Efficacy of Web-Based Cognitive Remediation Therapy in Psychiatric Inpatients with Psychotic Disorders

"Boosting Brainpower, Improving Lives"

This study evaluates the effectiveness of **Cognitive Remediation Therapy (CRT)**—an evidence-based approach designed to improve cognitive functioning in individuals with major mental illnesses such as schizophrenia, schizoaffective disorder, and bipolar disorder with psychotic features. Cognitive impairments in these conditions often affect memory, attention, processing speed, and executive functioning, limiting recovery and everyday functioning.

Led by **Professor Mansfield Mela** and collaborators, the research implemented a **15-week, 30-session CRT program** using the web-based *Happy Neuron* platform. Each 90-minute session included 50 minutes of individualized, game-based cognitive exercises that progressively increased in difficulty, followed by a facilitator-led "bridging session." These discussions helped participants connect cognitive skills practiced in the program—such as problem-solving, attention, and memory—to real-life challenges.

Participants were psychiatric inpatients meeting strict inclusion criteria, including stabilization from acute symptoms, abstinence from substances for at least one month, and the capacity to use a tablet device. The cohort included **Indigenous participants** and **forensic-involved patients** (e.g., those found Not Criminally Responsible).

Cognitive outcomes were measured pre- and post-intervention using the **MATRICS Consensus Cognitive Battery (MCCB)**, which assessed domains such as attention/vigilance, working memory, verbal and visual learning, reasoning and problem-solving, social cognition, and an overall composite score. Validated subtests—such as the Trail Making Test, Hopkins Verbal Learning Test, and Mayer-Salovey-Caruso Emotional Intelligence Test—provided detailed insight into changes across cognitive domains.

By capturing pre-to-post changes, the study seeks to determine whether structured, web-based CRT can meaningfully enhance cognitive functioning and, in turn, improve treatment outcomes, rehabilitation potential, and quality of life for psychiatric inpatients.