**Introduction:** Cardiorespiratory fitness (CRF) can be directly measured and assessed by the cardiopulmonary exercise test (CPET) or estimated from different field tests as the Modified Shuttle Walking Test (MSWT). The CRF in schizophrenia (SP) population may be altered due to sex, age, body composition and core symptoms variables. However, the extent to which each domain influences CRF in this pathology is still unknown.

**Objectives:** To analyze the predictive value of body composition and core symptoms in SP for CRF.

**Methods:** Participants (N = 144, 41.7 ± 10.3 yr old) with SP were assessed with (1) body mass index and fat percentage; (2) upright bicycle ergometer using an incremental ramp protocol and the MSWT; and (3) positive and negative symptoms of the disease [“Positive and Negative Syndrome Scale” (PANSS) and “The Brief Negative Symptom Scale” (BNSS)]. In the Stepwise Multiple Regression analyses, those variables which correlated (Spearman’s Rho) significantly with each CFR scores were included.

**Results:** Lower negative symptoms (P<0.001) and positive PANSS (P=0.035) predicted VO2peak (L·min⁻¹) (R²=28.3%). Lower negative symptoms (P<0.001), positive PANSS (P=0.006) and fat body mass (P<0.001) explained VO2peak (mL·kg⁻¹·min⁻¹) (R²=46.3%). MSWT was predicted (R²=58.9%) by lower negative symptoms (P=0.001), body mass (P<0.001) and total PANSS (P=0.004).

**Conclusions:** In patients with SP significantly higher CRF was detected in those with lower negative and positive symptoms, as well as lower body mass. Exercise interventions for improving CRF should be promoting in this population for a better control of core symptoms.

**Disclosure:** No significant relationships.

**Keywords:** cardiorespiratory fitness; body composition; core symptoms; schizophrenia

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**EPP0210**

**Multivitamin, mineral, and n-3 PUFA supplementation to reduce aggression among long-stay psychiatric inpatients: a randomized clinical trial**

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**Introduction:** To assess whether multivitamin, mineral, and n-3 PUFA supplementation would reduce the number of aggressive incidents among long-stay psychiatric inpatients.

**Methods:** Participants (N = 144, 41.7 ± 10.3 yr old) with SP were assessed with (1) body mass index and fat percentage; (2) upright bicycle ergometer using an incremental ramp protocol and the MSWT; and (3) positive and negative symptoms of the disease [“Positive and Negative Syndrome Scale” (PANSS) and “The Brief Negative Symptom Scale” (BNSS)]. In the Stepwise Multiple Regression analyses, those variables which correlated (Spearman’s Rho) significantly with each CFR scores were included.

**Results:** Lower negative symptoms (P<0.001) and positive PANSS (P=0.035) predicted VO2peak (L·min⁻¹) (R²=28.3%). Lower negative symptoms (P<0.001), positive PANSS (P=0.006) and fat body mass (P<0.001) explained VO2peak (mL·kg⁻¹·min⁻¹) (R²=46.3%). MSWT was predicted (R²=58.9%) by lower negative symptoms (P=0.001), body mass (P<0.001) and total PANSS (P=0.004).

**Conclusions:** In patients with SP significantly higher CRF was detected in those with lower negative and positive symptoms, as well as lower body mass. Exercise interventions for improving CRF should be promoting in this population for a better control of core symptoms.

**Disclosure:** No significant relationships.

**Keywords:** cardiorespiratory fitness; body composition; core symptoms; schizophrenia

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**EPP0211**

**Brain controllability and clinical relevance in schizophrenia**

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**Introduction:** To characterize the control properties of functional brain network in first-episode untreated patients with schizophrenia and the relationships between controllability and psychiatric symptoms, as well as exploring the predictive value of controllability in differentiating patients from healthy controls (HCs).

**Methods:** Average and modal controllability of brain networks were calculated and compared between 135 first-episode untreated patients with schizophrenia and 135 HCs. The associations between controllability and clinical symptoms were evaluated using sparse canonical correlation analysis. Support vector machine (SVM) and SVM-recursive feature elimination combined with the controllability were performed to establish the individual prediction model.

**Results:** Compared to HCs, the patients with schizophrenia showed increased average controllability and decreased modal controllability in dorsal anterior cingulate cortex (dACC). Brain controllability predominantly in somatomotor, default mode, and visual networks was associated with the positive symptomatology of schizophrenia. The established model could identify patients with an accuracy of 0.68. Furthermore, the most discriminative features were located in dACC, medial prefrontal lobe, precuneus and superior temporal gyrus.

**Conclusions:** Altered controllability in dACC may play a critical role in the neuropathological mechanisms of cognitive deficit in schizophrenia, which could drive the brain function to different states to cope with varied cognitive tasks. As symptom-related biomarkers, controllability could be also beneficial to individual prediction in schizophrenia.

**Disclosure:** No significant relationships.

**Keywords:** schizophrenia; Resting-state functional magnetic resonance imaging; Recursive feature elimination; Controllability