Synopsis no.: S2.4

Preliminary title:

Childhood Adversity and Psychosis: Prevalence, Main Effects, and Variations by Site

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Publication category: 2

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Work Packages involved: WP2

Partners involved from whom candidate co-authors (*additional to working and writing group*) should be nominated:

CIBERSAM (L Roldan, M Bernardo, J Sanjuan, M Arrojo, J Bobes, J L Santos)

Objectives (scientific background, hypothesis, methods, and expected results):

Background

There are three parts to the background for this proposed set of analyses and paper:

First, there is now robust evidence that various forms of childhood adversity (e.g., separation from, or death of, a parent, bullying, abuse, etc.) are associated with an increased risk of psychosis (variously defined). The evidence is strongest in relation to low-level psychotic experiences in adolescent and general population samples. Fewer studies have examined childhood adversities in relation to psychotic disorder and, while findings have generally been in the same direction, a number of methodological limitations (e.g., small sample size; biased control sample; crude measures of exposure, information bias, etc.) characterise most of these. There consequently remains some scepticism about the extent to which associations with childhood adversities extend to psychotic disorders.

Second, there is some evidence that childhood adversities are associated with psychosis in a linear, dose-response fashion. Extending this, it is possible that the timing, duration and severity of adversities matter. However, only a small number of studies have considered these more fine grained features of relevant childhood exposures and there are no studies that have reported on data across all these dimensions.

Third, the prevalence of exposure to childhood adversities varies by geographical area. For example, there is evidence that the prevalence of sexual abuse varies across Europe, though a consistent pattern is difficult to discern. It is possible, then, that the impact of adversities varies by country; however, variations by country have not been examined before.

Synopsis for EU-GEI Publication

Aim

The overall aim of these analyses is to examine the main effects of various forms and aspects of childhood adversity on odds of psychosis both overall and by country. As a basis for this, we will address possible bias arising from choice of instrument by examining the convergent validity of the CECA and CTQ by comparing positive items on physical and sexual abuse.

Hypotheses

1) Each form of childhood adversity (i.e., separation from and death of a parent; abuse; bullying; etc.) will be associated with an increased odds of psychosis (i.e., case status), independent of a priori confounders age, gender, ethnicity, social class, cannabis use, premorbid function, IQ and family history of mental disorder (or psychosis)

2) The effects of each adversity will be strongest among a) those occurring prior to age 12, and b) those occurring at a high frequency over an extended period (i.e., one year or more)

3) The effects of childhood adversities, when summed to create a score, will be associated in linear (dose-response) fashion with psychosis

4) Although the population prevalences of adversities (estimated using control samples) may vary by country, there will be no evidence that the effects (odds ratios) vary by country

Methods

WP2 case-control data will be used to test these hypotheses.

Detailed information has been collected, using the CECA and CTQ, from samples of first-episode cases of psychosis and population-based controls on the duration, frequency, timing and severity of exposure to a wide range of childhood adversities, from separation from a parent to sexual abuse.

In addition, data has been collected on age, gender, ethnicity, social class, cannabis use, premorbid function, IQ and family history of mental disorder (or psychosis).

Expected Results

See hypotheses

Data needed for the study:

- Case-control status
- MRC Sociodemographic Schedule Parts 1 and 2
- Childhood Experiences of Care and Abuse
- Childhood Trauma Questionnaire
- Cannabis Experiences Questionnaire
- Premorbid Adjustment Scale
- WAIS (IQ)
- Family Interview for Genetic Studies

Plan for statistical analysis (overall strategy):

We will first examine convergent validity of CECA and CTQ by calculating kappa scores and sensitivity and specificity. Then:

1) We will begin by producing descriptive statistics (frequencies and percentages; means and standard deviations; medians and inter-quartile ranges; etc) for cases and for controls on the main exposures and each relevant dimension (i.e., timing, duration, severity, etc) both overall and by study site, gender and age.

2) We will test Hypothesis 1 by quantifying associations between the main exposures and case-control status in terms of odds ratios derived from logistic regression analyses with and without a priori confounders.

3) We will test Hypothesis 2 by examining effects (odds ratios) across groups of each exposure variable (e.g., frequency) and stratified by age of exposure, etc using, as appropriate, linear tests for trend, Mantel-Haenszel tests for homogeneity of odds ratios, and interaction terms in logistic models.

4) We will test Hypothesis 3 by examining effects (odds ratios) by adversity score a) using linear tests for trend and b) by fitting logistic models with the adversity score first entered as a categorical variable and then entered as continuous variable and comparing the models using a likelihood ratio test.

5) We will test Hypothesis 4 by a) comparing prevalences of each exposure in control samples in each site (using chi-square tests, t-tests, etc, as appropriate) and b) both by stratifying by study site and by fitting an interaction terms for exposure*site in a logistic model.

Other analyses/methods:

None

Involvement of external Parties (non EU-GEI):

None

IPR check:

Timeframe:

3 months from final data being available

Additional comments:

Possible extensions of these analyses for this and/or subsequent papers include:

a) examining effects of exposures on symptom dimensions and specific symptoms (e.g., paranoia, hallucinations)

b) examining effects of exposures on psychotic experiences and schizotypy among controls