

NAME OF PRESENTING AUTHOR: Alicia Peel

EMAIL ADDRESS OF PRESENTING AUTHOR: alicia.peel@kcl.ac.uk

## Genetic and early environmental predictors of retrospective self-reports of childhood trauma

Alicia J. Peel<sup>1</sup>, Jessie R. Baldwin<sup>1,2</sup>, Gerome Breen<sup>1,3</sup>, Jonathan R.I. Coleman<sup>1,3</sup>, Jean-Baptiste Pingault<sup>1,2</sup>, Kirstin L. Purves<sup>1</sup>, Megan Skelton<sup>1,3</sup>, Abigail ter Kuile<sup>1,3</sup>, Andrea Danese<sup>1,4,5</sup> & Thalia C. Eley<sup>1,3</sup>

<sup>1</sup> Social, Genetic and Developmental Psychiatry Centre; Institute of Psychiatry, Psychology & Neuroscience; King's College London, London, United Kingdom

<sup>2</sup> Division of Psychology and Language Sciences, Department of Clinical, Educational and Health Psychology, University College London, London, United Kingdom

<sup>3</sup> UK National Institute for Health Research (NIHR) Biomedical Research Centre, South London and Maudsley NHS Trust, London, United Kingdom

<sup>4</sup> Department of Child & Adolescent Psychiatry, Institute of Psychiatry, Psychology & Neuroscience, King's College London, London, SE5 8AF, United Kingdom

<sup>5</sup> National and Specialist CAMHS Trauma, Anxiety, and Depression Clinic, South London and Maudsley NHS Foundation Trust, London, SE5 8AF, United Kingdom

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### ABSTRACT:

Background. Evidence suggests that retrospective self-reports of childhood trauma are associated with a greater risk of psychopathology in adulthood than are prospective measures. However, it remains unclear why retrospectively self-reported trauma confers a greater risk for poor mental health outcomes. Investigating the heritable characteristics and environmental adversities associated with measures of self-reported trauma could increase understanding of this risk pathway to psychopathology. Methods. Our sample included 3,963 unrelated individuals from the Twins Early Development Study. We tested whether polygenic scores for 21 psychiatric, cognitive, anthropometric and personality traits were associated with childhood trauma retrospectively self-reported in adulthood and whether these associations remained after controlling for composite scores of early environmental adversity between birth and age 16, using linear regression models. Results. Retrospectively self-reported childhood trauma was positively associated with polygenic scores for autism spectrum disorder (ASD), body mass index and risky behaviours. When composite scores of environmental adversity were included in the model, only the association with the polygenic score for ASD remained significant. Conclusion. Retrospective self-reports of childhood trauma are associated with heritable characteristics of the reporter. Genetic liability to ASD may increase sensitivity to experiencing or interpreting events as traumatic. Associations between genetic predisposition for risky behaviour and high BMI with self-reported childhood trauma may be environmentally-mediated. Studies of the association between self-reported childhood trauma and later life outcomes should consider that genetically-influenced reporter characteristics may confound associations, both directly and through gene-environment correlation.