



GPRU Safer Gambling Messaging Trial

September 2025



PREDICTIV



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We work with all levels of government, nonprofits and the private sector, applying behaviour science expertise with robust evaluation and data to help clients achieve their goals.

The report is produced by the Gambling Policy and Research Unit (GPRU) within BIT.

GPRU is a multi-year programme, running from 2021-2025, which aims to discover, test and scale ways to minimise gambling harm across Great Britain. Our work is funded through a [regulatory settlement fund](#) via the Gambling Commission, the UK's gambling regulator.

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Glossary of terms

- **Gambling Commission:** The Gambling Commission is the regulator for gambling in Great Britain.
- **Games / gambling games:** When we use the term games in this context, we mean gambling games - that is, games offered by gambling operators where consumers place bets or stakes in the hope of winning money or prizes.
- **Gambling operator:** A company or entity that provides and manages gambling services and activities, such as casinos, online gaming sites, and betting shops.
- **Safer gambling:** A public health-informed framework of policies, practices, and interventions designed to minimise the risk and severity of gambling-related harms among individuals who gamble, particularly by promoting informed decision-making, reducing risky behaviours, and supporting self-regulation.
- **Stake:** The amount of money a person chooses to put down when taking part in a gambling game or bet. Stakes are placed in the hope of winning a return, but they can also be lost, and the size of a stake affects the potential winnings or losses.
- **Protective actions:** In this research, protective actions refer to proactive steps individuals can take to help reduce the risk of experiencing gambling-related harm. These could include, but are not limited to setting up safer gambling tools, researching information about how to manage budgets, or seeking safer gambling support.

Executive summary



Executive Summary

BIT ran an online randomised controlled trial with 4,532 UK adults between 13 and 28 August 2025 to test how **safer gambling messages designed for use on gambling websites** influence **intentions to engage with protective actions** that could reduce the risk of gambling harm.

Participants were **randomly assigned** to see no message or one of three safer gambling messages at the top of a **simulated gambling platform**. They were then asked to review the platform, and to choose how much hypothetical money they would bet on one of the offered games. They were not offered the chance to win any real money.

We measured participants' **stated intentions to engage in various protective actions**. We explored whether normalising messages are more impactful than informative industry messages, and whether adding a self-reflection component can increase their effect on intentions. We also examined participants' **in-platform behaviour** and **potential mechanisms** underlying any observed changes.

We tested three different safer gambling messages:

Informative industry message

A message adapted from a real gambling operator's website that gave clear information about available support.

Normalising message

A new message, which used a rollercoaster analogy to normalise protective actions by making them relevant and accessible to all.

Normalising message + self-reflection

A second normalising message, which included a self-reflection prompt to encourage participants to reflect on their gambling patterns and the way they stay safe while gambling.

Findings

1.

Safer gambling messages drafted to normalise the uptake of safer gambling tools significantly **increased participants' likelihood to intend to take protective actions** from 21.1% to 24.5%.

2.

Normalising messages did not significantly increase intention to take protective steps compared with industry messages that only offered informative insights.

3.

Normalising messages with a self-reflection prompt were not statistically more likely to increase intention to take protective safer gambling actions compared to similar messages without a prompt.

4.

Exploratory research suggests that **self-reflection messages, combined with a relevant call to action (CTA)**, have the potential to increase engagement with the CTA.

Recommendations:

- Further research should test the impact of displaying salient, normalising safer gambling messages on real operators' platforms on individuals' behaviour.
- Further research should explore the impact of normalising messages on individuals with low, medium and high PGSI scores.
- Further research should explore how metaphor-based messages can be made easier to understand while remaining memorable, and whether improving ease of understanding can lead to stronger intentions to take protective actions and to changes in behaviours.
- Further research should explore whether combining self-reflection prompts with a clear CTA can boost engagement with the CTA itself, and whether it can drive additional behavioural changes afterwards.

Background



Safer gambling messages are widespread, yet evidence on what works is limited

Safer gambling messages designed to reduce gambling harm are a common feature across online platforms, venues, and advertising. However, **there is no clear agreement** on what these messages should say, how they should be framed, or where and when they should appear.

Evidence suggests that current practice often falls short. Many existing messages are too generic¹ and robust **evidence on what works best remains limited.** A BIT audit also found that messages frequently place responsibility solely on individuals, without acknowledging operators' duty of care.² This approach risks reinforcing stigma and may reduce the likelihood that those experiencing harm will engage with protective measures.

Further research is therefore needed to build the evidence base on safer gambling messages and inform future industry practice.



Why this matters

1. **Gambling harm is a significant policy issue.** Around four in ten people most in need of support do not seek any form of treatment, advice, or help.³
2. **Well-designed messages can play an important role** by raising awareness of harms, encouraging reflection, and, where needed, prompting behaviour change.^{4,5} Research shows that effective messages can positively influence gambling attitudes and behaviour.⁶
3. **Clearer evidence could shape industry practice.** Tested, evidence-based messages could be integrated into voluntary codes, industry standards, and potentially regulation.

This project examined the impact of different safer gambling messages on intention to take protective action

BIT's Gambling Policy and Research Unit (GPRU) ran a randomised control trial to test how safer gambling messages, designed for use on gambling operator websites, affect **people's intentions to take protective safer gambling action**.

Alongside measuring stated intentions, we also examined participants' **behaviour on a simulated platform** to capture any changes, and we explored **the mechanisms that might explain the potential changes** in intentions or behaviours.

This study directly supports the Gambling Commission's research priorities under *Evidence Theme 4: The impact of operator practices*. In particular, it examines how operator communications affect consumer behaviour, and addresses the gap in evidence on the effectiveness of approaches to promote safer gambling tools.²



Research questions:

1. *(Primary)* Can **safer gambling messages** designed for use on gambling operators' platforms impact users' intentions to engage with protective measures that could help reduce the risk of experiencing gambling harm?
2. *(Secondary)* Are messages designed to **normalise safer gambling** more impactful in driving users' intended engagement with protective measures compared to safer gambling messages that solely provide information about safer gambling?
3. *(Exploratory)* Are messages designed to **promote self-reflection** more impactful in driving users' intended engagement with protective measures, compared to similar safer gambling messages that do not promote self-reflection?

We also conducted additional analyses to assess other impacts and explore potential mechanisms.

Message design



We developed a theory of change to map how safer gambling messages could impact behaviour

Many factors can influence gambling behaviour, so we developed a theory of change to identify elements that short messages on gambling platforms could target and to guide message design (see [Appendix 1](#)).

To develop the theory we drew on behaviour change frameworks, such as the Theory of Planned Behaviour, reviewed evidence on barriers and facilitators to safer gambling, and examined research on effective public health messaging.

This process highlighted different pathways through which individuals may decide to engage in safer gambling behaviours and helped us prioritise four specific elements as realistic targets for short messages.

Our message designs focused on four key behavioural elements:



Increasing knowledge about available support – Awareness of safer gambling tools is often low, and clear explanations of how to use these tools or access support can help build both awareness and confidence to take action.^{[8.9.10](#)}



Providing reminders and prompts – Salient, visual cues can encourage people to take action at the right moment.^{[11](#)}

