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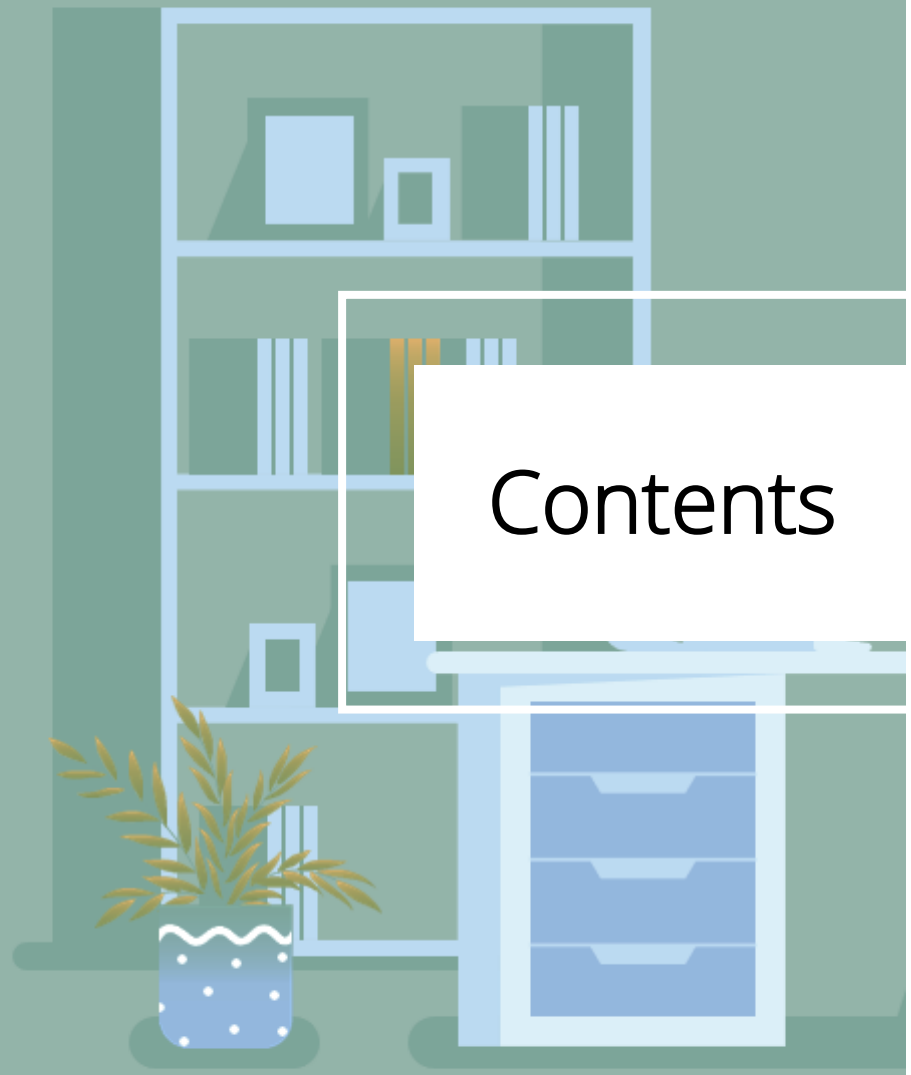
Gambling Spending Limits Study

South Australian Department of Human Services

March 2025

Deloitte Access Economics



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1.1 Executive Summary | Project Overview

This research investigates how the design of gambling spending limits within banking apps can positively impact upon active gambling management among gamblers in South Australia.

Australia has the highest gambling loss per adult in the world, with total losses reaching approximately $31.5 billion in 2022-23 – an 18% increase from 2012-13. This equates to $1,527 per adult. A significant driver of these losses is online gambling, which accounts for approximately 23% of all gambling losses in Australia. Online gambling has surged in the last five years, with losses growing by 62% since 2019/20. In South Australia, per capita gambling expenditure increased by 10.2% to $1,227 in the ten years to 2022-23.

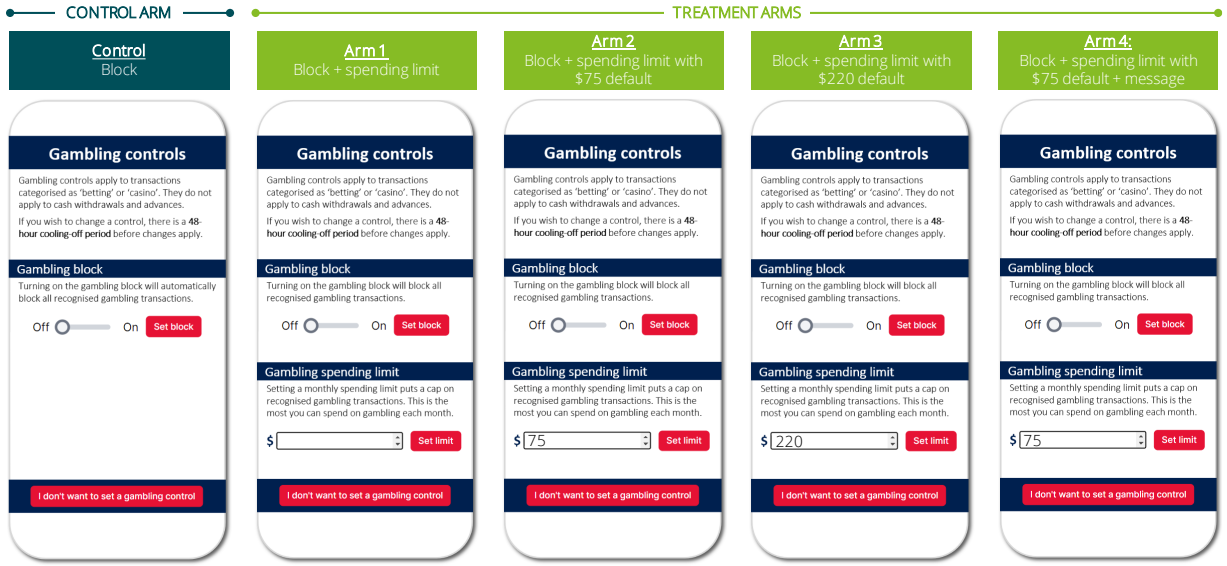
Gambling can have detrimental effects on individuals, including financial and productivity loss and damage to personal relationships, health and wellbeing. The 2018 SA gambling prevalence survey identified that nearly two-thirds (65%) of South Australians had participated in some form of gambling in the previous 12 months. Amongst this group, 2.9% were classified as 'at-risk' (either 'moderate-risk' or 'problem' gamblers), which was a slight decrease from 2012 (3.1%).

In light of this, the South Australian Department of Human Services engaged Deloitte Access Economics to undertake this research study to examine uptake of gambling harm minimisation tools. This research study specifically considers **gambling blocks** (which prevent users from depositing money onto gambling websites) and **spending limits** (which cap the amount of money an individual can deposit within a set time period).

The study considers five research questions:

1. Are gamblers more likely to engage with gambling harm minimisation tools when a gambling spending limit is offered?
2. Does a default gambling spending limit impact the limits set by users?
3. How do users' interaction with gambling spending limits change with their level of engagement with gambling?
4. Do users want a gambling spending limit in their banking app, and how can the tool be designed to encourage adoption?
5. Which of the gambling spending limit options is likely to cause the greatest reduction in gambling harm?

The experiment was conducted in an online lab experiment setting with 392 participating Australian adults who had gambled at least once in the past 12 months. Participants were randomised into either the control group (gambling block only) or one of the four intervention arms (block plus a spending limit). The five arms are shown below.



1.2 Executive Summary | Key Findings

This study found that gambling harm minimisation tools are an effective mechanism to empower individuals to reduce their gambling spend and mitigate the negative consequences of gambling. The six core findings of the research are presented below.

1 Introducing spending limits within banking apps was shown to significantly increase user engagement with gambling harm minimisation tools, increasing user interaction with gambling harm minimisation tools by approximately 20%. This gives users greater ability to manage their gambling spend and engage in safer gambling behaviours.

2 Our research suggests that a default spending limit of approximately $100 per month with a priming preliminary message may be most appropriate to minimise gambling spend for most users.

3 There may be a risk that gambling spending limits increase the risk of harm for problem gamblers. Introducing a gambling spending limit may lead to those experiencing high levels of hambling harm setting a limit rather than a block. A greater sample of moderate and problem gamblers is needed to better understand this potential risk.

4 Approximately 3 in 4 people are not aware of the gambling harm minimisation tools currently available within banking apps. Our research indicates that 3 in 4 people were also in favour of banks introducing spending limit tools within their apps.

5 Problem gamblers were the most likely to engage with either a gambling spending limit or gambling block. Our study found that approximately 90% of moderate-risk and problem gamblers chose a gambling harm minimisation tool, suggesting that these tools may be effective in minimising gambling harm for at risk individuals.

6 Users favoured additional functionality for their gambling harm minimisation tools. Examples of additional features include:

- Variable time periods for gambling spending limits
- Flexible cooling off periods
- Improved visibility of current gambling expenditure.

2 | Background

Project context, purpose and objectives

2.1 Background | Gambling in Australia

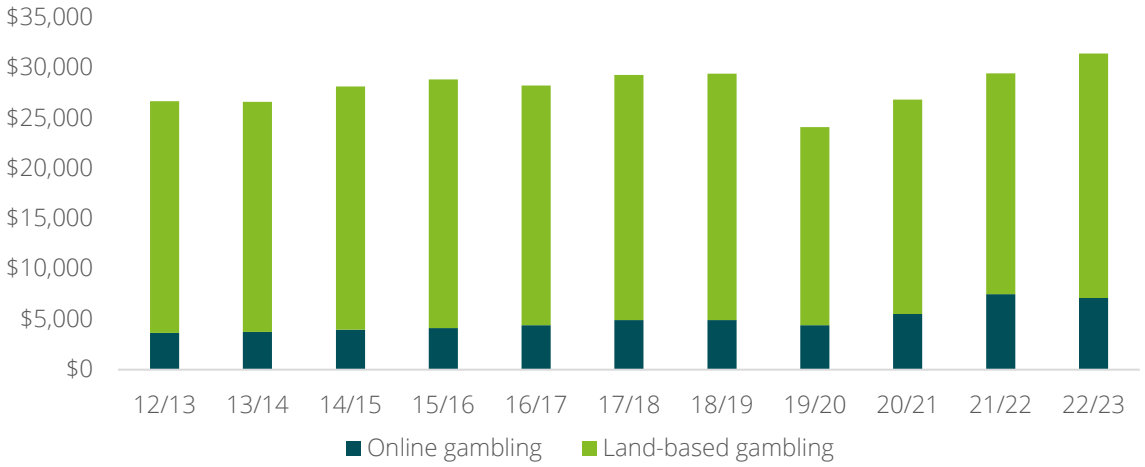
Gambling is a major issue in Australia, including South Australia.

Gambling in Australia

Australia has the highest gambling loss per adult in the world, with total losses reaching approximately $31.5 billion in 2022-23 – an 18% increase from 2012-13 (Chart 2.1).[1,2] This equates to $1,527 per adult. A significant driver of these losses is online gambling, which accounts for approximately 23% of all gambling losses in Australia.[2] Online gambling has surged in the last five years, with losses growing by 62% since 2019/20.[2] This growth was largely fuelled by the COVID-19 pandemic, during which many land-based gambling venues were closed.

In South Australia, per capita gambling expenditure was $1,227 in 2022-23, which was the third lowest of any state or territory and below the national average.[2] However, this represents a 10.2% increase from 2012/13.[2]

Chart 2.1: Total gambling losses by gambling mode, 2012-13 to 2022-23



Source: *Deloitte Access Economics analysis Australian Gambling Statistics, Queensland Treasury, 2022-23*
Note: *Online gambling is assumed to be 85% of wagering[3]*

Gambling harm

Gambling can have detrimental effects on individuals, including financial and productivity loss and damage to personal relationships, health and wellbeing.[4] The 2018 SA gambling prevalence survey identified that nearly two-thirds (65%) of South Australians had participated in some form of gambling in the previous 12 months. Amongst this group, 2.9% were classified as 'at-risk' (either 'moderate-risk' or 'problem' gamblers), which was a slight decrease from 2012 (3.1%).[5]

Potential negative impacts associated with gambling go beyond the financial and psychological impacts experienced by individuals, extending to their families, and other close social connections. Goodwin et al. (2017) found that for every person involved in high-risk gambling, at least six other people can be affected.[6] In South Australia, the 2018 SA gambling prevalence survey found that 6% of residents had been affected by someone else's gambling in the previous 12 months.[5] Beyond personal harms, gambling has costly flow-on effects for society, including implications on government service use.

The Australian gambling sector

In Australia, the Commonwealth Government oversees online gambling through the Interactive Gambling Act 2001.[7] A key amendment in June 2024 further restricted online wagering by prohibiting the use of credit cards, credit-related products, and digital currencies for gambling.[8]

This change aligns with a broader increase in interest in cashless gaming systems, which have been explored in Victoria, New South Wales, and Tasmania. In contrast, South Australia currently enforces a $250 daily cash withdrawal limit per card in gaming venues but has not yet introduced a cashless gaming mandate.[9]

2.2 Background | Gambling harm minimisation tools and engagement purpose

While various harm minimisation tools exist, more research is needed on spending limits within banking apps.

Gambling harm minimisation tools

Many Australian gambling venues offer gambling harm minimisation tools, such as mandatory closure periods and on-site self-exclusion programs, to help individuals manage their gambling and reduce harm.[1,2] Informed by these tools, many gambling websites and apps now also offer gambling harm minimisation tools, including the following:

Gambling block – a restriction preventing an individual from making gambling deposits on a certain website or app.

Gambling spending limit – a cap on the amount of money an individual can deposit or lose within a set time period on a certain website or app (e.g., 1 day, 1 week, 1 month).

Time limit – a cap on the amount of time an individual can spend using a certain website or app, either within a set time frame or consecutively.

While gambling blocks inherently restrict gambling expenditure, limit-setting and time-out features have also been found effective, especially when enabled by default, requiring users to actively disable them if undesired.[3,4,5,6] However, evidence is mixed regarding their long-term effectiveness and it remains unclear whether these tools are more effective when implemented voluntarily or mandatorily.[7,8]

A key limitation of these site-specific gambling harm minimisation tools is that they are disjointed and not coordinated. That is, a gambling block on one gambling site will not prevent a user from accessing a different gambling site. To address this, most banks in Australia now offer gambling blocks, which provide a coordinated method of preventing gambling spend almost entirely. As of 2023, more than 775,000* debit and credit cards had gambling blocks placed upon them by bank customers, representing less than 2% of all credit cards in Australia.[9,10]

However, it is hypothesised that gambling spending limits within banking apps may be a more useful alternative for some subset of gamblers. Gambling spending limits may be useful for people who choose not to enforce a gambling block but would still like to be proactive with their gambling management and limit their overall gambling spend.

