



Title	Comparison of Short-Term Clinical and Neurocognitive Outcome Between Atypical and Typical Antipsychotics in First Episode Schizophrenia
Author(s)	Chen, E; Chan, RCK; Chan, P; Kwong, P; Chen, RYL
Citation	The 30th Annual International Neuropsychological Society Conference, Toronto, Canada, 13-16 February 2002. In Journal of the International Neuropsychological Society JINS, 2002, v. 8 n. 2, p. 180-181
Issued Date	2002
URL	http://hdl.handle.net/10722/46980
Rights	Journal of International Neuropsychological Society. Copyright © Cambridge University Press.

J.S. BEDWELL, M. SHALANGO, G. STRAUSS, & L.S. MILLER. Accelerated Age-Related Decline of Visual Perception in Schizophrenia.

Previous research has indicated that relatives of persons with schizophrenia display reduced performance on tasks of visual processing. Additional research has indicated that persons with schizophrenia evidence an accelerated age-related decline on a specific task of visual perception, but to the authors' knowledge, no research has examined this effect in first-degree relatives—which would rule out potential confounds present when examining persons with schizophrenia directly. This study contributes to the gap in the literature and provides preliminary data from a larger ongoing study. Several computer tasks were administered to an initial sample of 23 first-degree relatives of persons with schizophrenia/schizoaffective disorder and 18 controls. The groups were well matched on age (controls: $M = 49.5$, $SD = 12.92$, range 30–75; relatives: $M = 51.0$, $SD = 11.6$, range 30–72; $t = .393$, $p = .70$), but differed on socioeconomic status, IQ estimate, and visual acuity. However, there was no indication of difference between groups in the relation of age to visual acuity (controls: $R^2 = .09$; relatives: $R^2 = .06$). Based on performance from conditions on 2 computer tests that required intense visual processing (Backward Masking and Span of Apprehension) a single summary score was created to represent accuracy. Although both groups displayed decreasing accuracy with increasing age, the data suggested that the relatives displayed an accelerated age-related decline (controls: $R^2 = .20$, relatives: $R^2 = .63$, $z = 1.73$, $p = .07$), which may reflect the influence of genes unique to schizophrenia on brain functioning. This finding supports previous research reporting a similar age-related decline in persons with schizophrenia and extends the finding to include healthy first-degree relatives.

Correspondence: Jeffrey S. Bedwell, *Clinical Psychology Program, University of Georgia, Athens, GA 30602. jbedwell@arches.uga.edu*

M. PÉREZ-GÓMEZ, I. BAEZA, S. CAÑIZARES, M. SALAMERO, M. BERNARDO, & C. JUNQUÉ. The Effect of Risperidone on Frontal Functions in First-Episode Schizophrenia.

Objective: To study the impact of the atypical antipsychotic risperidone on frontal functions in neuroleptic-naïve first-episode schizophrenic patients. **Method:** Subjects: 26 neuroleptic-naïve first episode schizophrenic patients (14 male, 12 female) were recruited from the Acute Psychiatric Ward of the Hospital Clinic i Provincial de Barcelona. They were compared with 16 healthy control subjects (matched for gender, age and education). **Procedure:** We assessed frontal functions with the following neuropsychological tasks: Trail Making Test B (TMT B), Continuous Performance Test (CPT), The Stroop Test, Tower of Hanoi, and Controlled Oral Word Association (COWA). Patients were tested before and one month after initiation of risperidone treatment. Healthy subjects were assessed at baseline and one month later to control practice effects on cognitive tests. **Statistical Analysis:** Multivariate analysis of variance for repeated measures for the frontal battery were performed to compare the results at baseline and one month after assessment. Groups were also compared at baseline by mean analyses (T-test, U-Mann-Whitney). **Results:** There were significant differences between patients and controls in the CPT, Stroop task, Trail Making B, and Tower of Hanoi at baseline. When comparison test-retests were made there was a significant difference in the Tower of Hanoi and COWA. **Conclusions:** Patients differed from control subjects in attentional tasks and executive functions at baseline. Before and after treatment there were differences in frontal functions: planning and verbal fluency.