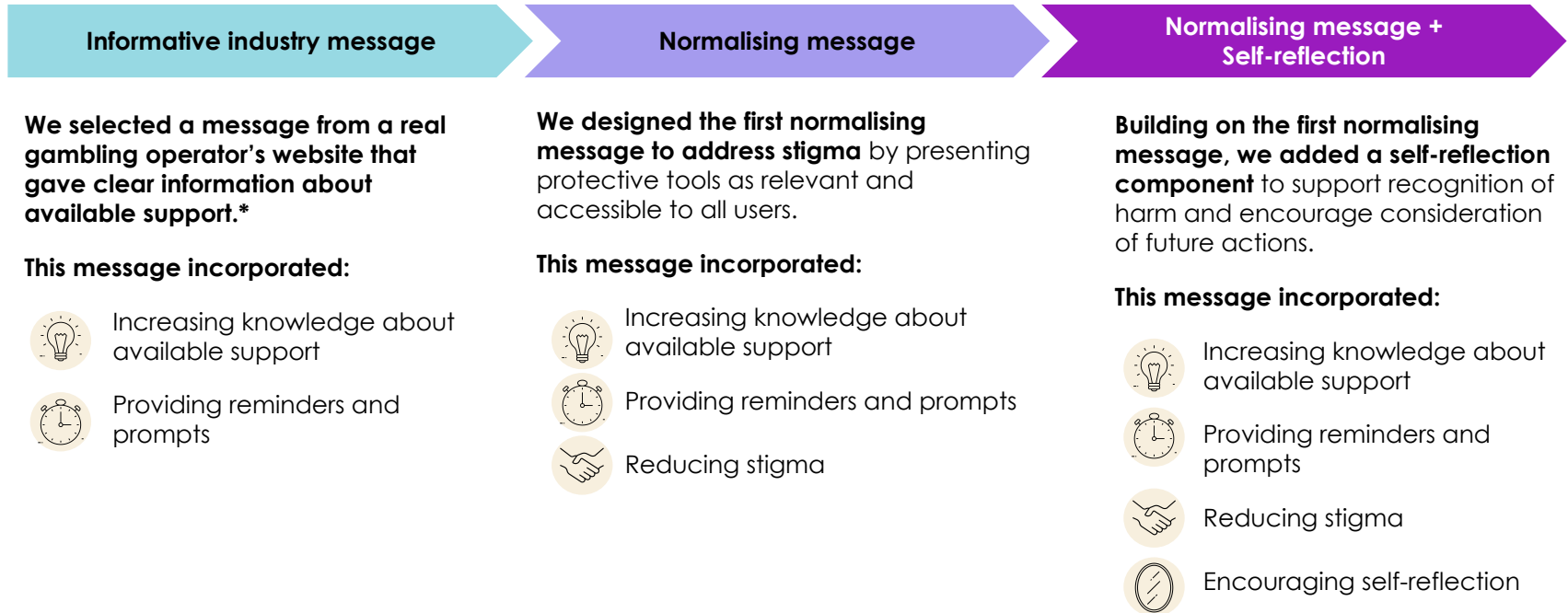


Reducing stigma – Stigma can prevent people from recognising harm or taking action early.^{[12.13.14](#)} Although evidence on reducing stigma through messaging is limited, we aimed to reduce stigma associated with taking safer gambling by presenting safer gambling tools as relevant and accessible to all users.

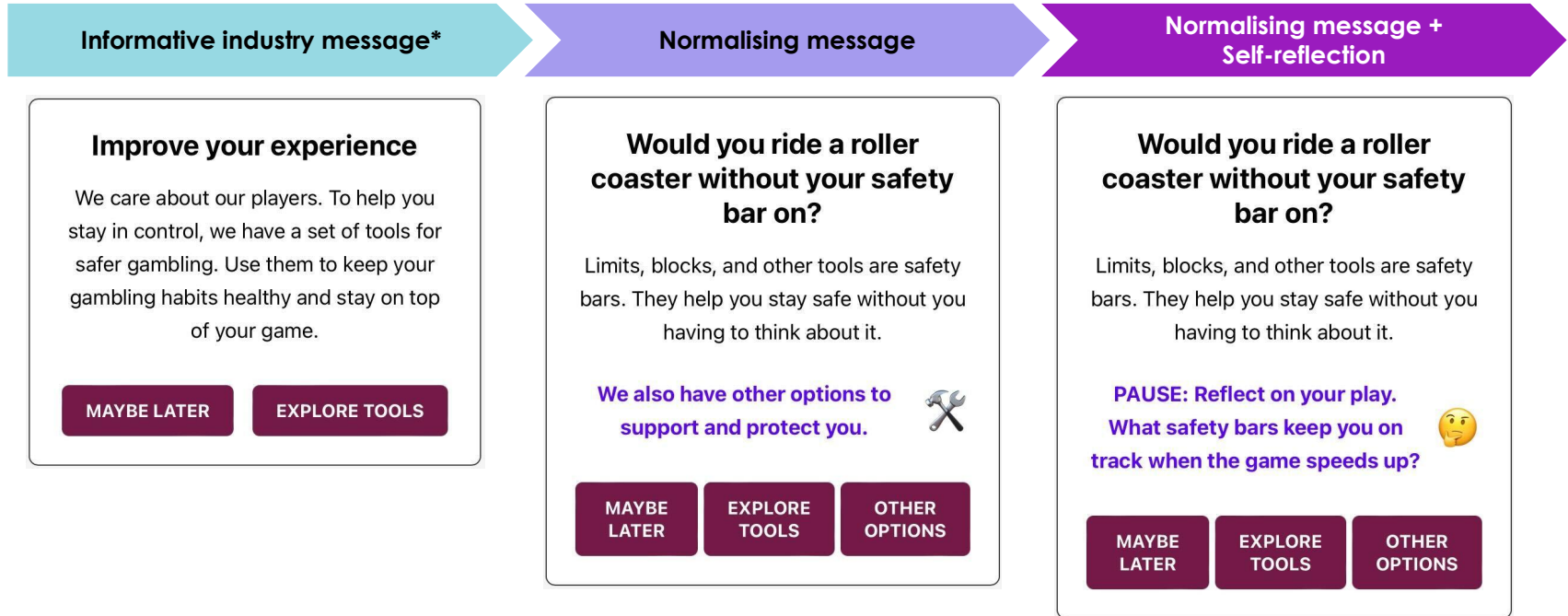


Encouraging self-reflection – Self-reflection is a promising but relatively under-explored mechanism for recognising harm.^{[15.16.17.18.19](#)} While the exact process is unclear, research outside gambling suggests it may be effective if it prompts a pause in behaviour, helps people identify a problem they can address, and encourages them to take action.

Messages targeted elements likely to influence engagement with safer gambling actions



We designed the final messages to be short, readable, and include clear calls to action (CTAs)



*The informative industry message did not include the 'Other option' prompt used in the normalising messages, as it was designed to stay closer to the original real-world version. By contrast, the normalising messages aimed to prompt broader reflection on gambling beyond specific tools; therefore, we included the 'other option' prompt to make taking action easy.

Trial methodology



We recruited a representative sample of people who gamble

Between 13th to 28th of August 2025, we recruited a representative sample of 4,532 people in the UK who gamble (see [appendix 5](#) for type of gambling). We excluded those who only played the lottery or had used a self-exclusion register.

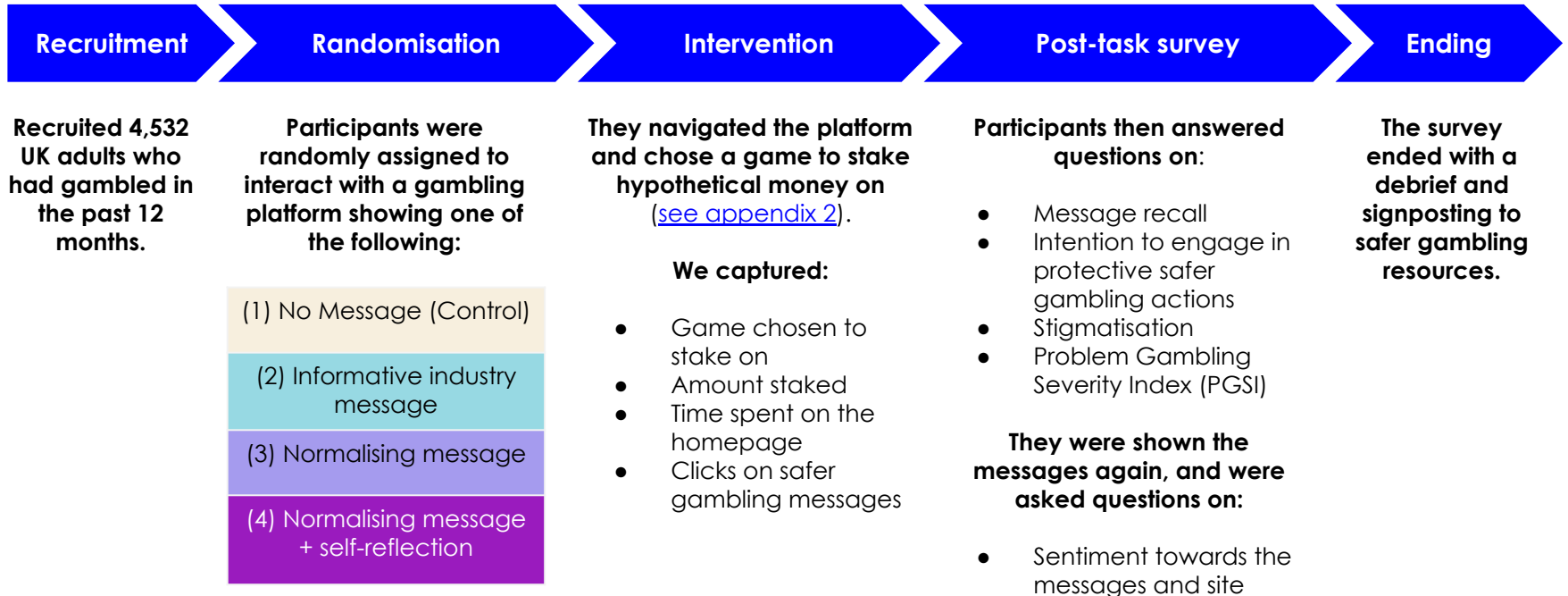
NOTE ON INTERPRETING RESULTS

1. The sample doesn't capture the digitally excluded, or people not inclined to complete online surveys.
2. Self-reported intentions in experimental settings do not always directly translate into real-world actions. We therefore interpret the stated intent measured in this study as an upper bound on the likely impact on actual behaviour.
3. When we examine differences by subgroups (e.g., gender, ethnicity), we only do so when the sample size remains large enough to draw robust inferences from.

