

Neuropsychological Dysfunctions in Schizophrenia Patients

Raj Kishore Ram*

Dept. of Psychology, Gossner College, Ranchi, Jharkhand

Jai Prakash**

Ranchi Institute of Neuro-Psychiatry and Allied Sciences (RINPAS), Kanke, Ranchi., (Jharkhand)

Abstract

Background: Neuropsychological dysfunctions encompasses the inability to pay proper attention, process information quickly, remember and recall information, respond to information quickly, think critically, plan, organize, solve problems and initiate speech and the patients with schizophrenia have been found to exhibit neuropsychological dysfunctions. **Aim:** Present study has been under taken with the aim to assess the neuropsychological dysfunction in schizophrenia patients. **Method:** The sample consists of 30 schizophrenia patients and 30 normal control subjects, age ranges from 20 to 50 years based on purposive sampling technique. GHQ-12 and BPRS have been used as screening tools. Wisconsin Card Sorting Test was used to assess neuropsychological dysfunctions in schizophrenia patients. **Result:** Schizophrenia patients exhibited executive dysfunctions as compared to normal controls on WCST. Schizophrenia patients took more number of trials and committed more errors. Their neuropsychological profile include perseverative responses with errors, more nonperseverative errors, low conceptual level response, completed less categories, taken more trials to complete first category, failure to maintain set and low learning to learn scores, which demonstrate impaired attention and concentration, problem in flexibility, inability in set shifting, impaired planning and organizing in the patients with schizophrenia.

Key Words: *Neuropsychological Dysfunctions, Schizophrenia, WCST*

Authors: *Raj Kishore Ram, Assistant Professor, Dept. of Psychology, Gossner College, Ranchi, Jharkhand

** Jai Prakash, Additional Professor of Clinical Psychology, Ranchi Institute of Neuro-Psychiatry and Allied Sciences (RINPAS), Kanke, Ranchi., (Jharkhand), M.No. 91-9934582290,
Email: pdrjai@gmail.com

Reference

- Bhatia, T., Garg, K., Geile, M. P., Nimgaonkar, V. L. and Deshpande, S. N. (2009). Executive functions and cognitive deficits in schizophrenia: comparison between probands, parents and controls in India. *Journal of Postgraduate Medicine*, 55 (1), 3-7.
- Boeker, H., Kleiser, M., Lehman, D., Jaenke, L., Bogerts, B. and Northoff, G. (2005). Executive dysfunction, self, and ego pathology in schizophrenia: an exploratory study of neuropsychology and personality. *Comprehensive Psychiatry*, 47 (1), 7-19.
- Chan R. C. K., Chen E. Y. H., and Law C. W., (2004). Specific executive dysfunction in patients with first-episode medication-naïve schizophrenia. *Schizophrenia Research*, 82, 51-64.
- [Dalal](#), P. K. and [T. Sivakumar](#) (2010). Cognitive psychiatry in India. *Indian Journal of Psychiatry*, 52 (1), 128-135.
- Das, R. K., Moore, B. P., Nayak, A. and Patel, R. R. (2007). Relationship of cognitive function in patients with schizophrenia in remission to disability: a cross-sectional study in an Indian sample. *Annals of General Psychiatry*, 6 (19), 1-8.
- Divya, P., Prakash, J. and Singh, A. R. (2007). Neurocognitive impairment in schizophrenia. *Industrial Psychiatry Journal*, 16 (2), 112-115.
- Donohoe, G., Corvin, A. and Robertson, I. (2006). Evidence that specific executive functions predict symptom variance among schizophrenia patients with predominantly negative symptom profile. *Cognitive Neuropsychiatry*, 11 (1), 13-32.
- Elliott, R., McKenna, P. J., Robbins, T. W., and Sahakian, B. J., (1995). Neuropsychological evidence for frontostriatal dysfunction in schizophrenia. *Psychological Medicine*, 25, 619-630.
- Fullam, R. S. and Dolan, M. C. (2008). Executive function and in-patient violence in forensic patients with schizophrenia. *The British Journal of Psychiatry*, 193, 247-253.
- Gold, J. M., Carpenter, C., Randolph, C., Goldberg, T. E., Weinberger, D. R., (1997). Auditory working memory and Wisconsin Card Sorting Test performance in schizophrenia. *Archives of General Psychiatry*, 54:159-165.
- Goldberg and Miller (1979). *Manual of the General Health Questionnaire*, London, Oxford University Press.
- Heaton, R. K. (1981). *Wisconsin Card Sorting Manual*. Odessa, Florida: Psychological Assessment Resources, Inc.
- Jimenez, R. R., Bagny, A., Martinez, M., Ponce, G., Morla, M. S., Aragues, M., Rubio, G., Arriero, M. A. J., Santos, J. L. and Palomo, T. (2010). Executive function in schizophrenia: influence of substance use disorder history. *Schizophrenia Research*, 118 (1), 34-40.
- Kerns J. G., Nuechterlein, K. H., Braver, T. S. and Barch D. M. (2008). Executive functioning component mechanisms and schizophrenia. *Biological Psychiatry*, 64 (1), 26-33.
- Leeson, V. C., Barnes, T. R. E., Harrison, M., Matheson, E., Harrison, I., Mutsatsa, S. H., Ron, M. A. and Joyce, E. M. (2010). The relationship between IQ, Memory, Executive Functions and Processing Speed in recent-onset Psychosis: 1 Year Stability and Clinical outcome. *Schizophrenia Bulletin*, 36 (2), 400-409.
- Matsuda, Y., Sato, S., Hatsuse, N., Watanabe, V., Kishimoto, T. and Ikebuchi, E. (2014). Neurocognitive functioning in patients with first episode schizophrenic 1 year from onset in comparison with patients 5 years from onset. *International Journal of Psychiatry in Clinical Practice*, 18, 63-69.

- Nayak, S. G. (2009). Executive functions in schizophrenia: Defining and refining the constructs. *UC San Diego Electronic Theses and Dissertations*.
- Overall, J. E. and Gorham, D. R. (1962). The brief psychiatric rating scale (BPRS-16). *Psychological Rehabilitation*, 10, 799-812.
- Prakash, J. and Ram, R. K. (2010). Executive Dysfunctions in Schizophrenia Patients. *RINPAS Seminar*, 2, 310-313
- Trivedi, J. K. (2006). Cognitive deficits in psychiatric disorders: Current status. *Indian Journal of Psychiatry*, 48, 10-20.
- Tyson, P. J., Keith, R., Laws, K. R., Flowers, K. A., Mortimer, A. M. and Schulz, J. (2008). Attention and executive function in people with schizophrenia: relationship with social skills and quality of life. *International Journal of Psychiatry in Clinical Practice*, 12 (2), 112-119.
- Wongupparaj, P., Kumari, V. and Morris, R. G. (2014). Executive function Process mediate the impact of working memory impairment on intelligence in schizophrenia. *European Psychiatry*, 26 (14), 110-112