

**Conclusions:** Marital satisfaction has a remarkable influence on illness representation similarity and accuracy of the perception about the partner's illness representations. Patients and their partners are more likely to form similar illness representations if symptoms are clearly observable as in the case of asthma or lung cancer. The dimension of coherence has significant within-person variations, as illness usually has a deeply personal meaning to both the patients and their partners.

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## DIFFERENCE OF SYMPTOMS NETWORKS IN EARLY AND LATE PHASE SCHIZOPHRENIA; A CROSS-SECTIONAL NETWORK ANALYSIS

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**Objective:** The functional remission or recovery of schizophrenia patients is a challenging task which relies on pharmacotherapy but also on the timing of psychotherapy and other therapeutic interventions. The study aimed to assess the difference in strength and structure of symptoms networks between early and late phase schizophrenia. Our secondary objective was to check whether the overall, positive, negative, and general symptoms severity change over the course of treatment and disorder.

**Methods:** This nested cross-sectional analysis combined the samples from two studies performed during 2014-2016 at University Psychiatric Hospital Vrapče, Zagreb, Croatia on the consecutive sample of men 30-60 years old diagnosed with schizophrenia, 85 of them in the early ( $\leq 5$  years from diagnosis), and 143 in the late phase of the illness. The study was funded by the project: "Biomarkers in schizophrenia - integration of complementary methods in longitudinal follow up of FEP patients".

**Results:** Median (IQR) age of the participant in the early phase was 36 (32-45) years and in the late phase 44 (38-49) years. Patients in the early phase had significantly higher odds for being in the symptomatic remission compared to the patients in the late-phase schizophrenia (OR=2.11; 95% CI 1.09-4.09) and had 10% less pronounced negative symptoms. The global strength, density, and structure of the symptoms network were not significantly different between the two study groups.

**Conclusions:** Negative symptoms severity change with the course of illness and differ from the early to the late phase of schizophrenia. However, the overall network of psychotic symptoms is relatively stable, and overall strengths or density and the partial relationship between particular symptoms do not change significantly. The observed worsening of negative symptoms is probably at least partially caused by the lack of clear guidelines and effective treatment options aimed specifically toward negative symptoms.

**Key words:** schizophrenia - psychosis - PANSS - networks - symptoms

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## INFLUENCE OF SERUM TESTOSTERONE LEVEL ON AGGRESSION IN WOMEN WITH SCHIZOPHRENIA

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**Background:** Unlike in female population, the effect of testosterone on aggression in men has been investigated countless times so far. A scarce number of studies have examined the effect of testosterone on aggression in women. The results obtained so far are inconsistent for some studies indicated a positive, whilst others showed a negative correlation. Since testosterone turned out to be an important factor related to aggression in men, the aim of our study was to investigate whether this correlation existed in aggressive female patients with schizophrenia.

**Subjects and methods:** The sample consisted of 120 women, aged from 18 to 45 years, diagnosed with schizophrenia by DSM-5 criteria. Those who were breastfeeding or suffered from specific hormonal or other physical disorders were excluded from the study. They were divided into two groups of 60 - those with aggressive behavior and those with nonaggressive behavior. Psychopathology was measured by several tests (Positive and Negative Syndrome Scale - PANSS, Overt Aggression Scale - OAS and PANSS Extended Subscale

for Aggression Assessment). Serum testosterone hormone assays were performed. Statistical data analysis was done by parametric statistical tests, Kolmogorov-Smirnov test, Student's t-test and simple linear regression. All data were presented as mean values and corresponding standard deviations (SD).

**Results:** Testosterone levels didn't differ significantly between aggressive and nonaggressive subjects. There were no significant differences between testosterone levels in suicidal aggressive subjects compared to nonsuicidal aggressive respondents ( $t=0.616$ ;  $p=0.540$ ). The largest number of subjects in both groups had referent testosterone levels.

**Conclusions:** Despite expecting a significant effect of testosterone levels on aggression in women with schizophrenia, conducted by previous studies, no correlation has been found. Suicidal behavior surprisingly didn't depend on the subjects' testosterone levels.

**Key words:** aggression - schizophrenia - testosterone - women

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## ONSET OF SCHIZOPHRENIA PRIOR TO THE END OF BRAIN MATURATION ALTERS GREY MATTER VOLUME LOSS

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**Background:** Brain maturation is considered completed around the age of 25, when prefrontal cortex maturation has been achieved. The aim of our study was to investigate the alterations of grey matter (GM) in patients with the onset of schizophrenia before and after the completion of brain maturation.

**Subjects and methods:** The study group included 100 schizophrenia patients, while the control group comprised 50 healthy individuals. Brain magnetic resonance imaging was acquired on a 1.5 T scanner. Voxel-based morphometry (VBM) analyses were performed between groups.

**Results:** GM of the schizophrenic patients is reduced in many regions ( $p<0.005$  FDR corrected). Most widespread reduction is detected in frontal cortex and cerebellum, the other regions being limbic cortex, insula, cuneus, precuneus, superior temporal gyrus and motor cortex. The decrease of grey matter volume (GMV) increases with the increase in number of psychotic episodes and is more pronounced in the patients with earlier onset of the disease.

**Conclusions:** The age of the onset of the disease is important for both total and relative loss of GMV. Earlier onset of schizophrenia, prior to full brain maturation results in significant reduction of GM in comparison with healthy subjects and patients with later, post full brain maturation onset of the disease.

**Key words:** schizophrenia - brain maturation - voxel-based morphometry

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## ALPHA POWER IN VISUOSPATIAL WORKING MEMORY REVEALS POSSIBLE INHIBITORY DEFICIT IN SCHIZOPHRENIA

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**Introduction:** Visuospatial working memory (vsWM) comprises a set of processes for short-term visual information storage and manipulation that is known to be at the core of many higher-level cognitive