A recent study by the Behavioural Insights Team (BIT) in the UK produced some promising evidence that adjusting the design of gambling spending limits through default settings and messaging can encourage greater active gambling spend management.[11] However, these approaches have yet to be tested in an Australian context.

Engagement purpose and objective

Deloitte Access Economics was engaged by Gambling Harm Support SA in the South Australian Department of Human Services to investigate how the design of a gambling spending limit within banking apps can affect the likelihood of active gambling management by gamblers in South Australia.

This research is particularly important given the trend towards cashless gaming systems. The findings will contribute to understanding user interactions with cashless gambling and may help shape policies and tools that empower gamblers to manage their spending and sustain positive change.

** Data from the four major banks and Bendigo & Adelaide Bank only*

2.3 Background | Research questions

This project will aim to answer five research questions developed in consultation with the Department of Human Services.

Five research questions were established to help explore how the use of gambling spending limits may impact on user behaviour. The research questions align to research undertaken by the BIT in the UK, which provided an initial evidence base to suggest that gambling spending limits may be an effective tool for users to manage their gambling spend.[1] These research questions set out to understand if the findings from this research are replicable in an Australian setting.

RQ1	RQ2	RQ3	RQ4	RQ5
Are gamblers more likely to engage with gambling harm minimisation tools when a gambling spending limit is offered?	Does a default gambling spending limit impact the limits set by users?	How do users' interaction with gambling spending limits change with their level of engagement with gambling?	Do users want a gambling spending limit in their banking app, and how can the tool be designed to encourage adoption?	Which of the gambling spending limit options is likely to cause the greatest reduction in gambling harm?
We expect that when both a gambling block and a gambling spending limit are offered, some users who might have previously chosen the gambling block will instead opt for the gambling spending limit. However, that the overall proportion of people using any gambling harm minimisation tool will likely be higher compared to when only a gambling block is offered.	We anticipate that users exposed to default gambling spending limits will, on average, set lower limits than those not exposed, with the default value serving as a downward anchor. This effect was observed in the BIT study. We are interested in examining how varying default limit levels influence both the number of people who choose to set gambling spending limits and the average limits they set.	We expect that users with higher Problem Gambling Severity Index (PGSI) scores will be less likely to engage with either of the gambling harm minimisation tools compared to people with lower PGSI scores, and if they do, will be more likely to set a gambling spending limit than a gambling block. This was observed in the BIT study.	We expect that many users will be supportive of their banks offering a gambling spending limit in addition to a gambling block. However, similar to gambling blocks, which are often difficult to locate within banking apps, gambling spending limits may also face accessibility barriers. Better promotion and clearer descriptions, among other factors, will likely encourage adoption.	We anticipate that one of the default gambling spending limit options will result in the greatest reduction of gambling harm, as the anchoring effect may result in lower limits compared to other arms. However, it is unclear what default value will be most appropriate in the Australian context.

3 | Methodology

Approach, survey design and recruitment

3.1 Methodology | Approach

An online lab experiment was designed to test user interaction with multiple different gambling spending limit tools.

Study overview

The purpose of this study was to understand the impact of gambling spending limits within banking apps. An online lab experiment was conducted in the form of a randomised controlled trial (RCT), developed using the Gorilla experiment builder.

Experiment design

Why a randomised control trial?

The experiment took the form of a randomised control trial, with one control arm and four intervention arms (refer to Page 12). The intervention arms consisted of a simple gambling spending limit tool with minor variations between them. These differences allowed the impact of certain design features on behaviour to be isolated and understood.

Participants were randomised into one of the five survey arms, with an equal probability of being placed into each arm. This minimises bias and ensures that the results are attributable to the differences in the survey arms rather than differences in the participants, which enhances the reliability and validity of the findings.

Why an online lab experiment?

Unlike field experiments, in which participants make 'real' choices in a real-world setting, lab experiments involve making hypothetical choices in a controlled, artificial environment. In this case, an online lab experiment was conducted due to its ability to easily test multiple variations of a spending limit tool before making suggestions for the design of a field experiment.

The survey arms were designed to resemble a banking app, thus simulating a real-world user experience and encouraging 'real' behaviour.

Limitations

There were two primary limitations of this study, the first being the generalisability of the experiment conditions:

- As a lab experiment, participants were making decisions in an artificial environment. They therefore may not have experienced the same emotions, pressures, or consequences as they would in a real-world setting, potentially limiting the study's external validity and reducing its applicability to real-world decision-making.
- Furthermore, real-world gambling harm minimisation tools are often embedded within banking apps such they are difficult to stumble upon accidentally. As a result, most users who access these tools likely do so intentionally, indicating a pre-existing intention, or at least an interest, in using a gambling harm minimisation tool. By contrast, our sample included all gamblers, regardless of whether they had an active interest in these tools.

Secondly, the sample size was relatively small. This had the following impacts:

- There was a limited sample to compare smaller subgroups, including PGSI groups as well as groupings of participants with specific demographic characteristics.
- Some demographic characteristics were too small for analysis altogether, including Aboriginal and Torres Strait status participants and non-binary participants, and were therefore not included in the regression analysis.

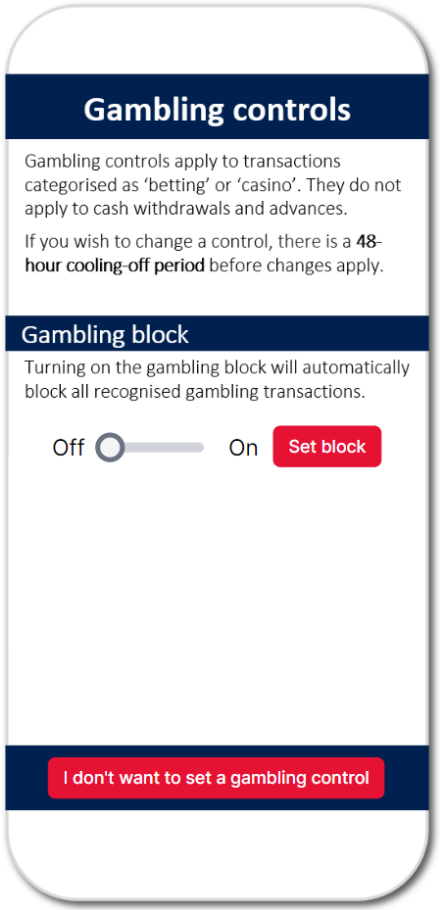
3.2 Methodology | Survey arms

This study consisted of one control arm and four intervention arms, the designs for which are provided below.

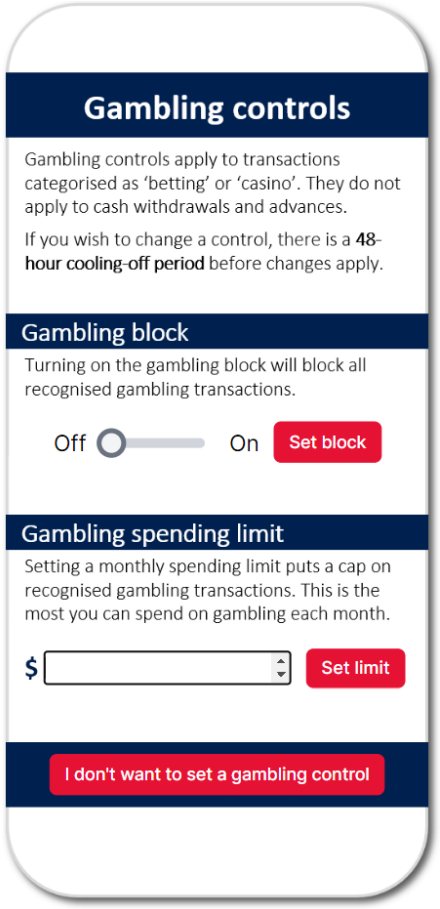
CONTROL ARM

TREATMENT ARMS

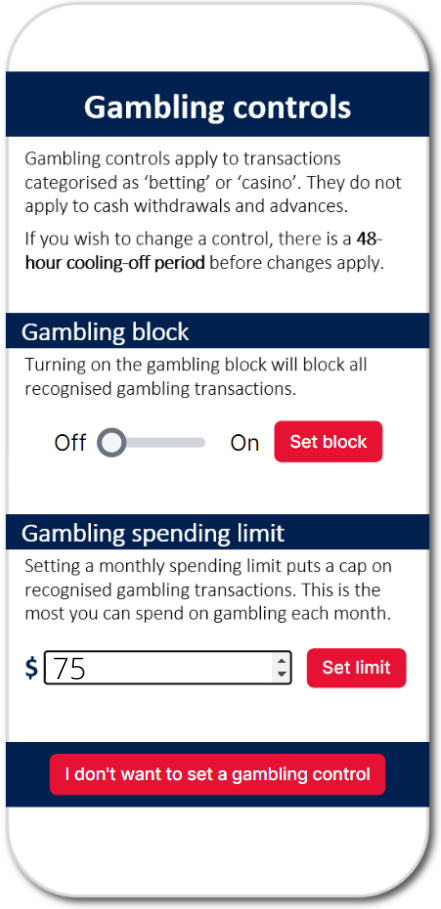
Control
Block



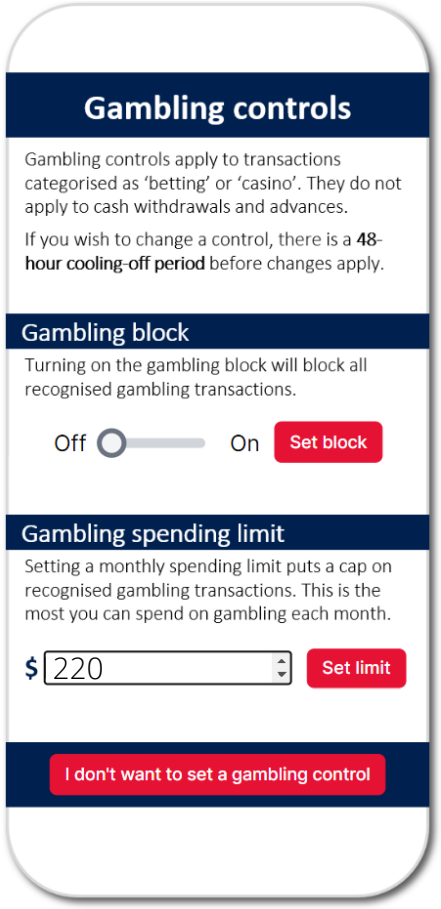
Arm 1
Block + spending limit



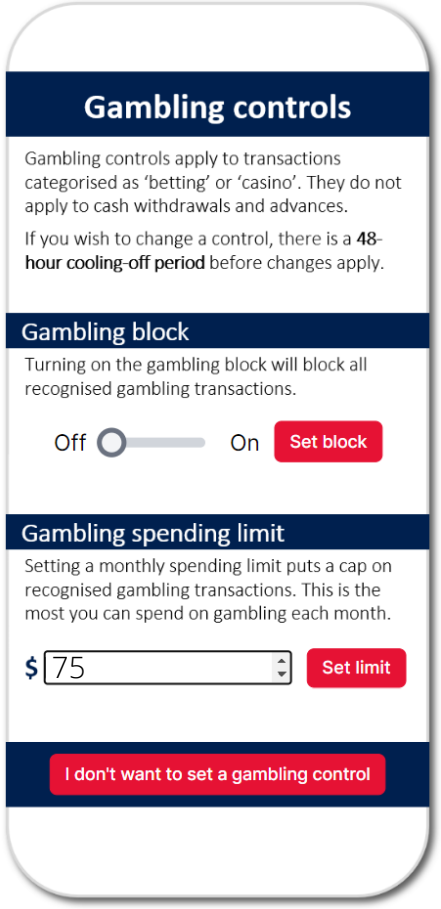
Arm 2
Block + spending limit with $75 default



Arm 3
Block + spending limit with $220 default



Arm 4:
Block + spending limit with $75 default + message



3.3 Methodology | Survey arm design - Control

This arm consists of a gambling block, representing what most Australian banks currently offer.

Description

The control arm consists of a gambling block, which prevents all transactions categorised as 'gambling' or 'casino'. This is what most Australian banks currently offer. Users can choose to proceed without turning on the gambling block.

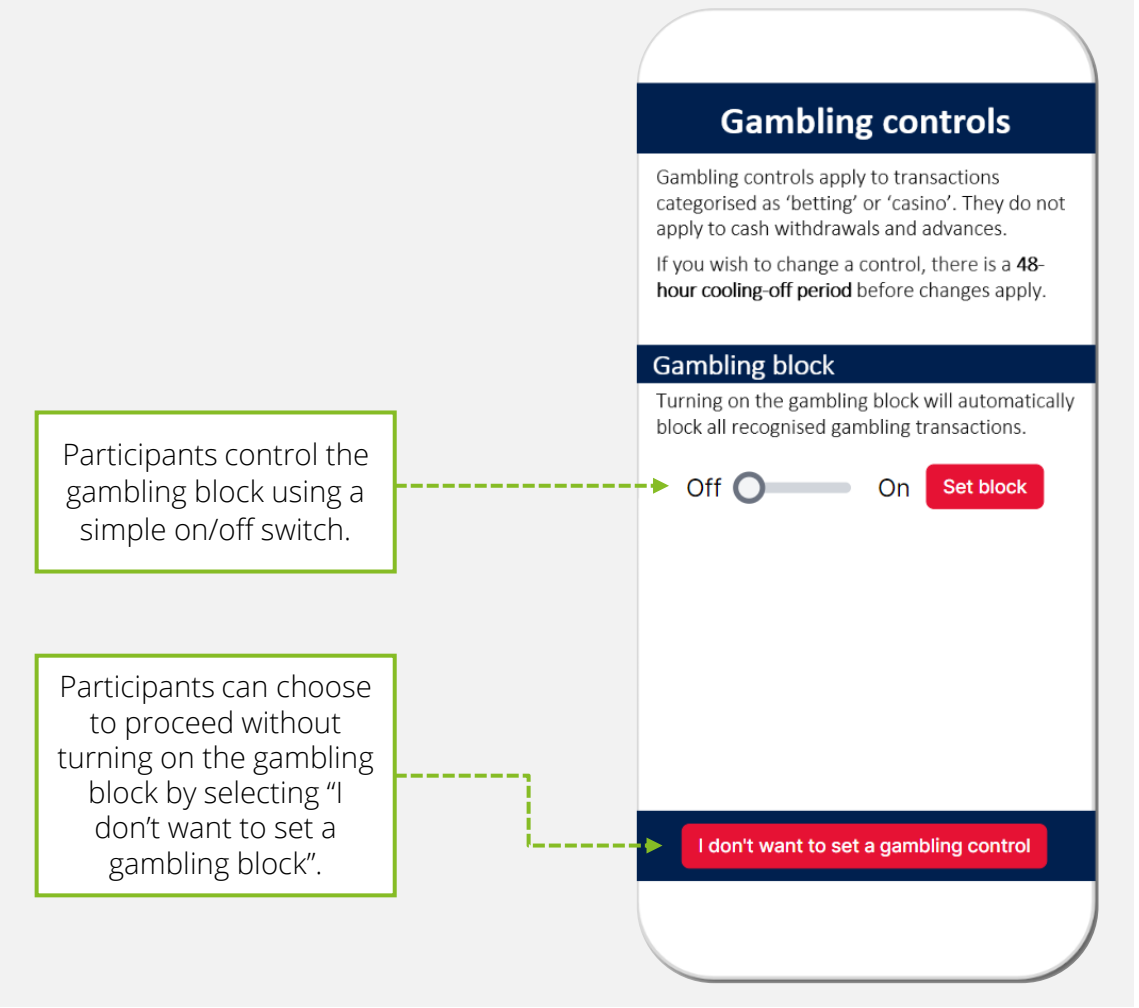
The gambling block is consistent across all survey arms.

