Abstract book

Editor convidado: Daniel Martins de Barros

SÃO PAULO, BRAZIL
5 – 7 AUGUST 2011

construct are still unclear when considering EF research in schizophrenia. The first one concerns EF organization and the second is related to the executive control of other cognitive processes. Several authors tend to agree with the unitary concept of executive process. However, another concept presumes that these processes are fractionated and may have different implications in behavior. The main aim of present study was to systematically review the literature on EF heterogeneity in schizophrenia to identify common dimensions that may be used as targets for cognitive interventions. : A literature search was performed using Medline with the following terms schizophrenia, schizoaffective, executive function, frontal lobe, frontal skills, executive skills, profile, frontal profile, executive profile, heterogeneity, specific deficit, component skills, cluster analysis, and factorial analysis. Only studies with original data evaluating the EF heterogeneity (at least one test for more than one dimension and/or ability) were included. Complex problem-solving tests without specifying scores for different EF dimensions were not included. **Results**: Of the 17,833 studies identified, 39 studies met all inclusion criteria. Six executive dimensions were identified: (1) Inhibition aspect, the capacity to deliberately inhibit automatic and dominant responses; (2) Working memory/updating capacity, which refers to the capacity to maintain temporal tags in mind, monitoring the items held with the purpose to replace them for newer ones when necessary; (3) Set shifting, which refers to the common cost taken to perform tasks that require disengagement from one process in order to undertake another; (4) Stimulus-driven responding, related to the incapacity to guide behavior by internal representation/intentions and, therefore, to primarily respond to external stimuli; (5) Output generation capacity. This ability refers to the high level of attentional control, which involves attentional allocation to regulate and maintain output of performance; (6) Abstraction. This dimension takes place when complex tasks are performed. **Discussion**: Although dissociated, poor performance in part of these factors (e.g. abstraction, output generation, and set shifting) may be obscured because it probably requires multiple cognitive processes rather than a single, unitary function. Furthermore, other idiosyncratic task requirements not related to target executive function might contribute to the formation of part of these factors, suggesting a strong sensibility to detect global EF impairment, but inappropriate specificity regarding the specific stage in which breakdown of EF processes takes place. This review demonstrates the scarcity and limitations of the methods used to investigate EF in schizophrenia and suggests a hybrid approach focusing on factor analysis mixed with the attempt to map aspects of the case study approach onto group analysis. Advantages of using this approach include the possibility to investigate EF organization among patients, relatives, and controls; to investigate relationships involving different EF and other features such as biological markers or functional outcome; to confirm previous theoretical models and testing the inclusion of new mechanisms in traditional models.

IQ measure in relation to the diagnosis and treatment of schizophrenia

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Background: Cognitive deficit is a core feature of schizophrenia, influencing the clinical presentation and daily functioning of patients. It is usually related to negative and disorganized symptoms of the disease. Most studies in this field has analyzed specific aspects of cognitive functions, with only a few including IQ as a general measure of global functioning1. According to a metanalysis, subjects with schizophrenia are one or more standard deviations (SD) below the average of general population2, and the IQ deficit appears before the onset of psychotic symptoms. Some studies have shown that a lower premorbid IQ is likely to be a risk factor for psychotic episodes. However, IQ measurement is rarely used as marker or follow-up tool in patients with schizophrenia. In this study, we assessed the IQ of patients with recent onset schizophrenia, during acute exacerbation, within one week of the beginning of antipsychotic treatment and re-assessed after 12 weeks of treatment, after the remission of acute psychotic symptoms. : Twelve subjects with recent-onset schizophrenia (7 males, 5 females), with mean age of 26.08 (± 8.40) years, had their IQ assessed through the Wechsler Abbreviated Scale of Intelligence (WASI) at baseline and after 12 weeks. Mean time since diagnosis was 1.58 (± 2.54) years. Two subjects had a history of substance abuse (cannabis), but none were on active use. Five (41.7%) were initially treated with FGA and 7 (58.3%) were treated with SGA since the beginning. All patients were participating in a clinical trial aimed to assess time to response to antipsychotics. The steps of IPAP algorithm (www.ipap.org) was used to treat all the patients. **Results**: Baseline PANSS was 86.92 (± 14.64), decreasing to 50.36 (± 17.61) (p < 0.001) after 12 weeks of treatment with antipsychotics, while there was no difference between baseline measure of IQ (75.92 ± 14.88) and after 12 weeks (76 ± 12.79). There was no correlation between PANSS total score and IQ measure, neither with negative or positive subscales, according to Spearman correlations matrix, Bonferroni corrected. Among the 12 analyzed subjects, two were considered refractory after 12 weeks, and had a slightly decrease in IQ measure (from 84.50 ± 16.23 to 81.00 ± 21.21). However, due to the limited number of refractory it is not possible to make any conclusion from this IQ decrease. **Discussion**: The impairment intellectual of abilities are not just a consequence of the pathological process of disease onset. IQ measure remained stable during the trial, regardless of the PANSS scores. It is possible that refractory patients have a more severe cognitive impairment that can be detected at the beginning of treatment. IQ is one of the markers of increased risk of developing schizophrenia; however, this aspect must be further studied in a larger trial. References: 1. Leeson VC, Barnes TR, Hutton SB, Ron MA, Joyce EM. IQ as a predictor of functional outcome in schizophrenia: a longitudinal, four-year study of first-episode psychosis. Schizophr Res. 2009;107(1):55-60. 2. Heinrichs RW, Zakzanis KK. Neurocognitive deficit in schizophrenia: a quantitative review of the evidence. Neuropsychology.1998;12(3):426-45.

