

Callous-unemotional traits and



Jennifer Allen and Alice Jones look at a core element of psychopathic behaviour and its role in autism, and antisocial and prosocial behaviour generally

Some children display callous-unemotional (CU) traits such as low levels of emotionality, lacking empathy and not feeling guilty when they misbehave or hurt others' feelings. The importance of CU traits lies in their strong association with antisocial behaviour. For example, there is now a great deal of evidence that young people with antisocial behaviour are at greater risk of poor outcomes if they possess high levels of CU traits. Youths who behave antisocially and are also high in CU traits show a greater variety, severity and persistence of antisocial behaviour over time than antisocial youths who are low in CU traits. So, even though young people with CU traits are few in number (around 1% of antisocial youth), they appear to be doing most of the 'damage' from a societal perspective.

CU traits are viewed as the childhood version of psychopathic traits in adults. Similar to adults who are high in psychopathic traits, adolescents high in CU traits lack empathy for others and show deficits in recognising and responding to others' distress, making it more likely that these individuals will commit crimes and have difficulty forming relationships.

CU traits and empathy

Lack of empathy is considered to be a hallmark feature of CU traits. However, empathy itself appears to consist of two key strands: cognitive and affective empathy, which are potentially separate and distinct from one another.

'Cognitive empathy' refers to the ability to accurately recognise emotions (also termed 'emotion recognition') and to understand why people feel the way that they do (also termed 'emotion understanding' or 'cognitive perspective-taking'). This relates to the concept of 'Theory of Mind', which is defined as the ability to differentiate between our own mental states and those of others, including beliefs, intentions, emotions and knowledge.

In contrast, the term 'affective empathy' is applied when referring to arousal in response to others' emotions or the ability to be able to resonate with the emotions expressed by others.

When does empathy emerge?

Clearly, both cognitive and affective processes are important for developing a sense of concern for others. However, it appears that components of affective empathy emerge before the cognitive components of empathy. For example, infants show distress when exposed to other crying infants (termed 'emotional contagion'), and provide comfort when they see others in distress, without receiving any external prompts or rewards for doing so. The ability to recognise and respond to

others' distress in an empathic manner also occurs before children have developed a sense of self, which is needed for cognitive empathy.

The fact that affective empathy and helping behaviour appears so early in infants suggests that human morality has an evolutionary basis, providing an in-built set of abilities and motives for helping and cooperating with others as a means for survival.

Cognitive empathy appears a bit later, about the age of 2. At this time, children understand different mental states and can attribute them to others. From the age of 4, children understand that others' perception and feelings about events may differ from their own. The ability to accurately recognise others' emotions also changes with development — the ability to recognise and name basic emotions in pictures (happy, sad, angry, afraid) appears by around 3 or 4 years of age, with emotion recognition accuracy for basic and more complex emotions (e.g. surprise, disgust) improving into adolescence.

Knowing the words but not the music

Johns and Quay (1962) suggested that adults with psychopathic traits may 'know the words and not the music', i.e. understand why others feel the way that they do (cognitive empathy), but simply do not care about other's distress (affective empathy). This same 'emotional disconnect' is seen in children with CU traits.

Signposts



antisocial behaviour, psychopathy, prosocial behaviour, helping behaviour, autism, Theory of Mind

CU TRAITS ARE VIEWED AS THE CHILDHOOD VERSION OF PSYCHOPATHIC TRAITS IN ADULTS

Children with autism and children with CU traits may show poor emotion recognition and deficits in eye gaze



There is strong evidence for deficits in affective empathy in children with CU traits. This finding occurs whether empathy is assessed using child or parent questionnaires, or during laboratory tasks where children’s

arousal to seeing others’ distress was indexed using physiological measures (e.g. heart rate).

This deficit in emotional response appears to have a biological basis. When adolescents high in CU traits were shown photos of people displaying fearful facial expressions, researchers found reduced activity in the amygdala, a brain region strongly associated with the processing of emotions such as fear and aggression (Jones et al. 2009).

In contrast, findings for cognitive empathy are less clear. There is now fairly consistent evidence that children with CU traits have difficulty in accurately recognising others’ emotions, particularly sadness and fear. However, some studies have found that CU traits are associated with better performance on tasks assessing cognitive empathy, including perspective-taking and

Theory of Mind, while others have found no relationship. Therefore, the relationship between CU traits and cognitive empathy is likely to be more complex than originally thought, potentially differing across different components of cognitive empathy and changing as children develop.