Cooling off period

The gambling block has a 48-hour cooling off period, meaning that after disabling the gambling clock, users must wait 48-hours before the change becomes active. This limits impulsive decision making by providing the user with time to reflect. The timeframe of 48-hours was chosen because it aligns with what most Australian banks offer.

For a detailed summary of the pages in the control arm, see Page 38.

Figure 3.1: Design of the control arm presented to participants



3.4 Methodology | Survey arm design - Arm 1

This arm consists of a gambling spending limit in addition to the gambling block.

Description

Arm 1 consists of a gambling block and a gambling spending limit. The gambling spending limit tool allows users to set a limit on how much they spend on transactions categorised as 'gambling' or 'casino' each month. The look and descriptive text for the gambling spending limit tool are consistent across all intervention arms.

Cooling off period

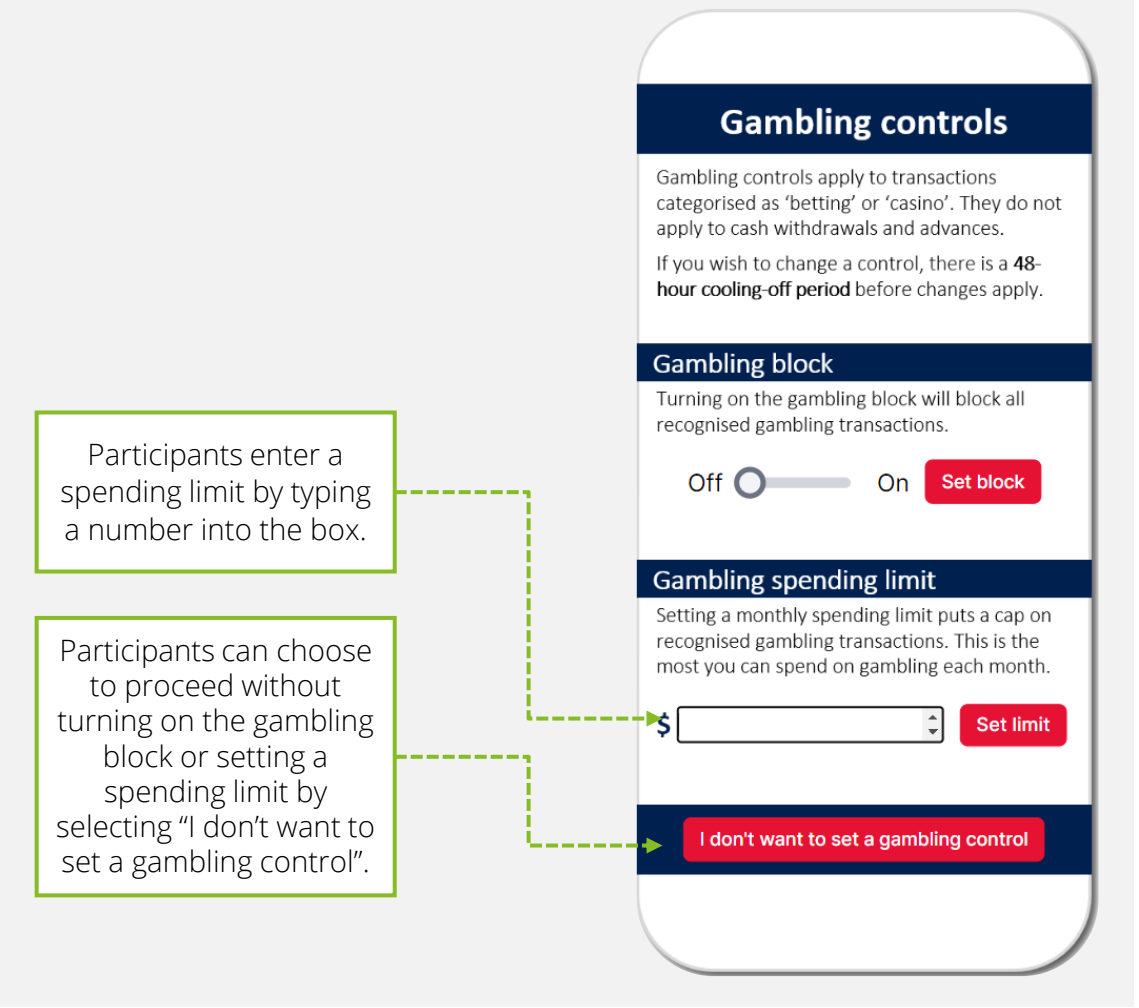
Like the gambling block, the gambling spending limit tool has a 48-hour cooling off period, meaning that after disabling or changing the gambling spending limit, users must wait 48-hours before the change becomes active. This limits impulsive decision making by providing the user with time to reflect.

No default spending limit

Before the participant sets a gambling spending limit, the limit box is blank. There is no upper limit to the amount that can be entered.

For a detailed summary of the pages in arm 1, see Page 39.

Figure 3.2 Design of arm 1 presented to participants



3.5 Methodology | Survey arm design - Arm 2

This arm consists of a gambling spending limit with a default value of $75, in addition to the gambling block.

Description

Arm 2 consists of a gambling block and a gambling spending limit tool with a default value of $75. This value is approximately 1% of the median monthly household income in Australia. This is based on the Lower Risk Gambling Guidelines (LRGGs) from Canada, which state that gambling spending above this level is associated with higher risk of gambling harm.[1]

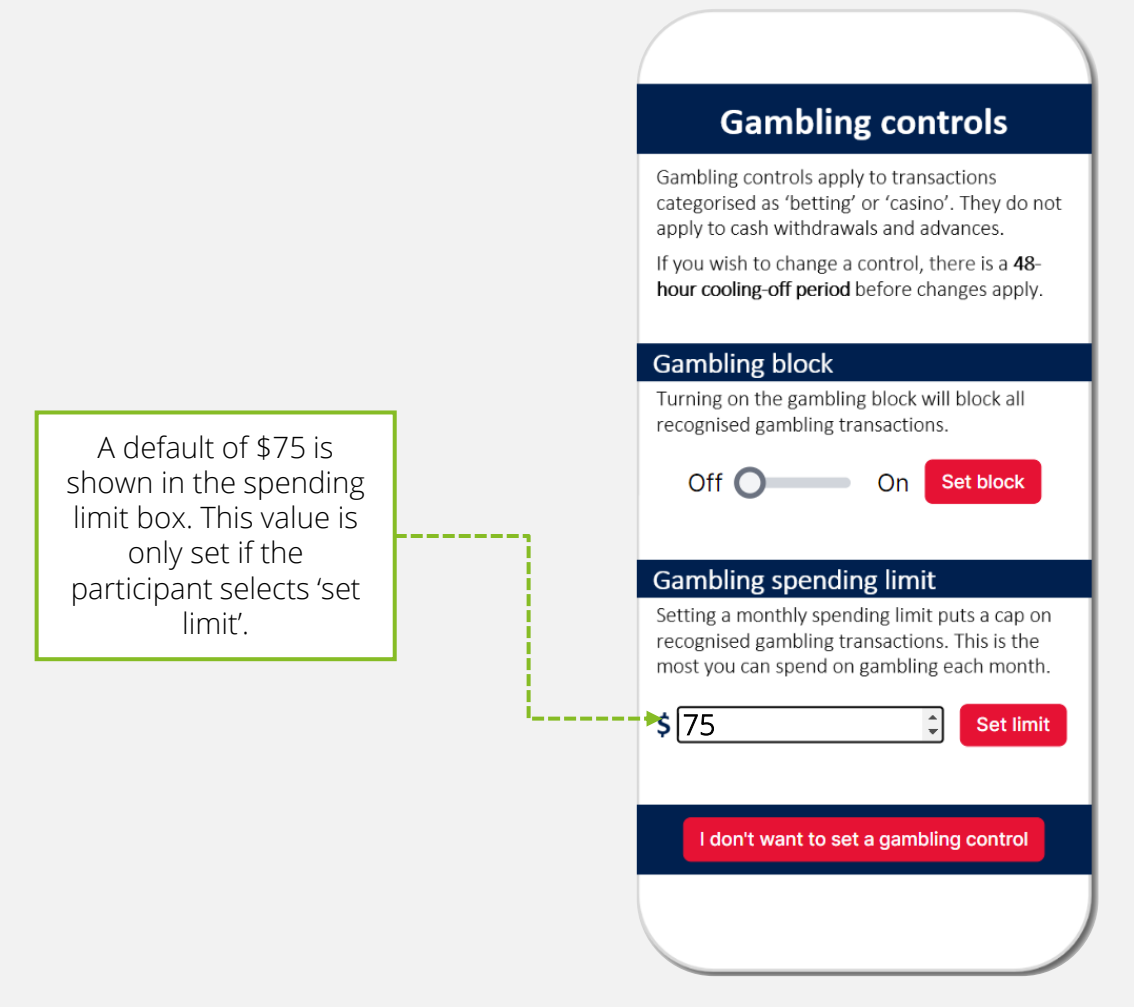
Default spending limit

A default value of $75 is shown in the limit box. This is expected to influence limit setting behaviour through two mechanisms:

- **Default effect:** When individuals are presented with a pre-selected option – a 'default' – they are more likely to select that option when making decisions.[2] In this case, users are likely to retain the $75 limit because it requires less effort or deliberation than choosing an alternative.
- **Anchoring effect:** Individuals often over-rely on the first information they receive – the 'anchor' – when making decisions, even if the information is irrelevant or irrational.[3] In this case, the $75 gambling spending limit may shape users' perceptions of what constitutes an appropriate spending limit and encourage them to increase their spending to that level. Additionally, those who choose to adjust the limit may base their decisions around this initial figure, leading to a narrower range of chosen values.

For a detailed summary of the pages in arm 2, see Page 40.

Figure 3.3: Design of arm 2 presented to participants



3.6 Methodology | Survey arm design - Arm 3

This arm consists of a gambling spending limit with a higher default value of $220, in addition to the gambling block.

Description

Arm 3 consists of a gambling block and a gambling spending limit tool with a higher default value of $220. This value was found by adjusting the 1% of median monthly household income, as recommended in the LRGGs, for the increased gambling spend per capita in Australia compared to Canada.

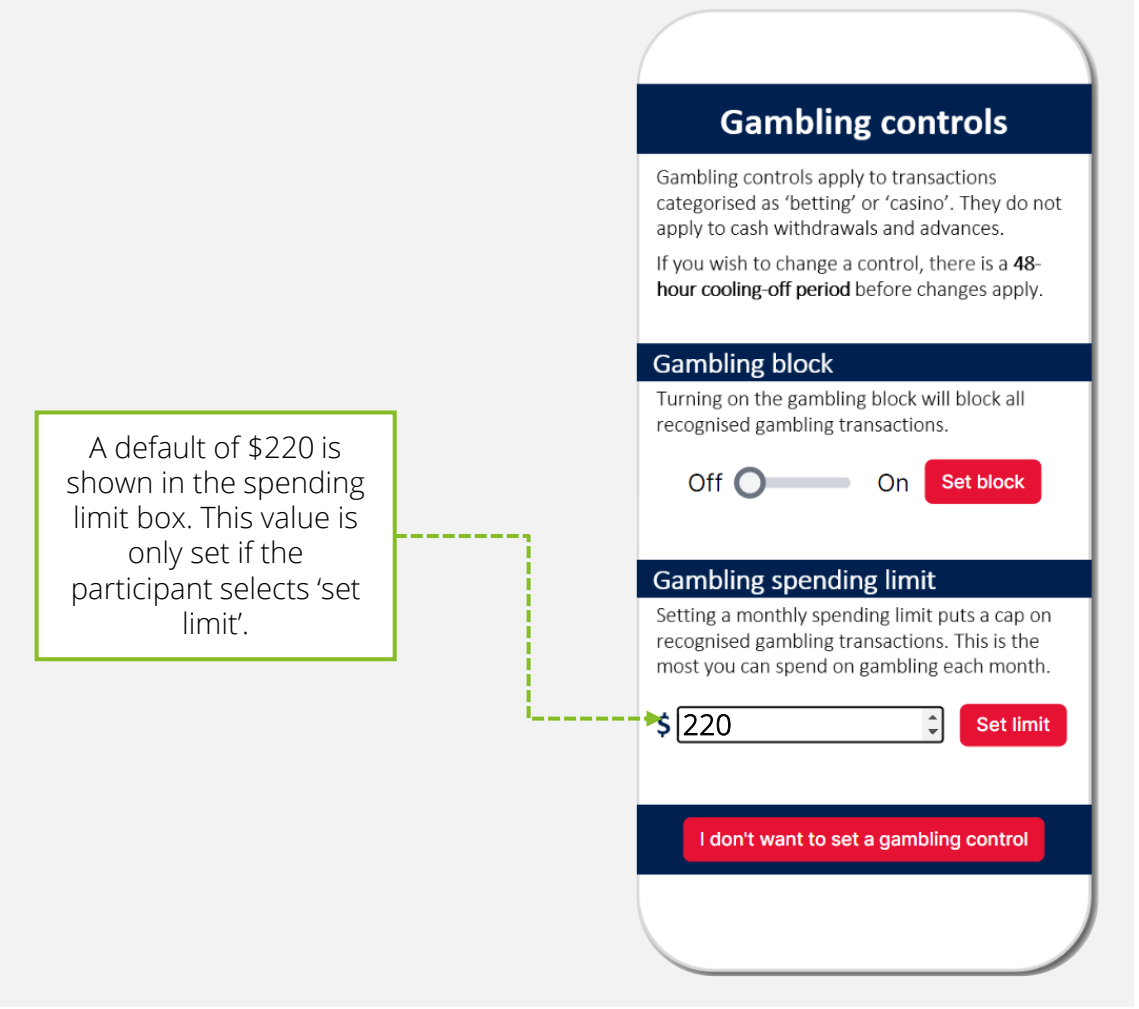
Default spending limit

Australians have higher gambling losses, on average, than any other country.[1] It is possible that because Australians spend significantly more than Canadians on gambling, that high-spending gamblers may dismiss the 1% default as too low and not be effectively anchored by it.

