

Autistic Spectrum Disorder and Psychopathy: The Double Hit

Professor Essi Viding

Developmental Risk and Resilience Unit

University College London

e.viding@ucl.ac.uk

ASD and Psychopathy

- Individuals with Autism Spectrum Disorders (ASD) can behave in ways that appears unempathetic
 - Have difficulties in social relationships
- Individuals with psychopathy (or at risk of developing psychopathy) lack empathy and do not affiliate in a typical way

- When a violent crime is committed by an individual with ASD or psychopathy, this often makes for 'juicy' headlines
 - Especially if crime unusual

Serial killer Dennis Nilsen brands himself a 'creative psychopath' with an 'overwhelming desire to kill' in never-before-seen letter

Recipe for a serial killer? Childhood abuse, autism and head injuries are more common in murderers, study claims

- Researchers studied journals, new stories and legal files for murder cases
- They found that 28 per cent of murderers were thought to have suffered from Autism Spectrum Disorder (ASD)
- 21% had suffered a 'definite or suspected' head injury in the past
- And of those killers with ASD and head injury, more than half had previously experienced psychosocial stress
- But researchers stressed that having ASD or a head injury alone were not linked to psychopathic tendencies
- Instead, small subgroup of these people suffering with a combination of problems would be more likely to kill
- Psychosocial stress includes exposure to sexual abuse during childhood

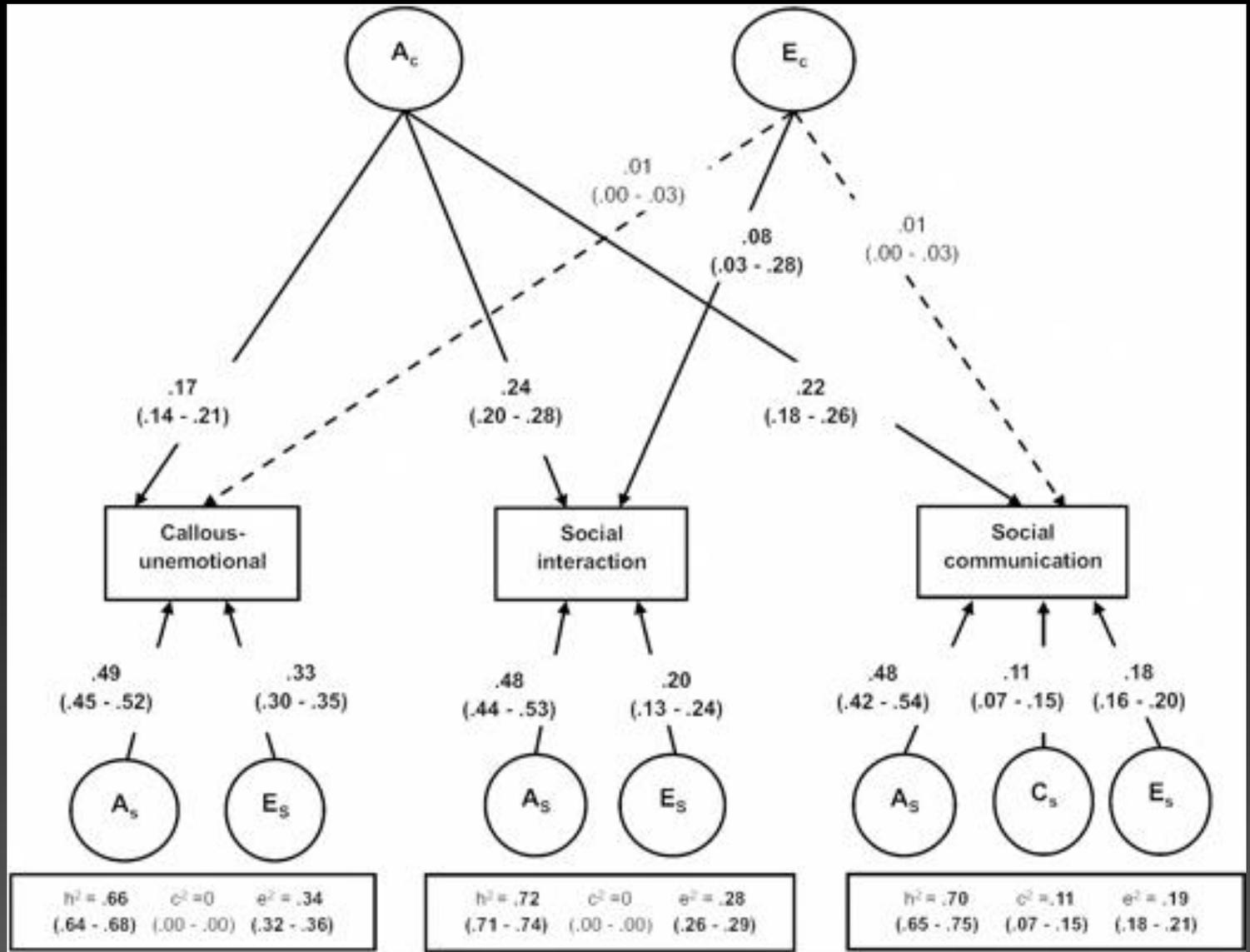
- But although both individuals with ASD and psychopathy may commit violent crimes that indicate lack of empathy this does not mean that:
 1. ASD and Psychopathy have the same aetiology or neurocognitive profile
 2. ASD and Psychopathic traits are equal risk factors for antisocial behaviour and violence

ASD and Psychopathy:

Aetiology and neurocognitive profile

- Both Psychopathic traits and ASD traits strongly heritable (Viding & McCrory, 2012; Tick et al., 2015)

Psychopathic and ASD features have largely independent aetiologies



Knowing vs. Feeling?

