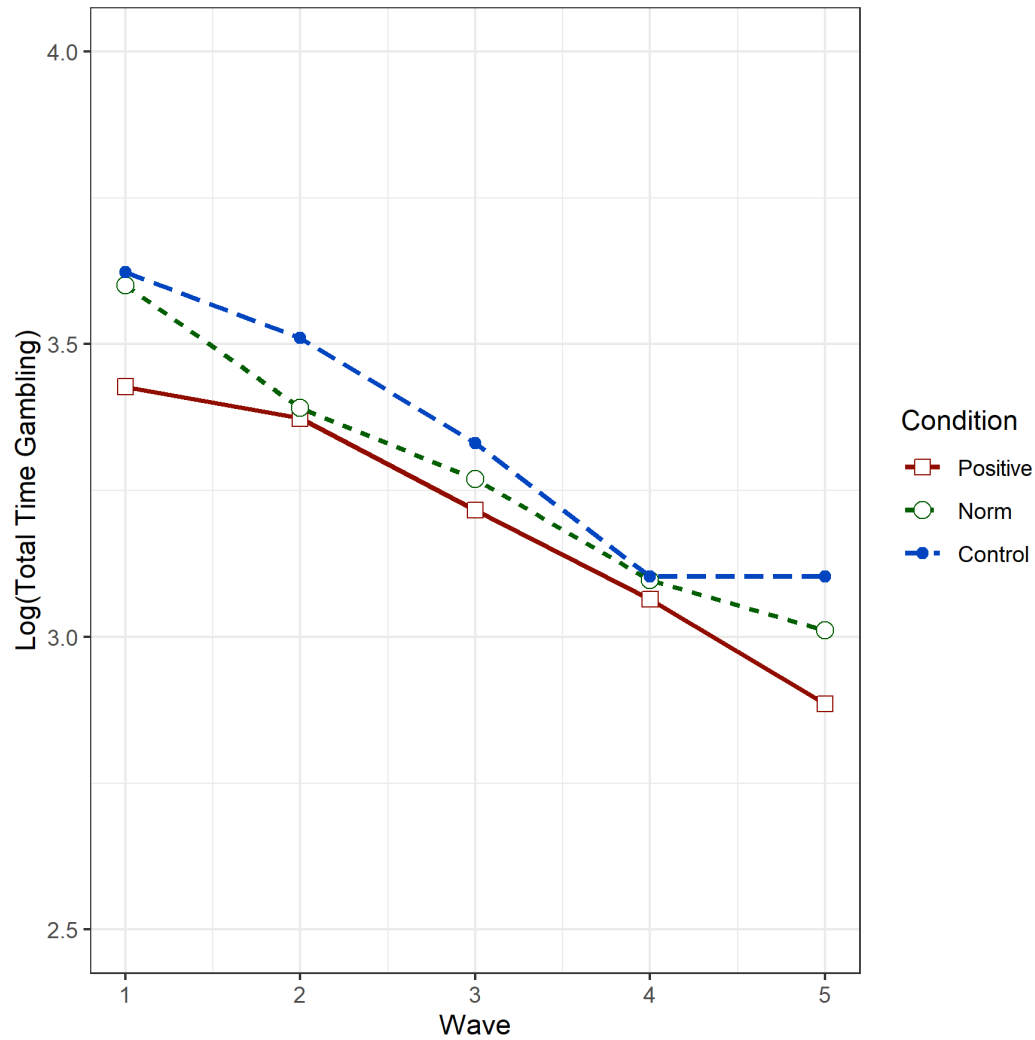


Figure 2. Time spent gambling

GAMBLING HARM

As shown in Figure 3, there appeared to be some decrease in Short Gambling Harm Screen (SGHS) scores, as measured in week 1 and week 5. There was a significant overall decrease in mean SGHS scores from weeks 1-5, $X^2(4) = 44.23$, $p < 0.001$. For context, the mean count of gambling harms, trimmed at 10% to account for outliers, was 3.1 harms in week 1 and 1.8 harms in week 5. Although there appeared to be some visual difference in slopes, there was no statistically significant difference in the rate of the decrease between people assigned to different messaging conditions, $X^2(8) = 3.55$, $p = .909$. Controlling for age, gender and PGSI status did not affect these results.

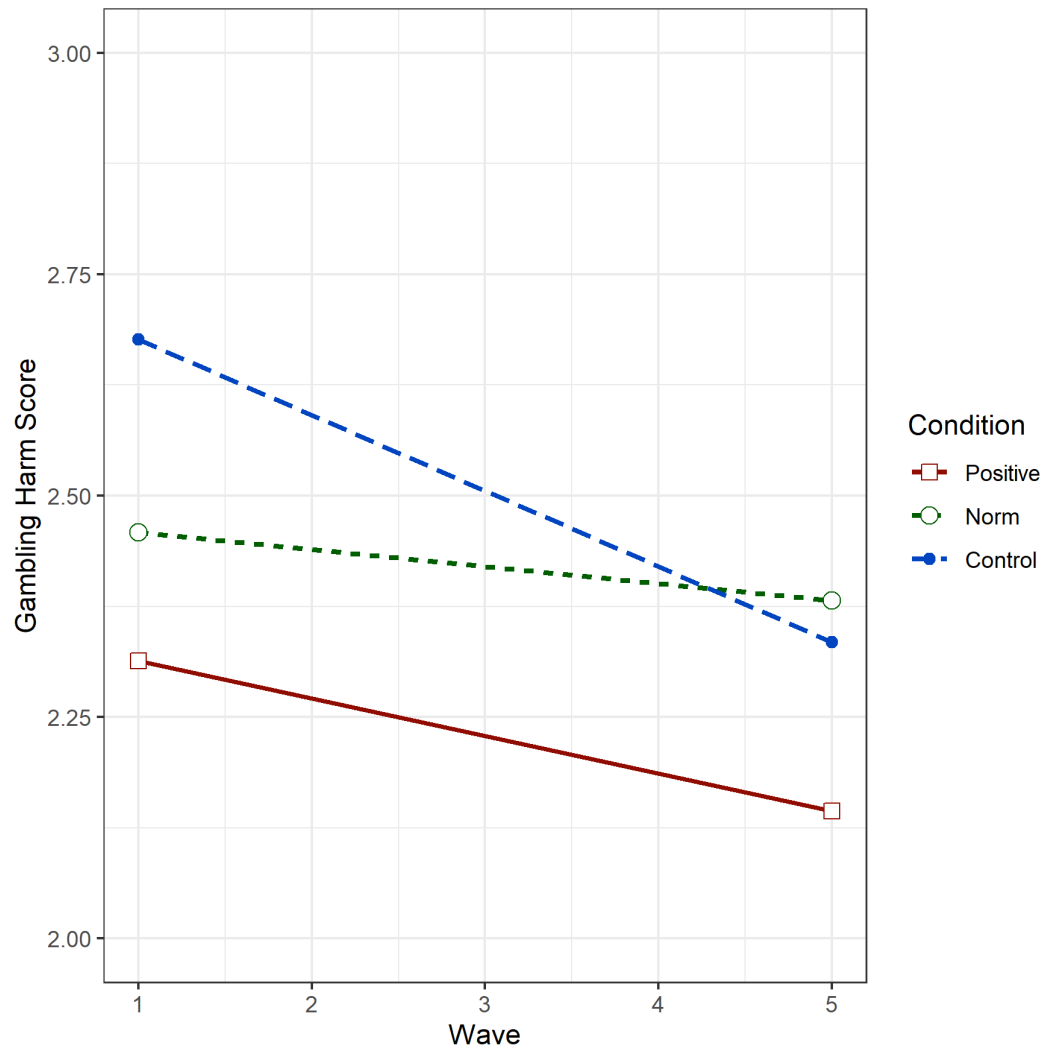


Figure 3. Short Gambling Harms Screen (SGHS) week 1 and week 5

GAMBLING URGES SCALE (GUS)

As shown in Figure 4, there was a significant decrease in reported gambling urges across the course of the trial, from weeks 1-5, $X^2(4) = 158.57$, $p < 0.001$. For context, the mean score on gambling urges, trimmed at 10% to account for outliers, was 15.3 in week 1 and 8.9 in week 5. However, there was no significant difference in the rate of the decrease between people assigned to different messaging conditions, $X^2(8) = 8.2$, $p = .408$. Controlling for age, gender and PGSI status did not affect these results.