Digits span tests in siblings of patients with schizophrenia: a lack of association

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Background: A wide range of neurocognitive deficits have been shown in schizophrenia (SZ). Recently, these impairments have been linked with BDNF gene-expression, suggesting neurocognitive deficits as potencial endophenotypes for SZ. Neurocognitive studies with first degree non-psychotic relatives of patients with SZ have show cognitive differences of this group compares to healthy controls, reinforcing the need of more studies to understand endophenotypes. In this study, we assessed cognition of SZ non-psychotic siblings with Digit Span of Wechsler Adult Intelligence Scale (WAIS) and compared with paired healthy controls. : Siblings (SB) of patients with SZ were recruited from the Schizophrenia Program at Hospital de Clinicas de Porto Alegre (HCPA). The patients were diagnosed with SZ by DSM-IV-TR. Thirty-three SB were selected to participate in the study. Exclusion criteria were presence of any psychiatric or substance dependence disorders in the last year and history of head trauma with extended loss of consciousness. Forty-three health controls were recruited from the community. A trained psychologist applied the WAIS Digit Span Test, which includes digits forward and digits backward. General linear model univariate analysis of covariance was performed. Digit span, digits forward and digits backward were the dependent variables. Age, sex and scholarity were covariates. **Results**: Response in Digit Span (p = 0,62), digits forward (p = 0,78) and digits backward (p = 0.98) were not different between siblings and healthy controls. **Discussion**: Our results have shown a similarity between SZ patients' siblings' subjects and healthy controls at Digit Span Test results. Studies with SZ patients' siblings using Digit Span Test have shown significant differences, but a small effect size, in larger samples than ours, once a small effect size would reflect a limited clinical effect. Our results and literature findings bring the questioning of the Digit Span Test feasibility to assess siblings. However, there is a need of further studies in siblings' cohorts to validate these results.

Schizoaffective disorders are closer to schizophrenia than bipolar disorder in rehospitalization rates: a 7-year outcome study

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Background: The diagnostic cathegory of Schizoaffective Disorder (SAD), as a distinct entity between Schizophrenia (SZ) and major mood disorder, display low reliability and need substantial consideration. SAD (F25) and Schizophrenic Disorder (SD) (F20) share similar symptoms with subtle differences regarding balance among affective and psychotic symptoms and outcome. : To expand the issues of differences among SAD and SD we compared 7-year (2000-2007) rehospitalization rates (RHR) and length of stay (LOS) in the population of all patients (42,088 adults) in the State of Rio Grande do Sul (Southern Brazil) covered by the Public Heath System – SUS, with ICD-10 diagnosis of SD, SAD and Bipolar Disorder (BD). Results: BD subgroup displayed lower LOS (27,65 days) than SAD (39,63 days) and SD (43,8 days). RHR in 90, 180 and 365 days were also similar among SAD and SD, and higher than in BD, with similar pattern in survival curves. **Discussion**: The similar pattern of cumulative survival among SAD and SD differing from BD demonstrates that these two first disorders have similar outcomes regarding time to rehospitalization, and generates additional arguments for the need to the review the adequacy of keeping SAD as a different disorder or put it inside SD. This change will increase the access of SAD to adequate care, with relatively small increase in overall costs for the Medical Care System (with the inclusion of 10% of newly eligible patients to special treatments as high cost drugs and extended benefits such as bus passes, food tickets and financial support). Our results can contribute for this discussion of DSM-V and ICD-11, according the criteria used to examine the similarity between disorders and clusters. SZ and SAD show similar rehospitalization rates and these characteristics could be included into two validators items for a disorder: course of illness and treatment response.