

**ENVIRONMENTAL-RISK (E-RISK) LONGITUDINAL TWIN STUDY  
CONCEPT PAPER FORM**

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Proposed co-authors: Louise Arseneault, Emma Quilter (MSc project student), Joanne Newbury, Andrea Danese, Terrie Moffitt, Avshalom Caspi

Provisional Paper Title: Comparing the prediction of poor functional outcomes in young adulthood between prospective informant-reports and retrospective self-reports of childhood maltreatment.

Date: 10th April 2019

Objective of the study and its significance:

Research into the long-term consequences of childhood maltreatment suggests that exposed children have an elevated risk of a range of adverse outcomes including functional impairment. For example, childhood maltreatment has been associated with poorer education<sup>1</sup> and occupational outcomes<sup>2</sup>, criminal offending<sup>3</sup>, teenage pregnancy<sup>4</sup>, lower life satisfaction<sup>5</sup>, and poorer sleep quality<sup>6</sup>.

Studies examining the consequences of childhood maltreatment typically measure exposure in one of two ways – retrospective self-reports or prospective informant-reports (typically via adults, usually caregivers, or official records). Recent research suggests that these two different methods capture two, largely non-overlapping groups of maltreated individuals<sup>7,8</sup> and there is emerging evidence that they are differentially associated with adult outcomes. For example, retrospective self-reports of childhood maltreatment have been found to be more strongly associated with adult mental health problems than were prospective self-informant reports<sup>7</sup>. Similarly, adults' retrospective self-reports of childhood adversity, as compared with prospective reports, have been found to have stronger associations with subjective, self-reported health outcomes<sup>9</sup>.

It remains unknown how the predictive value of prospective and retrospective measures of childhood maltreatment compare for adult functional outcomes. Therefore, the objective of this study is to compare whether prospective informant-reports of childhood maltreatment obtained when children were 5-12 years old and retrospective self-reports of childhood maltreatment provided at age 18 differ in their associations with poor functional outcomes (i.e. psychosocial and economic disadvantage) assessed at age 18.

We hypothesise that:

1. Both prospective and retrospective measures of childhood maltreatment will be associated with a greater likelihood of psychosocial and economic disadvantage at age 18.
2. Retrospective reports of childhood maltreatment, in comparison to prospective reports, will be associated with higher odds of age-18 psychosocial and economic disadvantage.

Note. This project will be written up for publication by Dr Latham and will also be included in a Masters dissertation (written up by Emma Quilter under the supervision of Dr Latham & Dr Fisher).

Statistical analyses:

Analyses will be conducted in STATA version 15 and will correct for familial clustering.

1. We will use two binary functional age-18 outcome variables: 'psychosocial disadvantage' and 'economic disadvantage' as per Latham et al., (submitted). These are based on a factor analysis of 9 functional outcome measures (low educational achievement; NEET status; parenthood; criminal cautions and convictions; adolescent poly-victimisation; social isolation; low life satisfaction; loneliness; and low sleep quality)<sup>10</sup>.
2. For prospective informant-reports of maltreatment, we will use 'any severe maltreatment' and 'multiple severe maltreatment' variables as per Newbury et al. (2018).
3. For retrospective self-reports of maltreatment, we will use 'any moderate/severe maltreatment' and 'multiple moderate/severe maltreatment' variables as per Newbury et al. (2018).
4. We will conduct a series of logistic regression models (controlling for sex, family SES, and age-5 IQ) to examine associations between:
  - A. Prospective informant-reports of (i) any maltreatment; (ii) multiple maltreatment; and (iii) specific types of maltreatment (e.g. physical neglect, physical abuse, sexual abuse, and emotional abuse/neglect) and psychosocial disadvantage at age 18.
  - B. Prospective informant-reports of (i) any maltreatment; (ii) multiple maltreatment; and (iii) specific types of maltreatment (e.g. physical neglect, physical abuse, sexual abuse, and emotional abuse/neglect) and economic disadvantage at age 18.
  - C. Retrospective self-report of (i) any maltreatment; (ii) multiple maltreatment; and (iii) specific types of maltreatment (e.g. physical neglect, physical abuse, sexual abuse, and emotional abuse/neglect) and psychosocial disadvantage at age 18.
  - D. Retrospective self-report of (i) any maltreatment; (ii) multiple maltreatment; and (iii) specific types of maltreatment (e.g. physical neglect, physical abuse, sexual abuse, and emotional abuse/neglect) and economic disadvantage at age 18.
5. We will repeat the regression models above this time entering the corresponding prospective and retrospective reports of maltreatment simultaneously to test whether they are independently associated with age-18 psychosocial and economic disadvantage.
6. Finally, sensitivity analyses will be conducted; because there are different thresholds of severity for prospective and retrospective reports (i.e. severe versus moderate/severe), we will re-run the above analyses using a broader definition of maltreatment ('no maltreatment' versus 'any evidence of maltreatment').