Gender		Region		Ethnicity		
Women	41%	South & East	30%	White	88%	
Men	59%	North	25%	Asian	4%	
<th>Age</th> <td>Midlands</td> <td>18%</td> <td>Black</td> <td>5%</td>		Age	Midlands	18%	Black	5%
		18-24	13%	Scotland, Northern Ireland, Wales	15%	
		25-54	65%	London	12%	
55+	22%			Mixed / other	2%	

Median time spent completing survey: 3m 57s.
 Also collected data for all respondents for income, education, urbanicity and employment status.

We tested the impact of messages on behaviour and attitudes using a simulated gambling website

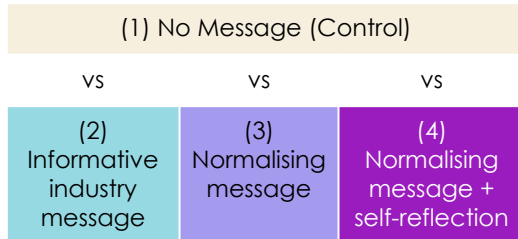


We first examined how the messages influenced individuals' intention to take protective safer gambling actions

Primary analysis

We first assessed whether exposure to safer gambling messages increased participants intention to take protective actions.

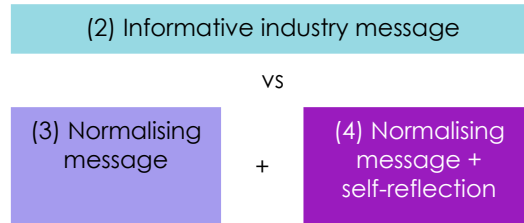
This was measured through a post-intervention survey that compared the responses of participants in each message group independently to those in the control group:



Secondary analysis

We then explored whether normalising messages were more effective at encouraging intention to take protective actions than existing informative messages.

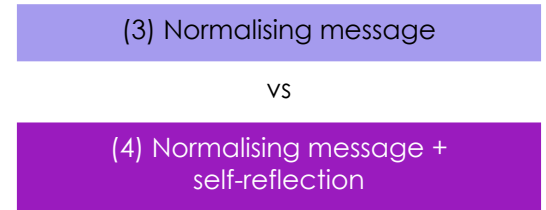
This was measured by comparing the intent survey answers to the informative industry message versus the two normalising messages, taken together:



Exploratory analysis

We were also interested in whether self-reflection increased participants' intention to take protective actions above and beyond the message that only focuses on normalisation.

This was measured by comparing the first normalising message with the normalising message that included the self-reflection prompt:



We also analysed participants' behaviour on the simulated platform to identify other potential impacts

Exploratory analysis

Behaviours: We explored the impact of the messages on the actions participants took on the platform:

- Do message interventions impact choosing a call to action option?
- Do message interventions impact the decision to place a hypothetical stake on one of the games?
- Do message interventions decrease the monetary value of stakes placed?

These comparisons were made by analysing relevant survey answers from the control group against each of the experimental groups:



We then explored factors that may explain differences in message effectiveness

Exploratory analysis

We examined whether the messages influenced key elements of the theory of change.

- **Stigma:** Did the messages affect perceptions of gambling-related stigma?
- **Self-reflection:** Did the messages prompt participants to reflect on their own gambling behaviour?
- **Perceptions of the platform:** Did the messages affect participants' trust in the gambling operator?
- **Recall:** Were the messages and their aim remembered?

These comparisons were made by analysing relevant survey responses, comparing the control group with each experimental group:



Exploratory analysis

After participants were re-shown the messages, we explored what they thought about them.

- **Sentiment:** How participants rated the message across key dimensions.
- **Perceived effectiveness:** How the message interventions impacted perceived effectiveness of the message itself.
- **Qualitative feedback:** What other comments participants had about the different messages.

These comparisons were made by analysing relevant survey answers between each experimental group:



The study's design introduced some limitations which should be considered when interpreting the results



The mock-up platform didn't include promotional materials commonly found on gambling sites, which made the safer gambling messages more noticeable than they would be in real settings. **However, this also allowed us to isolate and better assess the potential impact of the messages.**



Participants staked hypothetical rather than real money, and were not given the chance to win, which may have made their decisions feel less meaningful and less reflective of real gambling behaviour. **This approach was necessary for ethical reasons, and using a budget with stake decisions still provided useful indicators of engagement with the platform.**



Participants were presented with a gambling game as a result of deciding to participate in a survey, as opposed to a real world scenario where they intentionally look to play. This may lower their threshold for acting on the safer gambling message. **However, this allowed us to examine how messages affect behaviour in a neutral context.**



The primary outcomes were self-reported (e.g., intentions to take action), which may not fully reflect actual behaviour in real gambling contexts. **To address this limitation, we also examined exploratory outcomes related to in-platform behaviour, offering additional insight into the impact of the messages.**



Participants only interacted with the platform for a short period, so the study captured immediate responses rather than longer-term behavioural change. **This provided a practical way to identify early indicators of impact, longer-term behaviour would require longitudinal testing.**

Results

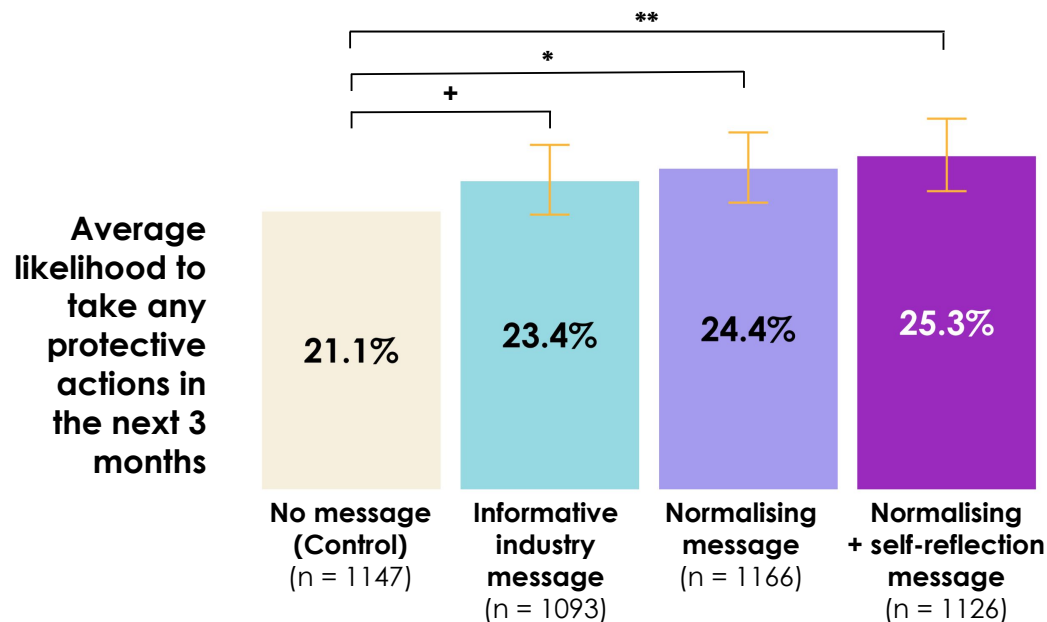


Key results: Intention to take protective action

This section presents results for the three key research questions, focusing on participants' overall intention to engage with protective measures against gambling harm. Intention was measured by asking participants how likely they were to take protective actions within the next three months.

See [Appendix 3](#) for complete details of these measurements and analyses.

Normalising messages significantly increased intent to take protective actions against gambling harm

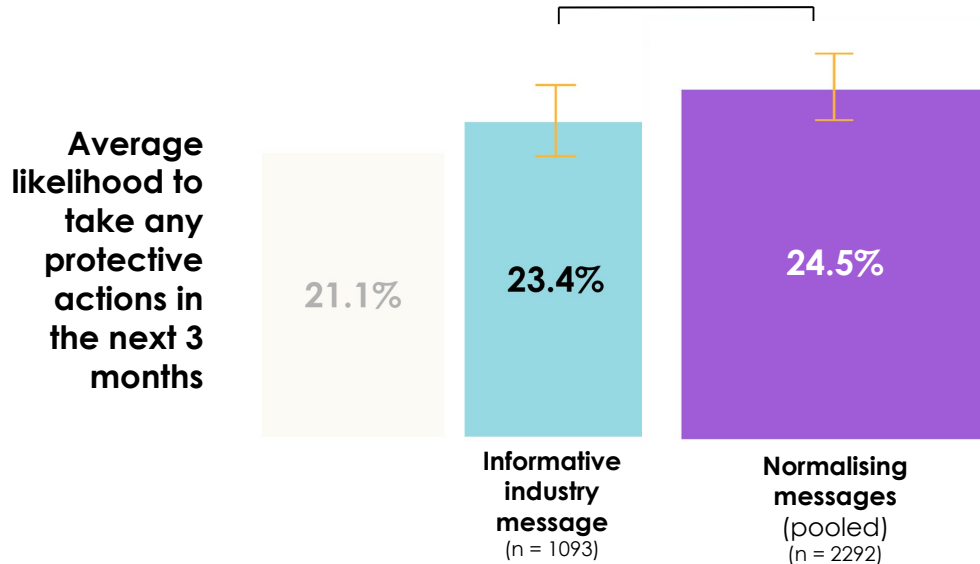


Participants who saw the normalising message or the normalising message with self-reflection were **significantly more likely to say they intend to take more protective actions** compared to those who saw no message, $p < .05$, $p < .01$, respectively.