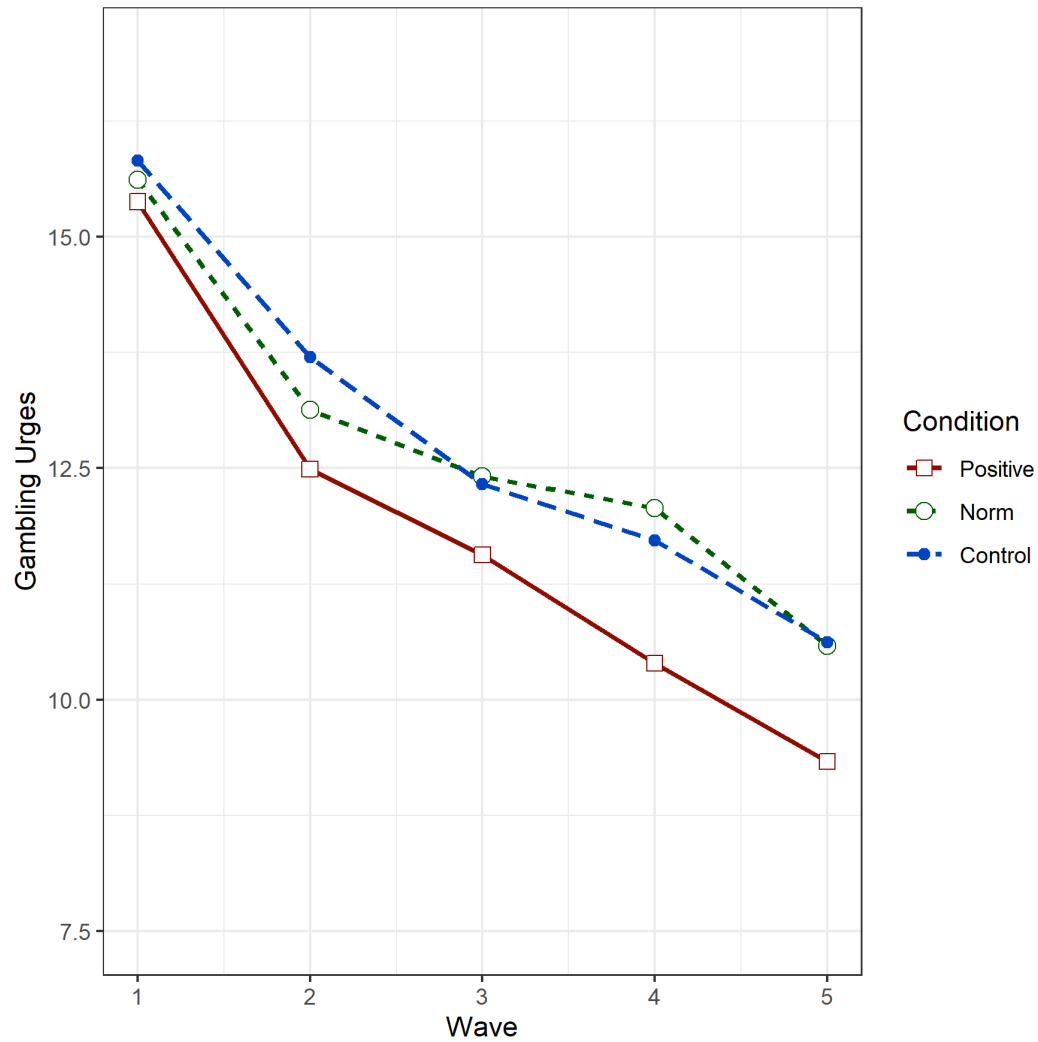


Figure 4. Gambling Urges Scale (GUS) for weeks 1 through 5

GAMBLER'S BELIEF QUESTIONNAIRE (GBQ)

As shown in Figure 5, there was a significant decrease in fallacious and risk-related beliefs as measured in weeks 1 and 5, $X^2(4) = 44.23$, $p < .001$. For context, the mean score on the GBQ, trimmed at 10% to account for outliers, was 73.6 in week 1 and 68.8 in week 5. However, there was no significant difference in the rate of the decrease between people assigned to different messaging conditions, $X^2(8) = 3.36$, $p = .909$. Controlling for age, gender and PGSI status did not affect these results.

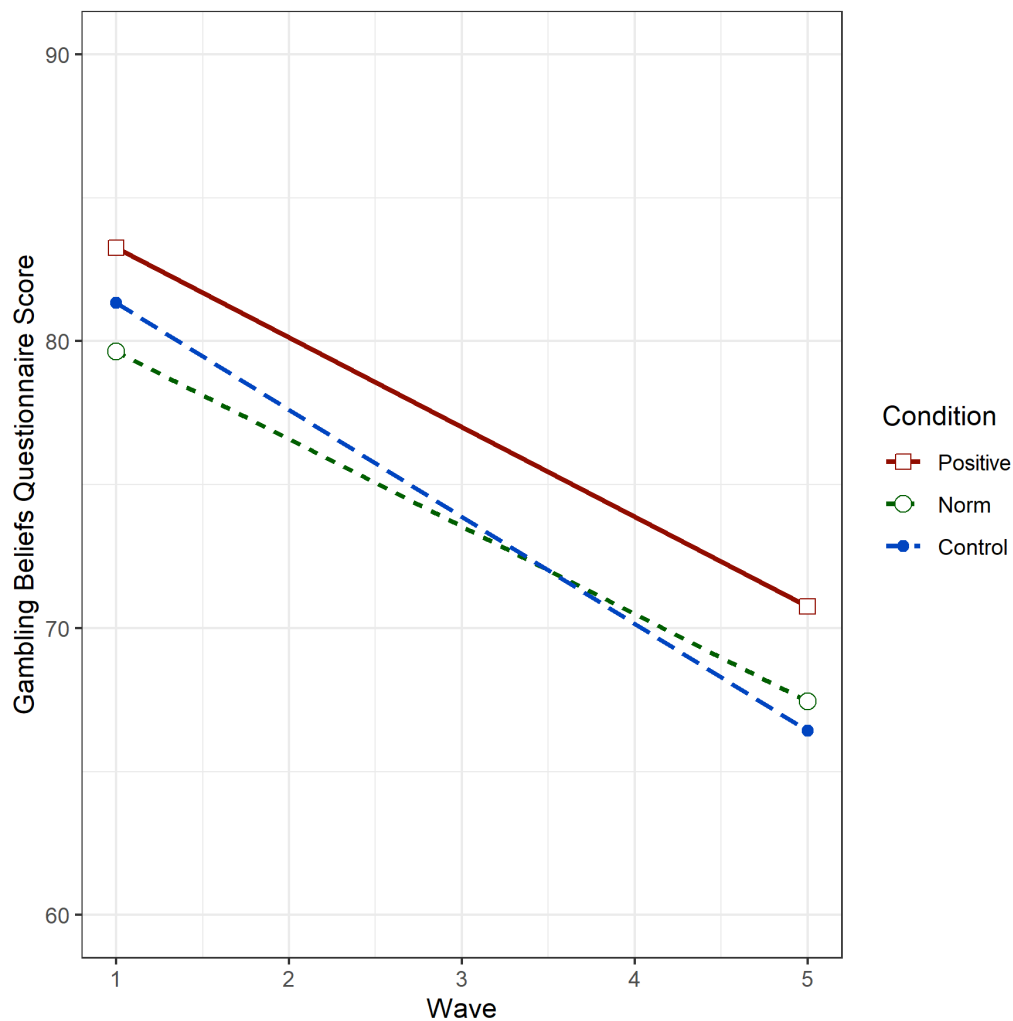
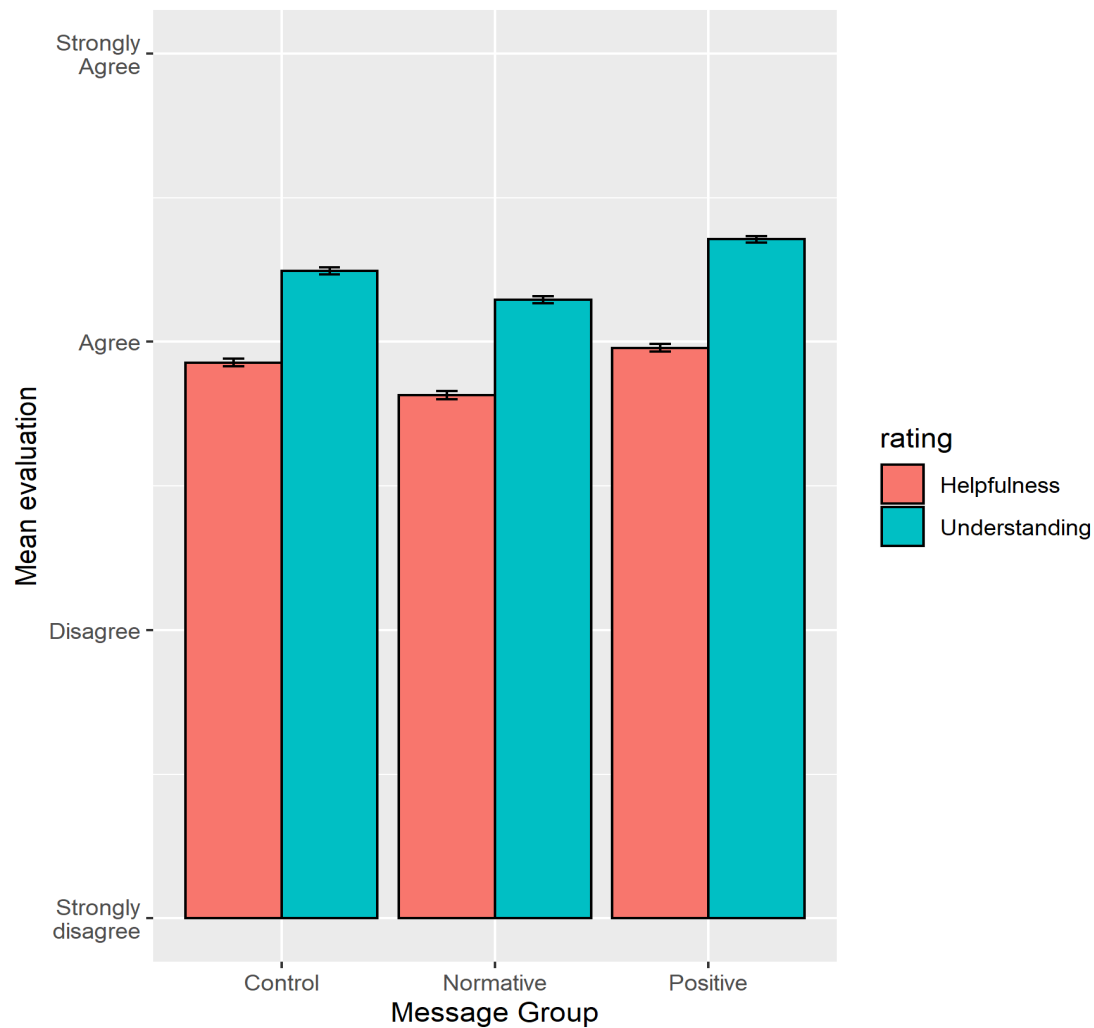


