

the study. Invalidation refers to a pattern of meeting expressions of painful and distressing experiences with disbelief or minimization, blame, and punishment for both the negative emotion and also the event evoking the emotion (Linehan 1993).

**Methods and Procedure:** Participants were 442 primarily Australian citizens (82.4%) who were undergraduates, as well as members of the general population. Participant data were extracted from a longitudinal on-line study evaluating narcissism. Convenience and panel sampling methods were used to create the sample that was mostly female (301 females, 141 males), principally in their mid-twenties (M age 25.6, SD 10.2). Complete demographic data was a requirement for inclusion into the study sample including information regarding who raised participants over the course of their childhood. Participants completed the Pathological Narcissism Inventory (PNI), the Invalidating Childhood Environment Scale (ICES) and the EMBU-Short Form (S-EMBU) that evaluates recalled experiences of parental rejection, over-protection and coldness versus warmth.

**Results and Discussion:** Participants who reported strong memories of parental invalidation scored higher on measures of grandiose and vulnerable narcissism. This finding remained even after controlling for age, sex and parenting variables already examined in the literature such as over-protection, coldness and rejection. Correspondingly, participants in the sample recalling low levels of parental invalidation scored low on measures of narcissism. This study is the first to specifically evaluate recollections of parental invalidation in the development of narcissism.

#### Key References:

**Foster, J. D., & Campbell, W. K. (2007).** Are there such things as “Narcissists” in social psychology? A taxometric analysis of the narcissistic personality inventory. *Personality and Individual Differences*, 43, 1321–1332. doi.org/10.1016/j.paid.2007.04.003

**Linehan, M. (1993).** Cognitive-behavioral treatment of borderline personality disorder. New York, NY: Guilford Press.

## Antisocial peer affiliation and externalizing disorders: Evidence for Gene × Environment × Development interaction.

**Samek, D. R. Hicks, B. M., Keyes, M. A., Iacono, W. G., & McGue, M. (Feb, 2017)**

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**Aim:** To determine whether the gene by environment interaction that underlies externalizing problem behaviour amongst young people persists into adulthood, and if so, for what specific behaviour problems/clinical syndromes, and for how long.

**Background:** The gene by environment interaction refers to the expression of genetically determined traits that are dependent in part upon the environment or a specific environmental threat. Although it is accepted that the gene by environment interaction underlies externalizing behaviour problems in children and youth, the onset, specific externalizing problems affected, and duration of this interaction is unknown.

**Participants and Procedure:** Externalizing behaviour (substance use disorders and antisocial behaviour) and association with antisocial peers were evaluated concurrently and prospectively in a

sample of 1,382 same sex twins (52% female, 65% monozygotic). Twin pairs were evaluated at age 17, 20, 24 and 29 and were participants of the Minnesota Twin Family Study (Iacono, Carlson, Taylor, Elkins & McGue, 1999). Participants were recruited through their identification using public birth certificates for twins born from 1972-1984. Inclusion criteria were that twins were biological to the parents with whom they lived and that the families resided near the study center's location. Participating twins were required to be both physically and mentally healthy. A total of 83% of the twins who were located and eligible participated.

**Results and Discussion:** A gene by environment interaction was present at the first measurement point, when the twins were 17 years old. The greater the association with antisocial peers, the more strongly the genetic influence on substance use disorders and antisocial behaviour was expressed. This interaction was no longer present at any other time-point over the course of the study for antisocial behaviour, although it persisted for substance use disorders, up to the age of 29 which was the final time-point in the study. It was concluded that adolescence in particular is a critical period for the onset of externalizing behaviour problems that is modifiable in part by the nature of the environment. Expression of genetic vulnerability is at its greatest when paired with a high-risk environment, and this persists for substance use into adulthood.

**Key Reference:**

**Iacono, W. G., Carlson, S. R., Taylor, J., Elkins, I. J., & McGue, M. (1999).** Behavioral disinhibition and the development of substance-use disorders: Findings from the Minnesota Twin Family Study. *Development and Psychopathology, 11*, 869–900.

## Association between childhood adversity and a diagnosis of personality disorder in young adulthood: a cohort study of 107,287 individuals in Stockholm County

**Björkenstam, E., Ekselius, L., Burström, B., Kosidou, K., Björkenstam, C. (May 2017)**

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**Aim:** To evaluate the role of cumulative childhood adversity (CA) and later development of personality disorder (PD) alongside the influence of school performance and childhood mental illness in a cohort of the Swedish population from Stockholm County born 1987-1991. By determining modifiable risk factors the authors aimed to facilitate early intervention and curtail the onset and severity of PDs and their associated suffering.

**Background:** It is generally accepted that CA, particularly child maltreatment, has a role in the later development of PD. The nature and scope of CA and the specificity of later PD is largely unknown, although multiple studies indicate that where CA exists, it is rarely of one single event or form, but rather tends to occur in clusters over time. Experience of CA is associated with poor school performance and risk of emotional and behavioural problems during childhood and adolescence. In the current study the authors evaluated the presence of seven different types of CA up to age 14. These were: death in the family, crime by parents, substance abuse and mental illness in parents, family separation and single parent-hood, social assistance and housing instability. Participants were evaluated until they turned 18 or the end of the study (Dec 31, 2011).