

# MECHANICAL REASONING IN THE MALE BRAIN, A PROTECTED FUNCTION

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## Abstract

The Schizophrenia Spectrum is a set of abnormalities that occur in the encephalon causing cognitive losses of various levels and physiological changes over the years that and end up being noticeable in exams. These neurophysiological changes lead to changes in behavior and of the perception of reality and the environment, thus harming the interaction between the person and the world. The difficulty of early diagnosis causes delayed treatment, which causes damages greater for the brain and for the person. Alcoholism is an insidious disease of uncertain progression that causes cognitive losses and neurophysiological changes. Chemical dependence on drugs (marijuana, cocaine, heroin and crack) causes biochemical changes in the brain causing significant cognitive losses, leading to behavioral changes and perception of reality and the environment, impairing the interaction between the person and his environment. The difficulty of awareness about the schizophrenia spectrum symptoms and about the dependence, whether alcohol, drugs or both, makes early diagnosis difficult, makes treatment impossible and increases neuronal and personal losses. However, the brain, as an intelligent, self-regulated, self-sufficient, and plastic system, tries to preserve its functions in the best possible way. Treatment should not be neglected or given up by the families or friends of these people, as their recovery and independence is very important for their self-regeneration. This research shows the results of a cognitive comparison survey among a group composed of 9 volunteers with schizophrenia, organized and owners of their mental faculties, hospitalized for treatment and having passed the outbreak episode period; a group of 11 volunteers, hospitalized for treatment of drugs dependence and having passed the detoxification period; a group of 19 volunteers, hospitalized for treatment of drugs and alcohol dependence and having passed the detoxification period; a group of 15 volunteers, hospitalized for treatment of alcohol dependence and having passed the detoxification period and a group of 16 healthy volunteers outside of the hospital. Schooling are equated in corrections indices. All tests were applied and corrected by a qualified and accredited professional in accordance with the rules in force in the country. From the analysis of Boxplot, as shown in Figure 1, it can be seen that the performance of volunteers undergoing treatment for schizophrenia spectrum and the volunteers undergoing treatment for dependences has similarly performance to that of the volunteers of the healthy group, with 95% confidence interval and p-value 0,405, characterizing high similarity between the groups for this brain function tested, suggesting preservations for this function in despite of others damages.

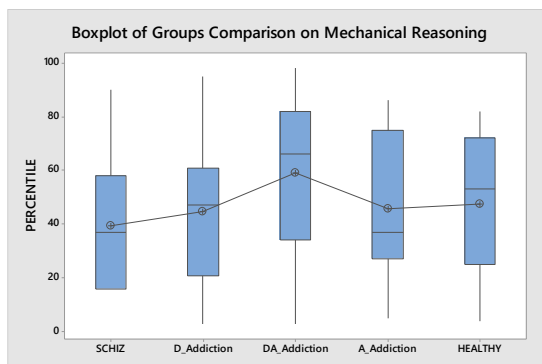


Figure 1: Overall Performance

**Keywords:** schizophrenia, alcoholism, drugs, brain performance, addiction, neurology, neuroscience



### Biography

Bernadete has completed his University undergraduate at Electrical Engineering and MSc in Biomedical Engineering studies from Technological Federal University of Parana, Curitiba, Brazil. She is a MBA student of the Information and Communication Management in the same school, where she is professor. She has published three papers in three Congress.

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