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**Aims:** To derive scores for mental disorganization and impoverishment from commonly used rating scales, and test the hypothesis that disorganization and impoverishment, along with impaired cognition and role-function reflect a latent variable that is a plausible candidate for the putative core deficit.

**Methods:** In a group of 40 patients with schizophrenia, we tested the hypothesis that mental disorganization and impoverishment, along with impaired cognition and role-function reflect a latent variable that is a plausible candidate for the core deficit. We derived disorganization and impoverishment factors from three symptom scales: PANSS, SSPI and CASH. For each of the three scales, we demonstrated significant correlation between these factors and impaired role function assessed using the Social and Occupational Functioning Scale (SOFAS) and cognitive impairment measured using the Digit Symbol Substitution Test (DSST). We then assessed the relationship between this latent "core deficit" variable and Post Movement Beta Rebound (PMBR), measured using magnetoencephalography and associated with persisting brain disorders.

**Results:** A single factor model provided excellent fit for the four features of core deficit, requiring no further modifications. Results were consistently similar for measures from all three scales.  $\chi^2$  value was non-significant (range: 0.30 to 2.13,  $df = 2$ ,  $p > 0.35$ ), GFI met the threshold of greater than 0.9 (range = .976 to .996) and RMSEA was lesser than 0.06 (range = 0.000 to 0.040). PMBR was found to be significantly reduced in the schizophrenia group compared to healthy controls ( $t(28) = 44.2 \pm 12.1$ ,  $p = 0.001$ ). PMBR was strongly correlated with disorganization ( $r(40) = .600$ ,  $p = 0.001$ ). In the hierarchical regression, neither age nor medication dose were significant predictors, but PMBR did predict the severity of the core deficit ( $F(1, 23) = 12.6$ ,  $P = 0.002$ ,  $R^2 = -.592$ ).

**Discussion:** Scores for the two latent variables representing impoverishment and disorganization of mental activity in schizophrenia can be derived from each of three symptom rating scales. A composite measure of impoverishment, disorganization, impaired cognition and impaired role function reflects an underlying psychopathological process that might be described as the core deficit of classical schizophrenia.

#### T91. THE POSITIVE AND NEGATIVE SYNDROME SCALE SUPERIOR TO A SELF-REPORT QUESTIONNAIRE IN THE PHARMACOTHERAPY MONITORING AND OUTCOME SURVEY

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**Background:** Aiming to improve the quality of care for patients with a psychotic disorder, the ongoing Pharmacotherapy Monitoring Outcome Survey (PHAMOUS) started in 2006 in four large mental health care organizations in the Northern Netherlands, by adding it to the at that time mandatory Routine Outcome Monitoring program. However, since the cuts in the financial budgets for mental health care, research nurses are increasingly experiencing time-pressure in the assessments. The Positive and Negative Syndrome Scale (PANSS), part of the assessment, is a time-consuming interview, taking approximately 30 minutes. Therefore, we developed and validated a short self-report questionnaire assessing positive psychotic symptoms, the Brief Positive Symptoms Questionnaire (BPSQ).

**Methods:** The BPSQ was added to PHAMOUS and filled in once by patients in four mental health care institutions in 2017 and 2018. The BPSQ

consists of nine items and takes about 2–3 minutes to complete. It was validated against the PANSS positive scale and two items of the Health of the Nations Outcome Scale (HoNOS), with item 6 assessing the problems that patients experience due to hallucinations and delusions and item 8 assessing further mental and behavioural problems.

**Results:** BPSQ data were obtained from  $n=287$  patients (mean age 47.1 years, 67.6% male). The PANSS was assessed in  $n=244$  and HoNOS data were available for  $n=156$  patients. Scores of one patient were considered unreliable and thus removed from the data set. The BPSQ had a Cronbach's alpha of .81. Spearman's correlation coefficient of the BPSQ and the PANSS positive scale was significant ( $\rho(243) = .63$ ,  $p < .05$ ). Correlations between the BPSQ and HoNOS items 6 and 8 were significant ( $\rho(155) = .488$ ,  $p < .05$  and  $\rho(155) = .251$ ,  $p < .05$  respectively). Post hoc analysis showed that the more severely psychotic the patients were, the less the BPSQ and the PANSS positive scale were corresponding.

**Discussion:** Given the medium correlation of the BPSQ with the PANSS positive scale and the low concurrent validity with the two relevant HoNOS items, we argue that the widely used and validated PANSS is indispensable in the PHAMOUS assessment of positive symptoms in a chronic population with psychotic disorders. Replication of this study in first-episode psychotic patients is recommended.

#### T92. POSSIBLE COMBINATIONS OF DSM-IV AND DSM-5 CRITERIA IN SCHIZOPHRENIA AND SCHIZOAFFECTIVE DISORDER VERSUS MAJOR DEPRESSIVE AND MANIC EPISODES

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**Background:** Psychiatric disorders diagnoses are based on the satisfaction of specific symptoms criteria. Although this categorical method of classification, which is based on the identification of clinical syndromes, has proven useful in terms of treatment, its validity has been criticized. The possible symptoms combinations for major psychotic and mood disorder diagnoses could be calculated using combinatorial mathematics and the results could provide indices of diagnostic heterogeneity.

**Methods:** Our calculations were conducted using the binomial coefficient. In mathematics, this coefficient calculates the number of an unordered and unreplicative selection of  $k$  items from a set  $S$  (a subset of  $k$  items from  $S$ ) with the following formula:  $n!/k!(n-k)!$ . We calculated the possible number of combinations of symptoms required for diagnosing a) two major psychotic disorders (a1. Schizophrenia-SCZ and a2. schizoaffective disorder-SAD), and b) two major mood disorders-episodes (b1. Major Depressive Episode-MDE and b2. Manic Episode- ME), implementing the DSM-5 and DSM-IV diagnostic criteria. For each diagnosis,  $k$  corresponds to the number of the necessary symptoms, where  $S$  to the total number of symptoms described in the relevant criteria. The following calculations were conservative, since they did not take into account all the possible combinations within each criterion, the effect of specifiers or the effect of SCZ, or SAD subtypes.

**Results:** We found the following combinations: DSM-5: SCZ=25, SAD=12,225, MDE=163, ME=326. DSM-IV: SCZ=74, SAD=2,762,198, MDE=163, ME=163. According to DSM-IV (but not to DSM-5), Criterion A for Schizophrenia could coexist with a mixed mood episode in SAD. Interestingly, the possible symptoms combinations for a mixed episode was 37,001. The possible symptoms combinations for the diagnosis of schizophrenia has been slightly reduced in DSM-5 as compared with DSM-IV, but the reduction in the number of relevant combinations for the diagnosis of SAD has been impressive. This reduction was driven by the removal of mixed mood episodes in DSM-5. The possible combinations in