Figure 5. Gambler's belief questionnaire (GBQ) for weeks 1 and 5

HELPFULNESS/UNDERSTANDING BY MESSAGE TYPE

Unlike the measures above, ratings of a message's helpfulness and ease of understanding were not repeated across time for the same participants. Instead, as outlined in the methods section, people made one-time judgements about each message within their assigned condition. That is, people rated 3 messages pertaining to their condition in week 2, a different set of 3 messages in week 3 and another set of 3 in week 4. Thus, a total of 9 messages were rated by each participant. The order of message judgement was counterbalanced, such that each message was judged with equal frequency in each of these weeks to avoid order effects. Figure 6 illustrates the average ratings for each message across the 3 conditions. All differences between the conditions, on both helpfulness and ease of understanding,

were significant, $p < .001$. Ratings were highest for positive-emotional messages, followed by control messages, and lastly normative messages.



Note: Bars for the SE of the mean shown

Figure 6. Helpfulness and ease of understanding for each message group

An examination of the ratings for individual messages reveals important details about which messages were rated best and worst. Generally, ratings of helpfulness and ease of understanding followed a similar pattern, although understanding was always rated higher than helpfulness. The most helpful and understandable message was “Only bet what you can afford,” which was employed in the UK and was one of the control messages. The lowest rated message was “Most people who gamble bet once a month or less,” which was a norm-based message.

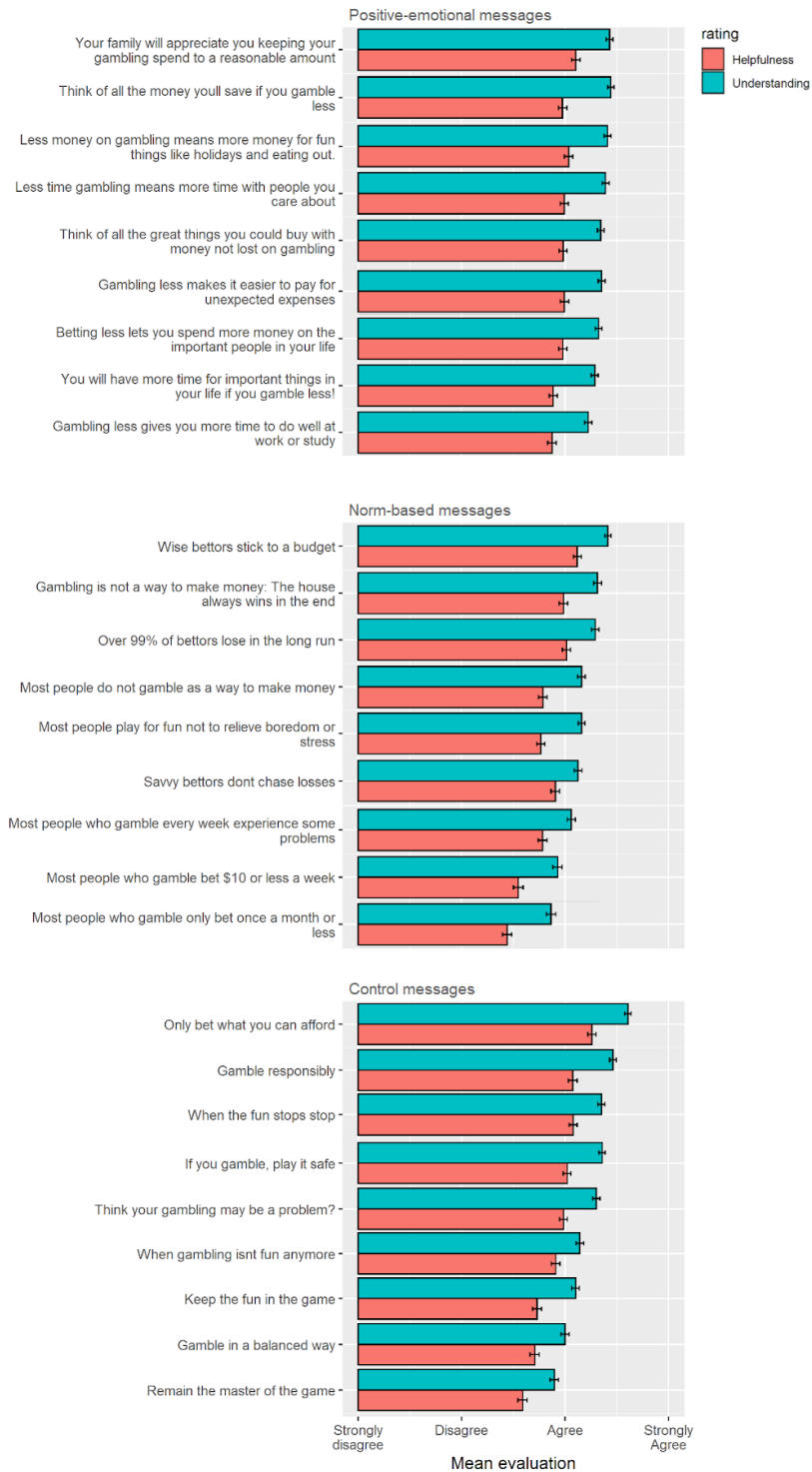


Figure 7. Helpfulness and ease of understanding for each specific message

DISCUSSION

In evaluating the effectiveness of messages there is a hierarchy of evidence that is manifest in what changes in behaviours or attitudes should be judged as most impactful. Gambling harm is a consequence of difficulty in limiting time and money spent on gambling. Thus, an effective message should be able to limit these aspects of play, particularly with respect to expenditures that exceed people's available resources. This is a means to protect people from future harm, rather than current harm reduction. Like much of advertising, however, repeated impressions are usually necessary to have a meaningful effect on behaviours. Thus, it is perhaps not entirely surprising that the RCT detected no observable difference between message conditions with respect to time and money wagered on gambling, or the ultimate consequence of gambling harm. Importantly, however, time, money and harm reduced on average for all participants over the course of the 5 weeks of the study - irrespective of message condition. Thus, there was an observable effect for participation in the study on the principal outcomes, but not for the particulars of the messages people received. It should be noted, however, that there was no control condition (i.e., a no messages condition) due to practical limitations on the number of participants that could be recruited.

Next in the hierarchy of evidence for evaluating message types are the presumed antecedent conditions, such as attitudes, that should have a long-term effect on betting behaviour. Attitudes can often change more quickly than behaviours, since they require less effort in action or in overcoming ingrained habits, as suggested by the intention-behaviour gap (Sheeran, 2002). Gambling urges were measured each week (1-5) of the study, and progressively and significantly decreased, although again without any differentiation between message conditions. Presumably, people with fewer urges are less tempted to exceed a reasonable budget for gambling, which in turn protects them from harm. In addition, scores on the Gamblers' Beliefs Questionnaire, which reflect cognitive distortions and risky assumptions surrounding gambling, also reduced significantly during the trial. Fewer cognitive distortions, similarly, can protect people from harm by reducing beliefs that suggest gambling is more profitable than it is in reality. Again, however, there were no significant differences by condition, suggesting that the content of messages was not particularly influential in realising this reduction.

Last, evidence that certain messages are perceived to be helpful and easily understood is an important starting point for effectiveness. Arguably, bettors have introspective access to what messages are most likely to be influential for them and others like them. For this last, more distal, source of evidence, there were significant differences between message conditions. Positive emotional messages were rated most highly in both helpfulness and ease of understanding. Ratings of helpfulness and ease of understanding were highly correlated, such that it is possible that people make little distinction between the two concepts. Instead, speculatively, these ratings may both represent some composite perception of the overall goodness of the message. Notably, support for positive emotional messages comported well with

our qualitative interviews, particularly with respect to concerns around the stigma that could be associated with other message types and is more often absent from positive messages. Surprisingly, the control messages were the next highest rated group on average. Some of these messages were anodyne and provide no real advice, such as “if you gamble, play it safe,” but nevertheless rated reasonably well. Norm-based messages had the lowest ratings. Messages such as “most people bet once a month or less,” and “most people bet \$10 a week or less,” were the lowest rated. It may be that these messages, as well as others like them, were too challenging for people who bet much more, creating a stigmatisation that people do not appreciate.

CAUTION ON ASSUMING POPULAR OPTIONS ARE “GOOD”

A note of caution is appropriate, however, in assuming that people’s ratings of helpfulness of a message are definitive evidence for effectiveness. It is possible that challenging messages, such as norm-based messages that suggest a bettor is wagering “too much” may be useful in realigning a gambler’s attitudes, even if such a realignment is not initially welcomed. Arguably, there are circumstances where people may not be the best in judging what is in their self-interest, including what messages they receive. Problem gambling is a concept predicated on the idea that people are not acting in their own self-interest. Consequently, it is at least reasonable to assume that people with gambling problems may not be able or willing to judge messages that well serve their own self-interests either.

