

Emotions & Antisocial Behaviour

Brain/Neural Basis

Amygdala: (Blair & Viding, 2008) In some ways this is the obvious place to start; mediates conditioned emotional responses and perception of emotional expressions. Patients with amygdala damage have poor emotional recognition, as do adults with AB/CU+.

Amygdala Activation: Jones, Viding et al. (2009) Boys with conduct problems and AB/CU+ show lower amygdala activation to faces showing fear and disgust.

Executive Function and the Vento-Medial Prefrontal Cortex: Blair et al. (2008) has a critical role in processing reinforcement expectations. Participants with AB/CU+ traits perform task similar to wisconsin cst (where rule changes). These children showed abnormal activity when punished for reversal errors. These impairments may predispose children to impaired decision making (i.e. increased frustration-aggression).

Currently, no studies have focused on children with AB/CU-. They probably have higher amygdala activation but reduced activation in anterior cingulate (emotion regulation).

Negative Valence: AB/CU+ (Blair et al 2006) This study suggests that AB/CU+ activate poorly to negatively valenced stimuli, suggesting they are insensitive to emotional cues. In **classical condition** tasks, they show poor modulation of behaviour in response to punishments.

Others Emotion: Blair & Viding (2008) AB/CU+ Show problems in processing fear and sadness in others in children and adults, both with visual and vocal stimuli.

Behaviour

Loeber et al. (2002) suggest that CU traits are one of the best predictors of later, persistent AB.

Bullying: Viding, Petrides et al. (2009) suggest that CU traits predict direct bullying (independent of conduct problems). Combining them with conduct problems are a strong predictor of **bullying behaviour**.

AB/CU+ and AB/CU- can be distinguished at the behavioural level: This evidence suggests that AB/CU+ are perhaps less mindful of others distress, whereas AB/CU- are perhaps bad at regulating their emotion.

Cognition

AB/CU-: Viding & Frith (2006) showed negative valence as overreactive in people with AB/CU-. They are hypersensitive to anger cues; this is known as the **hostile attribution bias**. This over-reactivity is a problem because it is a defence reaction which may be inappropriate.

Emotions are important social pragmatic cues that can help us empathise and react appropriately socially (not responding to fear and sadness can lead to dire consequences).

Twin Data (establishing a causal, genetic basis)

Twin Method: DZ twins are expected to have half the behaviour concordance of MZ twins (due to DZ only sharing 50% of polymorphic genes). If they don't, then this is called **shared-environmental influences**. MZ twins provide the genetic basis. Non-shared is the amount of behavioural data that does not concord (part of this is measurement error).

Rhee & Waldman, 2002 Suggest **moderate heritability** of AB, but equally large non-shared environmental influence.

Onset of AB: Viding, Blair et al. (2005) Those with high AB divided in to whether they were high on AB/CU+ or not. Data suggests that there was a very strong heritability for AB/CU+, but a high environmental influence for non AB/CU+.

Antisocial Behaviour "Behaviour that is likely to cause alarm, damage or distress to an unrelated member of society"

Antisocial behaviour is costly to society and a priority to prevent. Also can be used to predict conviction rates and physical/mental health.

Equifinality: The same behaviour can be driven by different vulnerabilities. Not all people that are classified under the same name end up there for the same reason.

Charting the emotional profile of different subtypes of individuals with antisocial behaviour may offer important clues for interventions.

'Emotional Profiling': Frick and Viding (2009) show that people with ABD can be differentiated on their 'emotional profile'. I.E the extent to which they exhibit **Callous-unemotional traits**.

Antisocial Behaviour Disorders There are different subtypes. Different causal mechanisms can be modelled: emotional reactivity can be an important differentiator between children and adults with antisocial ABD.

Adult Psychopathy (Adults with AB/CU+) Those with callous-unemotional traits are called psychopaths (unethical with children.) They lack empathy and remorse, are manipulative, start offending at a young age and have premeditated violence.

Children with AB/CU+ Frick & Viding (2009) have premeditated, severe AB. Parenting style is not related and they do not benefit from 'time out' anger management.

Antisocial Personality Disorder Patients are typically impulsive and non-psychopathic. They have **reactive violence** clearly triggered by environment and they often show remorse for their actions (Blair et al. 2006)

Children with AB/CU-: Frick & Viding (2009) Have impulsive AB. Parenting style heavily influences the level of antisocial behaviour. They learn from 'time-out' anger management.