A higher default value of $220 is therefore shown in the limit box to try to maintain the **anchoring effect**.

For a detailed summary of the pages in arm 3, see Page 41.

Figure 3.4: Design of arm 3 presented to participants



3.7 Methodology | Survey arm design - Arm 4

This arm consists of a preliminary message in addition to the gambling block and gambling spending limit with default value of $75.

Description

Arm 4 includes a message (1) before a gambling block and gambling spending limit with a $75 default: *"You can plan and manage your spending on gambling within this banking app! Click here to set a spending limit now."* Participants who select "*Yes*" are shown the tools (3). Those who select "*Not right now*" are asked "*Why did you choose to not view the gambling tools?*" (2) before being shown the tools (3). These participants are excluded from analysis.

The $75 default was chosen for this arm to align with the LRGGs (Page 15).

Friction

Gambling harm minimisation tools are often difficult to find within banking apps. The message replicates this friction and filters out uninterested individuals, thus ensuring genuine engagement from participants.

Priming

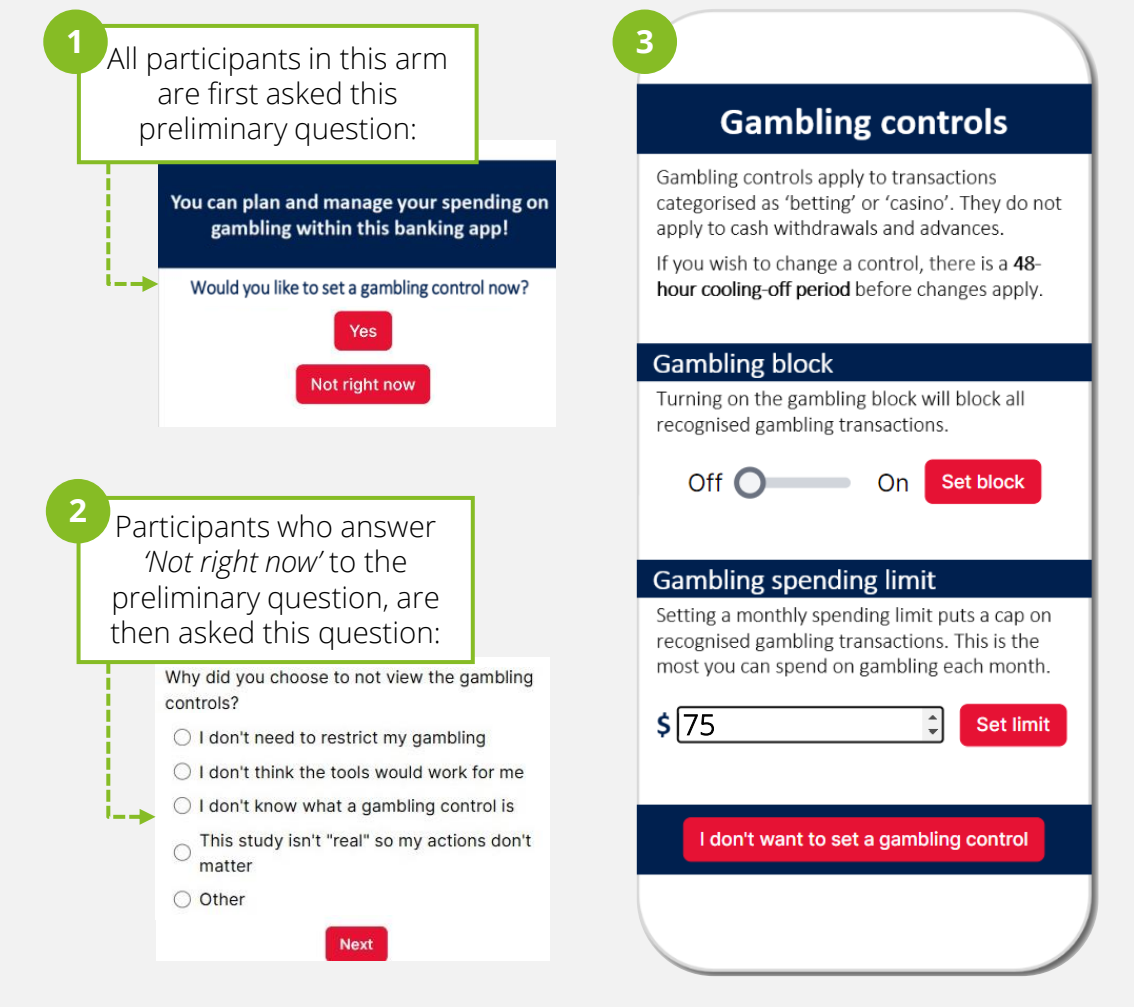
Using positive language, the message subconsciously primes participants to engage positively with the tools about to be offered, as outlined in the MINDSPACE framework for behavioural science in policymaking.[1]

Commitment

Also from the framework, the message may foster a sense of commitment, with participants who view the tools feeling more inclined to select one.[1]

For a detailed summary of the pages in arm 4, see Page 42.

Figure 3.5: Design of arm 4 presented to participants



3.8 Methodology | Survey design

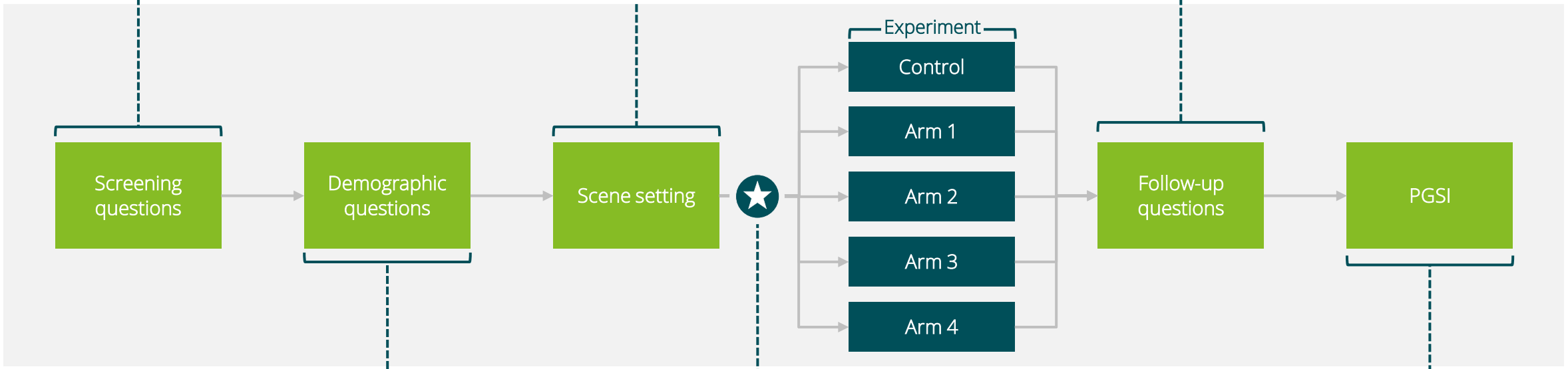
Eligible participants were asked demographic questions then given a simulated decision-making scenario, followed by follow-up questions and the PGSI tool.

Participants were asked screening questions (refer to Page 19) to determine their eligibility for the study. If they were deemed ineligible, the survey ended.

The following message was displayed to participants:

"Imagine you have logged into your mobile banking app. You are looking through your settings and find the gambling controls page on the following screen. Please interact with the page as you would if it were actually offered in your banking app. There will be some follow-up questions."

Participants were asked about the choices they made in the experiment, how the tools could be improved, and whether they would like their bank to offer similar gambling harm minimisation tools.



Participants were asked demographic questions relating to their age, gender, Aboriginal and Torres Strait Islander status, languages spoken at home, education attainment, employment status, and income.

Participants were **randomised** into one of the five survey arms. There was an equal chance of being assigned to each arm.

Participants completed the 9-question PGSI tool, which provides an indication of problem gambling behaviours.

3.9 Methodology | Recruitment

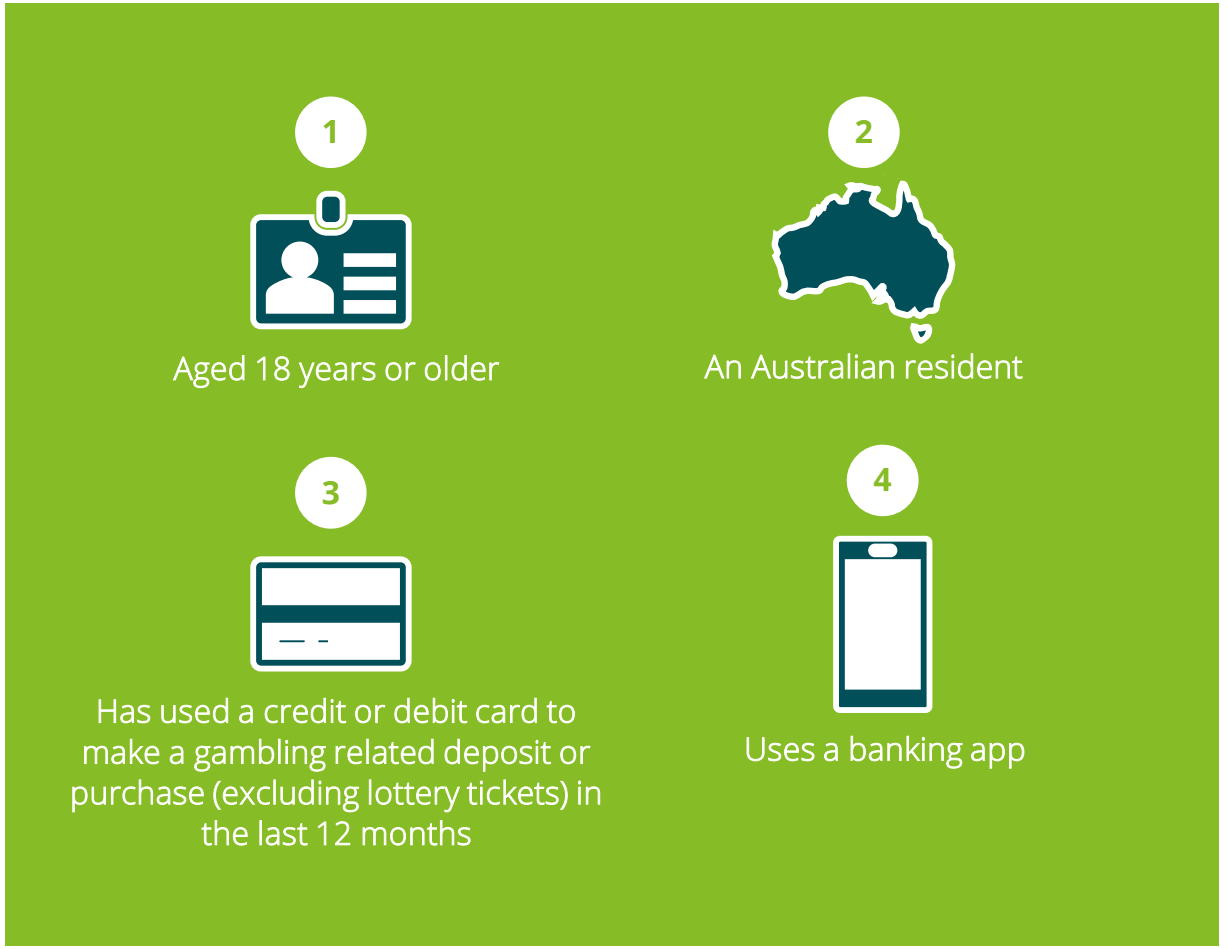
Eligible participants were recruited through Prolific, an online research recruitment platform.

Recruitment

Recruitment was conducted through Prolific, an online research platform that recruits and pre-screens participants for studies. Participants who met the study eligibility criteria (Figure 3.6) were invited to complete the survey and, upon completion, received a payment of $4.

Originally, the study focused on recruiting specifically South Australian gamblers through advertisements on stakeholders' social media, websites and newsletters, as well as flyers at gaming venues. However, this recruitment strategy yielded a limited number of survey completions, so the eligibility criteria was expanded and a different approach taken.

Figure 3.6: Study eligibility criteria



4 | Participant characteristics

Initial summary statistics and analysis of demographic characteristics and PGSI groups

4.1 Sample

A sample of 392 Australian gamblers were recruited to participate in the study, representing a variety of characteristics. Throughout the analysis, the 9 participants who answered "*Not right now*" in arm 4 were excluded, leaving a sample of 383.

Table 4.1: Gender of study participants

Gender	N	%
Male	202	52%
Female	186	47%
Non-binary	4	1%
Total	392	100%

Table 4.2: Age of study participants

Age	N	%
18-24 years	59	15%
25-34 years	181	46%
35-44 years	96	24%
45-54 years	42	11%
55-64 years	13	3%
65+ years	1	0%
Total	392	100%

Table 4.3: Aboriginal and Torres Strait Islander status of study participants

Aboriginal or Torres Strait Islander status	N	%
No	387	99%
Yes, Aboriginal and/or Torres Strait Islander	4	1%
I'd prefer not to answer	1	0%
Total	392	100%

Table 4.4: Language spoken at home of study participants

Language spoken at home	N	%
English	316	81%
Other	76	19%
Total	392	100%

Table 4.5: Highest completed level of education of study participants

Highest level of completed education	N	%
Year 11 or below	10	3%
Year 12	47	12%
Cert III/IV	36	9%
Advanced diploma or diploma	34	9%
Bachelor's degree	164	42%
Graduate diploma	28	7%
Postgraduate degree	73	19%
Total	392	100%

Table 4.6: Employment status of study participants

Employment status	N	%
No, I'm not in the labour force	16	4%
No, I'm unemployed	24	6%
Yes, part-time	113	29%
Yes, full-time	239	61%
Total	392	100%

Table 4.7: Annual income of study participants

Annual income	N	%
$1 - $19,999	34	9%
$20,000 - $39,000	44	11%
$40,000 - $59,000	51	13%
$60,000- $79,000	69	18%
$80,000 - $99,000	67	17%
$100,000 - $139,000	66	17%
$140,000 -$179,000	29	7%
$180,000 +	17	4%
I'd prefer not to answer	15	4%
Total	392	100%

Table 4.8: PGSI category of study participants

PGSI category	N	%
Non-problem	136	35%
Low-risk	143	36%
Moderate-risk	89	23%
Problem	24	6%
Total	392	100%

5 | Findings

Results by research question

RQ1 | Are gamblers more likely to engage with gambling harm minimisation tools when a gambling spending limit is offered? (1 of 2)

Introducing the option of a gambling spending limit increased the proportion of participants engaging with any type of gambling harm minimisation tool compared to when offered a gambling block alone.