WHY ARE PEOPLE IMPROVING OVER TIME?

One central finding of the trial is that people improved uniformly on every outcome measure, when averaged, over the course of 5 weeks. Potentially informative is the slight increase in expenditure from week 1 to week 2, which declined progressively thereafter. Messages were only first delivered in week 2, which suggests that engaging with messages, regardless of message type, is potentially the active ingredient in the decline in expenditures. Time spent gambling and gambling urges, the only other two outcomes that were measured in every week, however, declined throughout the study, inclusive of weeks 1 and 2. Thus, it is possible that the small expenditure bump between weeks 1 and 2 is only an anomaly in an otherwise general pattern of improvement.

An alternative explanation for the general pattern of improvement on all outcomes is the beneficial effects of self-reflection on betting behaviours. In all weeks, participants were asked to indicate how much they had bet on sport and races. The wording of this question was neutral but nevertheless may have been instrumental in causing people to reflect on whether their expenditures on gambling were well controlled. Given the fact that only gambling expenditures (and urges) were asked in all weeks (1-5), at least as an outcome, the pattern of results is consistent with self-reflection as a causal mechanism.

GOOD SUBJECT EFFECT

Although self-reflection is a possible explanation for improvements on all outcome measures, people may have been motivated to please the researchers with “correct” answers. The good subject effect is the general finding that people attempt to conform to the answers or results that they expect that researchers hope to find in any study. Thus, people may have shown improvements in terms of their answers that were not fairly or clearly reflected in changes in their actual gambling behaviours and attitudes. Given the consistent decline in most outcome measures, however, it seems likely that at least some improvements were genuine. If people were only motivated by the good subject effect, the improvement would be expected to be almost entirely immediate. Instead, a gradual change was observed that appears to be more consistent with an explanation other than a demonstration of being a good subject. A study using objective measures of gambling behaviour, such as account data from a wagering operator (Heirene & Gainsbury, 2021), could help test whether the good subject effect drove the observed changes across all groups in the current study.

HAWTHORNE EFFECT

Related to the good subject effect, the Hawthorne effect is a tendency for participants in a study to produce an outcome that experimenters for the study seem to desire (i.e., not just to change their answers but instead their behaviour). Thus, it is possible that participants in the present study genuinely reduced their gambling expenditure and time spent gambling resulting in a reduction of harm, but such a change was only a function of conforming to the perceived requirements of the study. That is, it is possible that a genuine change will not be sustained past the end of the study. Although it is difficult to know if this was the case, our related reductions in gambling-urges and gambling-related beliefs are consistent with a genuine change. In the case of scores on the Gamblers’ Beliefs Questionnaire (Steenbergh et al., 2002), for instance, it is unclear whether participants would know what the “correct” response was as viewed through the lens of the experimenters.

BENEFICIAL EFFECTS OF SELF-REFLECTION

It is notable that the most popular individual message, as revealed through ratings of helpfulness and ease of understanding, was “only bet what you can afford.” The strong endorsement of this control-message may have revealed that reflecting on one’s own expenditures each week was individually helpful. Moreover, the positive emotional messages, which proved to be the most highly endorsed message-type overall, had content that reflected largely on the benefits of controlling expenditures. In short, the pattern of overall decreases in risk-related outcomes over the course of the study, along with endorsement of messages that emphasise the need and benefits of controlling expenditure, suggests

that such messages are implicated in realised improvements in gambling-risk outcomes over the course of the 5-week trial.

LIMITATIONS OF CORRELATIONAL FINDINGS

The most reasonable explanation for our findings is that self-reflection on spending is the mechanism by which people improved on our measured outcomes. Unfortunately, self-reflection on gambling expenditure was both an outcome and the likely source of improvement. That is, people likely spent less money over the study period because they reported how much they bet (and won or lost). Of course, improvement in other outcomes, such as time spent gambling, gambling urges and gambling-related cognitions (i.e., scores on the Gamblers' Beliefs Questionnaire), give greater confidence that reflecting on expenditures was instrumental in realised improvements. Nevertheless, our results that were designed to be experimental revealed effects that are only correlational in nature.

It must also be noted that there was a substantial reduction in the number of participants who completed week 1 ($n = 2074$) versus week 5 ($n = 1116$). Attrition is typical in longitudinal internet surveys. Although our use of Linear Mixed Effects modelling is robust with respect to missing data, it is possible that people who failed to complete the later surveys might have experienced different (unmeasured) outcomes. That is, there is potential for bias arising from attrition. Younger participants were slightly less likely to drop out prior to week 5, whereas people with gambling problems were more likely to drop-out.

Importantly, as noted previously, there was no control condition with either no messages or dummy messages (i.e., messages with protection-irrelevant content). This exclusion was consciously made by the researchers because the number of participants that could be recruited to the study was limited. Inclusion of another condition would have negatively affected statistical power. Nevertheless, as a consequence of this choice, it is difficult to know if the uniform improvements on all outcomes were due to the messages, or alternatively, simply the consequence of being part of the study; inclusive of the Hawthorne Effect or the Good Subject Effect as noted previously.

FUTURE RESEARCH

Since experimental research is best practice for producing evidence for cause and effect, it would be helpful to verify our correlational outcomes by including them as the new conditions within a future experiment. This could be accomplished by keeping track of people's spending habits from an outside source. For instance, player tracking data from wagering operators on actual expenditures (losses) could be combined with an experiment where only some participants (i.e., half) were asked about how much they spent on betting (e.g., in the last week or month). If the beneficial effects observed in the present

study are truly attributable to self-reflection on expenditure, only the test-group that reflects on their expenditures should improve over time.

Moreover, it would be helpful to include an additional control condition where people receive no messages for evaluation. This additional control would provide evidence for whether simple participation in the trial, as opposed to message content, is responsible for any potential improvements in outcomes. Our available sample was not large enough to warrant this inclusion, but future research may allow such a consideration.

Finally, it is worth exploring in future research whether tailored messaging for people with pre-existing problems vs people without problems is warranted. Our focus group interviewees suggested this might be important, but we found no strong evidence for differential endorsement of messages by PGSI categories.

CONCLUSION

Whilst this research failed to reveal reliable differences amongst message conditions on key outcome variables, such as expenditures, time spent gambling, urges, and gambling-related cognitions, we nevertheless found correlational evidence to suggest that self-reflection on gambling expenditure is likely related to an overall pattern of improvement for most bettors. Moreover, there is evidence that gambling messages that focus on keeping track of expenditures (e.g., “only bet what you can afford”) and the positive benefits of spending less (e.g., “think of all the money you’ll save if you gamble less”) were some of the highest rated messages in terms of perceived helpfulness and ease of understanding. Consequently, the best available evidence from the present study suggests that messages which encourage people to keep track of expenditures and think about the benefits of spending less are likely to be the most effective in helping people to limit harm in relation to their sports and race betting.

REFERENCES

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Alexander, K. (2020). Corrected oral evidence: Social and economic impact of the gambling industry. Retrieved from <https://committees.parliament.uk/oralevidence/97/html/>
- Armstrong, T., Donaldson, P., Langham, E., Rockloff, M., & Browne, M. (2018). Exploring the effectiveness of an intelligent messages framework for developing warning messages to reduce gambling intensity. *Journal of Gambling Issues*, (38)
- Armstrong, T., Rockloff, M., Browne, M., & Blaszczynski, A. (2020). Training gamblers to re-think their gambling choices: How contextual analytical thinking may be useful in promoting safer gambling. *Journal of Behavioral Addictions*, 9(3), 766-784.
- Auer, M. M., & Griffiths, M. D. (2015). Testing normative and self-appraisal feedback in an online slot-machine pop-up in a real-world setting. *Frontiers in Psychology*, 6, 339.
- Bates, D., Sarkar, D., Bates, M. D., & Matrix, L. (2007). The lme4 package. *R Package Version*, 2(1), 74. <http://ftp.auckland.ac.nz/software/CRAN/doc/packages/lme4.pdf>
- Behavioural Insights Team. (2012). Applying behavioural insights to reduce fraud, error and debt. Retrieved from http://www.behaviouralinsights.co.uk/wp-content/uploads/2015/07/BIT_FraudErrorDebt_accessible.pdf
- Behavioural Insights Team. (2018). Can behavioural insights be used to reduce risky play in online environments? Retrieved from https://about.gambleaware.org/media/1869/gambleaware-phase-iii-report_updated-v1.pdf
- Biener, L., McCallum-Keeler, G., & Nyman, A. L. (2000). Adults' response to massachusetts anti-tobacco television advertisements: Impact of viewer and advertisement characteristics. *Tobacco Control*, 9(4), 401-407. doi:10.1136/tc.9.4.401 [doi]
- Borland, R., & Hill, D. (1997). The path to australia's tobacco health warnings. *Addiction*, 92(9), 1151-1158.
- Bowden-Jones, H., Dickson, C., Dunand, C., & Simon, O. (2019). Harm reduction for gambling: A public health approach. doi:10.4324/9780429490750

- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Browne, M., & Rockloff, M. J. (2018). Prevalence of gambling-related harm provides evidence for the prevention paradox. *Journal of Behavioral Addictions*, 7(2), 410-422.
- Browne, M., Goodwin, B. C., & Rockloff, M. J. (2017). Validation of the Short Gambling Harm Screen (SGHS): A Tool for Assessment of Harms from Gambling. *Journal of Gambling Studies / Co-Sponsored by the National Council on Problem Gambling and Institute for the Study of Gambling and Commercial Gaming*. <https://doi.org/10.1007/s10899-017-9698-y>
- Browne, M., Langham, E., Rawat, V., Greer, N., Li, E., Rose, J., . . . Best, T. (2016). *Assessing gambling-related harm in victoria: A public health perspective*. Melbourne: Victorian Responsible Gambling Foundation.
- Browne, M., Rockloff, M., Hing, N., Russell, A., Boyle, C. M., Rawat, V., & Sproston, K. (2019). *NSW gambling survey, 2019*. NSW Office of Responsible Gambling. <https://www.responsiblegambling.nsw.gov.au/research2/nsw-gambling-survey-2019>.
- Cacioppo, J. T., & Petty, R. E. (1979). Effects of message repetition and position on cognitive response, recall, and persuasion. *Journal of Personality and Social Psychology*, 37(1), 97-109.
- Chapman, S. (1993). Unravelling gossamer with boxing gloves: problems in explaining the decline in smoking. *BMJ*, 307(6901), 429–432. <https://doi.org/10.1136/bmj.307.6901.429>
- Cialdini, R. B., Demaine, L. J., Sagarin, B. J., Barrett, D. W., Rhoads, K., & Winter, P. L. (2006). Managing social norms for persuasive impact. *Social Influence*, 1(1), 3-15.
- Collins, P., Shaffer, H. J., Ladouceur, R., Blaszczynski, A., & Fong, D. (2020). Gambling research and industry funding. *Journal of Gambling Studies*, 36, 989-997.
- De Vos, S., Crouch, R., Quester, P., & Ilicic, J. (2017). Examining the effectiveness of fear appeals in prompting Help-Seeking: The case of At-Risk gamblers. *Psychology & Marketing*, 34(6), 648-660.
- Delfabbro, P., & King, D. (2017). Prevention paradox logic and problem gambling: Does low-risk gambling impose a greater burden of harm than high-risk gambling? *Journal of Behavioral Addictions*, 6(2), 163-167.
- Delfabbro, P., & King, D. L. (2019). Challenges in the conceptualisation and measurement of gambling-related harm. *Journal of Gambling Studies*, doi:10.1007/s10899-019-09844-1

- Delfabbro, P., & King, D. L. (2020). On the limits and challenges of public health approaches in addressing gambling-related problems. *International Journal of Mental Health and Addiction*, doi:10.1007/s11469-020-00276-2
- Fishbein, M. (1980). A theory of reasoned action: some applications and implications. *Nebraska Symposium on Motivation. Nebraska Symposium on Motivation*, 27, 65–116.
<https://www.ncbi.nlm.nih.gov/pubmed/7242751>
- Gambling Commission. (2018). Gambling participation in 2017: Behaviour, awareness and attitudes. Retrieved from <https://www.gamblingcommission.gov.uk/PDF/survey-data/Gambling-participation-in-2017-behaviour-awareness-and-attitudes.pdf>
- Gambling Commission. (2019). National strategy to reduce gambling harms. Retrieved from <http://www.reducinggamblingharms.org/asset-library/national-strategy-to-reduce-gambling-harms.pdf>
- Getty, D., Li, H., Yano, M., Gao, C., & Hosoi, A. (2018). Luck and the law: Quantifying chance in fantasy sports and other contests. *SIAM Review*, 60(4), 869-887.
- Ginley, M. K., Whelan, J. P., Pfund, R. A., Peter, S. C., & Meyers, A. W. (2017). Warning messages for electronic gambling machines: Evidence for regulatory policies. *Addiction Research & Theory*, 25(6), 495-504. doi:10.1080/16066359.2017.1321740
- Goodwin, B. C., Browne, M., Rockloff, M., & Rose, J. (2017). A typical problem gambler affects six others. *International Gambling Studies*, 17(2), 276-289.
- Hammond, D. (2011). Health warning messages on tobacco products: A review. *Tobacco Control*, 20(5), 327-337. doi:10.1136/tc.2010.037630 [doi]
- Harris, A., Parke, A., & Griffiths, M. D. (2018). The case for using personally relevant and emotionally stimulating gambling messages as a gambling harm-minimisation strategy. *International Journal of Mental Health and Addiction*, 16(2), 266-275.
- Heirene, R. M., & Gainsbury, S. M. (2021). Encouraging and evaluating limit-setting among on-line gamblers: A naturalistic randomized controlled trial. *Addiction*, doi:10.1111/add.15471
- Hilton, M. E. (1993). An overview of recent findings on alcoholic beverage warning labels. *Journal of Public Policy & Marketing*, 12(1), 1-9.

- Hing N. (2003). An assessment of member awareness, perceived adequacy and perceived effectiveness of responsible gambling strategies in Sydney clubs. Lismore: Southern Cross University.
- Hing, N., Browne, M., Russell, A. M. T., Rockloff, M., Rawat, V., Nicoll, F., & Smith, G. (2019). Avoiding gambling harm: An evidence-based set of safe gambling practices for consumers. *PloS One*, 14(10), e0224083. doi:10.1371/journal.pone.0224083 [doi]
- Hing, N., Gainsbury, S., Blaszczynski, A., Wood, R., Lubman, D., & Russell, A. (2014). *Interactive gambling. Melbourne, Australia: Gambling Research Australia.*
- Hing, N., Russell, A. M., Thomas, A., & Jenkinson, R. (2019). Wagering advertisements and inducements: Exposure and perceived influence on betting behaviour. *Journal of Gambling Studies*, 35(3), 793-811. doi:10.1007/s10899-018-09823-y
- Hobin, E., Vallance, K., Zuo, F., Stockwell, T., Rosella, L., Simniceanu, A., . . . Hammond, D. (2017). Testing the efficacy of alcohol labels with standard drink information and national drinking guidelines on consumers' ability to estimate alcohol consumption. *Alcohol and Alcoholism*, 53(1), 3-11.
- Horch, J. D., & Hodgins, D. C. (2008). Public stigma of disordered gambling: Social distance, dangerousness, and familiarity. *Journal of Social and Clinical Psychology*, 27(5), 505-528.
- Jenkinson, R., Sakata, K., Khokhar, T., Tajin, R. & Jatkar, U. (2020). Gambling in australia during COVID-19. Retrieved from https://aifs.gov.au/agrc/sites/default/files/publication-documents/2009_gambling_in_australia_during_covid-19.pdf
- Kersbergen, I., & Field, M. (2017). Alcohol consumers' attention to warning labels and brand information on alcohol packaging: Findings from cross-sectional and experimental studies. *BMC Public Health*, 17(1), 123.
- Korn, D. A., & Shaffer, H. J. (1999). Gambling and the health of the public: Adopting a public health perspective. *Journal of Gambling Studies*, 15(4), 289-365.
- Ladouceur, R., Sylvain, C., Boutin, C., Lachance, S., Doucet, C., Leblond, J., & Jacques, C. (2001). Cognitive treatment of pathological gambling. *The Journal of Nervous and Mental Disease*, 189(11), 774-780.

- Langham, E., Thorne, H., Browne, M., Donaldson, P., Rose, J., & Rockloff, M. (2016). Understanding gambling related harm: A proposed definition, conceptual framework, and taxonomy of harms. *BMC Public Health*, 16(1), 80.
- Larimer, M. E., Neighbors, C., Lostutter, T. W., Whiteside, U., Crouce, J. M., Kaysen, D., & Walker, D. D. (2012). Brief motivational feedback and cognitive behavioral interventions for prevention of disordered gambling: A randomized clinical trial. *Addiction*, 107(6), 1148-1158.
- Leonard, C. A., Williams, R. J., & McGrath, D. S. (2021). Gambling fallacies: Predicting problem gambling in a national sample. *Psychology of Addictive Behaviors*,
- Leonard, C., Williams, R., & Vokey, J. (2015). Gambling fallacies: What are they and how are they best measured. *Journal of Addiction Research & Therapy*, 6(4) doi:10.4172/2155-6105.1000256
- Livingstone, C., Rintoul, A., de Lacy-Vawdon, C., Borland, R., Dietze, P., Jenkinson, R., . . . Stooze, M. (2019). *Identifying effective policy interventions to prevent gambling-related harm*. Melbourne: Victorian Responsible Gambling Foundation.
- Lole, L., Li, E., Russell, A. M., Greer, N., Thorne, H., & Hing, N. (2019). Are sports bettors looking at responsible gambling messages? an eye-tracking study on wagering advertisements. *Journal of Behavioral Addictions*, 8(3), 499-507.
- Markham, F., Doran, B., & Young, M. (2016). The relationship between electronic gaming machine accessibility and police-recorded domestic violence: A spatio-temporal analysis of 654 postcodes in Victoria, Australia, 2005–2014. *Social Science & Medicine*, 162, 106-114.
- Markham, F., Young, M., & Doran, B. (2016). The relationship between player losses and gambling-related harm: Evidence from nationally representative cross-sectional surveys in four countries. *Addiction*, 111(2), 320-330.
- Maynard, O. M., Munafò, M. R., & Leonards, U. (2013). Visual attention to health warnings on plain tobacco packaging in adolescent smokers and non-smokers. *Addiction*, 108(2), 413-419.
- Miller, H., E., & Thomas, S., L. (2017). The problem with 'responsible gambling': Impact of government and industry discourses on feelings of felt and enacted stigma in people who experience problems with gambling. *Addiction Research & Theory*, 26(2), 85-94.
- Mizerski, R., Lee, A., Sadeque, S., Jolley, W., Wang, S., Jiang, J., & Osborne, C. (2012). Boomerang effects of gambling warnings exposed to non-problem gamblers. Paper presented at the

Presented at the Australian & New Zealand Marketing Academy, Adelaide, South Australia, Australia.