Correspondence: Mercedes Perez-Gomez, *Department of Psychiatry and Clinical Psychobiology, University of Barcelona, Casanovas 143, Barcelona 08036, Spain. mpgomez@psi.ub.es*

J. POOLE, H. WILLIAMS, M. FISHER, & S. VINOGRADOV. The Relation of Schizophrenic Patients' Coping Strategies to Neuropsychological Functioning, Symptom Severity, and Illness Outcome.

The Coping Response Inventory (CRI) is a measure of coping strategies that individuals employ to deal with stressful life events. It has been extensively used to evaluate patients with general medical conditions, substance abuse, and mood disorders, but not those with psychotic disor-

ders. We administered the CRI to 88 clinically stable schizophrenic outpatients, to investigate whether patients' coping strategies are related to the neurocognitive and symptomatic expressions of their illness, as well as to clinical outcome. Compared to normative values, we found that schizophrenic subjects used significantly fewer proactive coping strategies (i.e., logical analysis, seeking help, positive-reframing, trying alternate solutions) and used significantly more avoidant strategies (emotional outbursts, resignation, avoidant thinking). Use of proactive coping strategies was associated with better performance on several cognitive measures (e.g., executive problem solving, facial affect recognition); use of avoidant strategies was associated with poor performance on other measures (e.g., visuospatial abilities). The strongest correlates of avoidant strategies, however, were patients' symptoms (notably, dysphoric mood and psychosis). In terms of outcome, greater use of proactive strategies and less use of avoidant strategies were associated with higher quality of life (socially and intrapsychically) and less frequent psychiatric hospitalization. This study suggests that the CRI can be a valuable adjunct to the comprehensive neuropsychological evaluation. Our findings highlight the relation of schizophrenic patients' proactive coping strategies to their neuropsychological resources, the relation of their avoidant strategies to unresolved symptoms, and the relation of both types of strategies to patients' quality of life and illness outcome.

Correspondence: Heather Williams, *1159 Regent Street, Alameda, CA 94501. hawilliams21@hotmail.com*

R.E. HARLAND, R. KRIKORIAN, P.K. SHEAR, & S.M. STRAKOWSKI. Cognitive Flexibility and Psychiatric Symptomatology in Different Domains of Psychosocial Functioning in Individuals with Schizophrenia.

Individuals with schizophrenia often experience significant impairment in autonomous living, occupational functioning, and social functioning, and both psychiatric symptoms and cognitive deficits predict these aspects of functioning. However, the extent to which each of these factors contributes to functional disability remains unclear. The purpose of this study was to determine the extent to which cognitive inflexibility, an executive function deficit observed in schizophrenia, contributed to specific domains of psychosocial functioning. Thirty-eight community-dwelling individuals (23 females, 15 males, M age = 42.3, $SD = 7.7$) with SCID-I/P diagnoses of schizophrenia were evaluated. Participants' psychotic, disorganized, and negative symptoms were rated formally using the SAPS and the SANS. Autonomous living, occupational functioning, and social functioning were rated using the Role Functioning Scale. The number of perseverative errors derived from the Wisconsin Card Sorting Test (WCST) was used as an index of mental flexibility. Bivariate correlations revealed that both the WCST and symptomatology were significantly related to autonomous living, occupational function, and social function. Partial correlations revealed that the WCST accounted for unique variance in autonomous living, while symptomatology was not significant after WCST was controlled. In contrast, symptomatology accounted for unique variance in both occupational function and social function once the WCST was partialled out, while the WCST was not a significant independent predictor. These results suggest that the predictive utility of cognitive functioning and symptomatology may differ as a function of the specific psychosocial skills examined. In particular, autonomous functioning appears to require greater cognitive flexibility than other aspects of functioning.

Correspondence: Renata Harland, *Department of Psychology, Vancouver General Hospital, 855 West 12th Avenue, Vancouver, BC V5Z 1M9, Canada. renata.harland.1hsc.on.ca*

E. CHEN, R. CHAN, P. CHAN, P. KWONG, & R. CHEN. Comparison of Short-Term Clinical and Neurocognitive Outcome Between Atypical and Typical Antipsychotics in First Episode Schizophrenia.

