Violent teenage girls fail to spot anger or disgust in others' faces

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(PhysOrg.com) -- Girls appear to be "protected" from showing antisocial behaviour until their teenage years, new research from the University of Cambridge has found.

The study sheds new light on antisocial behaviour in girls compared with boys and suggests that rather than violence or antisocial behaviour simply reflecting bad choices, the brains of people with antisocial behaviour may work differently from those who behave normally.

Until now, little research has been done on antisocial behaviour (Conduct Disorder) in girls. According to Dr Graeme Fairchild of the University of Cambridge, one of the study's authors: "Almost nothing is known about the neuropsychology of severe antisocial behaviour in girls. Although less common in girls than boys, UK crime figures show that serious violence is increasing sharply in female adolescents."

The study, published online this month in Biological Psychiatry, compared a group of 25 girls, aged 14-18 years-old, with high levels of antisocial and/or violent behaviour with a group of 30 healthy controls.

"Most of our participants had major difficulties controlling their temper, lashing out and breaking things around their homes when they got angry, and had often been involved in serious fights. Several had convictions for violent offences and some had been to prison for assault," Dr Fairchild explains.

Dr Fairchild and colleagues measured the girls' ability to recognise the six primary facial expressions - anger, disgust, sadness, fear, surprise and happiness. They found that girls with antisocial behaviour made a large number of errors when asked to recognise anger and disgust, but had no problems recognising other facial expressions.

According to Dr Fairchild: "Our findings suggest that antisocial behaviour or violence may not simply reflect bad choices but that, at some level, the brains of individuals with antisocial behaviour may work differently. This might make it harder for them to read emotions in others - particularly to realise that someone is angry with them - and to learn from punishment."

The study also shows that although girls and boys with severe antisocial behaviour have the same problems recognising emotions, the girls - whose problems began when they were teenagers - more closely resembled boys whose antisocial behaviour began in childhood.

Boys with childhood-onset Conduct Disorder have difficulties recognising anger and disgust, but those with adolescence-onset Conduct Disorder do not.

"This suggests that there are interesting differences

in antisocial behaviour between girls and boys, with girls being protected from showing antisocial behaviour until their teenage years for reasons we don't yet understand," Dr Fairchild says.

The next phase of the research involves a brain scanning study. "As far as we know, this will be the first functional neuroimaging study ever carried out in girls with severe antisocial behaviour," Dr Fairchild says.

Around five percent of school-age children would meet criteria for Conduct Disorder, but it is approximately three to four times more common in boys than girls. A range of factors - ranging from physical abuse in childhood to being diagnosed with Attention-Deficit/Hyperactivity Disorder - make it more likely that someone will develop Conduct Disorder.

It is difficult to treat using psychological therapy, and there are no effective drug treatments, but a new form of therapy called Multi-Systemic Therapy is currently being trialled in the UK and shows promise in treating antisocial behaviour.

Provided by University of Cambridge