There was a marginally significant trend suggesting the informative industry message increased intent compared to no message, $p = .06$.

** $p < .01$, * $p < .05$, + $p < .1$. Significance has been corrected for 3 comparisons (Benjamini-Hochberg) but confidence intervals (CIs) are unadjusted. Numbers represent control mean + estimated effect from the regression. Regression controls for age, gender, income, region, ethnicity, education and employment status. Data collected by BIT on 13-28 August 2025.

Normalising messages work, but we have insufficient evidence to conclude that they outperformed the informative industry message



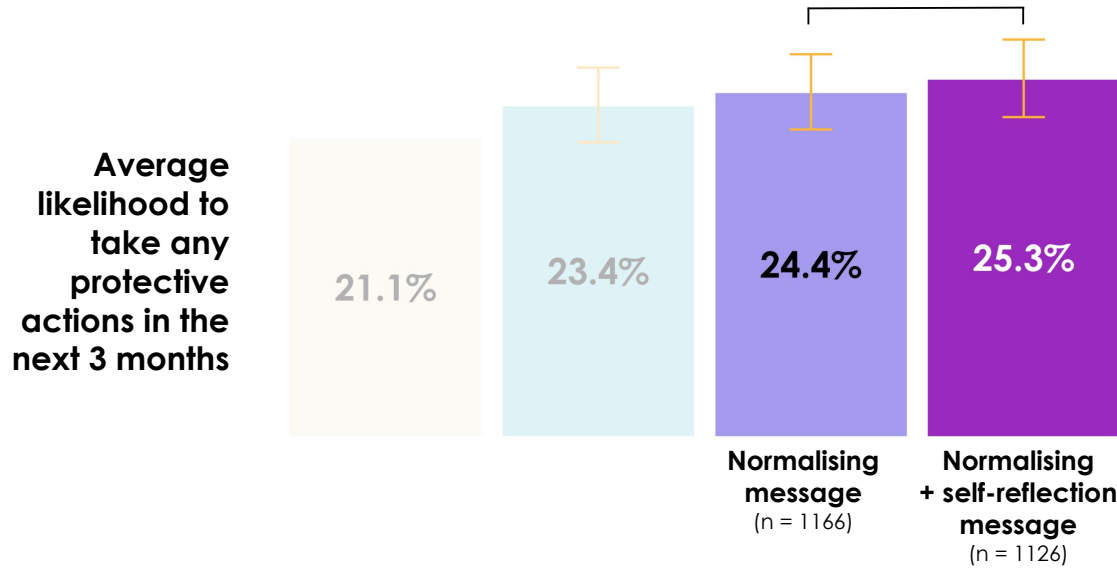
To test their efficacy, we pooled the two variations of the normalising message and compared their combined impact on intent with that of the informative industry message.

The normalising messages taken together **did not significantly outperform** the informative industry message, $p > .05$.

While primary analysis results show normalising messages are effective against a no-message control, we lack sufficient evidence to conclude they are superior to an informative industry message like the one tested here.

** $p < .01$, * $p < .05$, + $p < .1$. Confidence intervals and number on 'Informative industry message' bar are from primary analysis results. Number on 'Normalising messages' bar represents 'Informative industry message' mean + estimated effect from the regression. Regression controls for age, gender, income, region, ethnicity, education and employment status. Data collected by BIT on 13-28 August 2025.



Adding a self-reflection component to the normalising message did not increase intent to take protective actions



Compared to the normalising message alone, including a self-reflection prompt **did not lead to a greater increase** in participants' intent to take protective actions, $p < .05$.

This illustrates that self-reflection prompts, on their own, are not enough to increase the impact of normalising messages on the intention to take safer gambling actions.

The impact of normalising messages was highly dependent on the participants' risk level

Average likelihood to take any protective actions in the next 3 months		No message (n = 1147)	Informative industry message (n = 1093)	Normalising message (n = 1066)	Normalising + self-reflection message (n = 1126)
 Gender	Male (n = 2687)	21.3%	24.4% +	25.5% *	25.2% *
	Female (n = 1845)	20.8%	22.9%	23.4%	25.7% *
 PGSI	Non-risk (n = 2683)	13.4%	15.9%	20.6% **	18.5% **
	At risk (n = 1849)	32.7%	35.1%	32.4%	35.4%

For **male participants**, both types of normalising messages increased intent. However, for **female participants**, only the normalising message with self-reflection was effective, suggesting the prompt was the key factor, though why this is the case needs more research.

Both types of normalising messages were statistically more effective for those with **no risk** of experiencing gambling harm. None of the messages led to statistical significant differences in intent for those **at-risk**. This may be because they generally had a higher overall intent to take action, suggesting this group requires more tailored support. However, the current study lacked sufficient power to compare those at low, moderate, and high risk of experiencing gambling harm, which should be addressed in future studies.

** $p < .01$, * $p < .05$, + $p < .1$. Green shading indicates a statistically significant increase from the 'No message' arm, $p < .05$. Numbers represent control mean + estimated effect from the regression. Regression controls for age (omitted for gender analysis), gender, income, region, ethnicity, education and employment status. PGSI was measured using the 3-item scale: 'non-risk' represents a PGSI score of 0, while 'at risk' refers to a score of 1 or higher (low-, medium-, or high-risk). Data collected by BIT on 13-28 August 2025.

Both types of normalising messages were effective at encouraging participants to take a range of protective actions

% who say they're likely to...	No message (n = 1147)	Informative industry (n = 1093)	Normalising (n = 1066)	Normalising + self-reflection (n = 1126)
Set a deposit or spending limit on one or more of your gambling accounts	37.2%	40.2%	42.0 *	41.8% *
Set a time limit on one or more of your gambling accounts	26.2%	29.0%	29.1%	30.8% *
Search online for information or tools to help you understand and manage your gambling	19.4%	22.6% +	24.8% **	25.5% **
Get in touch with a gambling support service, such as a helpline or peer support group	12.8%	13.4%	14.1%	16.6% *
Sign up for a self-exclusion scheme, such as GamStop or a similar service	12.2%	14.4%	15.9% *	15.0% +
Take other actions to help me manage my gambling	18.8%	21.6%	21.8% +	23.1% *

Looking at the effects of the messages on the individual protective actions, the messages were particularly strong for **increasing intent to set deposit or spending limits and search for help online**. The normalising message with self-reflection showing the most consistent effect across all measures.

