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Background: Negative symptoms are currently viewed as having a 2-dimensional structure, with factors reflecting diminished expression (EXP) and motivation and pleasure (MAP). However, several
factor-analytic studies suggest that the consensus around a 2-dimensional model is premature. The current presentation summarizes results from a series of studies that identified and then
extensively validated the latent dimensions of negative symptoms in people with schizophrenia.
Methods: Study 1 used confirmatory factor analysis (CFA) to examine the latent structure of negative symptoms on the 3 most conceptually contemporary measures: Scale for the Assessment for Negative Symptoms (SANS) (n = 268), Brief Negative Symptom Scale (BNSS) (n = 192), and Clinical Assessment Inventory for Negative Symptoms (CAINS) (n = 400). Study 2 examined cross-cultural invariance of the models identified in Study 1 in a total of a total n = 1691 schizophrenia patients rated on the BNSS from a diverse range of cultures and languages: Italy (n=937), Spain (n=115), China (n=163), Switzerland (n=119), and the United States (n = 357). In studies 1 and 2, CFA was used to evaluate the fit of four models: 1) a one-factor model, 2) a two-factor model with EXP and MAP factors, 3) a five-factor model with separate factors for the five NIMH consensus development conference domains (blunted affect, alogia, anhedonia, avolition, asociality), and 4) a hierarchical model with two second order-factors reflecting EXP and MAP, as well as five first-order factors reflecting the five consensus domains. In study 3, network analysis was applied to evaluate the latent structure of negative symptoms using a community-detection algorithm in 201 American and 912 Italian outpatients rated on the Brief Negative Symptom Scale. Study 4 examined the cognitive and functional correlates of unveiled negative symptom dimensions (n=146).
Results: In studies 1 and 2, which utilized CFA, one- and two-factor models provided mediocre fit for the data. The five-factor and hierarchical models provided excellent fit, with the five-factor
model being more parsimonious. In study 3, network analysis indicated 5 distinct communities
reflecting the 5 NIMH consensus domains; separation of these domains was statistically significant with reference to a null model of randomized networks. The 5 domains had distinct external correlates in terms of associations with cognition, measures of functional outcome, and reward processing tasks. Notably, the granularity observed for these associations was masked when viewed in relation to 1 or 2 dimensional models.
Discussion: These findings suggest that the recent trend toward conceptualizing the latent structure of negative symptoms as two distinct dimensions, does not adequately capture the complexity of the construct. The latent structure of negative symptom is best conceptualized in relation to the five consensus domains. These conclusions regarding latent structure are not scale dependent (the 5-domain model was supported in the SANS, BNSS, and CAINS), culturally restricted (the 5 domains were observed across 5 diverse cultures/languages), or specific to a singular mathematical approach (the 5 domains were found using factor analysis and network analysis).

O11.7. INVESTIGATING THE STRUCTURAL CORRELATES OF APATHY WITHIN THE PSYCHOSIS CONTINUUM

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Background: Apathy is one of the most severe and debilitating symptoms in schizophrenia. Evidence suggests that motivational deficits are associated with striatal and orbitofrontal structural abnormalities. However, it is unclear whether this holds across subclinical and early stages of the psychosis spectrum. Here, we investigated whether motivational deficit in healthy individuals with schizotypal personality traits (SPT) and patients with first episode psychosis (FEP) are associated with reduced striatal volume and reduced thickness of the orbitofrontal cortex (OFC).
Methods: We analyzed T1-weighted brain images from 27 healthy individuals with high schizotypal personality traits, 26 patients with FEP and 28 controls using Freesurfer (http://surfer.nmr.mgh.harvard.edu/). We evaluated volumes of the nucleus accumbens, putamen, caudate and cortical thickness of the OFC, as well as apathy and diminished expressivity from the Brief Negative Symptom Scale.
Results: In individuals with SPT apathy was negatively associated with lower volume of right nucleus accumbens (r=-.548, p=.007), and right and left putamen (right: r=-.58, p=.003: left: r=-.63, p=.001) accounting for age, gender and intracranial volume. In patients with FEP, apathy was negatively associated with reduced OFC thickness (r=-.644, p=0.001) accounting for age, gender and global cortical thickness. None of the structural abnormalities were associated with diminished expressivity. On a group level, we found a significant effect of group in the right OFC (F(2,76)=5.1, p=.009) and left OFC (F(2,76)=5.8, p=.005) with reduced OFC thickness in patients with FEP compared to individuals with SPT (right: p=.005, left: p=.011) and controls (right: p=.035, left: p=.04).
Discussion: Our findings suggest that structural correlates of apathy can already be observed in non-clinical unmedicated populations and early stages of psychosis. These distinct structural correlates of apathy may help to identify symptom specific subgroups within the psychosis continuum and foster progress to develop individualized treatments.

O11.8. RELATIONSHIP BETWEEN SCHIZOTYPY AND SUBCORTICAL BRAIN VOLUMES IN 1084 INDIVIDUALS VIA THE ENIGMA CONSORTIUM

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