

Synopsis no.: S2.47/ S5.32

Preliminary title:

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

Contact info for the person(s) proposing the synopsis

Name: Lieuwe de Haan, Frederike Schirmbeck

Partner no: 8 (University of Amsterdam)

E-mail address: l.dehaan@amc.uva.nl; n.f.schirmbeck@amc.uva.nl

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 of 30% to experience co-occurring obsessive-compulsive symptoms (OCS)(Swets *et al.*, 2014). Average prevalence rates of OCS (13%) and obsessive-compulsive disorder (5.4%) in at risk mental state for psychosis (ARMS) samples are also considerably higher than in the general population (Schirmbeck *et al.*, 2015).

Several studies investigated the association between comorbid OCS and cognitive impairment in patients with psychotic disorders and reported conflicting results. Whereas some studies found OCS to be linked to cognitive deficits others found no evidence for cognitive differences between schizophrenia patients with or without co-occurring OCS (Varlakova *et al.*, 2015). A prospective investigation over 3 years showed that the absence and remission of co-occurring OCS was associated with significant improvement in specific cognitive domains but did not find evidence for pre-existing cognitive risk constellations for the development of OCS in psychotic disorders (Schirmbeck *et al.*, 2016).

The association between cognitive performance and OCS in ARMS has been investigated in a limited number of studies. The majority of findings suggest better performance of the comorbid group (Soyata *et al.*, 2018; Zink *et al.*, 2014). Prospective associations have not yet been investigated in ARMS.

This study is the first to investigate the association between co-occurring OCS and cognitive functioning in the early stages of psychotic illnesses in a large multi-national sample, making it possible to investigate this association with less illness-related confounding effects present in more chronic samples. Furthermore, the prospective investigation in the ARMS sample

makes it possible to investigate the course and possible co-variation of OCS and cognitive function.

Key questions

Question 1.

Are co-occurring OCS associated with more cognitive impairment in FEP cross-sectionally and in ARMS across subjects and time?

Question 2.

Is change in co-occurring OCS severity associated with co-variation in cognitive functioning on the between- and within-subject level in ARMS?

Methods and expected results

Data collected to assess psychotic experiences, OCS and neurocognitive functioning 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 cognitive functioning on the between- and within-subject level.

Baseline FEP and prospective UHR data needed for the study:

- data on psychotic experiences (CAPE ->WP2, CAARMS, SCID, SPIA, SANS -> WP5)
- data on OCS (OCI-R)
- cognitive functioning (Beads, Degraded facial recognition, AVLT, WAIS, TMT, Benton, Digit Span)

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

Schirmbeck, F., Swets, M. & de Haan, L., 2015. Epidemiology: Prevalence and Clinical Characteristics of Obsessive-Compulsive Disorder and Obsessive-Compulsive Symptoms in Patients with Psychotic Disorders. In *Obsessive-Compulsive Symptoms in Schizophrenia* (ed. L. De Haan, F. Schirmbeck and M. Zink), pp. 47-61. Springer International Publishing.

- Schirmbeck, F., Swets, M., Meijer, C.J., Zink, M. & de Haan, L.,** 2016. Longitudinal association between cognitive performance and obsessive-compulsive symptoms in patients with psychosis and unaffected siblings. *Acta Psychiatr Scand* **133**, 399-409.
- Soyata, A.Z., Akisik, S., Inhanli, D., Noyan, H. & Uçok, A.,** 2018. Relationship of obsessive-compulsive symptoms to clinical variables and cognitive functions in individuals at ultra high risk for psychosis. *Psychiatry Res* **261**, 332-337.
- Swets, M., Dekker, J., van Emmerik-van Oortmerssen, K., Smid, G.E., Smit, F., de Haan, L. & Schoevers, R.A.,** 2014. The obsessive compulsive spectrum in schizophrenia, a meta-analysis and meta-regression exploring prevalence rates. *Schizophrenia Research* **152**, 458-468.
- Varlakova, Y., Patel, D., Mukhopadhaya, K., Laws, K., David, E., Sukwinder, K. & Fineberg, N.,** 2015. The Neurocognitive and Behavioural Impact of Comorbid Obsessive–Compulsive Syndrome in Schizophrenia. In *Obsessive-Compulsive Symptoms in Schizophrenia* (ed. L. De Haan, F. Schirmbeck and M. Zink), pp. 91-114. Springer International Publishing.
- Zink, M., Schirmbeck, F., Rausch, F., Eifler, S., Elkin, H., Solojenkina, X., Englisch, S., Wagner, M., Maier, W., Lautenschlager, M., Heinz, A., Gudlowski, Y., Janssen, B., Gaebel, W., Michel, T.M., Schneider, F., Lambert, M., Naber, D., Juckel, G., Krueger-Oezguerdal, S., Wobrock, T., Hasan, A., Riedel, M., Müller, H., Klosterkötter, J. & Bechdolf, A.,** 2014. Obsessive–compulsive symptoms in at-risk mental states for psychosis: associations with clinical impairment and cognitive function. *Acta Psychiatrica Scandinavica*, n/a-n/a.