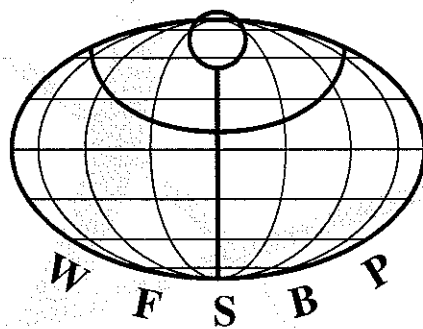


# 9th World Congress of Biological Psychiatry

28 June – 2 July 2009  
Paris, France

## ABSTRACTS



## PSYCHOTIC DISORDERS - Poster Presentations

P-35-011

### Rational for the use of neurofeedback as a rehabilitation tool to overcome neurocognitive impairments in schizophrenia

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**Objectives:** Over the past decades, there has been an enormous effort to develop various behavioral approaches for the rehabilitation of schizophrenia. Among these approaches, cognitive rehabilitation plays a key role, relying on the evidence that neurocognitive deficits are core features of the illness. The aim of this presentation is to discuss the feasibility and the rational for the use of neurofeedback as a bio-behavioural and rehabilitation tool to overcome neurocognitive impairments in schizophrenia.

**Methods:** Current literature on the efficacy of neurofeedback was reviewed. Studies focusing the neurophysiology and the use of neurofeedback in schizophrenia and disorders associated with similar neuro and social cognitive impairments (e.g., attention deficit/hyperactive disorder, Autism) were taken into account.

**Results:** Research shows that a variety of neurofeedback protocols have been used successfully in the treatment of several mental disorders. While it is clear that neurofeedback had a positive effect on behavioral and cognitive measures in different populations, few studies reported its use with schizophrenic patients. Moreover, neurophysiological abnormalities in schizophrenia are inconsistent, although some studies have shown reduction of alpha power, excessive theta and decreases on the P300 amplitudes concomitant with executive and attentional problems. These findings, as well as recent data showing the social cognitive correlates of Mu suppression, should be taken into consideration in the formulation of Neurofeedback protocols for patients with schizophrenia.

**Conclusions:** Neurofeedback maybe a promising method for the rehabilitation of people with schizophrenia, given that it was shown to be effective improving attention, executive functioning, motivation and self-control in other neuropsychiatric disorders. This review highlights the need for controlled studies to investigate the replication of these cognitive and behavioral outcomes in schizophrenia.

P-35-012

### Neurocognitive predictors of proactive coping in schizophrenia

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**Objectives:** Impairments in social/occupational functioning have been linked to impairments in neurocognition in schizophrenia. However, few studies attempted to analyse the impact of neurocognition on coping. In that sense, the aim of this study was to examine the predictive value of neurocognition for a variety of domains related to coping, focusing proactive coping in particular.

**Methods:** Sample consisted of 28 schizophrenic patients followed during a 30 months period. All participants were assessed for neurocognitive functions on the following domains: attention (d2 cancellation test), executive functioning (Wisconsin Card Sorting Test), processing speed (Digit Symbol - Coding and Symbol Search), working memory (Digit Span and Letter-Number Sequencing), calculation (Arithmetic), visuo-spatial organization and memory (Rey-Osterrieth complex figure test) and general intellectual ability (IA test). All patients completed the Proactive Coping Inventory to assess their coping skills 30 months post cognitive assessment. Data was analysed by stepwise multiple regressions with the neurocognitive measures entered as predictor variables and the Proactive Coping Inventory domains as dependent variables. A probability of 0.05 was used to enter a variable in the equation, while a probability of 0.10 was used to remove a variable.

**Results:** Several stepwise multiple regressions were performed after correlating variables in study. Visuo-spatial memory and working memory emerged as significant predictors of proactive coping ( $R^2=0.43$ ) and reflective coping ( $R^2=0.39$ ) domains; working memory was a significant predictor of the strategic planning ( $R^2=0.34$ ) domain; visuo-spatial memory was a significant predictor of the instrumental support seeking subscale ( $R^2=0.20$ ); and calculation significantly predicted the emotional support seeking subscale ( $R^2=0.26$ ). None of the neurocognitive functions were correlated to avoidance coping.

**Conclusions:** Neurocognitive status seems to play an important role on the use of proactive and strategic coping skills in patients with schizophrenia. The strengthening of cognitive skills by means of cognitive rehabilitation may be used as a way to promote adaptive coping.

P-35-013

### A new tool to evaluate anxiety in schizophrenia: Anxiety Scale in Schizophrenia (ASS)

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**Objectives:** The aim of this study was to design a scale (ASS) to specifically measure anxiety in a hetero evaluation manner and to explore its nature and subtypes in schizophrenia.

**Methods:** Following a review of literature and examination of current theories in anxiety in schizophrenia, a selection of items was done. The item selected were reformulated and submitted along The Delphi method to further evaluate questionnaire's pertinence, reliability and limitations. The Delphi Expert Committee validate the construction of a twenty-nine items questionnaire in a Likert-formatted (ASS). Each item take into account the intensity, frequency and functional consequences of the symptom. The ASS, PANSS and HAMA were administered to patient with schizophrenia in a cross sectional, multicenter study.

**Results:** Two exploratory factor analysis conduct to an item selection reducing the 29 items ASS into a 22 item scale. Three factors have been described as "somatic anxiety", "perceived and expressed anxiety", and "environmental anxiety". The 22 items ASS scale shows good reliability and validity. Cronbach's alpha statistics for each factor and the total ASS are good (respectively 0.87, 0.79, 0.71 and 0.89). The two first factors showed high correlation with the 2 Hamilton anxiety subfactors ("physical" and "psychic" respectively), assessing a good concurrent reliability. Interrater fidelity has been evaluated for 17 patients: ICC are good ( $> 0.7$ ).

**Conclusions:** ASS's reliability and validity have been established in a french schizophrenics sample. Future research using ASS will be needed to establish its responsiveness and stability.

P-35-014

### Spectral karyotyping of schizophrenia populations in Tamilnadu, South India

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**Objectives:** The focal aim of the present investigation was to study the foremost chromosomal aberrations (CA) like deletion, translocation, inversion and mosaicism in schizophrenic subjects of Tamilnadu, Southern India. Totally 65 blood samples were collected from various hospitals in Tamilnadu, Southern India. Equal numbers of physically and mentally healthy subjects were serve as a control.

**Methods:** In the present study chromosomal examinations were carry out by using the GTG banding technique on 65 schizophrenics and finally the results were ensured by spectral karyotyping (SKY) technique.

**Results:** All the patients had random numerical and structural aberrations were identified. Structural aberrations predominated and usually consisted of deletions, translocation, inversion and mosaicism of various chromosomes. Present study has detected 1, 7, 9, 11, 21, 22 and X, suggested that these chromosomal scratches are prevalent in schizophrenics. In comparison with experimental subjects, the control subjects exhibited very low levels of major CA ( $P<0.05$ ).

**Conclusions:** In the present study, the high frequency of chromosomal rearrangements designates a potential role for mitotic indiscretion coupled with the centromere in schizophrenia mental disruption. The reason for this might be that these anomalies increase risk for schizophrenia in a relatively nonspecific way, such as contributing to disruption of normal embryogenesis of the nervous system. Identification of chromosome alterations may be helpful in understanding further molecular basis research of the disease in better way.