Synopsis no.: *S5.20*

Preliminary title: The differential effects of childhood trauma and bullying and affective mediators on clinical outcome in patients at ultrahigh risk of developing a first psychotic episode

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Publication category: 3, Publications from a single work package involving only some parties (or in some cases only one party) in the Work Package

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Work Packages involved: WP 5

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

Objectives (scientific background, hypothesis, methods, and expected results): **Scientific background:** The relationship between childhood trauma and psychosis is now well established (Varese et al., 2012) and studies on this association have broadened to the ultra-high risk (UHR) phase (Addington et al., 2013; Bechdolf et al., 2010; Thompson et al., 2014). In UHR cohorts, childhood trauma rates (86.8%) are substantially higher than in the general population (42.7-60%) (Addington et al., 2013; Kraan et al., 2015; Tikka et al., 2013). In addition, two recent studies found that childhood sexual abuse was associated with transition to a first-episode of psychosis (Bechdolf et al., 2010; Thompson et al., 2014). However, in earlier studies two important topics received limited attention. The first topic is that it is unclear whether there is a specific association between childhood trauma and psychotic symptoms or whether childhood trauma is associated with a wide range of general psychopathology. For instance, previous research showed that there are also associations between childhood trauma and other psychiatric disorders, such as depressive and anxiety disorders (Figueroa et al., 1997; Swett et al., 1990; van Dam et al., 2015). Whether childhood trauma is stronger associated with psychosis than with other psychopathology in UHR patients has not been examined yet. Another topic that has not received much attention yet in UHR studies is the specific association between type of childhood trauma and type of specific psychotic symptoms. In line with research of (Bentall et al, 2012) we expect that sexual abuse is associated with hallucinations, and that emotional neglect is associated with paranoid ideation. Examining these specific associations might help in understanding the etiology of psychosis. Aims: (1) to examine the effect of childhood trauma and bullying on transition to psychosis at 1-year follow-up in a large sample with UHR subjects, (2) to examine whether childhood trauma and bullying are stronger associated with psychotic symptoms than with depression or anxiety symptoms, (3), to examine whether there are specific associations between type of childhood trauma and type of attenuated psychotic symptoms and (4) to examine whether depression and anxiety mediate the association between childhood trauma and transition to psychosis **Methods** Baseline data and data of the 12 months follow-up will be used to examine transition to psychosis, attenuated psychotic symptoms, depression, anxiety and global functioning (GAF) as a result of childhood trauma in WP 5 subjects. In the analyses we will control for cannabis use, medication and psychological interventions, as these

factors may influence the severity of attenuated psychotic symptoms and co morbid psychopathology.

Expected results:

1. Childhood trauma and bullying predict transition to psychosis, anxiety and depression at 1-year follow-up

2. Sexual abuse is associated with hallucinations and emotional neglect is associated with paranoid ideas

3. Depression and anxiety mediate between childhood trauma and psychosis outcome

References

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Data needed for the study: (please list the EU-GEI WP5 instruments)
Data from all WP 5 sites:

- CTQ to determine childhood trauma
- Neurapro to determine UHR status and psychopathology (including MADRS, BPRS, SPIA, YMRS, SANS)
- Cannabis Experience Questionnaire: to determine drug (ab)use
- GAF disability & symptoms: level of functioning
- Medication list: to determine medication use
- Psychological interventions to determine psychological treatment
- Combined Social Scales part 1 for demographics and CECA for bullying

Plan for statistical analysis (overall strategy):

Data-analysis: By means of structural equation modelling (SEM), we will construct an overall model with bullying, total childhood trauma and different domains (5 subscales) of childhood trauma, in which these domains predict all outcome measures at 1-year follow-up (depression, anxiety, UHR symptoms (yes/no) and transition to psychosis (yes/no)).

Three SEM models will be tested:

Model 1: Effects of bullying and childhood trauma on severity of psychopathology. In this model, independent variables are total scores on the CTQ subscales (emotional abuse, physical abuse, sexual abuse, emotional neglect and physical neglect), bullying, CAARMS total score, anxiety, depression score and GAF score at baseline. Dependent variables are total score on the positive symptoms subscale of the CAARMS, GAF score, depression total score and anxiety total score, all at 1-year follow-up.

Model 2: Effects of bullying and childhood trauma on specific subtypes of positive psychotic symptoms. In this model, the independent variables are the totals scores on the CTQ subscales (emotional abuse, physical abuse, sexual abuse, emotional neglect and physical neglect) and bullying. Dependent variables are the following CAARMS subscales: unusual thought content, non-bizarre ideas, perceptual aberrations and disordered speech are assessed.

Model 3: Mediating effect of specific subtypes of positive psychotic symptoms, anxiety and depression in the relationship between childhood trauma and severity of positive psychotic symptoms. A model will be tested in which the specific CAARMS subscales (unusual thought content, non-bizarre ideas, perceptual aberrations and disordered speech) at baseline are the independent variables. The dependent variable is CAARMS positive symptom subscale at follow-up. The mediators are anxiety and depression.

Other analyses/methods:
N/A

Involvement of external Parties (non EU-GEI):
N/A

IPR check (Intellectual property rights):
N/A

Timeframe:
Six months after receiving the data the manuscript will be sent for approval of publication.

Additional comments:
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