Analysis

When participants were provided with both the option of a gambling block or a gambling spending limit, they were more likely to engage with any tool (79%-94%) compared to those who were only offered the option of the block (62%) (Chart 5.1). The gambling spending limit option increased the likelihood of selecting a tool by 24.7% compared to the control group, with this difference being statistically significant across all four intervention arms.*

When comparing the intervention groups, there was no significant difference in the uptake of gambling harm minimisation tools when different default settings were provided. The uptake was slightly lower for those that were provided with no default (79%) compared to those provided with a low or high default (85% and 86% respectively). This was not statistically significant.*

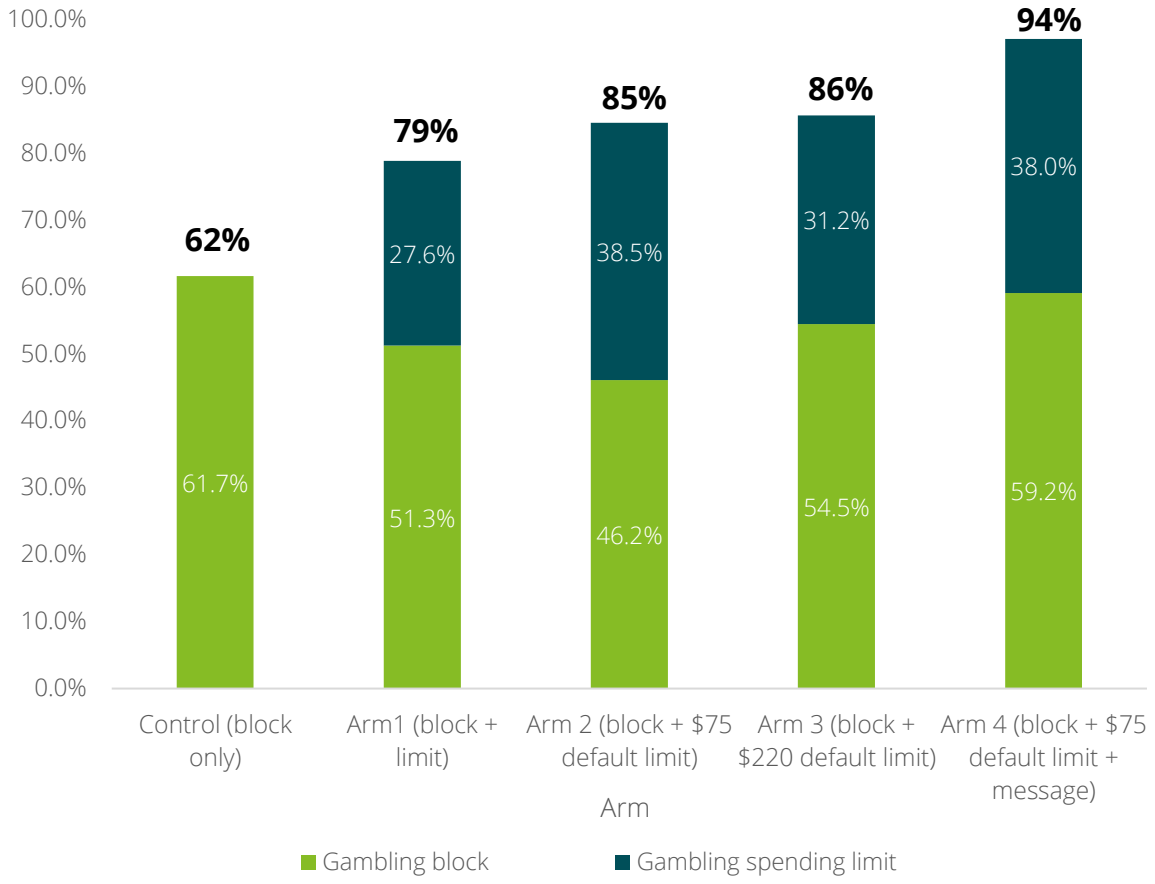
While the overall uptake of gambling harm minimisation tools increased with the introduction of a gambling spending limit (in addition to the block), the proportion selecting a gambling block decreased compared to the control group. However, this difference was not statistically significant across intervention arms.

KEY LEARNING:
Introducing a gambling spending limit significantly increases the likelihood that a user will select a gambling harm minimisation tool.

KEY LEARNING:
Gambling spending limits may be counterproductive for some at-risk individuals, causing them to set a limit rather than a block.

* *Regression calculations are provided on Page 45.*

Chart 5.1: Distribution of gambling harm minimisation tool chosen, by survey arm (n=383)



Source: *Deloitte Access Economics analysis using survey data*
Note: *Arm 4 results are only presented for participants who answered "Yes" to seeing the gambling harm minimisation tools (see Page 17)*

RQ1 | Are gamblers more likely to engage with gambling harm minimisation tools when a gambling spending limit is offered? (2 of 2)

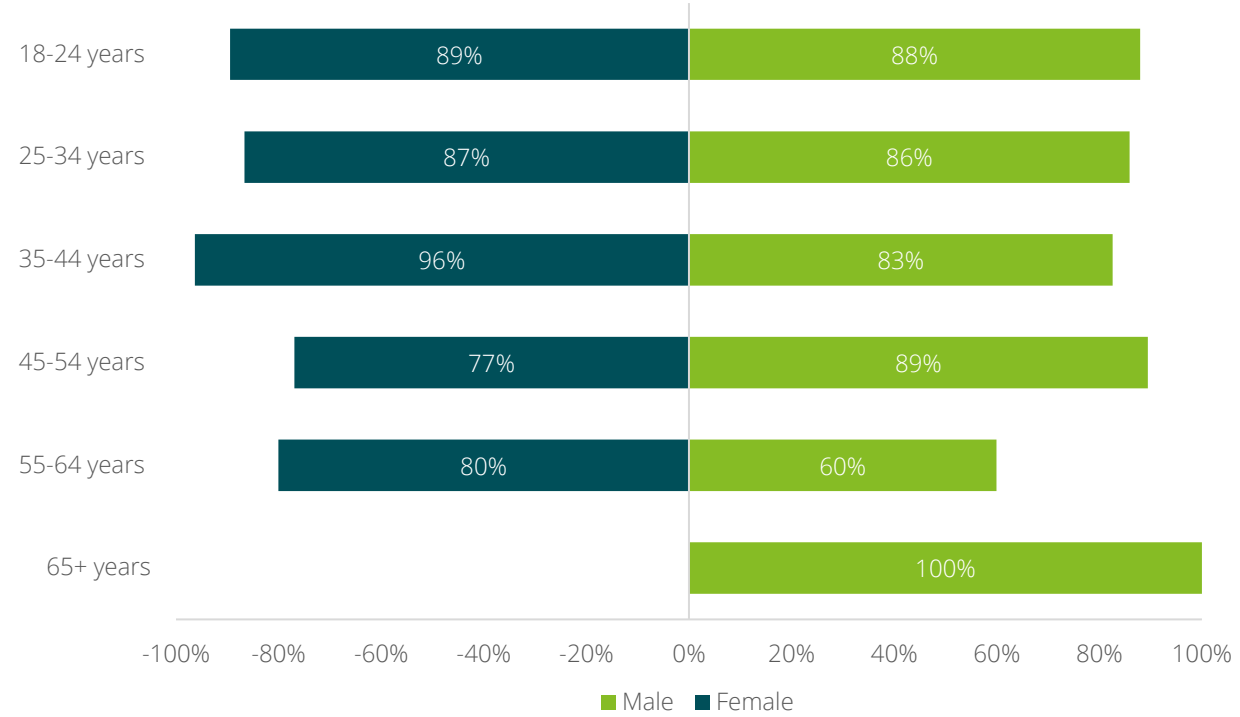
Females were slightly more likely to use gambling harm minimisation tools than males, however this was not statistically significant.

Analysis

Female participants were slightly more likely to use a gambling harm minimisation tool than male participants in almost all age brackets (see Chart 5.2), however this was not statistically significant.

Similarly, there were no statistically significant difference across other sub-groups, including educational attainment, employment status, income, and PGSI category.

Chart 5.2: Proportion of participants in arms 1 to 4 that selected a gambling harm minimisation tool, by age and gender (n=299)



Source: *Deloitte Access Economics analysis using survey data.*
Note: *n=1 for 65+ males and n=0 for 65+ females*

RQ2 | Does a default gambling spending limit impact the limits set by users? (1 of 3)

Default gambling spending limits influenced the limits set by participants, with the most appropriate default likely sitting within the range of $75 to $220.

Analysis

The impact of default gambling spending limits were compared across arms 2 and 3. While the default gambling spending limit did not significantly impact the uptake of limits, it did influence the size of the limit participants ultimately set. Participants in arm 2, where the default value was $75, were more likely to set a limit higher than the default than participants in arm 3, where the default was $220 (Table 5.1). Equally, participants in arm 3 were more likely to set a limit that was lower than the default than participants in arm 2. This suggests that the most effective limit may lie between these two default values.

Chart 5.3 presents the mean and median gambling spending limits set by participants who chose to set a gambling spending limit, alongside the default limit value for each arm. In arm 2, participants set lower mean and median limits than in arm 3. This suggests that participants in arms with lower default values set lower mean and median gambling spending limits.

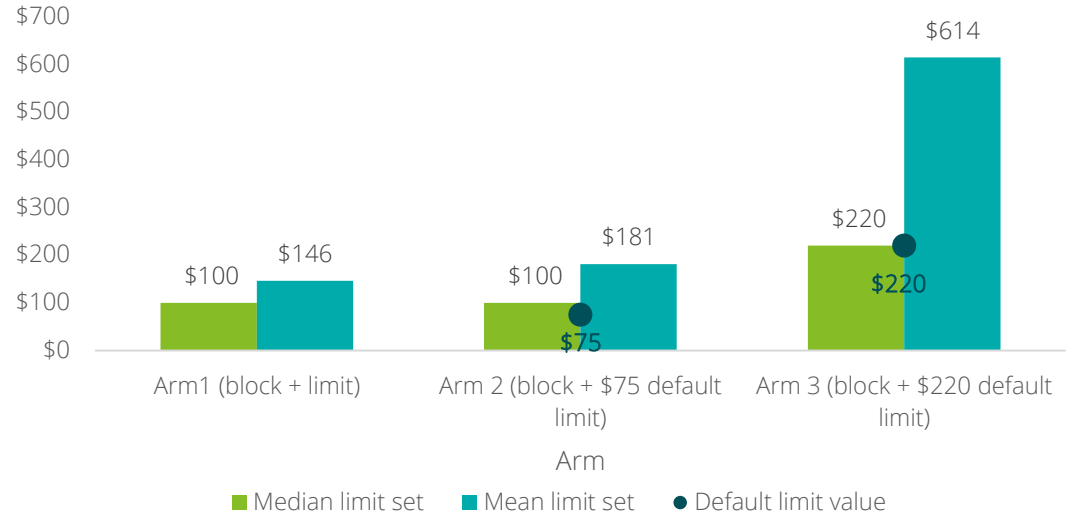
Participants in both arm 1 and arm 2 set median gambling spending limits of $100, which lies within the range of $75 and $220. A default limit of approximately $100 may therefore be appropriate to minimise gambling spend for most users.

Table 5.1: The proportion of participants who set a gambling spending limit higher, equal to, and lower than the default value, by survey arm

Arm	Set higher limit (%)	Retained default limit (%)	Set lower limit (%)	Total
Arm 2 (block + $75 default limit)	56.7%	13.3%	30.0%	100.0%
Arm 3 (block + $220 default limit)	25.0%	29.2%	45.8%	100.0%

Source: *Deloitte Access Economics analysis using survey data*
Note: *Arm 4 results are only presented for participants who answered "Yes" to seeing the gambling harm minimisation tools (see Page 17)*

Chart 5.3: The median gambling spending limit set, by survey arm (n=102)



Source: *Deloitte Access Economics analysis using survey data*
Note: *Participants in arm 2 set limits ranging from $5 to $1,000. Participants in arm 3 set limits ranging from $20 to $10,000. Notably, only one participant in arm 3 set a limit of $10,000, with the next highest limit being $1,000.*

RQ2 | Does a default gambling spending limit impact the limits set by users? (2 of 3)

The preliminary message in arm 4 resulted in lower gambling spending limits being set than in arm 2, which was otherwise identical.

Analysis

While arm 2 and arm 4 both had $75 default gambling spending limits, arm 4 also included a preliminary message (see Page 17). As a result of this message, participants in arm 4 set fewer limits higher than the default than participants in arm 2 and more limits equal to or less than the default (see Table 5.2). Further, participants in arm 4 set lower median and mean limits ($75 and $102) than participants in arm 2 ($100 and $181) (see Chart 5.4)

These results suggest that the message was successful in filtering out uninterested participants and primed those who were interested to commit to a gambling harm minimisation tool, particularly a gambling spending limit.

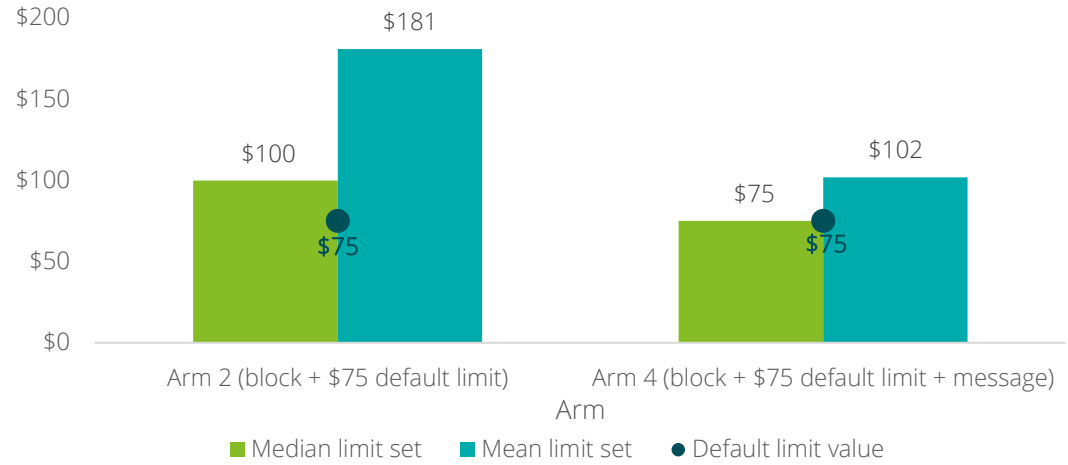
KEY LEARNING:
A default gambling spending limit of approximately $100 with a preliminary message may minimise gambling spend for most users.

