Synopsis no.: *S2.30*

Preliminary title: Does impaired affective mentalizing mediate the relationship between parental abuse and clinical and functional outcome in psychotic disorder?

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Publication category: Scientific Paper

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Work Packages involved: WP2

Partners involved from whom candidate co-authors (*additional to working and writing group*) should be nominated: None

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

Background:

Patients with psychotic disorder are almost three times more likely than non-psychiatric controls to report a history of abuse in childhood (Varese et al., 2012). Moreover, reported abuse in childhood predicts clinical outcome (Schenkel, Spaulding, DiLillo, & Silverstein, 2005; Van Dam et al., 2015; Weijers et al., Unpublished) and may predict functional outcome (Alameda et al., 2015; Stain et al., 2013) though not every study found this particular association (Weijers et al., Unpublished). It has been proposed that an impaired ability to mentalize, i.e. the capacity to understand one's own and others' behavior in terms of mental states, such as intentions, wishes, beliefs, and emotions, may account for some of the effect of childhood abuse on outcome (van Os, Kenis, & Rutten, 2010). Indeed, recent research (Weijers et al., Unpublished) has found that parental abuse is related to poorer mentalizing capacity in patients with psychotic disorder. In turn, poor mentalizing has been found to relate to negative symptoms and possibly social dysfunction, though not to positive symptoms. Lastly, impaired mentalizing accounted for more than a third of the effect of parental abuse on negative symptom severity., indicating it is a partial mediator of the effect.

Our previous study (Weijers et al., Unpublished) used a small sample of 81 patients. We propose to use the EU-GEI data to examine whether these results can be replicated with a larger sample. Also the use of the EU-GEI data will allow us to examine relevant questions that were left unanswered. First, several dimensions of mentalizing have been identified, including cognitive forms of mentalizing (e.g. "Pete knows that Mary does not believe him") and affective forms of mentalizing (e.g. "Pete recognizes that Mary is angry with him and that he feels guilty"). There is evidence that different types of mentalizing may affect the positive and negative syndromes in psychotic disorder differently (Shamay-Tsoory et al., 2007). Our previous study employed a measure of cognitive mentalizing whereas the present study could examine affective mentalizing by using the degraded facial affect recognition task (Fett, Maat, & Investigators, 2011; Maat, Fett, Derks, & Investigators, 2012; Quee et al., 2010). Second, the previous study did not take general intelligence, or 'neurocognition', into account. Other studies have shown that neurocognitive capacity is highly related to? , though distinct from mentalizing capacity (Sergi et al., 2007). Neurocognitive capacity may account for some of the effect of mentalizing capacity

on clinical and functional outcome. Lastly, the previous study involved a sample with a relatively long duration of illness: five years on average since onset of psychosis. Previously found relations between childhood abuse and social dysfunction were found in samples at a premorbid or a recent onset stage of psychosis (Alameda et al., 2015; Stain et al., 2013). Because the EU-GEI study involves patients that have recently started treatment, we can examine whether childhood abuse affects social dysfunction in recent onset psychosis and the role of impaired mentalizing in this effect.

Methods:

Sample: patients with psychotic disorder that participated in EU-GEI.

Variables and operationalization (instrument):

Independent Variable
- Parental abuse: Childhood Experience of Care and Abuse (CECA). Specifically, severity (a product of intensity and frequency) of maltreatment perpetrated by either or both of primary caregivers, scored on 4 dimensions: physical abuse, emotional abuse, sexual abuse and parental conflict.

Mediator
- Affective mentalizing: Degraded facial affect recognition task.

Dependent Variables
- Positive symptom severity: Community Assessment of Psychotic Experiences - positive symptom subscale (CAPE).
- Negative symptom severity: CAPE – negative symptom subscale
- Social functioning: Global Assessment of Functioning – functioning subscale (GAF)

Covariates:
- Neurocognitive capacity: Wechsler Adult Intelligence Scale III (WAIS III)
- Face blindness: Benton facial recognition test.
- Duration of untreated psychosis

Diagnosis: Operational Criteria Checklist for Psychotic Illness (OPCRIT)

Hypotheses/Expected results:

Based on previous research we hypothesize that the severity of parental abuse is related to impaired affective mentalizing capacity (operationalized as the capacity to correctly infer affective expressions) and severity of positive and negative symptoms. Furthermore, given the recent onset of psychosis in this particular sample, we expect that parental abuse is also related to the level of social dysfunction. Lastly we expect that impaired affective mentalizing, independent from IQ, accounts for some of the effect of parental abuse on negative symptoms and social dysfunction, but not on positive symptoms.

Data needed for the study:

Results on the following tests:
- OPCRIT
- CECA
- Degraded facial affect recognition task
- Benton Face recognition test
- WAIS III
- CAPE
- GAF (functioning)
- Duration of untreated psychosis

Plan for statistical analysis (overall strategy):

Three multi-mediator models will be tested, one for each outcome variable (positive symptoms, negative symptoms and social functioning) with parental abuse as the independent variable and scores on degraded affect recognition as mediators in each model. Scores on the Benton facial recognition

test, WAIS III and the duration of untreated psychosis will be added as a covariate. SPSS version 22 combined with Hayes's PROCESS script for assessing indirect pathways (Hayes, 2012) will be used for this analysis. The process script uses a non-parametric bootstrapping method that involves random resampling observations with replacement in order to estimate the true effect size. Confidence intervals and estimates of the means of the bootstrapped samples are generated with 10 000 resamples. The non-parametric nature of bootstrapping allows for an analysis with variables that are non-normally distributed (as is often the case with psychotic symptoms).

Other analyses/methods: None

Involvement of external Parties (non EU-GEI): None

IPR check:
Not applicable

Timeframe:
Late 2016 until early 2017

Additional comments:
None

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