

Synopsis for EU-GEI Publication

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Preliminary title: Trauma history and impairment on emotional recognition on schizophrenia
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Publication category: 1 (<i>Publications from integrated work from several Work Packages</i>)
Working and writing group: University of Oviedo
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Objectives (scientific background, hypothesis, methods, and expected results): Background Trauma is a common occurrence and has been associated with psychosis and suggested as a risk factor leading to psychosis and schizophrenia, and it can introduce of social skill problems [1, 2]. Trauma victims and patients with psychosis show similar areas of cognitive deficits, for example difficulties identifying facial expressions [3]. Social and affective disturbances have long been thought to be core to schizophrenia. Deficits in accurately identifying and discriminating displays of emotion may be central components of the functional and social abnormalities seen in schizophrenia [4]. However, there are uncertainties about the neuropsychological specificity of the finding [5]. Interestingly, there are at present very few studies investigating cognition and trauma in people with psychosis. Hypothesis We therefore hypothesized that trauma contributes to the cognitive deficits found in this patient group. Patients with trauma show an emotional processing deficits and a bad neurocognitive performance; this impairment is related to clinical and neuropsychological variables and influence their functioning due to potential developmental effects of trauma on social cognition and personality.

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We therefore hypothesized that a history of trauma before 17 years old leads to greater impairment of emotion recognition in adulthood only in patients with schizophrenia; whereas in healthy subjects there would not be a significant relationship between history of trauma and cognitive functioning. Healthy siblings of patients will show a performance in the emotion recognition tests better than patients, but worse than healthy subjects. As a secondary hypothesis, we postulate that patients will show impairment in processing speed, which will be to some extent related to emotion recognition. However, impairment in emotion recognition will not be fully explained by processing speed impairment.

Aims

To compare the performance of the patients with schizophrenia, with their healthy siblings and the control group on emotion recognition and processing speed tests.

To test the potential associations (correlations) of the performance in the emotion recognition tests with processing speed tests and the trauma questionnaires, in the three groups separately.

To test the amount of emotion recognition variance explained by the trauma questionnaire score and processing speed test in the three groups separately, by means of a regression analysis.

References:

- [1] Aas M, Dazzan P, Fisher HL, Morgan C, Morgan K, Reichenberg A, et al. Childhood trauma and cognitive function in first-episode affective and non-affective psychosis. *Schizophrenia research*. 2011 Jun;129(1):12-9.
- [2] Dvir Y, Denietolis B, Frazier JA. Childhood trauma and psychosis. *Child and adolescent psychiatric clinics of North America*. 2013 Oct;22(4):629-41.
- [3] Sachs G, Steger-Wuchse D, Kryspin-Exner I, Gur RC, Katschnig H. Facial recognition deficits and cognition in schizophrenia. *Schizophrenia research*. 2004 May 1;68(1):27-35.
- [4] Strauss GP, Jetha SS, Ross SA, Duke LA, Allen DN. Impaired facial affect labeling and discrimination in patients with deficit syndrome schizophrenia. *Schizophrenia research*. 2010 May;118(1-3):146-53.
- [5] Pomarol-Clotet E, Hynes F, Ashwin C, Bullmore ET, McKenna PJ, Laws KR. Facial emotion processing in schizophrenia: a non-specific neuropsychological deficit? *Psychological medicine*. Jun;40(6):911-9.

Data needed for the study:

1. Childhood trauma questionnaire
2. MRC Sociodemographic Schedule: Threatening Experiences, Childhood Experiences of Care and Abuse, Parental Discord, Psychological Abuse, Physical Abuse, Sexual Abuse,

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Bullying, Discrimination, Brief Impact of Events Ratings, Social Environment Assessment Tool 3. Degraded Facial Affect Recognition, Benton Facial Recognition, White Noise Task 4. WAIS
Plan for statistical analysis (overall strategy): Participants will be separated into independent groups for comparative purposes on the basis of information gathered. Data from this cross-sectional between-group study will be analyzed using the Statistical Package for Social Sciences. Sociodemographic and clinical data will be compared between groups using analysis of variance (ANOVA) and the Pearson chi-square test. Group comparisons for indices of cognition will be conducted using MANCOVA (multivariate analysis of covariance [MANCOVA]). Statistical significance for all tests was defined as $p < .05$.
Other analyses/methods:
Involvement of external Parties (non EU-GEI):
IPR check:
Timeframe:
Additional comments: