were genotyped: rs1006737 (G/A) in CACNA1C gene, rs3800779 (G/A) in KCNH2. A subsample (296 SZ/157 HC) underwent neurocognitive assessment, which included: i) premorbid IQ (Word Association Test - Test de Acentuación de Palabras (TAP)); ii) memory (Wechsler Memory Scale (WMS-III)) and, iii) executive function (Behavioural Assessment of the Dysexecutive Syndrome (BADS)). The association between the SNPs and neurocognitive performance was explored (adjusted by sex and age) separately in patients and in controls groups.

**Results:** In our sample, we did not detect an association of CACNA1C and KCNH2 with the risk for SZ. Patients performed significantly worse than controls in all cognitive measures (p<0.005). SZ patients homozygous for the risk allele (A) of the CACNA1C polymorphism showed lower premorbid IQ (TAP scores) than patients carriers of the C allele (rs1006737: B=-1.39 p=0.027). Within HC, the minor allele (A) of KCNH2 was associated with WMS global score (rs3800779: B=3.01 p=0.010): subjects carrying the AA genotype presented better memory performance.

**Discussion:** Our findings add evidence on the role of CACNA1C and KCNH2 on modulating cognitive performance in SZ patients and HC (Huffaker et al 2009, Krug et al 2010, Zhang et al 2012, Hashimoto et al 2013). Our results in patients are in line with previous studies that suggest an association of CACNA1C risk allele on different cognitive domains. As regards to KCNH2, our results are opposite in terms of the direction of the effect observed in previous studies, probably as a consequence of the sample size and heterogeneity in methods used to assess memory. The different direction of the genetic effects among patients and controls reflects the complex relationship between genetic factors and cognitive performance variability. It is suggested that genes that enhance cognitive abilities under normal circumstances turn to be pernicious under the modulation effect of a disease (Crespi et al 2007). Further research is needed and we expect to extend the present results with neuroimaging genetics approaches.

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**T81. LONG-TERM COURSE OF COGNITIVE PERFORMANCE IN PATIENTS WITH CHRONIC SCHIZOPHRENIA**

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**Background:** Cognitive deficits are prevalent among patients with schizophrenia and are robustly associated with functioning and outcome. Although cognitive deficits are known to be present at the prodromal phase and to worsen at the onset of the disease, the long-term course of cognitive impairments is less well established. Many studies have focused on first episode psychosis with relatively short lengths of follow-up. Thus, the aim of this study is to investigate changes in cognitive performance of chronic schizophrenia patients in a variety of neurocognitive tests over a seven-year test-retest period.

**Methods:** We will contact 85 patients with schizophrenia (as defined by the DSM-IV-TR), considered clinically stable in the previous year, who participated in a study about the deficit syndrome of schizophrenia carried out in 2009 and 2010. Back then, they were recruited in two sites: an outpatient psychiatric service of a university general hospital (49 patients) and a community-based mental health service for patients with severe mental illness (36 patients), both in Campinas, Sao Paulo, Brazil. Patients will be assessed with the same instruments adopted in the first study: a questionnaire for clinical and demographic information; SAPS, SANS, Calgary Depression Scale and a battery of neurocognitive tests comprising: Digit Span Forward (DSF), Digit Span Backward (DSB), Rey Complex Figure Copy (RCFC), Rey Complex Figure Memory (RCFM), Digit symbol-coding (DSC), Picture Completion (PC), Matrix Reasoning (MR), Vocabulary (V), Trail Test A (TTA), Trail Test B (TTB), Phonological Fluency (PF) and Semantic Fluency (SF). To test differences in neurocognitive performance, and in symptoms severity at base and at follow-up we used the Wilcoxon Test.

**Results:** We present in this poster partial results. Among the 20 reassessed patients the mean age at baseline was 36.9 ± 8.9 years, mean duration of mental illness was 16 ± 10.1 years, 75% were men. They had, in mean, 10.7 ± 3.3 years of education, only 20% had any work activity, and 15% were married. Mean length of test-retest interval was 6.9 years (minimum 6 and maximum 7.7). At follow-up, 4 patients had improved their education, but only 3 (15%) had any work activity. Up to now 19 patients completed the cognitive reassessment. Severity of positive and of depressive symptoms was low at base line (mean score on SAPS 5.5 ± 4.8; mean score on Calgary 1.5 ± 1.9) and remained low at follow-up (SAPS 6.2 ± 4.4, Calgary 2.2 ± 2.2), with no significant change. Patients, as a group, had moderate negative symptoms were at baseline (mean SANS score 10.5 ± 6.9) and had their negative symptoms worsened at follow-up (SANS 14.8 ± 7.1), p=0.005. Patients had a worse performance at follow-up in 4 out of 12 tests: DSF (3.8 ± 1.5 at follow-up versus 10.1 ± 2.8 at baseline, p < 0.000), DSB (3.4 ± 1.9 at follow-up versus 4.3 ± 2.2, p=0.005), RCFC (14.8 ± 9.4 versus 30.2 ± 6.6, p < 0.000) and RCFM (5.9 ± 6.5 versus 13.9 ± 9.8, p < 0.000). In the remaining 8 tests: DSC, PC, MR, V, TTA, TTB, PF and SF, there were no significant differences in performance between baseline and follow-up assessments.