- Monaghan S, Blaszczynski A. (2010). Impact of mode of display and message content of responsible gambling signs for electronic gaming machines on regular gamblers. *J Gambl Stud.* 2010;26:67–88.
- Monaghan, S., & Blaszczynski, A. (2009). Electronic gaming machine warning messages: Information versus self-evaluation. *The Journal of Psychology*, 144(1), 83-96. \
- Moore, S.M., Thomas, A.C., Kyrios, M. et al. (2012). The Self-Regulation of Gambling. *J Gambl Stud* 28, 405–420. <https://doi.org/10.1007/s10899-011-9265-x>
- Moss, A. C., Albery, I. P., Dyer, K. R., Frings, D., Humphreys, K., Inkelaar, T., . . . Speller, A. (2015). The effects of responsible drinking messages on attentional allocation and drinking behaviour. *Addictive Behaviors*, 44, 94-101.
- Mouneyrac, A., Le Floch, V., Lemerrier, C., Py, J., & Roumegue, M. (2017). Promoting responsible gambling via prevention messages: Insights from the evaluation of actual european messages. *International Gambling Studies*, 17(3), 426-441.
- Mugleton, N., Parpart, P., Newall, P., Leake, D., Gathergood, J., & Stewart, N. (2021). The association between gambling and financial, social, and health outcomes in big financial data. *Nature Human Behaviour*, 5, 319-326. doi:10.1038/s41562-020-01045-w
- Munafò, M. R., Roberts, N., Bauld, L., & Leonards, U. (2011). Plain packaging increases visual attention to health warnings on cigarette packs in non-smokers and weekly smokers but not daily smokers. *Addiction*, 106(8), 1505-1510.
- Munoz, Y., Chebat, J., & Borges, A. (2013). Graphic gambling warnings: How they affect emotions, cognitive responses and attitude change. *Journal of Gambling Studies*, 29(3), 507-524.
- Munoz, Y., Chebat, J., & Suissa, J. A. (2010). Using fear appeals in warning labels to promote responsible gambling among VLT players: The key role of depth of information processing. *Journal of Gambling Studies*, 26(4), 593-609.
- National Consumer Protection Framework for Online Wagering.* (n.d.). Department of Social Services. https://www.dss.gov.au/sites/default/files/documents/08_2020/ncpow-fact-sheet28-august-2020.pdf

- Neal, P. N., Delfabbro, P. H., & O'Neil, M. G. (2005). *Problem gambling and harm: Towards a national definition*. <https://hekyl.services.adelaide.edu.au/dspace/handle/2440/40558>
- Newall, P. W. S., Weiss-Cohen, L., Singmann, H., Walasek, L. & Ludvig, E. A. (2021). No credible evidence that UK safer gambling messages reduce gambling. Retrieved from <https://psyarxiv.com/hv6w9>
- Newall, P.W.S., Russell, A.M.T., & Hing, N. (2021). Structural characteristics of fixed-odds sports betting products. *Journal of Behavioral Addictions*. doi: 10.1556/2006.2021.00008
- Noar, S. M., Hall, M. G., Francis, D. B., Ribisl, K. M., Pepper, J. K., & Brewer, N. T. (2016). Pictorial cigarette pack warnings: A meta-analysis of experimental studies. *Tobacco Control*, 25(3), 341-354. doi:10.1136/tobaccocontrol-2014-051978 [doi]
- Noar, S. M., Rohde, J. A., Barker, J. O., Hall, M. G., & Brewer, N. T. (2020). Pictorial cigarette pack warnings increase some risk appraisals but not risk beliefs: A meta-analysis. *Human Communication Research*, 46(2-3), 250-272.
- Peter, S. C., Brett, E. I., Suda, M. T., Leavens, E. L., Miller, M. B., Leffingwell, T. R., . . . Meyers, A. W. (2019). A meta-analysis of brief personalized feedback interventions for problematic gambling. *Journal of Gambling Studies*, 35, 447-464.
- Petry, N. M., Ammerman, Y., Bohl, J., Doersch, A., Gay, H., Kadden, R., . . . Steinberg, K. (2006). Cognitive-behavioral therapy for pathological gamblers. *Journal of Consulting and Clinical Psychology*, 74(3), 555-567.
- Petticrew, M., Douglas, N., Knai, C., Durand, M. A., Eastmure, E., & Mays, N. (2016). Health information on alcoholic beverage containers: Has the alcohol industry's pledge in england to improve labelling been met? *Addiction*, 111(1), 51-55.
- Pettigrew, S., Jongenelis, M. I., Glance, D., Chikritzhs, T., Pratt, I. S., Slevin, T., . . . Wakefield, M. (2016). The effect of cancer warning statements on alcohol consumption intentions. *Health Education Research*, 31(1), 60-69.
- Pettigrew, S., Jongenelis, M., Chikritzhs, T., Slevin, T., Pratt, I. S., Glance, D., & Liang, W. (2014). Developing cancer warning statements for alcoholic beverages. *BMC Public Health*, 14(1), 786.
- Potenza, M. N., Steinberg, M. A., Skudlarski, P., Fulbright, R. K., Lacadie, C. M., Wilber, M. K., Rounsaville, B. J., Gore, J. C., & Wexler, B. E. (2003). Gambling urges in pathological gambling:

- a functional magnetic resonance imaging study. *Archives of General Psychiatry*, 60(8), 828–836. <https://doi.org/10.1001/archpsyc.60.8.828>
- Previte, J., Russell-Bennett, R., & Parkinson, J. (2015). Shaping safe drinking cultures: Evoking positive emotion to promote moderate-drinking behaviour. *International Journal of Consumer Studies*, 39(1), 12-24.
- Queensland Government. (2019). Australian gambling statistics. 1992–93 to 2017–18. 35th edition. Retrieved from <https://www.qgso.qld.gov.au/issues/2646/australian-gambling-statistics-35th-edn-1992-93-2017-18.pdf>
- R Core Team (2013). *R: A language and environment for statistical computing*. R Foundation for Statistical Computing, Vienna, Austria. ISBN 3-900051-07-0, URL < <http://www.R-project.org>.
- Raylu, N., & Oei, T. P. (2004). The gambling related cognitions scale (GRCS): Development, confirmatory factor validation and psychometric properties. *Addiction*, 99(6), 757-769.
- Raylu, N., & Oei, T. P. S. (2004). The gambling urge scale: development, confirmatory factor validation, and psychometric properties. *Psychology of Addictive Behaviors: Journal of the Society of Psychologists in Addictive Behaviors*, 18(2), 100–105. <https://doi.org/10.1037/0893-164X.18.2.100>
- Reiley, D. (2011). Which half is wasted? *Proceedings of the 17th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining - KDD '11*. the 17th ACM SIGKDD international conference, San Diego, California, USA. <https://doi.org/10.1145/2020408.2020535>
- Reith, G. (2008). Reflections on responsibility. *Journal of Gambling Issues*, (22), 149-155.
- Rockloff, M., Browne, M., Hing, N., Thorne, H., Russell, A., Greer, N., Tran, K., Brook, K., Sproston, & K. (2018). *Victorian population gambling and health study 2018–2019*. Victorian Responsible Gambling Foundation. <https://responsiblegambling.vic.gov.au/resources/publications/victorian-population-gambling-and-health-study-20182019-759/>
- Rockloff, M. J., Greer, N., Fay, C., & Evans, L. G. (2011). Gambling on electronic gaming machines is an escape from negative self reflection. *Journal of Gambling Studies*, 27(1), 63-72.
- Romer, D., Peters, E., Strasser, A. A., & Langleben, D. (2013). Desire versus efficacy in smokers' paradoxical reactions to pictorial health warnings for cigarettes. *PloS One*, 8(1), e54937.
- Russell, A. M., Hing, N., & Browne, M. (2019). Risk factors for gambling problems specifically associated with sports betting. *Journal of Gambling Studies*, doi:10.1007/s10899-019-09848-x