Treatment with atypical antipsychotics for patients with schizophrenia has been shown to have a beneficial effect on psychotic symptoms as well as a minimization of the medication side-effect profile. However, its effects for negative symptoms and neurocognitive impairments have not been consistently reported. The purpose of this study was to compare the short-

term clinical and neurocognitive outcome between the first episode schizophrenic patients treated with atypical antipsychotic risperidone and those treated with conventional antipsychotic haloperidol in a randomized open-label trial design. A total of 49 patients (29 patients in the risperidone group and 20 patients in the haloperidol group) were recruited. The Positive and Negative Symptoms Scale and High Royds Evaluation of Negativity Scale were used to assess psychotic symptoms. Neurocognitive function tests on attention, memory, and executive function were administered to patients upon admission and discharge. Medication side-effect and drop-out rate were also assessed. Despite the significant improvement of psychotic symptoms in both groups across the trial periods, risperidone did not demonstrate superiority in reduction of psychotic symptoms as well as medication side-effect profile as compared to haloperidol. However, patients in the risperidone group tended to show improvement in the Modified Wisconsin Card Sorting Test. The results indicate that positive symptomatic outcome is very good for first episode schizophrenia, whether treated with haloperidol or risperidone. Negative symptoms improved significantly but not completely in either group. Even though risperidone was used in a short-term treatment, it tends to improve general cognitive impairments in first episode schizophrenic patients as compared to haloperidol. Correspondence: *Eric Chen, Department of Psychiatry, the University of Hong Kong, Pokfulam Road, Hong Kong, China. eyhchen@hkucc.hku.hk*

K.E. WILDER-WILLIS, P.K. SHEAR, R.M. STUTZ, & S.M. STRAKOWSKI. Cognitive Correlates of Psychosocial Outcome in Bipolar Disorder.

A subgroup of individuals with bipolar disorder (BPD) experience difficulties in psychosocial functioning during periods of clinical stability. BPD is also associated with impairment in memory and executive functioning. The goal of the current study was to determine whether executive functioning and memory were associated with difficulties in primary role (e.g., ability to carry out responsibilities associated with work, school, or housework) and relationship functioning (e.g., ability to form close relationships) in euthymic patients with BPD. Twenty-four clinically stable individuals with BPD (M age = 30, SD = 7) participated in the study and were administered tests of executive functioning [Wisconsin Card Sorting Test (WCST), Trail-Making test (TMT)], verbal memory [California Verbal Memory Test (CVLT)], and visual spatial memory and constructional ability [Benton Visual Retention Test (BVRT)]. Psychosocial functioning and clinical stability were assessed with the Longitudinal Interview Follow-up Evaluation (LIFE) and the presence of depressive, manic, and psychotic symptoms were assessed with the Hamilton Depression Scale (HAM-D), Young Mania Rating Scale (YMRS), and Scale for the Assessment of Positive Symptoms (SAPS), respectively. Recognition memory ($p < .01$) and visual-spatial constructional skills ($p < .01$) made significant, independent contributions to primary role functioning after controlling for the effects of demographic and clinical variables. Sequencing skills made a significant and independent contribution to relationship functioning after controlling for the effects of demographic and clinical variables ($p < .04$). The findings suggest that executive functioning and memory contribute to deficient psychosocial functioning in euthymic patients with BPD.

Correspondence: *Kelly Wilder-Willis, 429 Dyer Hall, Department of Psychology, University of Cincinnati, Cincinnati, OH 45221-0376. shearpk@email.uc.edu*

G.E. GETZ, M. STEED, K.E. WILDER-WILLIS, M.E. ZIMMERMAN, K. BATES-COREY, A.J. JAK, P.K. SHEAR, & S.M. STRAKOWSKI. Nonverbal Memory Impairment in Mania and Euthymia.