Table 5.2: The proportion of participants who set a gambling spending limit higher, equal to, and lower than the default value, by survey arm

Arm	Set higher limit (%)	Retained default limit (%)	Set lower limit (%)	Total
Arm 2 (block + $75 default limit)	56.7%	13.3%	30.0%	100.0%
Arm 4 (block + $75 default limit + message)	48.1%	33.3%	18.5%	100.0%

Source: *Deloitte Access Economics analysis using survey data*
Note: *Arm 4 results are only presented for participants who answered "Yes" to seeing the gambling harm minimisation tools (see Page 17)*

Chart 5.4: The median gambling spending limit set, by survey arm (n=102)



Source: *Deloitte Access Economics analysis using survey data*
Note: *Arm 4 results are only presented for participants who answered "Yes" to seeing the gambling harm minimisation tools (see Page 17).*
Note: *Participants in arm 2 set limits ranging from $5 to $1,000. Participants in arm 4 set limits ranging from $20 to $250.*

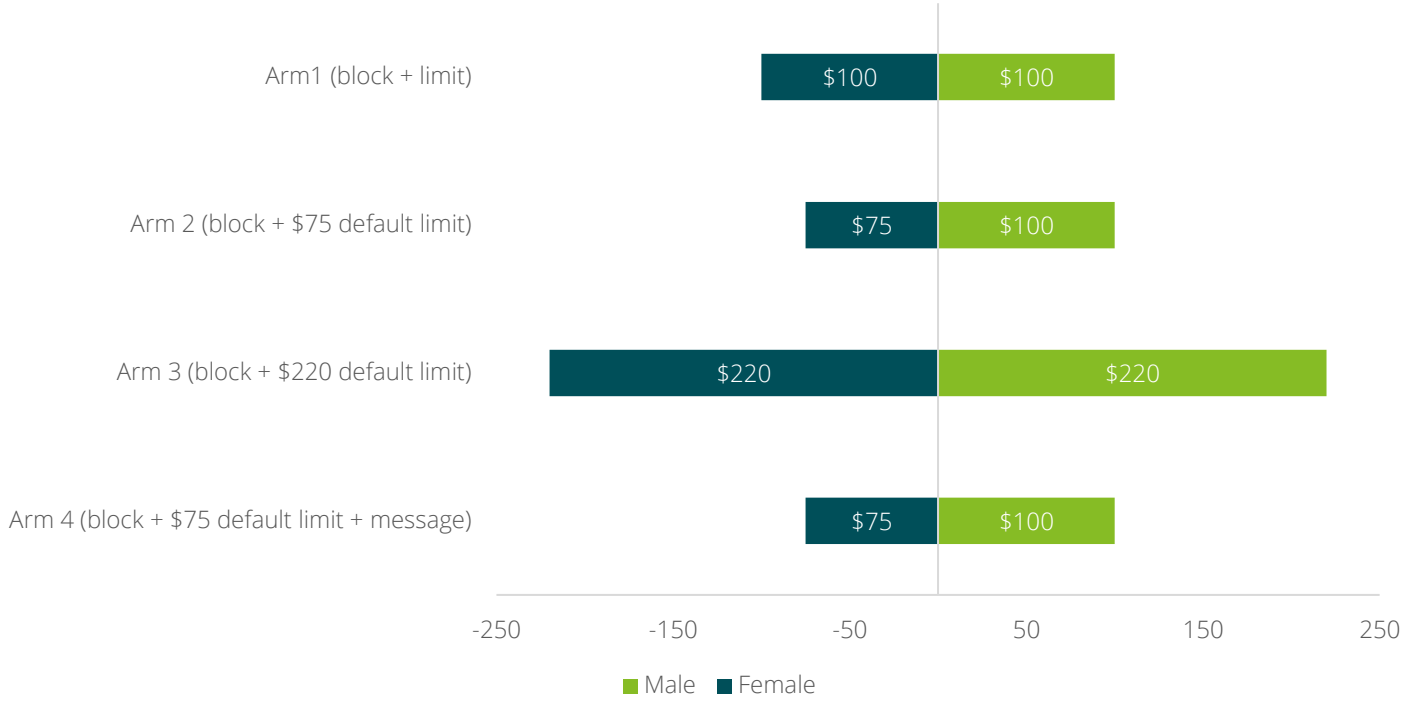
RQ2 | Does a default gambling spending limit impact the limits set by users? (3 of 3)

Male participants set slightly higher median gambling spending limits than female participants.

Analysis

In arms 1 and 3, both male and female participants set equal median gambling spending limits: $100 in arm 1 and $220 in arm 3, which was equal to the default value (see Chart 5.5). In contrast, in arms 2 and 4, male participants set slightly higher median gambling spending limits than female participants.

Chart 5.5: The median gambling spending limit set, by survey arm and gender (n=101)



Source: *Deloitte Access Economics analysis using survey data*
Note: *Arm 4 results are only presented for participants who answered "Yes" to seeing the gambling harm minimisation tools (see Page 17)*

RQ3 | How do users' interaction with gambling spending limits change with their level of engagement with gambling? (1 of 2)

Uptake of gambling harm minimisation tools appears to increase with risk of gambling harm, with moderate-risk and problem gamblers most likely to use gambling blocks and all groups equally likely to use gambling spending limits.

Analysis

Chart 5.6 displays uptake of gambling harm minimisation tools across arms 1 to 4, stratified by PGSI group*.

Moderate-risk and problem gamblers were most likely to engage in a gambling harm minimisation tool (91% vs 84.1%-84.9%). While this association was not statistically significant, moderate-risk gamblers alone did have a significantly higher likelihood of using a tool.**

Further, moderate-risk and problem gamblers had the highest uptake of gambling blocks, while the use of gambling spending limits was relatively evenly distributed across the PGSI groups. Non-problem and low-risk gamblers had very similar preferences across all three tool options.

Chart 5.6: Distribution of gambling harm minimisation tool chosen, by PGSI group (n=302)

Source: *Deloitte Access Economics analysis using survey data*

* *PGSI group has been used instead of PGSI score or PGSI category for succinctness. Non-problem consists of a PGSI score of 0 and corresponds with the PGSI category of the same name. Low-risk consists of PGSI scores of 1 to 4 and corresponds with the PGSI category of the same name. Moderate-risk and problem consists of PGSI scores of 5 to 27 and corresponds with the 'Moderate-risk' and 'Problem' PGSI categories.*

** *Regression calculations are provided on Page 45.*

RQ3 | How do users' interaction with gambling spending limits change with their level of engagement with gambling? (2 of 2)

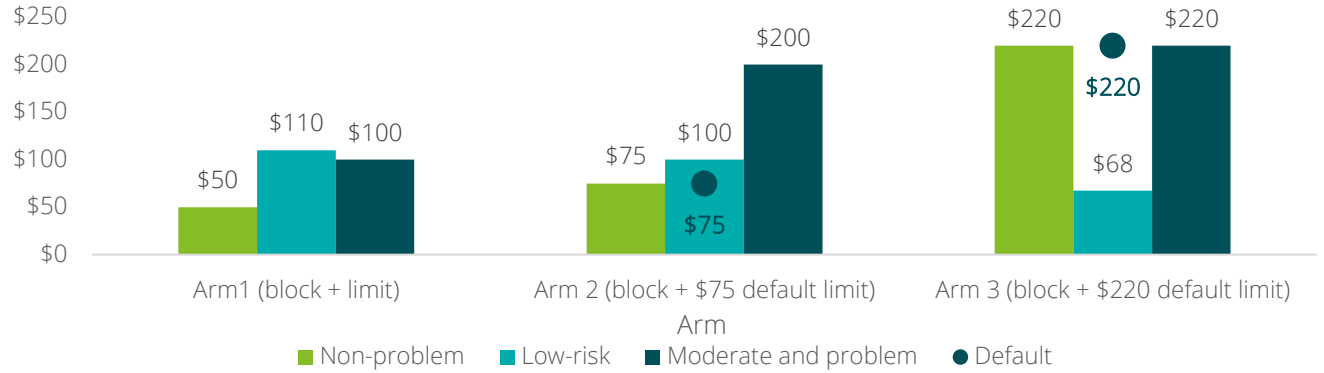
Gambling spending limits set by participants increased with risk of gambling harm, however there was no clear relationship between harm risk and the likelihood of retaining the default limit.

Analysis

Chart 5.7 displays the median gambling spending limits set by participants across arms 1 to 3, stratified by PGSI group. The median limits align with PGSI group, with non-problem gamblers setting the lowest limits and moderate-risk and problem gamblers setting higher limits. However, arm 3 deviates from this trend.

Table 5.3 shows the proportion of participants who set a gambling spending limit higher than, equal to, and lower than the default value in arms 2 and 3. Across both arms, moderate-risk and problem gamblers were most likely to set a limit higher than the default and low-risk gamblers were most likely to retain the default value. Beyond these findings, the results do not suggest a clear relationship between PGSI group, arm and likelihood of retaining the default value. Chi-square testing confirmed this, identifying no statistically significant association between PGSI group and survey arm in the decision to retain the default limit value.

Chart 5.7: The median gambling spending limit set by participants who set a limit, by survey arm and PGSI group



Source: *Deloitte Access Economics analysis using survey data*

Table 5.3: The proportion of participants who set a gambling spending limit that retained the default limit, by survey arm and PGSI group

Arm	Set higher limit (%)	Retained default limit (%)	Set lower limit (%)	Total
Arm 2 (block + $75 default limit)				
Non-problem gamblers	45%	9%	45%	100%
Low-risk gamblers	60%	20%	20%	100%
Moderate-risk and problem gamblers	67%	11%	22%	100%
Arm 3 (block + $220 default limit)				
Non-problem gamblers	67%	0%	33%	100%
Low-risk gamblers	33%	17%	50%	100%
Moderate-risk and problem gamblers	89%	0%	11%	100%

Source: *Deloitte Access Economics analysis using survey data*

RQ4 | Do users want a gambling spending limit in their banking app, and how can the tool be designed to encourage adoption? (1 of 3)

Most participants would like their banks to offer gambling harm minimisation tools but are unaware of existing offerings, suggesting a potential issue with uptake.

Analysis

After completing the experiment, participants in arms 1 to 4 were asked whether they would like their bank to offer a similar gambling spending limit in addition to the standard gambling block. Nearly three quarters (73.3%) either agreed or strongly agreed, while only 7.1% disagreed or strongly disagreed (see Chart 5.8).

In arm 4, when presented with: *"You can plan and manage your spending on gambling within this banking app! Click here to set a spending limit now,"* 71 out of 80 participants (88.8%) responded *Yes* and 9 (11.3%) chose *Not right now*. These findings suggest strong support for gambling spending limits.

However, it is important to note that when asked whether they were aware of any gambling harm minimisation tools offered by their bank, 74.5% of participants across all arms indicated they were not (Chart 5.9). This is despite major banks like Commonwealth Bank, Westpac, ANZ and NAB, which account for over 70% of Australia's banking market share, all offering gambling blocks.[1] This suggests that, even if gambling spending limits were introduced, uptake may remain low.

KEY LEARNING:
The majority of participants are interested in gambling tools, but most are unaware of the tools that are currently available.

Chart 5.8: Answers to: *'Would you like your bank to provide a similar gambling spending limit in addition to the gambling block they already offer?'* (n=383)

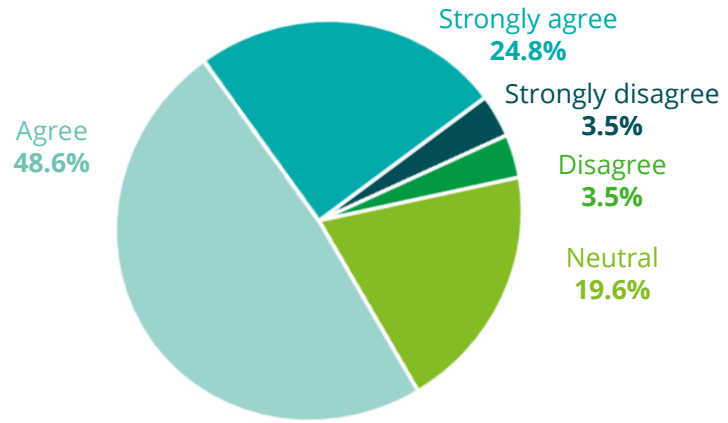
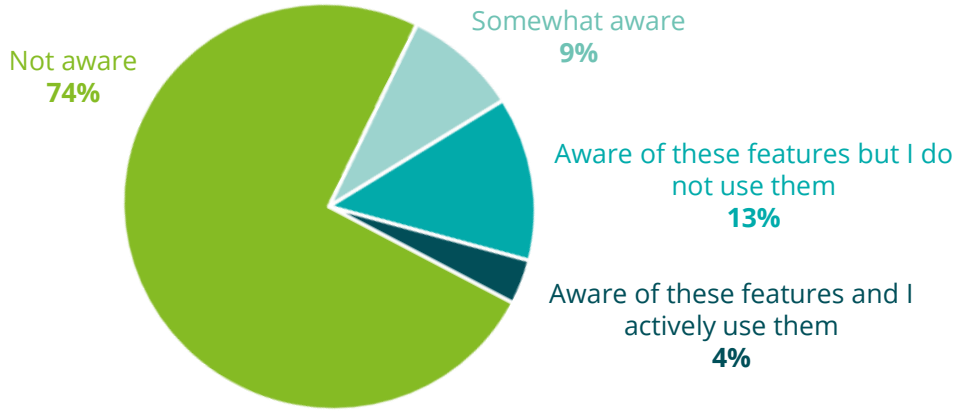


Chart 5.9: Answers to: *'Are you aware of any gambling controls currently offered by your bank?'* (n=383)



Source: *Deloitte Access Economics analysis using survey data*

RQ4 | Do users want a gambling spending limit in their banking app, and how can the tool be designed to encourage adoption? (2 of 3)

Participants who chose to use gambling harm minimisation tools typically did so to limit their gambling, while those not using them felt they did not need to restrict their gambling or that the tool would not work on them.

Why did participants choose to use a gambling harm minimisation tool?

When participants who adopted a gambling block or a gambling spending limit were asked their motivation for doing so, the most common response was a **desire to limit gambling**.

"I want to add extra effort to spending on gambling."

"I feel I've gambled too much recently and I'd like to spend some time away from it."

"This would be good to stop spontaneous gambling."

"It sounded like a good idea as I have poor impulse control."

"I believed I had to set a block, to limit my actions in future."

Other participants were **curious about the tool's effectiveness** and appreciated that they had the option to turn it off again if they wanted to.

Why did participants choose to *not* use a gambling tool?

When participants who did not adopt a gambling harm minimisation tool were asked their motivation, the most common reason was believing that they **did not need to restrict their gambling,** followed by the **belief that the block would not be effective on them.**

"I already do ok at restricting my gambling "

"I rarely gamble so I don't think I need it "

"I have my own control. I know my limits. "

One participant expressed that they did not use a gambling harm minimisation tool due to concerns **that their bank might see it** and that it could affect their loans or finances. Clarification around this point should be included in future designs.

RQ4 | Do users want a gambling spending limit in their banking app, and how can the tool be designed to encourage adoption? (3 of 3)

Participants suggested several improvements to the user experience, flexibility and functionality of the gambling harm minimisation tools and the resources provided alongside them.

What did participants think could be improved about the gambling harm minimisation tools?

Participants from all survey arms were asked how the gambling harm minimisation tool(s) could be improved. Their responses could be grouped into the following four categories:

User experience

- Simplified language and reduced wordiness,
- The spending limit placed above the block option, so the less extreme of the two options is shown first,
- A clearer separation between the two options.