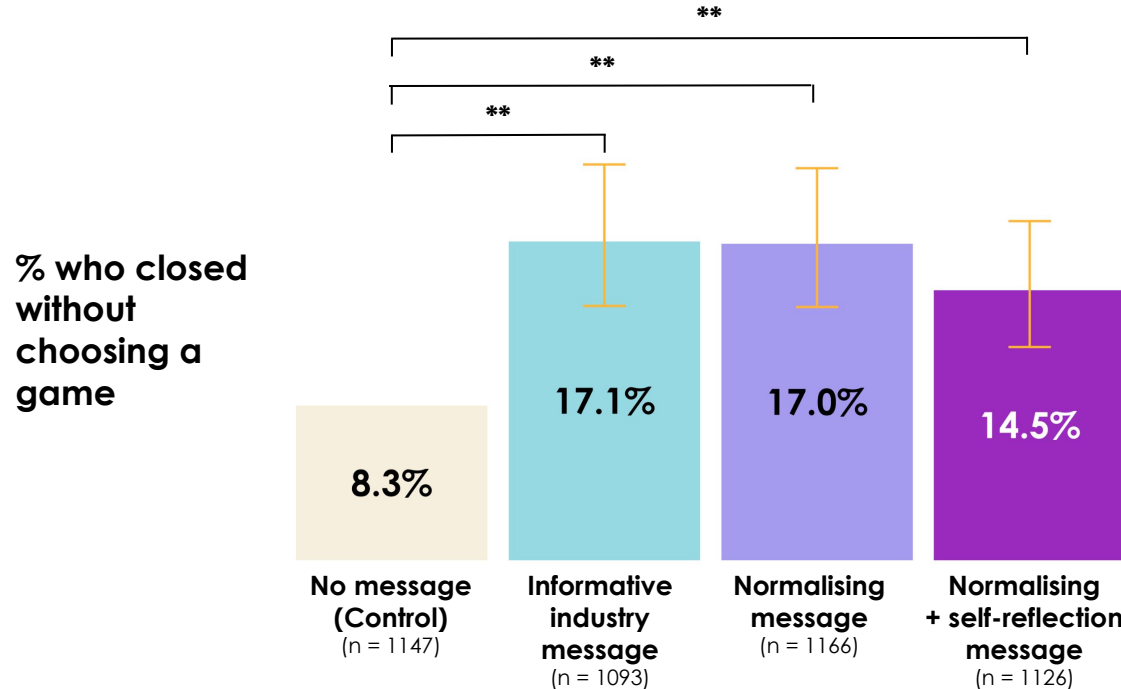
** $p < .01$, * $p < .05$, + $p < .1$. Green shading indicates a statistically significant increase from the 'No message' arm, $p < .05$. Numbers represent control mean + estimated effect from the regression. Regression controls for age, gender, income, region, ethnicity, education and employment status. Data collected by BIT on 13-28 August 2025. [Appendix 6](#) contains the analysis of the other actions participants were planning to take.

Additional analyses: In-platform behaviour

This section presents results from exploratory analyses of participants' behaviour on the simulated platform, such as the amount staked and engagement with protective action buttons. These findings provide additional insight into which messages may help translate intention into action.

See [Appendix 4](#) for complete details of these measurements and analyses.

People were more likely to chose not to play a game when they saw a message on the gambling platform



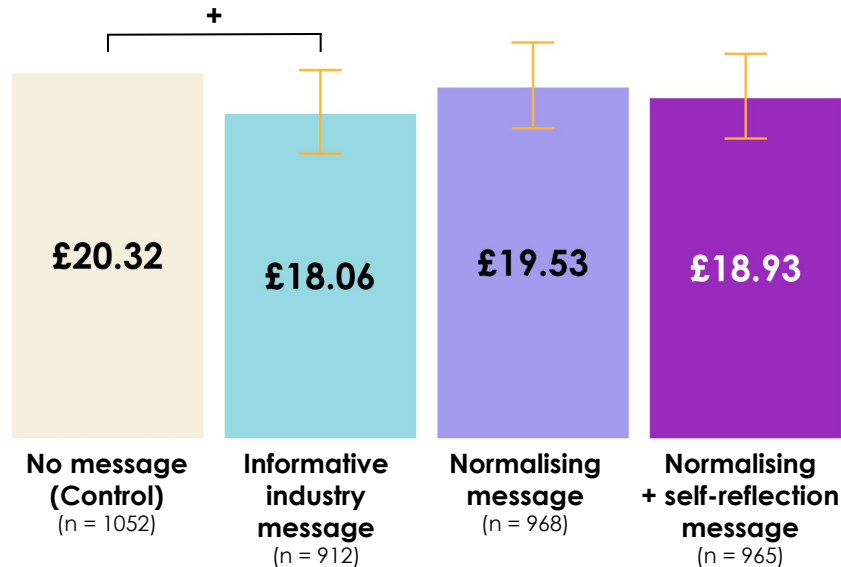
On the gambling platform, participants could either 1) choose a game and set a stake, or 2) close the platform without choosing a game.

Participants who saw a message were **significantly more likely to close the platform without choosing a game**, $ps < .01$.

These findings illustrate that the mere presence of a safer gambling message can influence individuals' decisions about whether to gamble, even when they have no intention of taking proactive safer gambling actions.

However, among the 86% of participants who did select a game, none of the messages influenced the amount they staked

Of those who chose a game, average amount staked (max of £100)

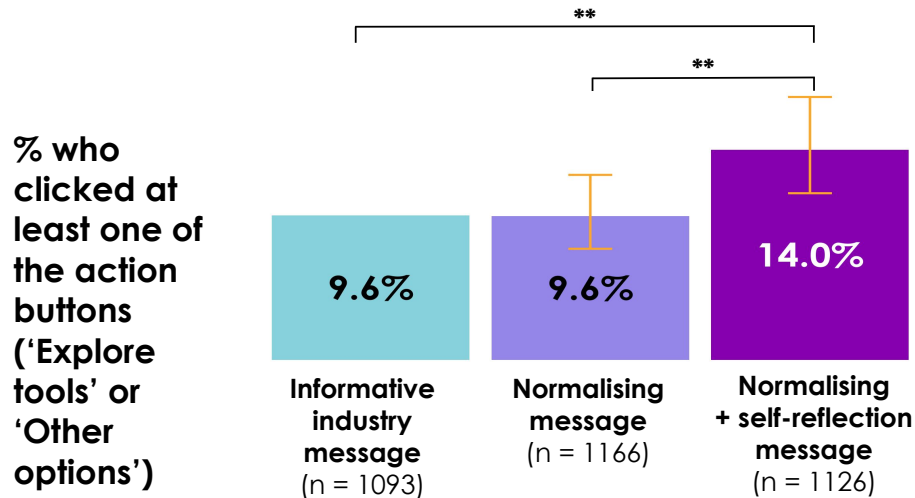


All messages led to a small decrease in the amount staked. However, **none of these changes were statistically significant** when compared to no message, $p_s > .05$.

This could illustrate that once individuals decide to gamble, seeing a safer gambling messages may not impact their behaviour.

Adding a self-reflection component to a normalising message could be a key in driving engagement with CTAs

Participants in the informative industry condition could click a CTA saying 'Explore tools', while those in the normalising groups could choose 'Explore tools' or 'Other options'.



The normalising message with self-reflection led to the highest engagement with the CTAs: 10.4% clicked 'Explore tools' and 7.1% 'Other options.' This was significantly higher than both the informative industry message (9.6% clicked 'Explore tools') and the normalising message without the reflection (7.8% clicked 'Explore tools' and 4.9% 'Other options'), $ps < .01$.

There was **no significant difference in click throughs between the informative industry and normalising messages**, despite participants in the normalising messages having more buttons to click.

These results demonstrate the value of a self-reflection component and a bespoke CTA. While both normalising messages increased participants' intent to take protective actions, **adding self-reflection prompted more participants to act on their intentions by searching for information about the available resources.**

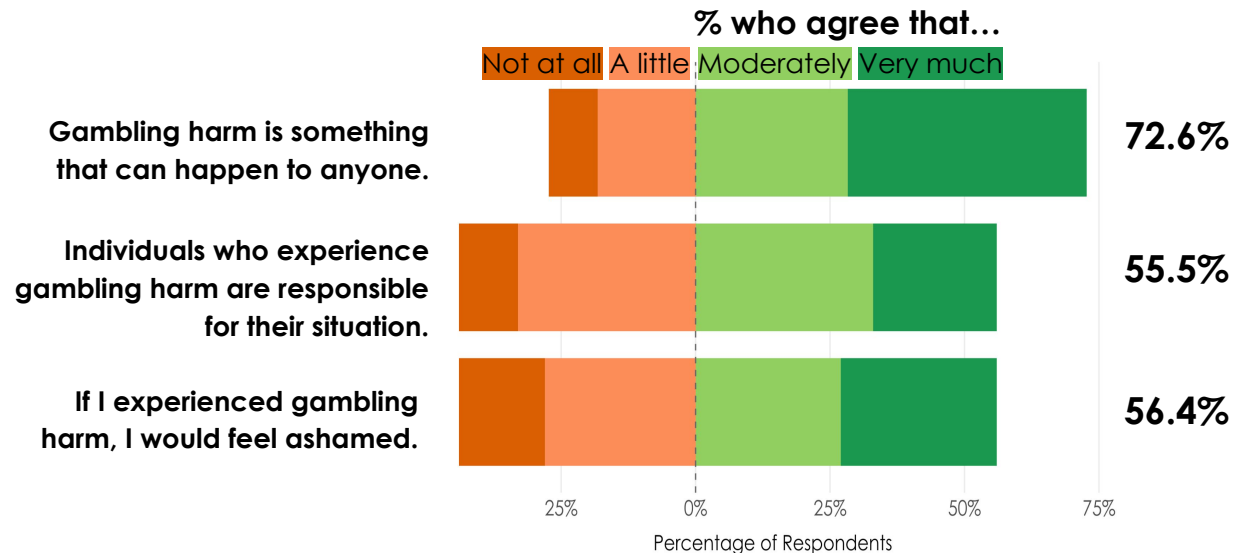
** $p < .01$, * $p < .05$, + $p < .1$. Numbers represent 'Informative industry message' mean + estimated effect from the regression. Regression controls for age, gender, income, region, ethnicity, education and employment status. Data collected by BIT on 13-28 August 2025.