Recent research has indicated that individuals with bipolar disorder (BPD) exhibit cognitive dysfunction, which appears to persist in approximately one-third of patients even during euthymia. We have reported that manic patients exhibit nonverbal memory impairment, including perseverative errors, in the context of spared visuospatial perception and construction. The goal of the present study was to re-examine data for the manic sample, this time including a euthymic comparison group, to determine if nonverbal memory deficits are specific to periods of abnormal mood. Thirty

healthy participants, 36 manic patients with BPD, and 24 patients with BPD in remission were administered the Benton Visual Retention Test (BVRT) as part of a comprehensive neuropsychological battery. In the recall condition, after covarying for the copy condition, there were significant group differences in errors ($p < .05$) and correct designs ($p < .05$). The manic patients performed worse than the healthy volunteers ($p < .02$ for both scores). The euthymic patients performed comparably to the manic ($p > .27$ for both scores) as well as the control groups ($p > .17$ for both scores). Further, the manic patients made more perseverations ($p < .003$) and rotations ($p < .05$) than the control group. The euthymic patients also made significantly more perseverations ($p < .04$) than the control group, but there were no significant differences between euthymic and manic patients on any error type ($p > .13$ for all cases). This study indicates that patients with BPD, even while in remission, demonstrate subtle nonverbal memory impairment.

Correspondence: *Glen Getz, Departments of Psychiatry and Psychology, Bipolar and Psychotic Disorders Research Program, University of Cincinnati, Cincinnati, OH 45267-0559. getzg@email.uc.edu*

D. MATTHEWS & L. FISHER. Pathological Apathy With Episodic Explosiveness: A Case Study.

Pathological apathy is sometimes referred to as "subcortical dementia," "pseudodepression," the "indifference reaction," or the "lateral frontal convexity syndrome." It is a neuropsychiatric syndrome seen in cerebral vascular disorders or neoplastic lesions, characterized by lack of initiative, poor spontaneity, flat affect, decreased motivation, and lack of interest in usual activities. There may be unusual cheerfulness and anosognosia. In some cases, there may be some associated depression, but the loss of drive and ambition and lack of concern over these dramatic changes is not due to a depressive disorder. Lesions of the right frontal convexity, right temporal lobe, or posterior internal capsule can produce this type of pathological apathy. The present case study presents a 28-year-old male patient who suffered polysubstance-induced lesions in frontal and temporal regions detected by neurophysiological abnormalities. Cortical functions including basic intellect, language, and perceptual motor skills were intact but he was severely disabled by chronic apathy. He had been a college student, athlete, and musician, but subsequently was no longer capable of living or working independently. Diagnostic test results and treatment plans will be reviewed for this classic case of pathological apathy.

Correspondence: *Larry Fisher, Ph.D., Comprehensive Neurobehavioral Systems, 2501 Cypress Creek Rd., Cedar Park, TX 78613. cnsgroup@swbell.net*

K.D. HIATT, A.R. LORENZ, & J.P. NEWMAN. Lateralized Information-Processing Deficits in Psychopathic Offenders.

Psychopaths demonstrate failures using emotional information and inhibitory threat cues. These performance deficits may be related to poor coordination of left- and right-hemisphere processing resources (Hare, 1998; Hiatt, Lorenz, & Newman, 2001), and may be particularly evident under conditions that primarily activate the left hemisphere (Bernstein, Newman, Wallace, & Luh, 2000; Kosson, 1998). Experiment 1 assessed emotion facilitation in 31 psychopaths and 43 controls while they performed a lexical decision task that differentially activated the left and right hemispheres by requiring either right- or left-handed responses. Experiment 2 examined the performance of 9 psychopaths and 41 controls on a passive avoidance task in which the go/no-go stimuli were presented unpredictably on either the left or the right side of the monitor and all responses were made with the right hand. In Experiment 1, a significant Psychopathy \times Response Hand interaction [$F(1,72) = 4.00, p < .05$] indicated that psychopaths displayed normal emotion facilitation when responding with the left hand, but nonsignificant facilitation when responding with the right hand. In Experiment 2, a significant Psychopathy \times Side interaction [$F(1,48) = 5.01, p < .05$] revealed that psychopaths' ability to discriminate between go- and no-go cues was significantly worse for stimuli on the left as opposed to the right side of the monitor. As the right hemisphere processes both emotional and left visual field information, these studies suggest that psychopaths' performance abnormalities may be related to