Autism and CU traits

Children with autism and children with CU traits behave in similar ways — for example, showing reduced empathy, lack of affiliative behaviour (e.g. negative responses to parental affection) and increased aggressive and anti-social behaviour. Deficits in eye gaze and emotion recognition are also seen in both groups. This has led to concerns that children with autism and/or children with CU traits may receive an incorrect diagnosis, and therefore potentially also receive treatment that does not address their needs.

The distinction between cognitive and affective empathy can help explain the different reasons underlying the insensitive behaviour of these two groups. Put simply,

Cognitive empathy — the ability to understand different emotions — develops around the age of 2



CHILDREN WITH AUTISM AND CHILDREN WITH CU TRAITS BEHAVE IN SIMILAR WAYS

children with autism show impairments in the ability to identify others' thoughts, recognise others' facial emotion expressions, and in their performance on Theory of Mind tasks. However, in contrast to children with CU traits, children with autism have a normal, healthy ability to respond affectively to others' feelings.

The difference between these two groups therefore appears to lie in 'feeling' versus 'knowing'. Children with autism have a normal emotional response to others' distress but may display a lack of concern due to their difficulties in understanding others' mental states, while children with CU traits understand how and why others feel the way

FOR THE VAST MAJORITY OF CHILDREN WITH AUTISM, ANY RESEMBLANCE TO CU TRAITS IS SUPERFICIAL IN NATURE

that they do, but lack concern for others' feelings.

As a result, for the vast majority of children with autism, any resemblance to CU traits is superficial in nature. However, some research has shown that CU traits and autism do co-occur for a small group of children with antisocial behaviour, and this subgroup appear to show especially severe antisocial behaviour (e.g. cruelty to animals).

Conclusion

Research on children with CU traits has helped our understanding of the different cognitive and affective components of empathy, how they relate to one another and change with development. This research has also increased our understanding of how children with CU traits and children with autism may behave in a similar manner, but for different reasons. More research is needed to understand how best to help children with overlapping difficulties.

References



- Johns, J. H. and Quay, H. C. (1962) 'The effect of social reward on verbal conditioning in psychopathic and neurotic military offenders', *Journal of Consulting Psychology*, Vol. 26, pp. 217–20.
- Jones, A. P., Laurens, K. R., Herba, C. M., Barker, G. J. and Viding, E. (2009) 'Amygdala hypoactivity to fearful faces in boys with conduct problems and callous-unemotional traits', *American Journal of Psychiatry*, Vol. 166, No. 1, pp. 95–102.

Jennifer Allen is a lecturer and clinical psychologist at the department of psychology and human development, UCL Institute for Education.

Alice Jones is a senior lecturer at the department of psychology, Goldsmiths, University of London.

Highly superior autobiographical memory

Bob Petrella can remember every single detail from his past. Name any date and he can tell you what he had for breakfast, what the weather was like, who else was there. He is one of a rare group of people with highly superior autobiographical memory (HSAM). It's a phenomenon that has only recently been studied by psychologists. The first case study of the condition was conducted by the memory researcher James McGaugh and published in 2006 about a woman, referred to as AJ (real name Jill Price). She remembers everything since she was 14 years old.

McGaugh and his team have researched the phenomenon. In a recent study (LePort et al. 2016) they compared people with HSAM to those without. They found, for example, that when both groups of people were given unexpected recall tasks the two groups had equal recall when asked to remember events



from a week ago but going further back people with HSAM had far superior recall. This suggests that the ability is not related to initial storage but rather, to a superior ability to retain memories.

It has been suggested that HSAM may be the effect of an excessive amount of repetition where individuals almost obsessively revisit past events and continually rehearse them. In fact, one study (LePort et al. 2012) looked

References



- LePort, A. K. R., et al. (2016) 'Highly superior autobiographical memory: quality and quantity of retention over time', *Frontiers in Psychology*. Available at: www.tinyurl.com/y7n3w2co.
- LePort, A. K. R., et al. (2012) 'Behavioural and neuroanatomical investigation of Highly Superior Autobiographical Memory (HSAM)', *Neurobiology of Learning and Memory*, Vol. 98, No. 1, pp. 78–92.

at the brains of people with HSAM and found that some of the areas that were abnormally enlarged included the caudate nucleus and putamen. These regions of the brain are also enlarged in people who display other obsessive symptoms such as repeated handwashing or checking a door is locked.

Such insights may have a useful application in treating psychological disorders such as depression, where faulty memories may exacerbate a person's negative world view. The research on HSAM shows that long-term memories can be improved through keeping diaries and constantly rehearsing events from the past so they are more accurately remembered.

Cara Flanagan