

INVESTIGATING THE NEUROCOGNITIVE, NEUROEMOTIONAL, AND BEHAVIOURAL PREDICTORS OF MENTAL HEALTH COMPLEXITY AMONG CHILDREN AND YOUTH

Caitlyn Gallant¹, Nathalie Gauthier¹, & Dawn Good^{1,2}

¹Department of Psychology, ²Centre for Neuroscience, Brock University

Objectives: Children and youth with dual diagnoses (i.e., an intellectual/developmental disability [IDD] and a mental disorder), neurological compromise (e.g., traumatic brain injury [TBI]), or comorbid mental health needs are poorly understood (Charlot, 2016a); many of the behaviours/symptoms they exhibit meet the diagnostic criteria for multiple syndromes (Charlot, 2016b), often leading to misdiagnoses, misattributions and prolonged involvement with the healthcare system (Kessler et al., 2010). Indeed, across a number of studies it has been shown that the behavioural profiles of individuals with a history of TBI are easily confusable with other disorders, such as Attention Deficit/Hyperactivity Disorder (ADHD) or Major Depressive Disorder (MDD), despite their differing etiologies (e.g., Jorge, & Arciniegas, 2014; Schachar, Park, & Dennis, 2015). Similarly, it has been reported that individuals with IDD are more likely to be hospitalized and stay longer in inpatient psychiatric units than individuals without disabilities (Charlot, 2016b), amplifying the potential treatment response challenge that symptom overlap with psychiatric presentations may otherwise reflect. Community-based mental health facilities predominantly address social/environmental determinants and externalized expressions of mental health, while the contributions of neurocognitive and neuroemotional factors remain a secondary focus. Neuropsychological assessment can be a valuable tool to clarify the extent to which an IDD may dampen overall performance across neurocognitive domains and contribute to psychopathology. Thus, this research investigates neurocognitive, neuroemotional and behavioural contributions to mental health complexity.

Methods: Using archival data from Pathstone Mental Health in St. Catharines, Ontario, a random sample of children and youth between the ages 0 and 18 were examined. All caregivers completed the Brief Child and Family Phone Interview (BCFPI; Cunningham, Boyle, Hong, Pettingill, & Bohaychuk, 2009), the Conners' Rating Scales (Conners, 2001), and the Child Behavior Checklist (CBCL; Achenbach & Edelbrock, 1983) to provide an index of children's externalizing and internalizing symptoms, family environment, and social participation. Neurocognitive measures were available for fewer than half of the sample, using the Wechsler Intelligence Scale for Children (WISC-IV; Wechsler, 2003) and the Kaufman Brief Intelligence Test (K-BIT; Kaufman, & Kaufman, 1990); data on the total number of program admissions, total number of times services were accessed, and duration of service use were obtained as indicators of complexity.

Results: Although mental health complexity was found to be unrelated to social and demographic factors, such as sex, socioeconomic status, and caregiver education, $p > .05$, it was associated with caregiver-reports of externalizing behaviour. In particular, children and youth with higher conduct scores were found to be involved in more programs and also had more diagnoses at intake. Children's neurocognitive and neuroemotional functioning was unrelated to service use, despite its relationship with externalizing symptoms.

Discussion/Conclusion: These findings provide preliminary evidence that neurocognitive and neuroemotional challenges can inform the child and youth's behavioural status but are not being effectively, or reliably, incorporated into the treatment program. By developing an in-depth understanding of this complex population, this research takes a proactive approach and aims to reduce the number of treatment-resistant cases.

Correspondence:

**Caitlyn Gallant, M.A., Ph.D. Candidate, Brock University
Department of Psychology
1812 Sir Isaac Brock Way
St. Catharines, Ontario L2S 3A1
cg14xx@brocku.ca**

**Nathalie Gauthier, M.A., Ph.D. Candidate, Brock University
Department of Psychology
1812 Sir Isaac Brock Way
St. Catharines, Ontario L2S 3A1
nathalie.gauthier2@brocku.ca**

**Dr. Dawn Good, Ph.D., C.Psych., Brock University
Department of Psychology, Centre for Neuroscience
1812 Sir Isaac Brock Way
St. Catharines, Ontario L2S 3A1
dgood@brocku.ca**