**Discussion:** Our preliminary results are derived from a small sample. Although we cannot draw definite conclusions, we identified different patterns of longitudinal course for different cognitive domains with attention, short-term memory, working memory, visual-spatial ability and executive functions presenting a decline over time; whereas other domains, such as visual memory, visual perception, learning memory, verbal comprehension, motor function, remaining stable in patient through patients’ 4th and 5th decades of life.

**T82. THE RELATIONSHIP BETWEEN SOURCE MONITORING DEFICITS AND NEUROPSYCHOLOGICAL FUNCTIONING IN SCHIZOPHRENIA**

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**Background:** Source monitoring (SM) is a metacognitive process involved in making judgments about the origin of memories, knowledge and beliefs. Many studies have demonstrated that people with schizophrenia perform more poorly on tasks of source monitoring when compared to non-schizophrenic. Although source of monitoring is considered as an important cognitive biases implicated in reality distortions/psychotic symptoms, the knowledge on its neurocognitive mechanisms is far from being conclusive. The main aim of our study was to investigate the relationship between SM and neuropsychological functioning in schizophrenia.

**Methods:** A total of 84 (43 females; mean age 42.01, SD=11.55) patients diagnosed with schizophrenia were assessed with neuropsychological tests, including executive functions, verbal memory, working memory, processing speed and attention. SM was assessed with an action memory task. Simple actions were presented to the participant verbally (text) or non-verbally (icons). Some actions were physically performed and others were imagined. Following the learning phase, participants were presented with each action as well as new ones, were asked whether the action was presented verbally or non-verbally (action’s presentation type discrimination), and whether the action was performed or imagined (self-monitoring). A knowledge corruption for self-monitoring (proportion of high confident errors on all high confident responses) was also obtained. The symptoms severity was
assessed with the PANSS. The relationship between SM biases and neuro-psychological functioning was investigated with correlation analyses.

**Results:** The correlations were found between incorrect action's presentation type discrimination and the results of test such as CTT (r=0.22, p<0.05), D2 (r=0.25, p<0.05) and Block Design (r=-0.40, p<0.01). Correlational analyses showed no relations between incorrect self-monitoring and neuropsychological functioning. Knowledge corruption for self-monitoring turned out to be correlated with WCST (r=0.22, p<0.05), CVLT (r=-0.26, p<0.05) and Backward Digit Span (r=-0.27, p<0.05). These correlations remain significant when controlled for positive symptoms severity. Incorrect self-monitoring showed a significant relation with the PANSS positive subscale (r=0.23, p<0.05). Knowledge corruption was related to PANSS disorganization subscale (r=0.25, p<0.05).

**Discussion:** In line with previous studies we found that deficits in self-monitoring are related to symptoms severity and not to neuropsychological functioning. On the other hand, deficits in action's presentation discrimination are related exclusively to neuropsychological functioning. These results suggest that the relationship between SM and neuropsychological functioning depends on the type of SM deficits. The conclusions of the study may be of clinical importance - in light of our results it might be advisable to combine cognitive remediation techniques with those interventions that focus on cognitive biases like source monitoring deficits.

**T83. PROCESSING SPEED PERFORMANCE AND FUNCTIONING IN YOUNG ADOLESCENTS EXPERIENCING AUDITORY HALLUCINATIONS**

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**Background:** Neurocognitive impairments are a prevalent aspect of psychosis which, on average, begin in early adolescents, with particular impairment apparent in speed of processing and nonverbal working memory in early stages (Kelleher et al., 2012). It is important to understand the impact of cognitive impairment on functional ability, particularly in early stages of illness which may assist in the development of targeted therapeutic strategies.

