Synopsis no.: *S2.48/S5.33*

Preliminary title:

Obsessive-compulsive symptoms in first episode and at risk mental state of psychosis: associations with symptoms of psychosis and depression

Contact info for the person(s) proposing the synopsis

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Publication category: 1

Working and writing group:

Nadine van der Burg, Frederike Schirmbeck, Lieuwe de Haan, WP2 and WP5 author groups.

Work Packages involved: WP2 and WP5

Partners involved from whom candidate co-authors (*additional to working and writing group*) should be nominated: Paolo Fusar-Poli, others?

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

Scientific background

Patients with psychotic disorders have a high life-time risk to experience co-occurring obsessive-compulsive symptoms (OCS)(Swets *et al.*, 2014), which are also more prevalent in the at risk mental state (ARMS) compared to the general population (Schirmbeck *et al.*, 2015).

The question how co-occurring OCS interact with other symptoms domains led to conflicting findings. Early concepts hypothesized that patients with schizophrenia develop OCS in an attempt to reduce psychotic symptoms and thus, the presence of OCS was thought to have a protective effect regarding psychotic disintegration (Dowling *et al.*, 1995; Stengel, 1945). Subsequent research yielded inconclusive results (Hunter and Lysaker, 2015). A meta-analysis by Cunill et al. concluded that most studies reported more severe positive, and negative symptoms if OCS were present (Cunill *et al.*, 2009). However, several studies did not find significant associations (de Haan *et al.*, 2012; Nasrollahi *et al.*, 2012; Poyurovsky *et al.*, 2008), and others even reported lower severity of negative symptoms (Tibbo *et al.*, 2000) or lower levels of positive and negative symptoms in patients with a first psychotic episode and co-morbid OCS (de Haan *et al.*, 2005; Poyurovsky *et al.*, 1999). Inconsistent findings might be due to the heterogeneity of investigated samples. More consistently OCS have been associated with more severe depressive symptoms in patients with psychotic disorders (de Haan *et al.*, 2005; de Haan *et al.*, 2012; Kim *et al.*, 2015) and ARMS (Fontenelle *et al.*, 2012; Soyata *et al.*, 2018).
So far, the association between OCS, affective and (subclinical) psychotic symptoms has mainly been investigated in cross-sectional designs. Fontenelle et al. investigated OCD in a cohort of individuals at ultra-high risk for psychosis and found especially persistent OCD

related to the development of a psychotic disorder seven years later (Fontenelle *et al.*, 2011). In a recent prospective study of patients with psychotic disorders and their siblings we found that OCS, affective and psychotic symptom domains were associated across subjects and assessment times. Within subjects, substantial variability and co-variation of all symptom domains was found. Particularly, between-subject differences in positive symptoms and within-subject change in depressive symptoms predicted subsequent OCS one months later (Schirmbeck *et al.*, 2018)
In this study we aim to extend literature on the associations between OCS and severity of affective and psychotic symptoms in the early course of psychotic disorders. This will be the first study to investigate the course of symptoms and possible co-variation in a representative ARMS sample.

Key questions
Question 1.
Are co-occurring OCS associated with higher severity in positive, negative and affective symptoms in FEP and on a subclinical level across subjects and time in the ARMS?

Question 2.
Is change in co-occurring OCS associated with co-variation in (subclinical) positive, negative and affective symptoms on the between- and within-subject level in ARMS?

Methods and expected results

Data collected to assess psychotic experiences, OCS and general psychopathology in individuals at risk for psychosis and first episode patients will be used.

Cross-sectional associations in FEP will be investigated with linear regression analyses. Prospective data of ARMS will be analysed using mixed-model multilevel analyses to examine the relationship and possible co-variation between OCS and other symptoms domains on the between- and within-subject level.

Baseline ARMS and FEP data needed for the study:

- data on psychotic experiences (OPCRIT, CAPE ->WP2, CAARMS, SCID, SPIA, SANS -> WP5)
- data on OCS (OCI-R)
- data on general psychopathology (BPRS, MADRAS, SIS-R,)

Other analyses/methods:

N/A

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

IPR check:

Timeframe: start spring 2019
Month 3: Literature search; obtaining, merging of data
Month 6: Completion of statistical analysis and first draft of manuscript
Month 8: Manuscript submission

Additional comments:

N/A

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