Flexibility

- An option to set blocks/ limits for different time periods (e.g., daily, weekly, fortnightly, yearly),
- An option to adjust the cooling-off period,
- An option to enforce the block/limit for a certain length of time without the option to turn it off,
- An option to block/ limit specific gambling types, websites venues etc.,
- An option to require approval from a trusted third party before tools can be switched off.

Functionality

- A summary of past gambling transactions,
- A projection of future gambling expenditure if current levels are maintained,
- Notifications for when approaching a limit.*

Resources

- Further detail on what qualifies as gambling transactions,
- Statistics on the risks of gambling,
- Links to gambling support websites and helplines.

* Applies only to gambling spending limits and not gambling blocks

RQ5 | Which of the gambling spending limit options is likely to cause the greatest reduction in gambling harm?

The benefits of increasing uptake of gambling harm minimisation tools offsets the reduction in users selecting a gambling block compared to a gambling spending limit. Arm 2 may lead to the lowest overall gambling expenditure.

Analysis

The survey results indicate that offering a gambling spending limit alongside a gambling block increases the overall use of gambling harm minimisation tools (see Chart 5.1 on Page 23), a finding supported by regression analysis. However, the proportion of people who selected a block in the intervention arms was lower than in the control arm.

Table 5.4 displays the average gambling expenditure per participant in each arm. These values were calculated by multiplying the proportion of participants that chose each tool option by the average expenditure per participant in each arm. Specifically, for each arm:

- A gambling block was assigned a value of $0,
- A gambling spending limit was assigned the median limit value, and
- Those who chose no gambling harm minimisation tool were assumed to have an average expenditure equal to other regular online bettors, taken from the Australian Gambling Research Centre's 2022 National Gambling Trends Study.[1]

These results show that the average estimated gambling spend is lower in all intervention arms compared to the control arm, except for arm 3. This suggests that the benefits of increasing uptake of gambling harm minimisation tools offset the reduction in the proportion of users choosing a gambling spending limit over a gambling block.

Further, while analysis identified no significant difference between the intervention arms in the likelihood of choosing a tool, a lower default limit resulted in the lowest limits being set (see Chart 5.3 on Page 25) for Arms 1 to 3. Compared to the control arm, participants in Arm 2 spent approximately $19.7 less on gambling per month, equating to $236.4 per person in gambling savings per year.

In Arm 4, when additional 'friction' and a priming message were introduced, the spend per person was even lower, averaging $35.7 for those who selected yes to seeing gambling spend tools. Compared to the control arm, participants in arm 4 (who answered "Yes" to seeing the gambling tools) spent approximately $61.5 less on gambling per month, equating to $738.0 per person in gambling savings per year

It is important to note that this calculation approach assumes that all participants who set a gambling spending limit will spend up to their chosen limit, and that those who do not use a gambling harm minimisation tool are regular online bettors. Additionally, the friction introduced in arm 4 is not necessarily reflective of real-world banking apps. The results should therefore only be used to compare arms, not extrapolate overall savings.

Table 5.4: The average estimated monthly gambling spend per person, based on participants' choice between tools and median limit set

	Control	Arm 1	Arm 2	Arm 3	Arm 4
Average gambling spend per person	$97.2	$81.1	$77.5	$104.9	$35.7

Source: *Deloitte Access Economics analysis using survey data*
Note: *Arm 4 results are only presented for participants who answered "Yes" to seeing the gambling tools (see Page 17)*

6 | Conclusion

Summary of findings

6.1 Conclusion and next steps

This research highlights the potential value of gambling spending limits to minimise the impact of gambling harm for South Australians and opportunities for their future implementation.

Conclusion

Australia has the highest gambling loss per adult in the world, losing approximately $31.5 billion in total, or $1,527 per capita in 2022-23. Gambling can lead to significant impacts on individuals, including financial and productivity loss and damage to personal relationships, health and wellbeing. In South Australia, the 2018 SA gambling prevalence survey found that 6% of residents had been affected by someone else's gambling in the previous 12 months. As such, there is a clear need to focus on minimising the impacts of gambling harm.

A major contributor of gambling losses is online betting, which represents approximately 23% of all gambling losses in Australia.[1]

Our research generated clear evidence that by helping to address the disjointed nature of the gambling spending limits available withing specific gambling websites and apps, gambling spending limits within banking apps are beneficial to users, including:

Introducing gambling spending limits within banking apps increased user engagement with gambling harm minimisation tools by approximately 20% but may lead to high-risk users setting limits over blocks.

A default spending limit of approximately $100 per month with a priming preliminary message may be most appropriate to minimise gambling spend for most users.

Approximately 3 in 4 people are not aware of the gambling harm minimisation tools currently available within banking apps. But an equal proportion support banks introducing gambling spending limits.

Higher risk gamblers were the most likely to engage with either a gambling spending limit or gambling block, with approximately 90% of moderate-risk and problem gamblers chose a gambling harm minimisation tool.

While this research indicates that gambling harm minimisation tools are effective in an Australian context, it is important to highlight that existing tools are underutilised due to a lack of awareness from users. To ensure effective implementation of gambling spending limits in the future, it is important that they are supplemented with appropriate education and awareness raising initiatives.

Next steps

To strengthen the evidence base and support effective implementation, further research could explore the following areas::

- Replicate this analysis with a **larger sample size** to allow for analysis and comparison of smaller subgroups of participants and improve the robustness and reliability of results.
- Conduct a **long-term impact analysis** to assess the sustained effectiveness of gambling harm minimisation tools. This research should examine user behaviour over time, including how many users maintain their limits, adjust them, switch to a block, or deactivate the feature altogether.
- Conduct research into user **experience and design** to identify the most effective way to present gambling harm minimisation features within banking apps. This should explore the placement within the app, ease of access, and the design of the tools themselves (including the factors discussed on Page 32).

Following this research, next steps could include engaging with the banking sector to determine the feasibility and appetite for implementation, running pilot programs with select banks to generate evidence for wider rollout, and if necessary, working with policy makers to consider incentives or regulations to encourage adoption.

7 | Appendices

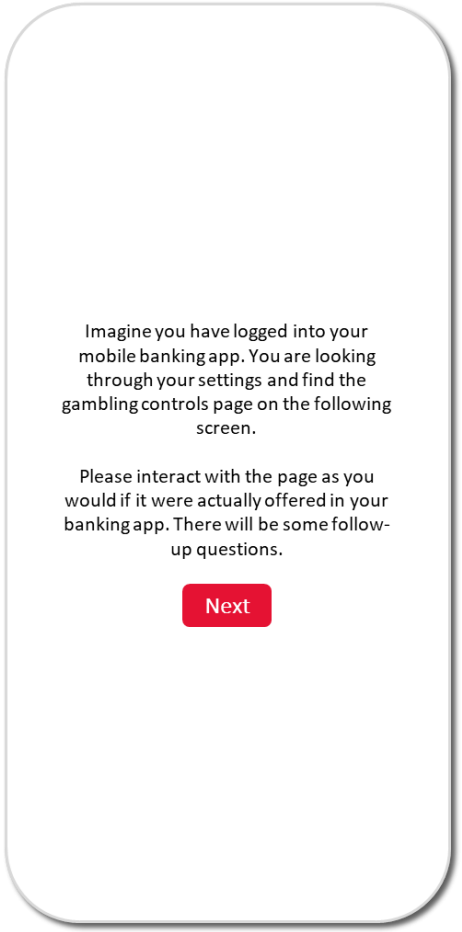
Additional information referenced throughout the report

Experiment design

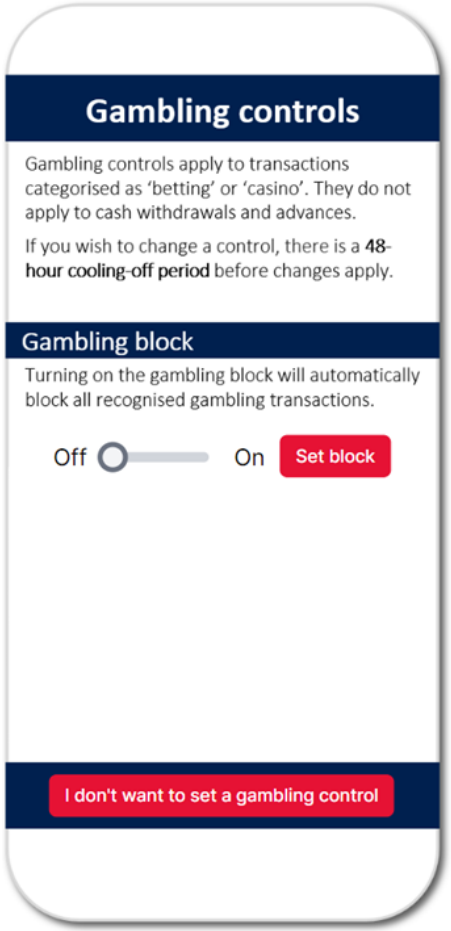
7.1 Survey arm design (1 of 5)

The control arm of the experiment consists of two pages.

Page 1



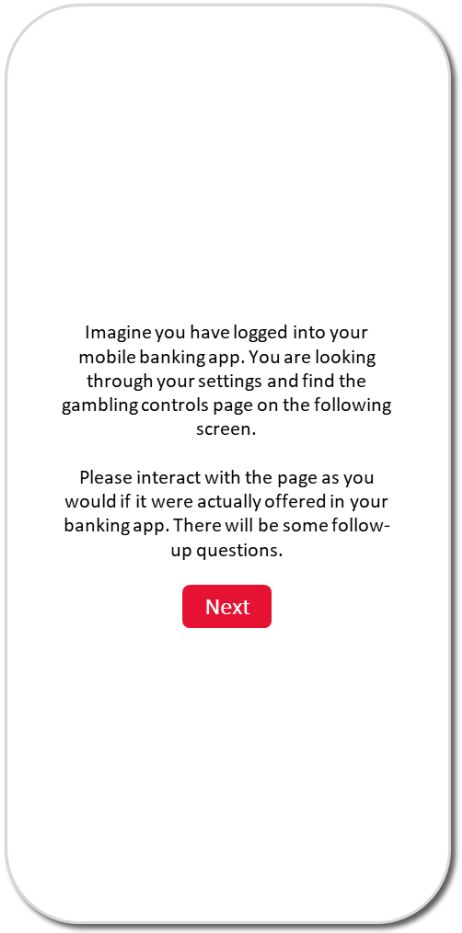
Page 2



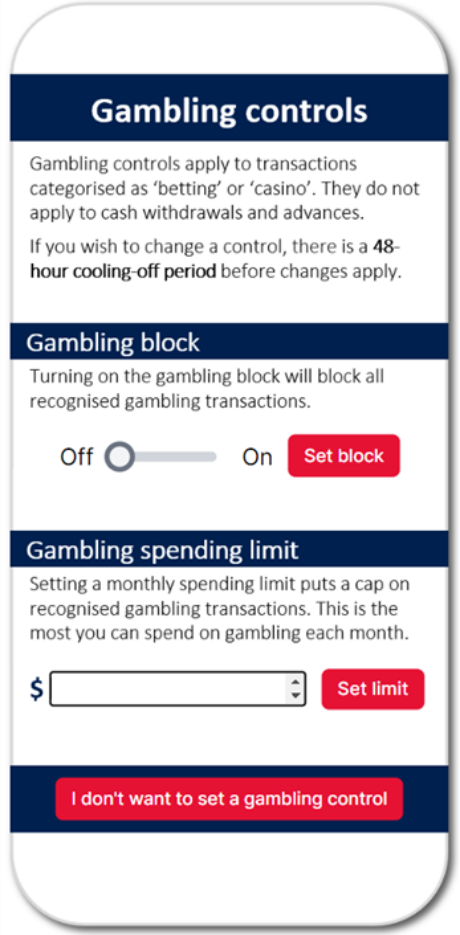
7.1 Survey arm design (2 of 5)

Arm 1 of the experiment consists of two pages.

Page 1



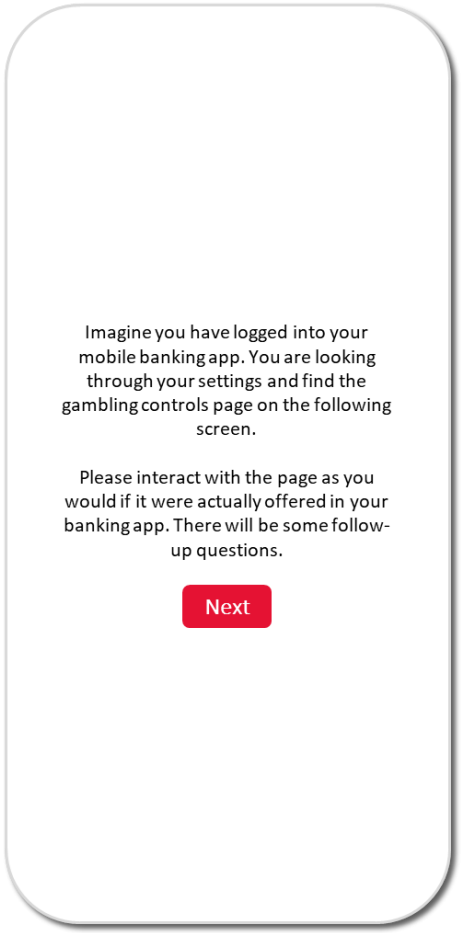
Page 2



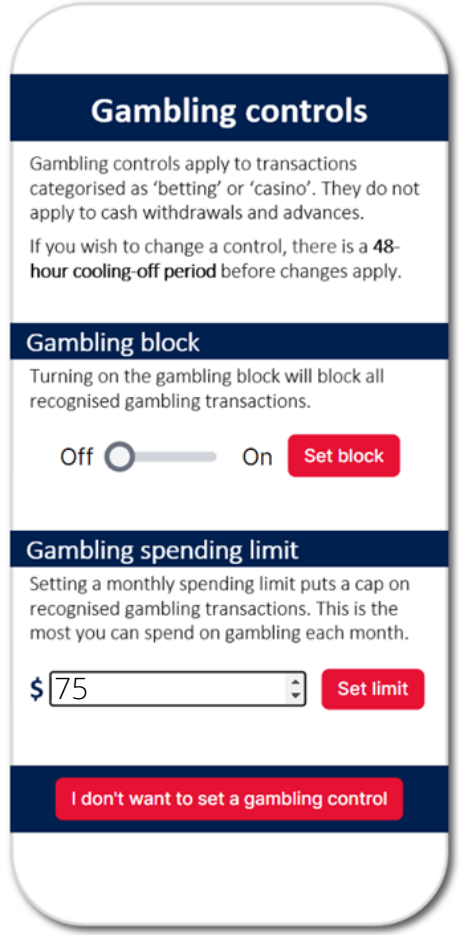
7.1 Survey arm design (3 of 5)

Arm 2 of the experiment consists of two pages.