Additional analyses: Exploring mechanisms of change

This section presents additional exploratory analyses of potential mechanisms that may help to explain differences in how messages performed. It draws on measures such as perceived stigma, recall of the messages, and perceptions of the messages.

See [Appendix 4](#) for complete details of these measurements and analyses.

Most believed gambling harm could happen to anyone, yet over half still considered it a matter of personal responsibility and shame



These feelings of stigma were **not affected** by the type of safer gambling message participants received.

Results from regressions reported in the [Appendix Z](#). Data collected by BIT on 13-28 August 2025.

Normalising messages were perceived more negatively compared to the industry informative message

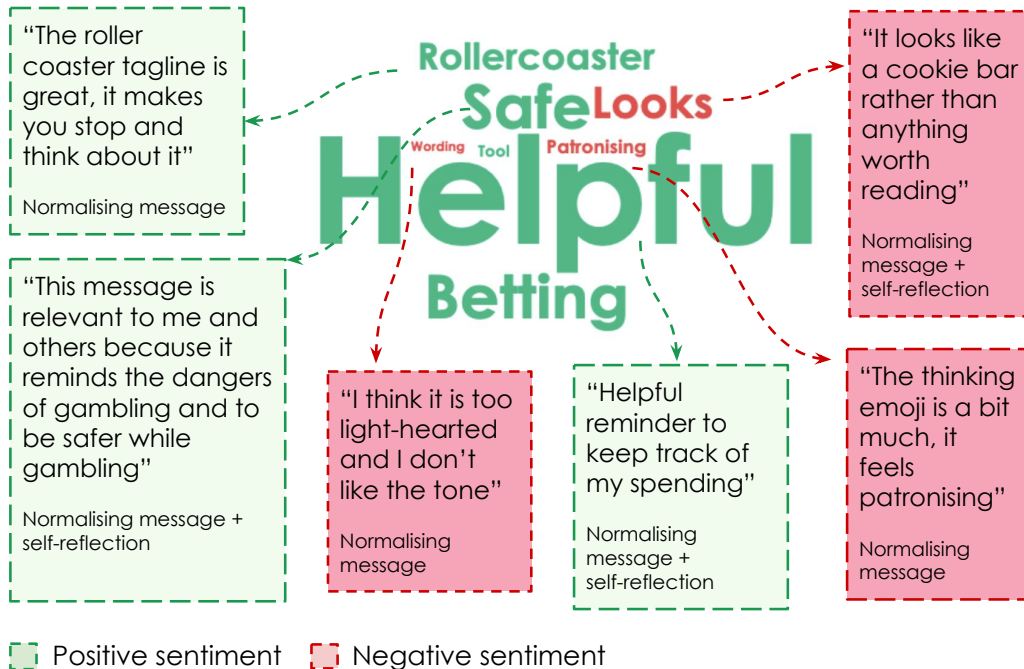
% who said the message was...	Industry informative message (n = 1093)	Normalising message (n = 1066)	Normalising + self-reflection message (n = 1126)
easy to understand	84.6%	76.0% **	74.9% **
supportive	69.4%	61.9% **	59.9% **
relevant to them	30.9%	30.4%	32.7%
patronising	17.4%	20.6% +	22.9% **
irritating	12.2%	15.2% *	14.4%
informative	70.4%	64.1% **	60.9% **
effective in raising awareness or encouraging safer play	59.2%	58.7%	57.3%

While a large majority of participants found **all messages to be easy to understand (over 74%) and supportive (over 59%)**, the industry informative message was consistently rated most positively.

The other two messages, which were more focused on normalising behaviour and self-reflection, were more likely than the industry message to be perceived as less informative, and sometimes more patronising or irritating.

** $p < .01$, * $p < .05$, + $p < .1$. Red shading indicates a statistically significant increase in negative sentiment from the 'Informative industry message' arm, $p < .05$. Numbers represent estimated mean from the regression. Regression controls for age, gender, income, region, ethnicity, education and employment status. Data collected by BIT on 13-28 August 2025.

Participants liked the message, but not the delivery



When asked to describe what else they thought about the messages, participants provided mixed feedback, which applied to all the messages:

- **Some responded positively to the core intent of the messages.** They found their substance to be 'relevant' and a 'helpful reminder' to manage their spending.
- **Conversely, the execution of the messages sometimes drew criticism.** A small number described the tone as "too light-hearted" and "patronising," and the visual style as undermining their serious purpose.

This suggests that while the messages are promising, they may not be received in the same way by everyone. This highlights the importance of using different targeted messages for different audiences and considering the trade-offs of each message.

Based on analysis of 854 open-text comments. A further 167 comments were omitted from the analysis as they indicated no further comment (e.g., "no", "none"). An inductive coding approach was used: 1) Natural language processing identified initial topics from the raw text. 2) These topics were then manually reviewed and grouped into the final thematic categories. Each theme was classified based on the prevailing positive or negative sentiment of the comments within that category which was determined by a qualitative review of the topics. [Appendix 8](#) contains justification for sentiment classification. The phrases shown are verbatim quotes from listed treatment group. Data collected by BIT on 13-28 August 2025.

Normalising messages were more memorable than the industry informative message

% who correctly recall...	Informative industry message (n = 1093)	Normalising message (n = 1066)	Normalising + self-reflection message (n = 1126)
Seeing a message about safer gambling	41.5%	49.4% **	54.5% **
That the main point of the message was to encourage you use safer gambling tools (of those who recall a message, n = 1642)	82.2%	83.5%	86.7% *

Adding a **self-reflection component** to the normalising message significantly **improved recall of the message's main point about using safer gambling tools.**

This illustrates that, although the normalising message with self-reflection was sometimes harder to understand or perceived as less supportive, it was actually more effective at capturing attention and helping participants remember the message's aim.

** $p < .01$, * $p < .05$, + $p < .1$. Green shading indicates a statistically significant increase from the 'Informative industry message' arm, $p < .05$. Numbers represent estimated mean from the regression. Regression controls for age, gender, income, region, ethnicity, education and employment status. Data collected by BIT on 13-28 August 2025.

Normalising messages prompted reflection on gambling safety without altering trust in the site

% who say the gambling site...	No message (n = 1147)	Informative industry message (n = 1093)	Normalising message (n = 1066)	Normalising + self-reflection message (n = 1126)
made them reflect on ways to keep their gambling safe	31.3%	33.5%	37.1% **	38.2% **
was trustworthy	48.3%	50.1%	50.5%	51.5%

Both normalising messages were **significantly more likely to prompt participants to reflect on how to keep their gambling safe**. This aligns with the finding that such messages can increase the intention to adopt safer gambling actions.

It illustrates that, despite the potential to be perceived as less clear or supportive, such messages may in fact be more effective at prompting participants to pause and reflect.

** $p < .01$, * $p < .05$, + $p < .1$. Green shading indicates a statistically significant increase from the 'Informative industry message' arm, $p < .05$. Numbers represent estimated mean from the regression. Regression controls for age, gender, income, region, ethnicity, education and employment status. Data collected by BIT on 13-28 August 2025.

Conclusions and recommendations



Safer gambling messages can increase individuals' intentions to take protective safer gambling actions



Primary RQ. Can **safer gambling messages** impact users' intentions to engage with protective measures? **Yes.**

Safer gambling messages designed to normalise the uptake of safer gambling tools significantly increased participants' likelihood to intend to take protective actions from 21.1% to 24.5%.

- The messages were only found to significantly impact the intentions of participants who were scored as not at risk of gambling harm (via the PGSI). This indicates that the messages may be most effective as preventative or educational tools.
- Exploratory analyses showed that all messages reduced the likelihood of placing a stake. But, among the 86% who did place a stake, messages had no effect on stake size. Because participants did not begin the survey intending to gamble, more realistic experiments are needed to test whether these findings translate to real-world behaviour.

Recommendations:

- Further research should **test the impact of displaying salient normalising safer gambling messages on real operators platform** on intentions and behaviours.
- Further research should investigate the impact of normalising messages across low, medium, and high PGSI risk levels, as the current study lacked the power to do so.

Normalising messages are no more effective than informative ones at changing protective intentions



Secondary RQ. Are messages designed to **normalise safer gambling** more impactful in driving individuals' intended engagement with protective measures compared to informative safer gambling messages? **No.**


Normalising messages did not significantly increase intention to take protective steps compared with industry informative messages.

- Exploratory analyses showed that participants found normalising messages harder to understand and less informative than informative messages, yet they remembered them better. This suggests that the 'rollercoaster' metaphor captured attention and encouraged reflection, even if the message was less clear.
- Normalising messages also proved more effective than the informative message at prompting participants to think about ways to keep their gambling safe. However, as the main findings suggest, this reflection did not translate into intentions.

