Brain volume differences between pathological gamblers and healthy volunteers

What this research is about

Magnetic resonance imaging (MRI) is a diagnostic tool used to produce images of the body. Researchers use MRI to detect abnormalities in the brains of people with addictive disorders such as pathological gambling. A person with pathological gambling continues to gamble despite the negative consequences, including the loss of money and social relationships.

Researchers have found that people with addictions have abnormalities in a brain region involved in processing information about rewards. This region regulates motivations and feelings of pleasure. This research aimed to build upon previous research by exploring brain abnormalities involved in pathological gambling. The researchers compared brain volumes of male pathological gamblers who had never received treatment and healthy volunteers.

What the researcher did

The researchers recruited 30 pathological gamblers who were admitted to a gambling outpatient center but had not received any treatment. They also recruited 30 healthy volunteers who did not have gambling problems from a recreational club near the outpatient center. All participants were male and did not have other mental disorders or addictions except for smoking. The healthy volunteers were matched to the pathological gamblers in terms of age and educational level.

What the researcher found

The researchers did not find differences in the total brain volume of pathological gamblers and healthy volunteers. But pathological gamblers had some differences in brain volume in areas of the brain involved in reward processing. These brain abnormalities might make people more vulnerable to the development of pathological gambling. But they could also be the consequences of gambling habits. More research is needed to further examine the link between these brain volume differences and pathological gambling.

What you need to know

The total brain volume of pathological gamblers did not differ from healthy volunteers who did not have gambling problems. But pathological gamblers had some differences in brain volume in areas of the brain involved in reward processing. These brain abnormalities might make people more vulnerable to the development of pathological gambling. But they could also be the consequences of gambling habits. More research is needed to further examine the link between these brain volume differences and pathological gambling.
How you can use this research

The results suggest that pathological gamblers may have altered brain functions in regard to reward and pleasure. Researchers can use this study to further examine the link between abnormalities in brain volume and pathological gambling. Researchers need to conduct more longitudinal studies to explore other brain regions in pathological and at-risk gamblers, as well as healthy controls. Future studies should also focus on how differences in brain structures influence thought patterns and behaviours related to gambling.

About the Researcher

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