

Article: 1232

Topic: EPV05 - e-Poster 05: Cognitive Neuroscience

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## Facial Emotion Recognition and Disorganization in Subjects with Schizophrenia and Alcohol, Substance Use Disorder

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**Introduction:** Schizophrenia (SKZ) is a disease characterized by positive and negative symptoms, thoughts and behaviour disorganization with a progressive socio-cognitive impairment<sup>1</sup>; deficits in facial emotion recognition (FER) represent one of the most serious problems linked to interpersonal problems<sup>2</sup>. In addition, these patients have often comorbid condition of alcohol and substances abuse<sup>3</sup>.

**Objectives:** to compare the ability of FER in patients with SKZ using alcohol and/or substances (SKZ+SUD) compared to schizophrenics without SUD (SUD-SKZ).

**Methods:** we enrolled 53 subjects (M=40, F=13) with a DSM-IV diagnosis of SKZ (SCID I). The sample was divided according to alcohol and/or substance abuse (AUS and DUS) into two groups, compared for socio-demographic and clinic characteristics (PANSS and Bell model<sup>4</sup>). We analyzed the association between abuse condition and Ekman test performance.

**Results:** SKZ+SUD (n=20; M=16, F=4) and SKZ-SUD (n=33; M=24, F=9) show a statistically significant age difference with a mean (SD) of 38.4 years (10.5) and 46.0 years (8.7) respectively (p=0.006). SKZ+SUD Ekman test score (mean=43.1, SD=6.9) was statistically higher (p=0.006) than SKZ-SUD (mean=34.6, SD=12.0). The different performance was more evident in comparison with poly-abusers (44.94±7.05 vs 12.04±34.6; p=0.002). We further noticed the role of disorganization as a mediator of the relationship between abuse and FER score (p=0.017): the proportion of the effect of abuse on Ekman test score was 48%.

**Conclusions:** In subjects with SKZ, FER seems to be less impaired in abusers than non-abusers. We also showed an important role of thoughts and behavioral disorganization as a mediator between SKZ+SUD and FER.