Different empathic processing difficulties implicated in individuals with ASD vs. with/at risk of developing psychopathy

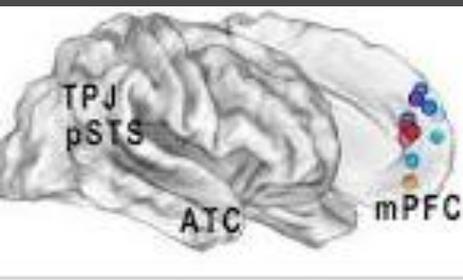
	ToM/Perspective taking (No affective content)	Empathic/affective resonance (No ToM demands)
ASD	X	✓
P	✓	X
Conduct /AB	✓	✓
Typical	✓	✓

- Individuals with or at risk of developing psychopathy are skilled manipulators,
 - Individuals with ASD not

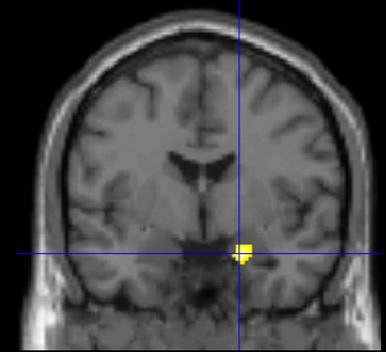
e.g. Jones et al., 2010; Schwenck et al., 2011; O’Nions et al., 2014; Blair, 2005; Dolan & Fullam, 2004; Bird & Viding, 2014

- fMRI findings:

- ASD associated with atypical engagement of mentalising network
 - e.g. medial prefrontal cortex, superior temporal sulcus, temporoparietal junction, anterior temporal cortex
- Those with (or at risk of developing) psychopathy show typical activation across this network when performing a mentalising task without an affective component



Frith & Frith, 2012; O’Nions et al., 2014; 2017



- fMRI findings:

- Psychopathy in adults, and risk of developing psychopathy in children, associated with atypical neural processing of distress and empathy
 - E.g. low amygdala activity to fear, low insula activity to empathy inducing stimuli



- But some studies seem to indicate that ASD associated with different neural activity to emotional and empathy related stimuli?

- These findings may be explained by contribution of co-occurring alexithymia

ASD and Psychopathy:

Associations with antisocial behaviour and violence

- Psychopathic traits predict future violence and antisocial behaviour
- ASD does not

Hare & Neumann, 2008; Lundstrom et al., 2014; Viding & McCrory, 2015

BRIEF REPORT

Brief Report: No Increase in Criminal Convictions in Hans Asperger's Original Cohort

**Kathrin Hippler · Essi Viding · Christian Klicpera ·
Francesca Happé**

- But some individuals do appear to have a 'double hit'

Psychological Medicine, Page 1 of 10. © 2006 Cambridge University Press
doi:10.1017/S0033291706008853 Printed in the United Kingdom

Autism spectrum disorder and psychopathy: shared cognitive underpinnings or double hit?

JOHN ROGERS¹, ESSI VIDING^{2*}, R. JAMES BLAIR³, UTA FRITH²
AND FRANCESCA HAPPÉ¹

¹ *Institute of Psychiatry, King's College London, UK;* ² *Department of Psychology, University College London, UK;* ³ *Mood and Anxiety Disorders Program, NIMH, Bethesda, MD, USA*

1. ASD and Psychopathy do not have the same aetiology or neurocognitive profile
 - Relevant for treatment provision - unempathic behaviour can be driven by not 'feeling' or not 'knowing'

2. ASD and Psychopathic traits are not equal risk factors for antisocial behaviour and violence

- But there are complex cases who present with both traits
- Both presentations represent unique challenges for treatment provision and institutional management
 - Also for prevention
- Co-morbidities complicate the picture

The mATCH study: People with autism detained in hospital:
defining the population, understanding aetiology and improving
care pathways

PI Peter Langdon

Co-Is Alexander, Duggan, Devapriam,
Viding, Staufenberg, Turner, Bhaumik, Shepstone

Post-doc: Magali-Fleur Barnoux

The face validity of an initial sub-typology of people with autism spectrum disorders detained in psychiatric hospitals

**Magali Barnoux¹, Regi Alexander², Sabyasachi Bhaumik³,
John Devapriam⁴, Connor Duggan⁵, Lee Shepstone²,
Ekkehart Staufenberg⁶, David Turner², Nichola Tyler⁷,
Essi Viding⁸ and Peter E Langdon⁹ **

Autism

2020, Vol. 24(7) 1–13

© The Author(s) 2020



Article reuse guidelines:

sagepub.com/journals-permissions

DOI: 10.1177/1362361320929457

journals.sagepub.com/home/aut



- Psychiatrists in forensic settings recognise sub-typologies
- Psychiatrists weight psychopathic features as risk indicators, not ASD
- Importance of tailoring risk management and care pathways
- Potential value of neurocognitive research in informing care

Acknowledgements

Research participants across different studies

The mATCH study: People with autism detained in hospital: defining the population, understanding aetiology and improving care pathways

- PI: Langdon; Co-Is: Alexander, Duggan, Devapriam, Viding, Staufenberg, Turner, Bhaumik, Shepstone; Post-doc: Magali-Fleur Barnoux (Funded by NIHR)

ESRC, MRC, British Academy, Royal Society

Developmental
Risk and Resilience Unit