- Schrans T, Grace J, Schellinck T. (2003). NS VL responsible gaming features evaluation: final report. Halifax; 2004.
- Schüll, N. D. (2012). *Addiction by design: Machine gambling in las vegas*. Princeton, New Jersey: Princeton University Press.
- Sheeran, P. (2002). Intention—Behavior Relations: A Conceptual and Empirical Review. *European Review of Social Psychology*, 12(1), 1–36. <https://doi.org/10.1080/147927721430000003>
- Shemilt, I., Hendry, V., & Marteau, T. M. (2017). What do we know about the effects of exposure to 'low alcohol' and equivalent product labelling on the amounts of alcohol, food and tobacco people select and consume? A systematic review. *BMC Public Health*, 17(1), 29.
- Sillero-Rejon, C., Leonards, U., Munafò, M. R., Hedge, C., Hoek, J., Toll, B., . . . Robinson, A. (2020). Avoidance of tobacco health warnings? an eye-tracking approach. *Addiction*, doi:10.1111/add.15148
- Snyder, L. B., & Blood, D. J. (1992). Caution: Alcohol advertising and the surgeon general's alcohol warnings may have adverse effects on young adults. *Journal of Applied Communication Research*, 20(1), 37-53.
- Steenbergh, T. A., Meyers, A. W., May, R. K., & Whelan, J. P. (2002). Development and validation of the Gamblers' Beliefs Questionnaire. *Psychology of Addictive Behaviors: Journal of the Society of Psychologists in Addictive Behaviors*, 16(2), 143–149. <https://www.ncbi.nlm.nih.gov/pubmed/12079253>
- Stewart, S. H., & Zack, M. (2008). Development and psychometric evaluation of a three-dimensional gambling motives questionnaire. *Addiction*, 103(7), 1110-1117.
- Stockwell, T., Solomon, R., O'Brien, P., Vallance, K., & Hobin, E. (2020). Cancer warning labels on alcohol containers: A consumer's right to know, a government's responsibility to inform, and an industry's power to thwart. *Journal of Studies on Alcohol and Drugs*, 81(2), 284-292.
- Suurvali, H., Hodgins, D., Toneatto, T., & Cunningham, J. (2008). Treatment seeking among ontario problem gamblers: Results of a population survey. *Psychiatric Services*, 59(11), 1343-1346.
- The Economist. (2017). The world's biggest gamblers. Retrieved from <https://www.economist.com/blogs/graphicdetail/2017/02/daily-chart-4>

- Van Schalkwyk, M. C. I., Cassidy, R., McKee, M., & Petticrew, M. (2019). Gambling control: In support of a public health response to gambling. *Lancet (London, England)*, 393(10182), 1680-1681. doi:10.1016/S0140-6736(19)30704-4
- Walker, M. B. (1992). *The psychology of gambling*. New York: Pergamon Press.
- Wallace, F. (2021). Commonwealth of australia. parliamentary debates. Retrieved from https://parlinfo.aph.gov.au/parlInfo/genpdf/chamber/hansardr/02b5bbb8-03c3-444a-81a7-cac982040a76/0512/hansard_frag.pdf;fileType=application%2Fpdf
- Wardle, H., Reith, G., Langham, E., & Rogers, R. D. (2019). Gambling and public health: We need policy action to prevent harm. *Bmj*, 365 doi:10.1136/bmj.l1807
- Wells, S., Graham, K., & Purcell, J. (2009). Policy implications of the widespread practice of 'pre-drinking' or 'pre-gaming' before going to public drinking establishments—are current prevention strategies backfiring? *Addiction*, 104(1), 4-9.
- Wigg, S., & Stafford, L. D. (2016). Health warnings on alcoholic beverages: Perceptions of the health risks and intentions towards alcohol consumption. *PloS One*, 11(4), e0153027. doi:10.1371/journal.pone.0153027 [doi]
- Witte, K., & Allen, M. (2000). A meta-analysis of fear appeals: Implications for effective public health campaigns. *Health Education & Behavior*, 27(5), 591-615.
- Yi, S., & Kanetkar, V. (2011). Coping with guilt and shame after gambling loss. *Journal of Gambling Studies*, 27(3), 371-387.

APPENDIX A. INTERVIEW MATERIALS

Focus Group Structure

Aims of focus groups:

1. *Share the results of our literature review with stakeholders, so that each workshop will proceed from a shared framework and basis of understanding about current knowledge on effective messaging. Literature review will keep participants focused on the most promising avenues of messaging to explore in the trial.*
2. *Expand our universe of potential messages and message types that could merit inclusion in the trial*
3. *Evaluate message themes and properties, with the aim of identifying those that are of most interest for testing*
4. *Work towards a consensus regarding the features that are largely agreed upon as important for subsequent empirical evaluation and comparison.*

Note: Several aspects of messaging are well known, such as prominent placement of the message, and therefore should not unduly occupy discussion at the workshops/interviews.

Structure of sessions:

Introduction

Thank you all so much for coming. My name is Hannah Thorne/Nancy Greer and I am a PhD candidate at CQU. I'll be facilitating the focus group. Just a note to everyone to put yourselves on mute when you are not talking as we sometimes get feedback if mics are open. All feedback will be anonymised and you are welcome to request a copy of the project report.

There are two other CQU researchers here as well and I will just get them to introduce themselves now starting with Nancy/Hannah...

Brief overview of project

I'll start us off by giving a brief overview of the project and the aims of this focus group and then we'll go around our little Zoom room and if you are comfortable, get everyone to introduce themselves. This project is supported by a grant from Gambling Research Australia and the Principal Investigator is Prof. Matthew Rockloff.

The aim of the project is to conduct a behavioural trial to test design features for consistent gambling messaging for online wagering (race and sports betting). The trial will test and identify messages that best encourage online sports and race bettors to become more aware of their gambling and decisions, boost conscious decision-making, and correct any misperceptions about gambling. It will also test the efficacy of the messages for different groups of people (e.g. no risk, low risk, moderate risk, problem gambling) and any unintended consequences or stigmatising effects. The current phase we are in is expanding our universe of potential messages to use in the trial.

The findings of this project will be used to inform the Consistent Gambling Messaging measure as outlined in the National Consumer Protection Framework for Online Wagering. The National Framework consists of 10 measures, which aim to reduce the harm that can be caused by online wagering to consumers. The measures will provide people with easy-to-use tools and information to better control their gambling from a voluntary opt-out pre-commitment scheme through to a national self-exclusion register. Six measures have already been implemented with the remaining measures – including Consistent Gambling Messaging – subject to further development, trialling and testing.

Zoom admin

We will try to ensure that everyone is given the opportunity to speak. That might mean that I ask people directly or if you feel like you want to say something but don't want to interrupt the person speaking, you can use the raise-hand function or write something in the chat box.

Group introductions

{Introductions and scan of experience of those in the room around warning messages (Go around the 'room' with introductions (facilitator selecting people as unclear on Zoom who is 'sitting' where): name, location, organisation, role, e.g., counsellor.), experience of messaging.}

Literature review

Philip to briefly inform the group of literature review key findings with the goal of keeping p's focused on the most promising avenues to explore in the trial. IMPT: keep high level as we do not want to 'tell' people what to say.

- *Could share screen to show a summary of lit reviews/avenues. Could use the chat feature to have a record of feedback/ideas and to follow up on ideas with p's.*

Discussion

We want to discuss what messages you think would be effective in minimising harm and why. The overarching aim of the messages is to provide people with an opportunity to appraise their online wagering behaviour, including keeping time and money spent within their means. We'll try to discuss a number of message themes today so please be understanding if I need to move you on from a discussion (as I am conscious that your time is valuable). *We're interested in your perceptions, experience, knowledge and ideas about gambling product warning messages.*

- ❖ The first theme that we want to explore is messages that best encourage online sports and race bettors to ***become aware of their gambling behaviour and decisions.***

- Examples:

- When you gamble, always set aside a fixed amount you can spend.
- Have a dedicated budget for your gambling and stick to it.
- Gambling when you are feeling depressed or upset can lead to spending more money than you mean to.

- ❖ The second theme that we want to explore is messages that ***boost conscious decision making.***

- Examples:

- Q50. Tracey likes to bet on the winner of the local football match. Her last three picks have all won the game. In the next game, the 2 teams are equally matched. All else being equal, what are the odds that her pick for the next match will also win the game?
 - a. 50%
 - b. More than 50%
 - c. Less than 50%

Feedback: *While Tracey may be knowledgeable on football, in this instance the teams are evenly matched and therefore, it is irrelevant whether or not Tracey has some football expertise. Each gamble is independent from the last so for her next gamble, the odds of picking a winner out of two otherwise equal opponents is still 50/50.*

- Going to the races, Belinda noticed she's won every time she brought her partner to the track. Her chances of winning next time are:
 - a. Better if she brings her partner
 - b. Worse if she brings her partner
 - c. **About the same, regardless of whether or not she brings her partner**

Feedback: *In gambling, no one person is more or less lucky than anyone else. Similarly, despite many superstitions suggesting otherwise, there is no strategy or ritual that is likely to help you win. Belinda is incorrectly attributing her wins to the presence of her partner. Her good fortune when accompanied by her partner is nothing more than a coincidence.*

❖ The third theme that we want to explore is messages that **correct gambling misperceptions.**

➤ Examples:

- Gambling is not a good way to make money - the house always wins in the end.
- Australians lose \$24.8 billion a year gambling - the house always wins in the end.
- Systems or strategies will not make you successful at gambling.

❖ The fourth theme that we want to explore is messages based on **norm-based information.**

➤ Example:

- On average, one person's gambling problem hurts six of their close family and friends.
- One in five people who gamble experience harm from their gambling.
- Many gamblers have relationship conflict as well as feelings of regret and anger about their gambling.

❖ The final theme that we want to explore is **emotional messages.**

➤ Example:

- How is gambling hurting your relationships?
- Have you ever been late to pick up your child because of your gambling?
- What else could you be doing with this money?

Prompts (used to keep conversations above “on track”)

- What do you think will be the efficacy on different groups (e.g., PGSI)?
- What do you think might be some unintended consequences - “backfire effects” - from this message?
- What will be the stigmatising effects of this message (e.g., norm-based information)?
- How engaging do you think this message is?
- How much will using fear or other negative emotions cause people simply to just avoid the message (i.e., click straight through)?

