Teenagers programmed to take risks

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Risk-taking peaks in adolescence, according to scientists at UCL (University College London).

In research published today in the journal *Cognitive Development*, children, adolescents and adults aged 9-35 years chose between risky and safe options in a computer gambling game. Scientists found that the teenagers took the most risks compared with the other groups, with the most risky behaviour seen in 14-year olds.

The results suggest that teenagers are good at weighing up the pros and cons of their decisions (unlike children) but take risks because they enjoy the thrill of a risky situation more than other age groups - especially when they have a 'lucky escape'.

"The reason that teenagers take risks is not a problem with foreseeing the consequences. It was more because they chose to take those risks," said Dr Stephanie Burnett from the UCL Institute of Cognitive Neuroscience, and the lead author.

"This is the first evidence from a lab-based study that adolescents are risk-takers. We are one step forward in determining why teenagers engage in extremely risky behaviours such as drug use and unsafe sex," she added.

The study involved 86 boys and men who were asked to play computer games, during which they made decisions in order to win points. After each game scientists measured the participants' emotional response by

recording how satisfied or dissatisfied they were with the outcome.

They found that the onset of the teenage years marked an increase in how much enjoyment resulted from winning in a 'lucky escape' situation. This could help explain why teenagers are more likely to take bigger risks.

"The onset of adolescence marks an explosion in 'risky' activities - from dangerous driving, unsafe sex and experimentation with alcohol, to poor dietary habits and physical inactivity. This contributes to the so-called 'health paradox' of adolescence, whereby a peak in lifetime physical health is paradoxically accompanied by high mortality and morbidity.

"Understanding why adolescents take such risks is important for public health interventions and for families," said Dr Sarah-Jayne Blakemore, also from the UCL Institute for Cognitive Neuroscience, and co-author of the research.

More information: 'Adolescents' heightened risk-seeking in a probabilistic gambling task' is published online in the journal *Cognitive Development* on 25 March 2010.

Provided by University College London