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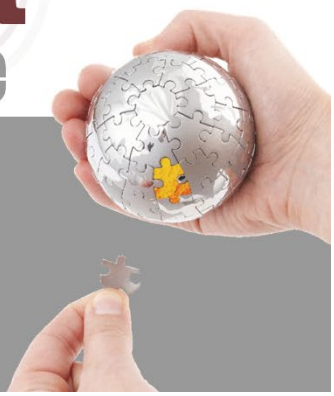

Demographic and clinical factors that predict response to drug treatment and placebo in gambling disorder

What this research is about

No drug treatment has been approved for gambling disorder. This may be because of the large placebo effect seen in some clinical trials. Placebo is a fake drug with no active ingredients. The placebo effect occurs when patients experience improvements in their symptoms despite the use of a non-active drug. Research with psychosocial interventions has found several factors that predict better treatment response, such as male gender and lower level of depression. There is little research on what factors predict response to a drug treatment or placebo. In this study, the researchers pooled data from six clinical trials that tested different kind of drugs against placebo. The aim was to explore demographic and clinical factors that predicted response to the drug treatment versus placebo.

What the researchers did

The researchers used data from six clinical trials carried out by the same research team. Participants were adults that met the DSM-5 criteria for gambling disorder. Three studies were double-blind trials in which both the researchers and the participants did not know if the participants received the drug or the placebo. Three studies were open-label trials in which the participants were told whether they received the drug or the placebo. The six clinical trials included:

- A 16-week double-blind trial with 76 participants comparing paroxetine to placebo.
- An 18-week double-blind trial with 77 participants comparing naltrexone to placebo.
- A 12-week double-blind trial with 28 participants comparing N-acetylcysteine to placebo. All participants had nicotine dependence as well.
- A 12-week open-label trial with 13 participants comparing escitalopram to placebo.
- A 14-week open-label trial with 36 participants comparing N-acetylcysteine and placebo.
- A 10-week open-label trial with 29 participants comparing memantine and placebo.

All participants completed the Gambling Symptom Assessment Scale (G-SAS) at baseline before the drug/placebo treatment and after the treatment. Thus, change in gambling symptoms as assessed by the G-SAS was used to indicate treatment response. The researchers first excluded participants with a baseline G-SAS score of less than 20 (suggesting 'mild' gambling disorder). They tested a number of factors as predictors of treatment response. Demographic factors included age, gender, and ethnicity (Caucasian

What you need to know

The placebo effect occurs when patients experience improvements in their symptoms despite the use of a non-active drug. This study explored factors that predicted response to a drug treatment and placebo. The researchers pooled data from six clinical trials that tested different kind of drugs against placebo. In participants who received the drug treatment, those who entered the trial with greater gambling symptoms at baseline and those who completed more weeks of the trial had better treatment response. In participants who received the placebo, stronger placebo effect was seen among those with greater depressive symptoms at baseline and those who were non-Caucasian. Greater anxiety symptoms at baseline reduced the placebo effect.

and non-Caucasian). Clinical factors included number of weeks completed in the trial, baseline gambling symptoms, baseline depressive and anxiety symptoms, co-occurring mental health disorders, and preference for strategic or non-strategic games.

The researchers ran a model testing these factors for all participants as a whole group. They then tested the model separately for those receiving the drug treatment and those receiving the placebo. To ensure their findings were robust, the researchers re-ran their model including those with a baseline G-SAS score of less than 20. They also re-ran the model with decrease in G-SAS score as a percentage as the treatment response.

What the researchers found

As a whole group, participants who entered the trial with greater baseline gambling symptoms and depressive symptoms had more positive response (i.e., greater decrease in G-SAS score). Those who completed more weeks of the trial also had more positive response. However, participants with greater baseline anxiety symptoms experienced less benefit.

In participants who received the drug treatment, greater baseline gambling symptoms and completing more weeks of the trial were associated with more positive treatment response. In participants who received the placebo, greater baseline depressive symptoms and non-Caucasian ethnicity were associated with a stronger placebo effect. In contrast, greater anxiety symptoms at baseline reduced the placebo effect.

The results were similar when using percentage decrease in G-SAS as the treatment response. There were also few differences when including participants with baseline G-SAS scores of less than 20. One difference was that greater anxiety symptoms at baseline emerged as a factor that predicted weaker drug treatment response. Also, greater baseline gambling symptoms was an additional factor that predicted a stronger placebo effect. However, greater baseline anxiety symptoms no longer predicted a stronger placebo effect.

How you can use this research

This study can inform researchers and clinicians. For example, future research can examine if predictors of treatment response differ for different kind of drugs.

About the researchers

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Citation

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About Gambling Research Exchange (GREO)

Greo has partnered with the Knowledge Mobilization Unit at York University to produce Research Snapshots. Greo is an independent knowledge translation and exchange organization with almost two decades of international experience in generating, synthesizing, and mobilizing research into action across the health and wellbeing sectors. Greo helps organizations improve their strategies, policies, and practices by harnessing the power of evidence and stakeholder insight.

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