Page 1



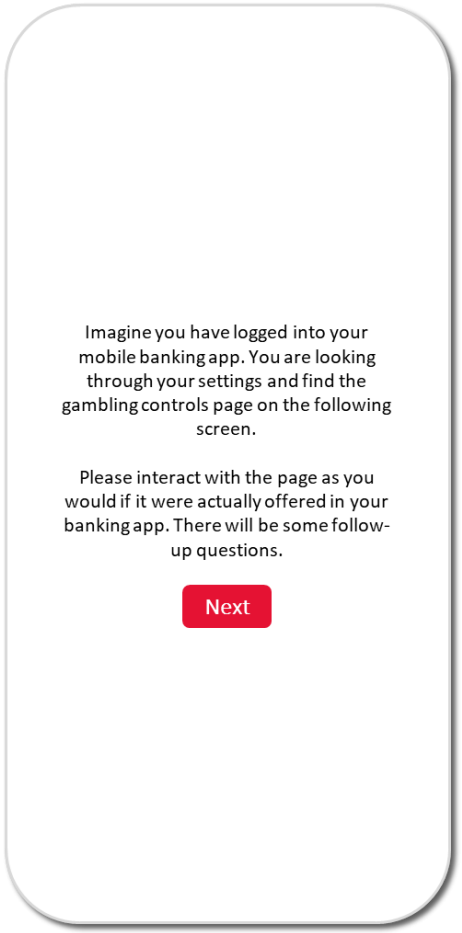
Page 2



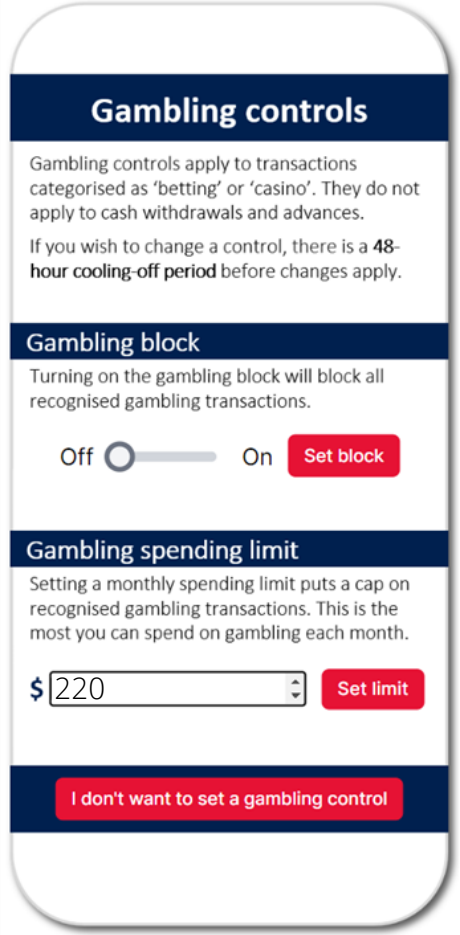
7.1 Survey arm design (4 of 5)

Arm 3 of the experiment consists of two pages.

Page 1



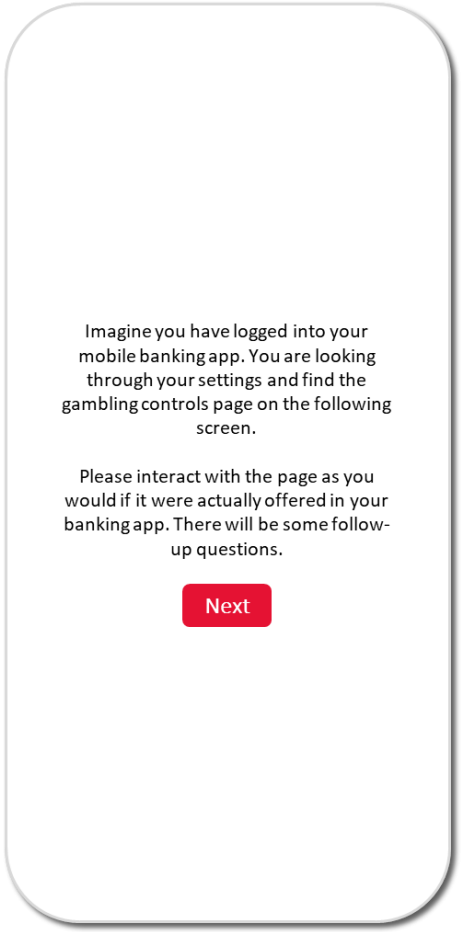
Page 2



7.1 Survey arm design (5 of 5)

Arm 4 of the experiment consists of five pages.

Page 1



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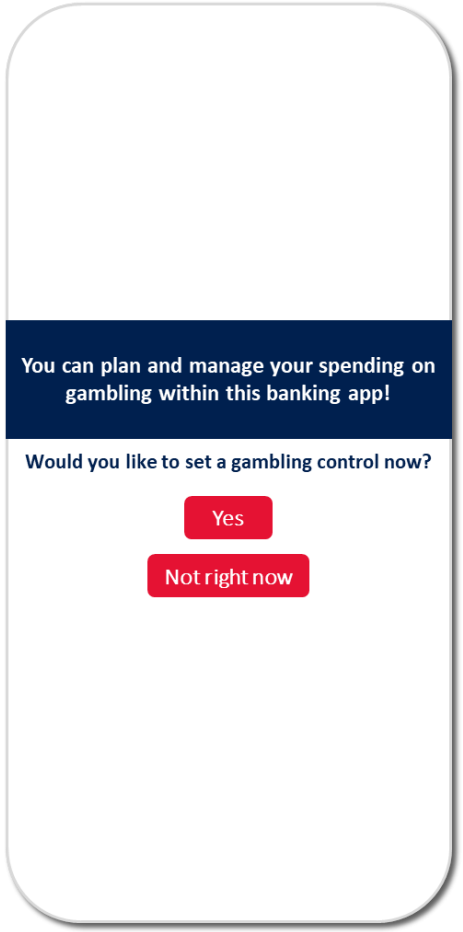
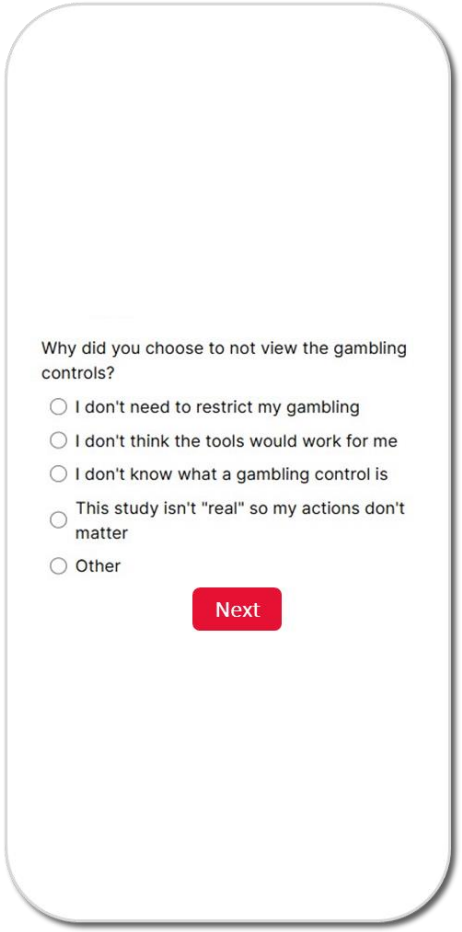
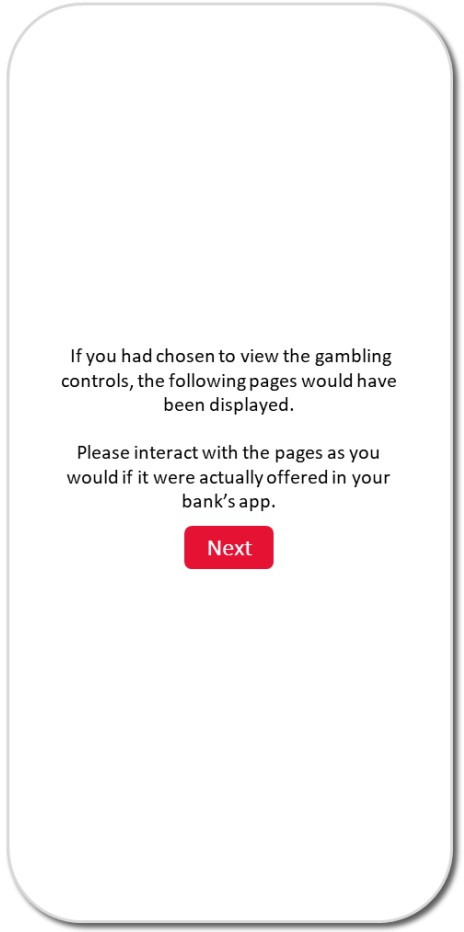


Page 3*



Page 4*



Page 5

* Pages 3 and 4 were only shown to participants who responded 'Not right now' on Page 2

Technical appendix

7.2 Regression calculations (1 of 3)

Regression analysis is used throughout this report to compare the impact of the different arms as well as demographic and other participant characteristics.

Page 23 (1 of 2)

1. The regression run to test the impact of the presence of a limit option on the likelihood of a participant choosing to use a gambling tool had the following formula:

```
tool.select ~ treatment
```

Where:

- `tool.select` = 0 if no tool is selected and 1 if a block or limit is selected
- `Treatment` = 0 if assigned to the control and 1 if participants are assigned to arms 1 to 4
- The results are shown below. They indicate that being in a treatment group (i.e., intervention arm) has a statistically significant impact on whether a gambling harm minimisation tool is selected.

Coefficient	Estimate	Std. Err.	z value	Pr(>|z|)	Signif.
(Intercept)	0.4780	0.2286	2.091	0.0365	*
treatment	1.3729	0.2837	4.839	1.3e-06	***
Signif. Codes:	0 '***'	0.001 '**'	0.01 '*'	0.05 '.'	0.1 ' '

7.2 Regression calculations (2 of 3)

Regression analysis is used throughout this report to compare the impact of the different arms as well as demographic and other participant characteristics.

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2. The regression run to test the impact of demographic characteristics, in addition to the presence of a limit option, on the likelihood of a participant choosing to use a gambling tool had the following formula:

```
tool.select ~ treatment + PGSI.group +
  age + gender + income + education
```

Where:

- `PGSI.group` = 0 if PGSI score was 0 (corresponding to non-problem gamblers), 1 if PGSI score was 1 to 4 (corresponding to low-risk gamblers) and 2 if PGSI score was 5 to 27 (corresponding to moderate-risk and problem-gamblers).
- `age` = 10-year age bracket (see Page 20 for specific values)
- `gender` = 10-year age bracket (see Page 20 for specific values)
- `income` = 10-year age bracket (see Page 20 for specific values)
- `education` = 10-year age bracket (see Page 20 for specific values)

Coefficient	Estimate	Std. Err.	z value	Pr(>|z|)	Signif.
(Intercept)	0.09405	1.03003	0.091	0.9273	
treatment	1.64257	0.32213	5.099	3.41e-07	***
PGSI.groupModerate + Problem	0.94181	0.40390	2.332	0.0197	*
PGSI.groupNon-problem	-0.18268	0.32037	-0.570	0.5685	
age.bracket25-34 years	0.52100	0.48833	1.067	0.2860	
age.bracket35-44 years	0.63214	0.55013	1.149	0.2505	
age.bracket45-54 years	0.95139	0.66679	1.427	0.1536	
age.bracket55-64 years	0.17399	0.83782	0.208	0.8355	
age.bracket65+ years	14.35989	2399.54496	0.006	0.9952	
genderFemale	0.12647	0.30098	0.420	0.6744	
genderNon-binary	15.26341	1125.66209	0.014	0.9892	
income.bracket$20,000 – $39,000 per year	-0.56529	0.69890	-0.809	0.4186	
income.bracket$40,000 - $59,000 per year	-1.07576	0.66853	-1.609	0.1076	
income.bracket$60,000 - $79,000 per year	-0.98107	0.67679	-1.450	0.1472	
income.bracket$80,000 - $99,000 per year	-0.47225	0.71190	-0.663	0.5071	
income.bracket$100,000 - $139,000 per year	-1.34438	0.70685	-1.902	0.0572	.
income.bracket$140,000 – $179,000 per year	-1.29211	0.82193	-1.572	0.1159	
income.bracket$180,000 or more per year	-0.26133	1.04770	-0.249	0.8030	
income.bracketI'd prefer not to answer	-0.88697	0.85730	-1.035	0.3009	
educationYear 12	0.16566	0.97342	0.170	0.8649	
educationCert III/IV	-0.17766	0.96816	-0.184	0.8544	
educationBachelor's degree	0.61680	0.91719	0.672	0.5013	
educationAdvanced diploma or diploma	-0.60505	0.99553	-0.608	0.5433	
educationGraduate diploma and graduate certificate	0.58204	1.08073	0.539	0.5902	
Signif. Codes:	0 '***'	0.001 '**'	0.01 '*'	0.05 '.'	0.1 ' '

7.2 Regression calculations (3 of 3)

Regression analysis is used throughout this report to compare the impact of the different arms as well as demographic and other participant characteristics.

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1. The regression run to test the impact of PGSI group on the likelihood of using a harm minimisation tool had the following formula:

   `tool.select ~ treatment + PGSI.group`

Coefficient	Estimate	Std. Err.	z value	Pr(>|z|)	Signif.
(Intercept)	0.3729	0.2822	1.322	0.1863	
treatment	1.3994	0.2888	4.846	1.26e-06	***
PGSI.groupModerate + Problem	0.7513	0.3811	1.971	0.0487	*
PGSI.groupNon-problem	-0.2415	0.3051	-0.791	0.4287	
Signif. Codes:	0 '***'	0.001 '**'	0.01 '*'	0.05 '.'	0.1 ' '

2. The regression run to test the impact of PGSI category on the likelihood of using a harm minimisation tool had the following formula:

   `tool.select ~ treatment + PGSI.category`

   Where:

   - `PGSI.category` = 0 if PGSI score was 0 (corresponding to non-problem gamblers), 1 if PGSI score was 1 to 4 (corresponding to low-risk gamblers), 2 if PGSI score was 5 to 7 (corresponding to moderate-risk gamblers) and 3 if PGSI score was 8 to 27 (corresponding to problem-gamblers)

Coefficient	Estimate	Std. Err.	z value	Pr(>|z|)	Signif.
(Intercept)	0.1325	0.2951	0.449	0.6534	
treatment	1.3980	0.2889	4.838	1.31e-06	***
PGSI.categoryLow-risk	0.2413	0.3051	0.791	0.4289	
PGSI.categoryModerate-risk	1.0175	0.4195	2.426	0.0153	*
PGSI.categoryProblem	0.9126	0.6718	1.358	0.1743	
Signif. Codes:	0 '***'	0.001 '**'	0.01 '*'	0.05 '.'	0.1 ' '

8 | References

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