

knowledge snapshot



Decision-making problems are common in people addicted to alcohol and gambling

What this article is about

Decision-making impairments are poor choices a person makes because they have a mental disorder. There are many different reasons why a person may have decision-making impairments. Problems in a person's brain development, using drugs, inflammation, infection, and negative habits can create changes in different parts of the brain that lead to decision-making impairments.

Decision-making impairments are common in many different mental disorders. They are found particularly in people who are addicted to substances such as alcohol and drugs. For example, people who drink a lot of alcohol may make impulsive decisions without thinking about the consequences. They may feel unable to stop drinking and drink more even though they know it's bad for them.

Decision-making impairments are also common in people who have behavioural addictions such as gambling disorder (GD). GD is repetitive gambling behaviour that leads to negative consequences. For example, people who gamble a lot may have false beliefs that they can control the outcome of a gambling game. There are other mental disorders that could be classified as behavioural addictions. These disorders include kleptomania or compulsive stealing, compulsive buying, and compulsive sexual behaviour disorder.

In this article, the authors review research studies to determine if all people with substance and behavioural addictions have decision-making impairments. They also explored if prescription drugs used to manage these addictions act on parts of the brain involved in making decisions.

Why is this article important?

Decision-making impairments may help explain why people behave the way they do when they have mental disorders. In this article, the authors reviewed research studies and identified whether people with addictions commonly have decision-making impairments. They also determined which drugs are helpful in managing addiction symptoms. The authors also provide ideas for future research.

What was done?

The researchers searched for data papers and meta-analyses in a database called PubMed. They reviewed studies that investigated the differences in brain function between people with and without substance and behavioural addictions. They also reviewed studies that investigated the effectiveness of certain drugs in managing substance and behavioural addictions. The researchers focused on substance addictions called alcohol and opiate use disorders.

What you need to know

Studies measured decision making impairments in different ways. This made it difficult to compare their results. Studies showed that people who are addicted to opiates and alcohol have severe decision-making impairments. People with addictions had higher amounts of delay discounting than people without addictions. Delay discounting is when a person prefers an immediate, small reward instead of waiting to get a larger reward. Since delay discounting is part of decision making, people with addictions may have problems making good decisions.

Studies showed that people with gambling disorder (GD) make worse decisions than people without GD. They also show more delay discounting and have weak reasoning skills. There is a lack of evidence about whether people who have other behavioural addictions such as kleptomania, compulsive shopping, and compulsive sexual behaviour disorder have decision-making impairments.

Research suggests that the drugs called acamprosate and naltrexone help people stay away from alcohol. A drug called naltrexone may relieve people's GD symptoms. N-acetylcysteine (NAC) may also help reduce GD symptoms in combination with therapy. These types of drugs may act on parts of the brain involved in decision making. Few studies investigate which drugs are effective at managing behavioural addictions (other than GD) and if they affect parts of the brain involved in decision-making. New research suggests that people with severe addictions may not respond as well to drugs as those who have less severe addictions. Drugs may be more effective in managing certain addictions over others. Drugs that increase the amount of dopamine in the brain may be effective in reducing decision-making impairments in people with addictions. Dopamine is a chemical that's involved in transmitting signals in the brain.

Who is it intended for?

Researchers can use this article to do more studies that investigate if people who have behavioural addictions such as kleptomania and compulsive shopping, also have decision-making impairments. More research is also needed to investigate whether prescription drugs used to treat addictions act on parts of the brain that are involved in making decisions.

About the researchers

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