Recommendations:

- Further research should explore how metaphor-based messages can be made easier to understand while remaining memorable and generating attention, and whether improving ease of understanding can lead to a stronger likelihood to take protective actions.

Adding a self-reflection prompt may not boost the impact of safer gambling messages on protective intentions

 Exploratory RQ. Are messages designed to **promote self-reflection** more impactful in driving users' intended engagement with protective measures compared with non-self-reflection messages? **No.**

Normalising messages with self-reflection were not statistically more likely to increase intention to take protective safer gambling action, compared with a similar message without the self-reflection prompt.

- However, messages containing the self-reflection prompt were the only ones that significantly influenced the intentions of female participants. This underscores the importance of tailoring messages to different audience segments.
- Explorative research further found that adding self-reflection prompted more participants to act on their intentions by searching for information about the available resources. Together, these findings may indicate that while self-reflection on its own is not enough to motivate changes in intentions, when combined with a clear call to action, it may have the potential to prompt protective actions.
- Participants in the self-reflection group were more likely to remember that the message's main point was to encourage the use of safer gambling tools.

Recommendations:

- Further research should explore how and whether combining self-reflection prompts with a clear CTA can boost engagement with the CTA itself, and whether it can drive additional behavioral changes afterwards.

Appendix

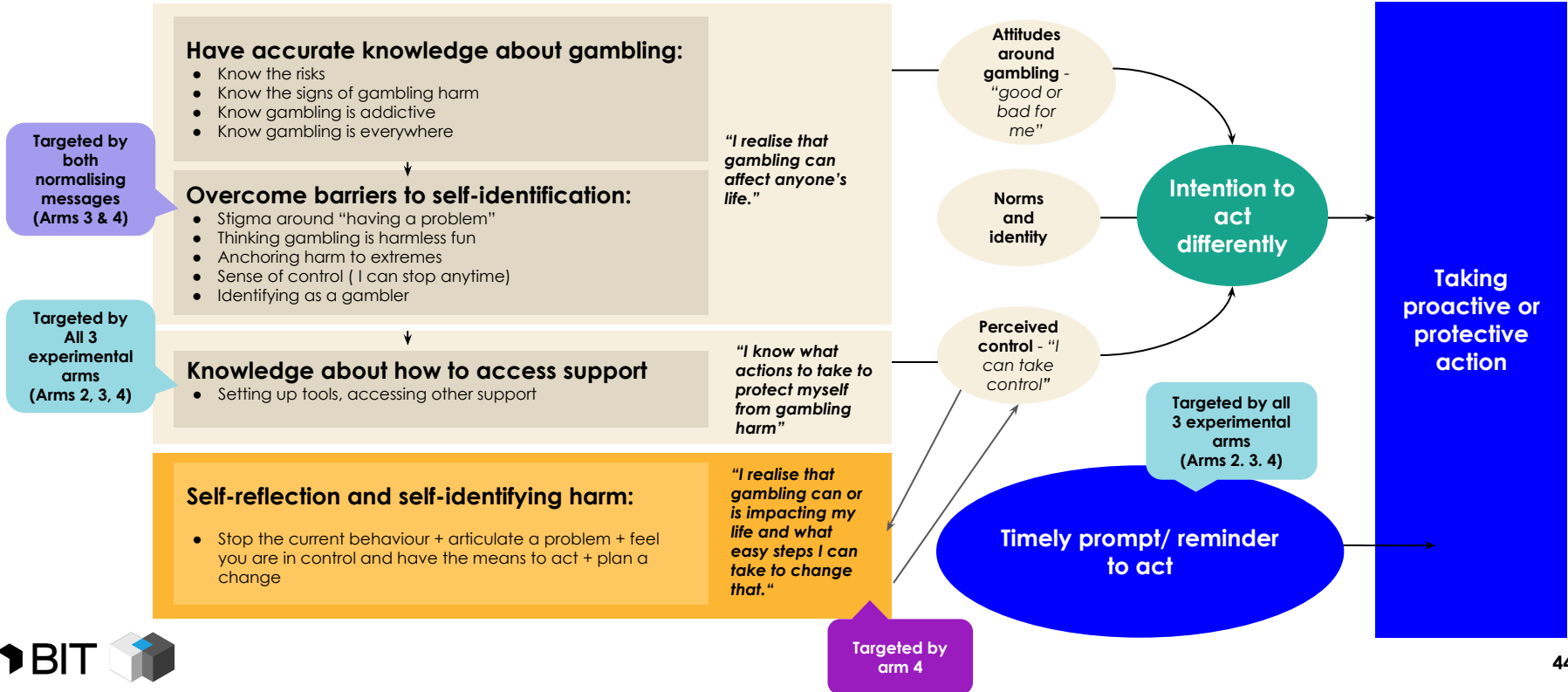


Appendix 1: Theory of change - visual representation

Appraisal

Intention

Action



Appendix 2: The mock-up gambling website

We built a one-page web platform mimicking an online gambling site, accessible on mobile devices. Participants browsed the site for a short period and chose a game to stake money on from a hypothetical budget of £100. The participants were not offered a chance to win money by choosing to stake on the game.

Apexbet

Would you ride a roller coaster without your safety bar on?
Limits, blocks, and other tools are safety bars. They help you stay safe without you having to think about it.

We also have other options to support and protect you.

MAYBE LATER EXPLORE TOOLS OTHER OPTIONS

Choose Your Game

Diamond Rhino

Mystic Lamp

GEMSTONE

Neptune's Riches


You chose to play Second Chance Spin.
How much would you like to stake?

£

Back Confirm stake

Close without choosing a game

One of the three messages, or no message was displayed at the top of the page

Participants could click the game's image or  icon to view more information about the game

Participants were asked to scroll through the platform

Participants completed the task by either placing a stake or exiting without choosing a game

Appendix 3: Intention to take protective actions

Intention to take protective actions - survey question	Category	Outcome	Measure	Analysis
<p>How likely are you to take the following actions in the next 3 months?</p> <ul style="list-style-type: none"> • [money] Set a deposit or spending limit on one or more of your gambling accounts. • [time] Set a time limit on one or more of your gambling accounts. • [search] Search online for information or tools to help you understand and manage your gambling (e.g., educational resources or self-assessment tools). • [service] Get in touch with a gambling support service, such as a helpline or peer support group (e.g., Gamblers Anonymous). • [exclusion] Sign up for a self-exclusion scheme, such as GamStop or a similar service. • [other] Take other actions to help me manage my gambling. <p>[Not at all likely / A little likely / Moderately likely / Very likely]</p>	Primary	Intent	The proportion of likely ('Moderately likely' or 'Very likely') across 6 protective actions	Quasi-binomial with correction for 3 comparisons (no message vs each message)
	Secondary	Intent	The proportion of likely ('Moderately likely' or 'Very likely') across 6 protective actions	Quasi-binomial (informative vs. normalising & normalising + self-reflection (pooled))
	Exploratory	Intent	The proportion of likely ('Moderately likely' or 'Very likely') across 6 protective actions	Quasi-binomial (normalising vs normalising + self reflection)

Appendix 4.1: Summary of additional exploratory analyses

Category	Outcome	Measures	Analysis
Exploratory	Outcomes measured in task	Stake amount Clicking "Explore tools" or "Other options"	Quasi-binomial model Logistic regression
Exploratory	Recall	Recall of message and purpose of message	Logistic regression
Exploratory	Sentiment	Trust in gambling operator Sentiment towards the message Perceived effectiveness of the message	Logistic regression
Exploratory	Stigma	Perceived gambling stigmatisation	Logistic regression

*All analyses controls for age, gender, income, region, ethnicity, education, employment status.
For all analysis, 3 comparisons are made (no message vs each message)*

Appendix 4.2: Additional exploratory analyses (Outcomes measured in task)

Outcomes measured in task	Category	Outcome	Measure	Analysis
<p>Stake amount</p> <ul style="list-style-type: none"> • [stake] Amount they staked in the game <p>[£]</p> <p>Clicking “Explore tools” or “Other options”</p> <ul style="list-style-type: none"> • [exploreTools] if they clicked ‘Explore tools’ on the message • [otherOptions] if they clicked ‘Other options’ on the message <p>[Yes / No]</p>	Exploratory	Outcome measured in task	Stake amount	Quasi-binomial model
	Exploratory	Outcome measured in task	Clicking “Explore tools” or “Other options”	Logistic regression

Appendix 4.3: Additional exploratory analyses (Recall)