Variables Needed at Which Ages (names and labels):

Study: E-Risk Study

**Age 5:**

<b>General study variables</b>	
FAMILYID	Unique family identifier
ATWINID	Twin A ID
BTWINID	Twin B ID
RORDERP5	Random Twin Order
RISKS	Sample Groups

COHORT	Cohort
SAMPSEX	Sex of Twins
ZYGOSITY	Zygoty
SESWQ35	Social class composite
IQE5	Twin IQ

**Age 12:**

<b>Prospective report of maltreatment variables:</b>	
EANSEVE12	Severity of emotional abuse/neglect of Elder twin, thru age 12, 2014
PABSEVTYE12	Physical abuse by 12, severity, Elder
PNSEVERITYE12	Physical neglect by 12, severity, Elder
SASEVTYE12	Sexual abuse by 12, severity, Elder
'Any maltreatment' variable used in Newbury et al., 2018	
'Multiple maltreatment' variable used in Newbury et al., 2018	

**Age 18:**

<b>Retrospective self-report of maltreatment variables:</b>	
CTQPNCCE18	Physical Neglect CTQ +/- P18 - Elder
CTQPACCE18	Physical Abuse CTQ +/- P18 - Elder
CTQSACCE18	Sexual Abuse CTQ +/- P18 - Elder
Combined 'emotional abuse & emotional neglect' variable used in Newbury et al., 2018	
'Any maltreatment' variable used in Newbury et al., 2018	
'Multiple maltreatment' variable used in Newbury et al., 2018	

<b>Functional outcomes:</b>	
NEETE18	NEET: not in educ emplymt or training – P18 - Elder
EDUCACHVE18	Highest educational achievement (based on QCF) – P18 - Elder
SOCISOE18	Social Isolation scale - P18 - Elder
LONELYE18	Loneliness scale – P18 – Elder
PSQIE18	PSQI - global score – P18 – Elder
LIFSATE18	Life satisfaction (average) P18 – Elder
PREGE18	Pregnant at visit – P18 – Elder
PARENTE18	Is the twin a parent at 18? (Combine with above variable as per Jasmin)
CRIMCNTE18	MOJ – number of criminal offences – P18 – Elder
POLYVCTZCE18	Poly-victimisation 4 cat (0,1,2,3+) - P18 - Elder

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## CONCEPT PAPER RESPONSE FORM

### A. To be completed by the proposing author

Proposing Author:

✓ I have read the E-Risk data-sharing policy guidelines and agree to follow them

Provisional Paper Title: Comparing the prediction of poor functional outcomes in young adulthood between prospective informant-reports and retrospective self-reports reports of childhood maltreatment.

Potential co-authors: Louise Arseneault, Emma Quilter (MSc project student), Joanne Newbury, Andrea Danese, Terrie Moffitt, Avshalom Caspi

Potential Journals: Brief Report

Intended Submission Date (month/year): Sept 2019

***Please keep one copy for your records and return one to Louise (louise.arseneault@kcl.ac.uk)***

### B. To be completed by potential co-authors:

Approved     Not Approved     Let's discuss, I have concerns

Comments:

Please check your contribution(s) for authorship:

- Conceptualizing and designing the longitudinal study
- Conceptualizing and collecting one or more variables
- Data collection
- Conceptualizing and designing this specific paper project
- Statistical analyses
- Writing
- Reviewing manuscript drafts
- Final approval before submission for publication
- Acknowledgment only, I will not be a co-author

**Signature:** .....