

Resisting peer pressure: new findings shed light on adolescent decision-making

July 25 2007

The capacity to resist peer pressure in early adolescence may depend on the strength of connections between certain areas of the brain, according to a study carried out by University of Nottingham researchers.

New findings suggest that enhanced connections across brain regions involved in decision-making may underlie an individual's ability to resist the influence of peers.

The study, published in the July 25 issue of *The Journal of Neuroscience*, suggests that brain regions which regulate different aspects of behaviour are more interconnected in children with high resistance to peer influence.

Professor Tomas Paus and colleagues at The University of Nottingham used functional neuroimaging to scan adolescents while they watched video clips of neutral or angry hand and face movements. Previous research has shown that anger is the most easily recognised emotion.

Professor Paus and his team observed 35 ten-year-olds with high and low resistance to peer influence, measured by a questionnaire. The researchers then showed the children video clips of angry hand movements and angry faces and measured their brain activity.

They found that the brains of all children showed activity in regions important for planning and extracting information about social cues from movement, but the connectivity within these regions was stronger

in children who were marked as less vulnerable to peer influence.

Those children were also found to have more activity in the prefrontal cortex, an area important for decision-making and inhibition of unwanted behaviour.

Professor Paus said: “This is important if we are to understand how the adolescent brain attains the right balance between acknowledging the influences of others and maintaining one's independence.”

Future research will involve follow-ups with the same children to determine whether their resistance to peer influence is related to the brain changes observed in this study.

The work was supported by grants from the Santa Fe Institute Consortium and the Canadian Institutes of Health Research.

Source: University of Nottingham

Citation: Resisting peer pressure: new findings shed light on adolescent decision-making (2007, July 25) retrieved 30 April 2024 from <https://medicalxpress.com/news/2007-07-resisting-peer-pressure-adolescent-decision-making.html>

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