Recall - survey question	Category	Outcome	Measure	Analysis
<p>Which of the following do you remember seeing on the gambling site? Please select all that apply.</p> <ul style="list-style-type: none"> • [message] A message encouraging safer gambling • [game] Names of the available games • [offers] Terms and conditions for bonus offers • [account] Information about how to open an account • [cookie] A pop-up about website cookies • [age] A message asking for age verification • [idk] Don't know <p>What do you think the main point of the message was?</p> <ul style="list-style-type: none"> • To encourage you use safer gambling tools, such as limits and blocks. • To recommend support services to get help for gambling. • To suggest that you should stop gambling entirely. • Don't know 	Exploratory	Recall	Correct recall of message	Logistic regression
	Exploratory	Recall	Correct recall of point of message	Logistic regression

Appendix 4.4: Additional exploratory analyses (Sentiment)

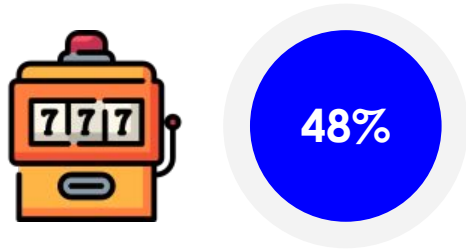
Sentiment - survey question	Category	Outcome	Measure	Analysis
<p>To what extent did you find the gambling site trustworthy?</p> <p>[Not at all / A little / Moderately / Very much]</p> <p>To what extent do you think this message is...</p> <ul style="list-style-type: none"> • [easy] Easy to understand? • [support] Supportive? • [relevant] Relevant to you? • [patronise] Patronising? • [irritate] Irritating? • [inform] Informative? <p>[Not at all / A little / Moderately / Very much]</p> <p>How effective do you think this message is in raising awareness or encouraging safer play?</p> <p>- [Not at all / A little / Moderately / Very much]</p>	Exploratory	Site sentiment	Trust in gambling operator ('Moderately' or 'Very much')	Logistic regression
	Exploratory	Message sentiment	Sentiment towards the message ('Moderately' or 'Very much')	Logistic regression
	Exploratory	Message sentiment	Perceived effectiveness of the message ('Moderately' or 'Very much')	Logistic regression

Appendix 4.5: Additional exploratory analyses (Stigma)

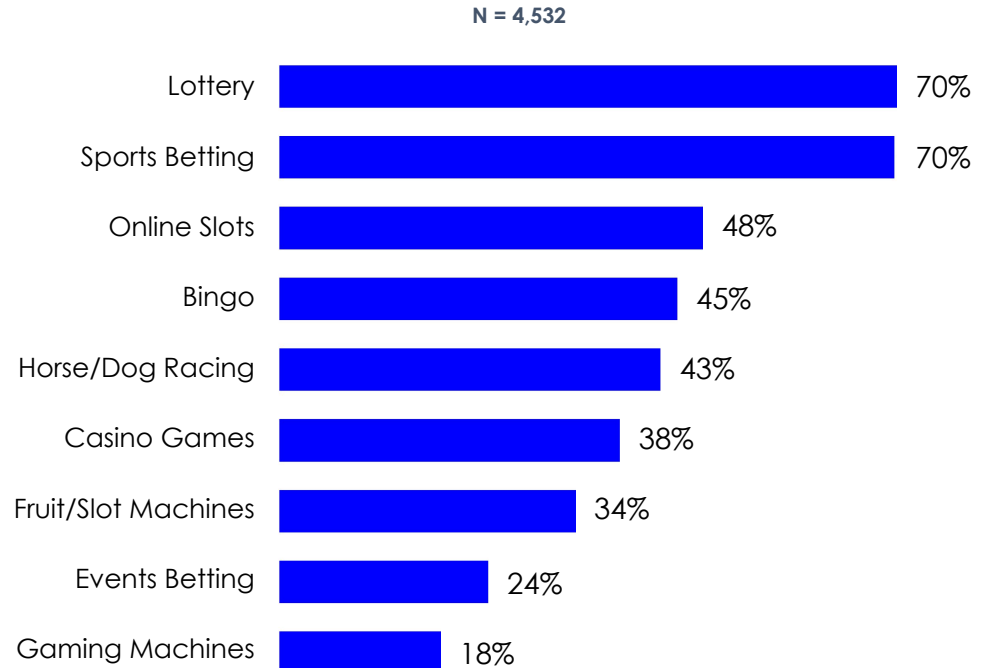
Stigma - survey question
<p>To what extent do you agree with the following statements?</p> <ul style="list-style-type: none"> - [norm] Gambling harm is something that can happen to anyone. - [responsible] Individuals who experience gambling harm are responsible for their situation. - [shame] If I experienced gambling harm, I would feel ashamed. <p>[Not at all / A little / Moderately / Very much]</p>

Category	Outcome	Measure	Analysis
Exploratory	Stigma	Perceived normalisation of gambling harm ('Moderately' or 'Very much')	Logistic regression
Exploratory	Stigma	Perceived responsibility of gambling harm ('Moderately' or 'Very much')	Logistic regression
Exploratory	Stigma	Perceived shame of gambling harm ('Moderately' or 'Very much')	Logistic regression

Appendix 5: Gambling activities participants engaged in over the last 12 months



Of participants have played online slots or instant win games



Appendix 6: Financial controls were listed as the top strategy to manage gambling

Participants who said they were at least 'a little likely' to take other actions to help them manage their gambling gave free text responses on what these actions are. The biggest themes in the responses were **financial control, social support and abstinence and exclusion**. These themes were consistent across treatment arms.

Categories	Topics	# of responses	Sample quotes
Financial Controls	budget, limits, deposit limits, card block, spending, stake low, limit cash	381	"I plan to set a monthly gambling budget" "Banning gambling transactions from my accounts"
Abstinence & Exclusion	stop altogether, self-control/exclusion, delete apps	162	"Delete a couple of betting apps" "Stop or reduce myself, not help needed"
Social Support	talk to friends/family or support groups	151	"Speak to family and friend" "Join a gamblers anonymous group"
Time Management	screen time, phone alarm, set a schedule, taking breaks	138	"Use a timer to play an alarm after my chosen time limit" "Take a break"
Other Information & Tools	safe action research, tracking tool of spending	119	"To use safety tools to manage how I gamble" "Get a tool that helps manage my spendings"
Alternative Activities	find other hobbies, watch less sports	51	"Prioritise other hobbies and interests to fill my time" "Not watch as much sports"

Based on analysis of 1,021 open-text comments. A further 19 comments were omitted from the analysis as they indicated no further comment (e.g., "no", "none"). An inductive coding approach was used: 1) Natural language processing identified initial topics from the raw text. 2) These topics were then manually reviewed and grouped into the final thematic categories. Data collected by BIT on 13-28 August 2025.

Appendix 7: Normalisation and stigmatisation of gambling harm were not affected by the type of message participants received

% who agree...	No message (n = 1147)	Informative industry message (n = 1093)	Normalising message (n = 1066)	Normalising + self-reflection message (n = 1126)
Gambling harm is something that can happen to anyone.	71.4%	73.0%	74.0%	72.8%
Individuals who experience gambling harm are responsible for their situation.	55.0%	56.5%	55.2%	55.3%
If I experienced gambling harm, I would feel ashamed.	54.4%	56.7%	58.4% +	56.9%

Normalising messages, which were designed to make taking protective safer gambling actions seem more usual, did not reduce the stigma associated with gambling harm compared with the informative message.

** $p < .01$, * $p < .05$, + $p < .1$. Red shading indicates a statistically significant decrease from the 'Informative industry message' arm, $p < .05$. Green shading indicates a statistically significant increase from the 'Informative industry message' arm, $p < .05$. Numbers represent estimated mean from the regression. Regression controls for age, gender, income, region, ethnicity, education and employment status. Data collected by BIT on 13-28 August 2025.

Appendix 8: Message sentiment classification

Thematic Category	Key Word	Justification	TR*	Thematic Category	Key Word	Justification	TR*
General Reception	Helpful	Combines topics where participants expressed approval, understanding, and positive feelings about the message.	230	Use of Analogy	Rollercoaster	This theme captures generally positive feedback on communication techniques like the "roller coaster" metaphor.	40
Responsible Gambling & Safety	Safe	Comments focus on the message's purpose of promoting safety and control, which was perceived as a positive feature.	74	Patronising Tone	Patronising	The topic is explicitly negative, reflecting participants' dissatisfaction with the message's delivery and tone.	17
Gambling & Addiction	Betting	Comments in this category were positive about the message's role in addressing these issues.	75	Tools & Feature	Tool	This theme reflects comments about the message's utility as a "tool," which was viewed positively.	14
Visuals & UI	Looks	Contains constructive critique of design elements, highlighting areas needing improvement. This reflects a negative aspect of the current design.	49	Wording & Phrasing	Wording	Feedback suggesting changes to wording implies the current phrasing is suboptimal, hence it is classified as negative.	11

Green represents positive sentiment and red presents negative sentiment

*TR stands for Total Responses

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