

## Editorial

Why should we care about measuring  
callous–unemotional traits in children?†

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**Summary**

Callous–unemotional traits consist of lack of empathy, guilt and shallow affect. A growing body of research suggests that the presence of these traits are of clinical significance, even if they occur in the absence of concurrent antisocial behaviour.

**Declaration of interest**

None.

Essi Viding (pictured) is Professor of Developmental Psychopathology at University College London. Her research focuses on genetic, environmental and neurocognitive risk factors for persistent antisocial behaviour. Eamon McCrory is a Senior Lecturer at University College London and a Consultant Clinical Psychologist. His current research uses brain imaging to investigate the impact of childhood maltreatment.

### Callous–unemotional traits and antisocial behaviour

Children with conduct disorder and callous–unemotional traits present with persistent and violent patterns of antisocial behaviour.<sup>1</sup> Callous–unemotional traits, such as limited empathy, guilt and shallow affect, are currently being considered as a subtyping index for conduct disorder in DSM-5,<sup>2</sup> and may have independent diagnostic value, even in the absence of conduct disorder.<sup>3–6</sup>

Much attention has been paid to antisocial behaviour combined with the core affective personality features of psychopathy (callous–unemotional traits).<sup>1,7</sup> It is natural that children and adults with a combination of antisocial behaviour and callous–unemotional traits should attract research, clinical and popular interest. These individuals commit more than their fair share of antisocial acts and appear to respond differently to typical socialisation efforts and at least some clinical interventions.<sup>1,7</sup> However, it is worth recalling that Cleckley's original conceptualisation of psychopathy highlighted that the core psychopathy traits (comparable with callous–unemotional traits) can be present in individuals who do not show antisocial behaviour.<sup>8</sup> Although Cleckley's work on psychopathy is of seminal importance, we need to keep in mind that he described clinical case studies and as such could not address questions about the prevalence of core psychopathic features in the absence of antisocial behaviour.

We now know that antisocial behaviour and callous–unemotional traits have an asymmetrical relationship for both children and adults: high levels of antisocial behaviour often occur in the absence of callous–unemotional traits, whereas high levels of callous–unemotional traits often occur in the presence of antisocial behaviour (see for example Hart & Hare,<sup>7</sup> Fontaine *et al*<sup>9</sup>). However, several longitudinal studies now suggest that callous–unemotional traits can also occur in the absence of clinical levels of antisocial behaviour (for example Barker *et al*,<sup>3</sup> Frick

*et al*,<sup>4</sup> Rowe *et al*,<sup>5</sup> Fontaine *et al*<sup>9</sup>). It is noteworthy that in these large community samples, 'callous–unemotional traits only' was associated with subclinical levels of antisocial behaviour or later developing antisocial behaviour. In addition, and perhaps more interestingly, individuals with 'callous–unemotional traits only' commonly showed elevated levels of other types of impairment including poor peer relationships, low prosociality and increased hyperactivity. Callous–unemotional traits may therefore have the potential to serve as a useful clinical indicator for psychiatric vulnerability and psychosocial maladjustment, in addition to their potential utility in subtyping children with conduct disorder.

### Genetic and environmental risk factors

High levels of callous–unemotional traits appear strongly heritable, regardless of whether accompanied by antisocial behaviour or not.<sup>10</sup> Genetically informative studies suggest that there is considerable overlap in the risk genes for callous–unemotional traits and antisocial behaviour and that these 'common genes' explain much of the phenotypic relationship between the two.<sup>11</sup> But there are also unique genetic and environmental risk factors for callous–unemotional traits and antisocial behaviour<sup>11</sup> – again in line with the notion that callous–unemotional traits can occur independently of antisocial behaviour.

A particularly interesting study on 'callous–unemotional traits only' is reported in the current issue of this journal.<sup>6</sup> Kumsta and colleagues studied callous–unemotional traits in a sample of adoptees who had experienced extreme early deprivation, with the aim of assessing whether such traits necessarily co-occur with antisocial behaviour. This study offers a valuable addition to previously published findings on longitudinal community samples. Most critically, it demonstrates that in a group of children who have experienced early deprivation, high levels of callous–unemotional traits typically occur in the absence of antisocial behaviour. The authors propose a number of plausible explanations for this finding. For example, it is possible that the developmental trajectory of children who have experienced early deprivation differs from the trajectory that typically characterises children with high levels of callous–unemotional traits; this may create a callous–unemotional traits phenotype, but without the common overlap with antisocial behaviour. It is also possible that the callous–unemotional traits in these children have different underlying causes related to early institutional deprivation, rather than primarily to genetic vulnerability as

†See pp. 197–201, this issue.

previously reported for community samples. Some of the adoptees in this study could have also had the misfortune of being genetic vulnerable, as well as experiencing extreme early deprivation. Finally, it is also possible that the normative family environment experienced by the adoptees in their adoptive families may have served to reduce the expression of callous–unemotional traits as overt antisocial behaviour. Adoptive families typically have low levels of the environmental risk factors that are associated with antisocial behaviour in the community.

### Avenues for future research

The existing handful of studies that have investigated callous–unemotional traits in the absence of antisocial behaviour,<sup>3–5,9</sup> including the most recent one reported in this issue,<sup>6</sup> suggest a number of interesting lines of enquiry. What are the long-term consequences of callous–unemotional traits in terms of psychiatric and social outcomes? Tentative evidence suggests that callous–unemotional traits index risk for later psychopathology and poorer social functioning, but more thorough follow-up studies with a range of diagnostic measures are required. The study of children with ‘callous–unemotional traits only’ may also provide clues to those factors that are protective against the development of antisocial behaviour, such as competent parenting or resource-rich environments. This issue could be explored in the context of treatment studies.

It would also be of interest to investigate whether those with ‘callous–unemotional traits only’ share neurocognitive characteristics with individuals who have both antisocial behaviour and callous–unemotional traits. One existing study suggests that callous–unemotional traits are associated with a ‘reward dominant’ response style on an experimental task, regardless of whether or not these traits are accompanied by antisocial behaviour.<sup>4</sup> However, additional studies with comprehensive experimental and imaging batteries are clearly needed.

What the existing evidence base on ‘callous–unemotional traits only’ does suggest, is that callous–unemotional traits may be of clinical significance, even when they occur in the absence of diagnostic levels of antisocial behaviour.

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First received 16 Aug 2011, final revision 5 Jan 2012, accepted 12 Jan 2012

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