

Compulsive gamblers always down on their luck

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Gambling addicts don't learn from their mistakes, according to a study published today in the open access journal *Clinical Practice and Epidemiology in Mental Health*. The problem could be explained by a kind of mental rigidity that leads to harmful compulsive behaviour in sufferers.

Donatella Marazziti of the University of Pisa and colleagues explain that pathological gambling revolves around the uncontrolled impulse to gamble, with serious consequences for the individual and their family. Its cause, however, is unclear. Scientists have suggested that environmental factors and a genetic predisposition play a part, affecting chemical signals in the brain.

In order to home in on the underlying cause, the Pisa team evaluated a group of 15 male and 5 female pathological gamblers. They carried out various neuropsychological tests in order to explore which areas of the brain are related to the disorder. The tests included the Wisconsin Card Sorting Test (WCST), the Wechsler Memory Scale revised (WMS-R) and the Verbal Associative Fluency Test (FAS). Each of which can assess particular problem-solving abilities. They compared the results with those of healthy individuals.

They found that the pathological gamblers scored well in all tests except the card sorting. In this test, the patients had great difficulty in finding different ways to solve each problem in the test as they worked through them, whereas the healthy individuals got better with practice.

"Our findings show that in spite of normal intellectual, linguistic and visual-spatial abilities, the pathological gamblers could not learn from their mistakes to look for alternative solutions in the WCST," say the researchers. This suggests that there are differences in the part of the brain involved in this kind of problem solving, the prefrontal region. "These differences might provoke a sort of cognitive 'rigidity' that predisposes a person to the development of impulsive or compulsive behaviour, leading to pathological gambling."

Source: BioMed Central

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