Debrief and thank you

Thank you for your time today. Your insights will be very informative for our next research phase of testing effective gambling messaging with gamblers. At the end of the project, we will be delivering a report to Gambling Research Australia. Please let us know if you are interested in reading this report and we will email you a link to it when available. If you have any questions, feel free to ask now or follow myself or Nancy/Hannah up via email. Thank you again for your time.

APPENDIX B. SAFER GAMBLING MESSAGES

Safe Gambling Message	category	Helpful?	Stigmatising?	Miscategorised? (out of 6)
Over 99% of gamblers lose in the long run	Norm	3.83	1.20	
Gambling is not a way to make money: The house always wins in the end	Norm	3.83	1.17	
50% of gamblers bet \$10 or less a week	Norm	3.67	1.83	
Most people who gamble only bet once a month or less	Norm	3.50	1.67	
The more you gamble, the more likely you are to lose overall	Norm	3.50	1.50	2
Typically, people only spend 10 to 20 dollars a week on gambling	Norm	3.50	1.83	
Most people do not gamble as a way to make money	Norm	3.33	1.67	
50% of gamblers bet no more than one day a week on average	Norm	3.33	2.00	

Safe Gambling Message	category	Helpful?	Stigmatising?	Miscategorised? (out of 6)
Most people who gamble every week experience some problems	Norm	3.33	2.00	
Think of all the money you'll save if you gamble less	Positive	3.67	1.17	
All the money not spent on gambling can go towards other fun things, like holidays and eating out	Positive	3.67	1.17	
If you gamble less, you'll have more time to spend with people you care about	Positive	3.50	1.17	
Gambling less really frees up your time to pursue other important things in your life!	Positive	3.50	1.17	
Gambling less gives you more time to do well at work or in study	Positive	3.50	1.33	
Betting less lets you spend more money on the important people in your life	Positive	3.33	1.33	
Think of all the great things you could buy with money not lost on gambling	Positive	3.33	1.17	

Safe Gambling Message	category	Helpful?	Stigmatising?	Miscategorised? (out of 6)
Your family will appreciate you keeping your gambling spend to a reasonable amount	Positive	3.33	1.33	
Gambling less often makes it easier to pay for unexpected expenses	Positive	3.33	1.17	
Asking for help with your problems can make things better for you sooner than you might think!	Positive	3.33	1.17	1
Gambling less means you can do more of the fun things in life	Positive	3.33	1.17	
Think of how nice it would be to not worry about money. Gambling less can help!	Positive	3.33	1.33	
Gamble less, enjoy life more	Positive	3.33	1.17	
You can enjoy your favourite sport more if you don't need to worry about losing money	Positive	3.20	1.17	
There's so many ways to enjoy yourself and relax apart from gambling	Positive	3.17	1.33	

Safe Gambling Message	category	Helpful?	Stigmatising?	Miscategorised? (out of 6)
Limiting your gambling will help keep your family happy	Positive	3.17	1.67	
Adhering to your limits can make you feel empowered	Positive	3.17	1.33	
Your family will be happy and proud of you for controlling your gambling	Positive	3.17	1.50	1
Think of how many bills you can pay with money not spent gambling!	Positive	3.17	1.17	
Most people play for fun; not to relieve boredom or stress	Norm	3.17	2.00	
Gambling less can help you sleep better at night	Positive	3.17	1.17	
Even a small reduction in time or money spent gambling can have positive effects on your wellbeing	Positive	3.17	1.17	
Most people do not keep track of their wins; they just gamble for fun	Norm	3.17	1.67	

Safe Gambling Message	category	Helpful?	Stigmatising?	Miscategorised? (out of 6)
Reducing the time you spend gambling will allow you to be more present for those around you	Positive	3.17	1.33	
Financial freedom is closer than you think! Betting less brings your financial goals closer	Positive	3.17	1.17	1
An extra job or a side-hustle can bring you much more money than gambling	Positive	3.17	1.17	
Most people do not make new bets to try and win back money they've lost	Norm	3.17	2.17	
Responsible (or smart?) gamblers don't chase losses	Norm	3.00	2.67	1
Responsible (or smart?) gamblers stick to a budget	Norm	3.00	2.50	3
Spending less money gambling allows you to invest in other areas of your life	Positive	3.00	1.33	
Spending less time gambling frees up time to engage in other pleasurable activities	Positive	3.00	1.17	

Safe Gambling Message	category	Helpful?	Stigmatising?	Miscategorised? (out of 6)
Most people who gamble spend less than 30 minutes planning their bets	Norm	3.00	1.83	
Most people don't feel depressed or upset after gambling	Norm	3.00	2.00	
People who gamble more than they can afford harm their families	Norm	3.00	2.67	1
Help for gambling is available in many forms, in person, on the phone and online	Positive	3.00	1.33	3
If you take a break from gambling, you'll probably find other ways to relax and have fun	Positive	3.00	1.17	
Most people don't stick with betting that produces consistent losses	Norm	3.00	2.17	
People who gamble for money are more likely to experience gambling problems	Norm	2.83	2.17	
Spending less on gambling can make you feel like a new and better person!	Positive	2.83	1.50	

Safe Gambling Message	category	Helpful?	Stigmatising?	Miscategorised? (out of 6)
Most people are OK with telling others about how much they lost	Norm	2.83	2.00	
Few people lie to other people about their gambling losses	Norm	2.83	2.67	
Most people overestimate the chances of winning on any given bet	Norm	2.83	1.17	
It's unusual for people to feel anxious if they don't gamble for a couple of weeks	Norm	2.83	1.83	
Responsible (or smart?) gamblers only gamble with spare money	Norm	2.83	2.50	3
You can't have fun if you're not having fun... gamble less and enjoy life more!"	Positive	2.83	1.17	1
Most people will just play a short game on the pokies, before having dinner or meeting friends	Norm	2.83	1.83	1
The majority of people aren't tempted to gamble more to recoup their losses	Norm	2.83	2.17	

Safe Gambling Message	category	Helpful?	Stigmatising?	Miscategorised? (out of 6)
How much have you spent today? Contact gambling help. We want to help you	Positive	2.83	1.67	4
Talking to someone is a better way of coping with problems than gambling is	Positive	2.83	1.17	4
Most people will walk away when they have lost too much	Norm	2.83	1.83	
Gambling to avoid life problems can escalate life stressors and contribute to harm	Norm	2.83	1.83	2
Most people won't bet their last dollar	Norm	2.83	2.50	
People who set limits on how much time and money they spend gambling can reduce the risk of developing problems	Norm	2.67	1.17	3
Gambling within your limits can minimise the chance of experiencing negative feelings due to blowing your budget	Positive	2.67	1.67	4
Most people feel they can walk away from gambling; they have other important things in their lives	Norm	2.67	3.17	1

Safe Gambling Message	category	Helpful?	Stigmatising?	Miscategorised? (out of 6)
Most people know the odds given by bookmakers ensure that you will never win consistently	Norm	2.67	1.83	
Gambling is a tricky business, don't let it trick you into blowing your budget	Control	2.67	1.50	1
Most people don't get angry when they lose	Norm	2.50	2.50	
Most people who gamble have some friends that are not interested in gambling	Norm	2.50	1.33	
Responsible (or smart?) gamblers limit the amount of time spent gambling	Norm	2.50	2.33	2
Most people do not think much about their bets, they just bet on their favourite teams, horses or jockeys	Norm	2.50	1.83	1
People who keep increasing their gamble end up with a gambling problem	Norm	2.33	2.50	
People who gamble beyond their limits can accumulate substantial losses in time and money	Norm	2.33	2.00	

Safe Gambling Message	category	Helpful?	Stigmatising?	Miscategorised? (out of 6)
Those who think carefully about gambling choices find it easier to stay in control of their gambling	Norm	2.17	2.00	2
Most people refuse to bet with offshore betting agencies or websites	Norm	2.17	1.17	
People who do not regulate their expenditure when gambling may spend more than they can afford	Norm	2.00	2.00	1
Only bet what you can afford	Control	2.00	1.67	
Think before you bet. Don't make a choice you can't afford	Control	2.00	2.00	
You're the one who decides how much gambling is right for you	Positive	1.83	1.67	2
Are you playing, or getting played?	Control	1.67	1.67	
Stay in control. Leave before you lose it	Control	1.67	2.00	
Bet with your head not over it	Control	1.67	1.67	

Safe Gambling Message	category	Helpful?	Stigmatising?	Miscategorised? (out of 6)
If you gamble, play it safe	Control	1.50	1.50	
When the fun stops, stop	Control	1.50	2.00	
Don't let the game play you	Control	1.50	1.67	
Keep the fun in the game	Control	1.50	1.50	
Know when to stop	Control	1.50	1.50	
Take stock of your gambling	Control	1.50	1.83	
If you gamble, play it safe	Control	1.50	1.50	
Think your gambling may be a problem?	Control	1.50	1.80	
Is gambling right for you?	Control	1.50	1.83	
Worried about your gambling	Control	1.33	1.33	
Be a responsible gambler	Control	1.33	2.33	
Remain the master of the game	Control	1.17	1.50	

Safe Gambling Message	category	Helpful?	Stigmatising?	Miscategorised? (out of 6)
Gamble responsibly	Control	1.17	2.00	
When gambling isn't fun anymore	Control	1.17	1.50	
Gamble in a balanced way	Control	1.17	1.50	

