

Comparing human-designed and AI-generated safer gambling emails

What this research is about

This study evaluated three versions of safer gambling (SG) emails, including (1) original emails sent by a gambling operator in Spain, (2) an expert-informed human redesign, and (3) an AI-generated redesign. Specifically, this study examined whether the redesigned SG emails can match or improve upon the operator's original emails in terms of cognitive and emotional outcomes. Cognitive outcomes included whether the emails might foster illusion of control, erroneous beliefs about winning probability, and related biases. Emotional outcomes included valence (i.e., whether the emails might evoke a positive or negative reaction) and psychological reactance (i.e., whether the emails might be perceived as threatening to one's freedom and lead to resistance).

What the researchers did

The researchers selected three emails that the operator JuegosONCE typically sends to its customers. These emails were also used as a base for the human-designed and AI-generated versions.

To inform the human-designed versions, the researchers reviewed previous research and carried out semi-structured interviews with sector professionals, including the operator's legal officer in charge of SG compliance and senior creative professionals in health and public policy communication. The researchers also conducted two focus groups, with 14 adults in total. They recruited participants for the focus groups through JuegosONCE and the Asociación Madrileña para el Estudio y Tratamiento de la Adicción al Juego

What you need to know

This study evaluated three versions of safer gambling (SG) emails, including (1) original emails sent to customers by JuegosONCE (a gambling operator in Spain), (2) an expert-informed human redesign, and (3) an AI-generated redesign. The researchers compared the three versions in terms of cognitive and emotional outcomes. Adult participants were recruited from JuegosONCE's active customer base by email invitation and completed an online experiment with a survey. Participants were assigned to one of three conditions: (1) original emails (95 participants); (2) human-designed versions (123 participants); or (3) AI-generated versions (123 participants).

There were only small differences between the AI-generated and human-designed versions in terms of perceived quality (format, content, appropriateness, and appeal), and both versions outperformed the original emails. Both versions also received more positive emotional reaction. But psychological reactance was slightly higher for the AI-generated versions. Both versions did not have an impact on beliefs about winning probability or gambler's fallacy. The AI-generated versions slightly increased the illusion of control.

(AMETAC). The focus groups focused on participants' views on SG, familiarity with SG tools, and reactions to the original and redesigned SG emails.

Insights from the focus groups were used to refine the human-designed versions and to inform the

constraints used in the AI prompt. The AI-generated versions of the emails were developed using a large language model (ChatGPT).

The researchers tested the original, human-designed, and AI-generated emails through an online experiment using a questionnaire. Adult participants were recruited from JuegosONCE's active customer base by email invitation. They were assigned to one of three conditions: (1) original emails (95 participants); (2) human-designed versions of the emails (123 participants); and (3) AI-generated versions (123 participants). After viewing the emails, participants rated their perceived quality (format, content, appropriateness, and appeal) and affective response (emotional valence and psychological reactance). They also completed measures of beliefs of winning probability, gambler's fallacy, and illusion of control.

What the researchers found

Human-designed versions: A total of 17 studies were reviewed to inform the human-designed versions. The researchers found that positive framing (e.g., focusing on the benefits of following rules) tends to be received better than negative framing (e.g., highlighting harms and dangers). It is helpful to include an emotional component in messages while taking care to not provoke rejection. Messages should suggest concrete actions and prompt self-assessment to encourage reflection.

The interviews with experts highlighted the importance of a single call to action per message. Feedback from the interviews and focus groups was used to refine the human-designed versions.

AI-generated versions: The AI-generated versions were produced using ChatGPT and screened using an audit checklist.

Comparison: The researchers examined differences in responses to the original, human-designed, and AI-generated emails. They found only small differences between the AI-generated and human-designed versions in terms of perceived quality. Both versions outperformed the original emails.

Both versions resulted in improved emotional valence (i.e., more positive reaction) compared to the

original emails. Emotional valence was similar for the AI-generated and human-designed versions. But psychological reactance was slightly higher for the AI-generated versions, followed by the human-designed versions, and then the original emails. Both versions did not have an impact on beliefs on winning probability or gambler's fallacy. But the AI-generated versions slightly increased the illusion of control compared to the human-designed versions.

How you can use this research

This research suggests a hybrid (human-in-the-loop) approach to AI-assisted drafting in SG communications. Further, the emails in this study can be used as templates for further pilot testing.

About the researchers

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