**Methods:** A population sample of 212 school going adolescents aged 11–13 years partook in the study, which included community-based adolescents who report experiencing psychotic symptoms but who were not clinically diagnosed. Psychotic symptoms were assessed using the psychosis section of the Schedule for Affective Disorders and Schizophrenia. Six cognitive domains were assessed using the MATRICS consensus cognitive battery. Functioning was assessed using the Children’s Global Assessment Scale. Six separate linear regression analyses were performed to test if each cognitive domain of the MATRICS battery predicted functioning.

**Results:** In the entire sample (including those who experienced psychotic experiences and those who did not) (n=211), speed of processing significantly explained 8% of the variance in functioning (F(1, 76) = 6.61, p = .0012, R-squared = 0.08), (Beta = 0.39, p = 0.012). When the sample was subdivided into those who ever experienced auditory hallucinations (AH) (n=62) versus those that did not (n=149), speed of processing significantly predicted 18% of the variance in functioning in the group experiencing AHS (F(2, 33) = 3.82, p = 0.032, R-squared = 0.18), (Beta = 0.43, p = 0.06). However, no effect was found in the group without AHS (F(1,40) = 1.19, p = .28). No other cognitive domain predicted functioning.

**Discussion:** Speed of processing appears to be a core cognitive deficit in psychosis which impacts on functioning in young adolescents particularly in those experiencing psychotic symptoms such as auditory hallucinations, however the variance predicted by processing speed is relatively low. This research highlights the potential of speed of processing as a possible viable target for early intervention in psychotic disorders.

**T84. DO SIMILAR COGNITIVE MECHANISMS ENCOURAGE DELUSION-LIKE IDEATION AND BELIEF IN FAKE NEWS?**

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**Background:** Increasingly, the positive symptoms of psychosis are recognized as being on a continuum with phenomena that are experienced by many members of the general population (i.e., non-clinical samples). Delusions are no exception. These fixed false beliefs, which are common in individuals with psychosis, are echoed by inflexible false beliefs in the general population that have delusion-like qualities (e.g., belief in clairvoyance). In a series of studies, we sought to determine whether belief in a particular type of disinformation (fake news) might represent a point on the same continuum as delusions and delusion-like ideation. To this end, we examined whether individuals who endorsed more delusion-like ideation were also more prone to believing fake news. We then examined whether the cognitive mechanisms behind any relationship between delusion-like ideation and fake news were similar to those associated with delusion-like ideation generally.

**Methods:** 503 participants were recruited using Amazon’s Mechanical Turk (MTurk). Participants completed a test of ability to discriminate real from fake news along with several individual difference measures. These included measures of delusion-like ideation (the Peters et al. Delusion Inventory [PDI]), engagement in analytic thinking (the Cognitive Reflection Test [CRT]), and the degree to which one values evidence in forming and revising beliefs (the Actively Open-Minded Thinking Questionnaire [AOT]). Mediation tests were conducted using the PROCESS macro for SPSS (model 4, with 5000 bootstrapped samples and bias-corrected 95% confidence intervals).

**Results:** Delusion-like ideation was positively correlated with belief in fake news (rho(501) = .20, p < .001). The relationship between belief in fake news and delusion-like ideation was partially explained by lower levels of analytic thinking ability (as measured by the CRT; completely standardized 95% CI = [.02 .07]) and lower evidence valuation (as measured by AOT scores; completely standardized 95% CI = [.01 .06]). These indirect effects accounted for 39% of the relationship between delusion-like ideation and belief in fake news. Delusion-like ideation and belief in real news were not correlated (rho(501) = 0.01, p = .927).

**Discussion:** Consistent with the notion that belief in fake news represents a point on the same continuum as belief in delusional and delusion-like ideas, belief in fake news was associated with increased endorsement of delusion-like ideation. This relationship was partially explained by factors previously associated with delusions and delusion-like ideation (e.g., lower engagement in analytic thinking, lower valuation of evidence in belief formation and revision). The link between delusion-proneness and belief in fake news (which was established for the first time in these studies) may prove useful in helping to inoculate the public against the deleterious effects of purposely-spread misinformation. Identifying individuals who might be at high risk of falling for fake news is an essential first step in this direction. The present results suggest that individuals who endorse delusion-like ideation may be one population toward which interventions aimed at preventing belief in misinformation might usefully be aimed.

**T85. PRELIMINARY ANALYSES OF THE NEUROCOGNITIVE DATABASE OF PRONIA USING UNIVARIATE STATISTICS: CLINICAL GROUP DIFFERENCES**

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Abstracts for the Sixth Biennial SIRS Conference