Title: The Relationship between Physical, Socioemotional, Intellectual, and Behavioral Deficits and Family Impact across Diagnostic Groups

Authors: Kristen Medeiros and Micah Mazurek

Introduction: It is widely understood that neurodevelopmental and mental health disorders do not occur in isolation; child deficits impact the family members a great deal. Research has focused mainly on individuals with comorbid Autism Spectrum Disorders, ADHD, or intellectual and developmental disabilities, and consistently, these disorders have been linked to poorer quality of life for the child and family, such as substantial stress, difficulties with intra-family interactions, and mental health problems (Peasgood et al., 2016; Schei et al., 2016). Few studies have attempted to pinpoint which specific aspects of the disorders are related to these poorer family outcomes, or the results have been limited to a certain age group or disorder. For example, a few recent studies on children with ADHD have found internalizing and externalizing problems (Armstrong et al., 2015; Green et al., 2016), as well as gender and age (Thorell & Rydell, 2008) explained a large amount of variance in family outcomes. One study on adults with intellectual disabilities found that concurrent depressive symptoms predicted poor maternal health outcomes in the future (Esbensen et al., 2006). Most of the studies to date have either no comparison group or use a typically developing population to draw conclusions about the impact of a particular disability on family outcomes. In addition, most studies report on data from a small range of ages. Few studies have explored these relationships in a large sample with consistent measurements across age groups that allows for comparisons between diagnostic conditions. The purpose of this study is to investigate how assorted types of deficits impact a family’s mental health, work life, and home life differently for various diagnostic groups.

Method: Data for this study came from the 2009-2010 National Survey of Children with Special Health Care Needs (NSCSHCD), which included youths ranging in age from 2 to 17 years old, and 67.4% male, who had a diagnosis of either ADD/ADHD (n=4,895), Anxiety (n=1,011), Intellectual or Developmental Delay (n=688), Depression (n= 376), Autism (n=367), or Conduct Disorder (n=316). Respondents provided information on the child’s conditions and challenges, as well as demographic and socioeconomic information, and family outcomes. Exploratory Factor Analyses will be performed on the five constructs of interest: Behavioral Deficits (e.g., behavior problems and adaptive functioning), Social-Emotional Deficits (e.g., anxiety and depression, making and keeping friends, and mental health counseling), Physical Deficits (e.g., coordination, use of hands, occupational or physical therapy, and use of assistive technologies for walking), Cognitive Deficits (e.g., learning and attention, speaking and communicating, and intellectual disabilities), and Family Impact (e.g., mental health, respite, hours of care, work life, and in-home care). Eugene values above 1 and scree plots from a Principal Components Analyses will determine the number of factors for each construct. Then, using Structural Equation Modeling, the legitimate factors for the four deficit constructs will be entered into a path analysis model with the Family Impact construct as the outcome variable. Age and gender will be included as covariates. Model fit and standardized regression coefficients will be compared across the 6 diagnostic groups to determine which deficits impact the family the most for each group.

Results: Using recommendations put forth by Little (2013), model fit will be evaluated using $\chi^2$ (non-significant $\chi^2$ is indicative of acceptable model fit, but $\chi^2$ is sensitive to sample size and model complexity), Comparative Fit Index and Tucker Lewis Index (values at or greater than .90 indicate acceptable model fit), Root Mean Square Error of Approximation (values at or below .08 suggest acceptable model fit), and Bayesian Information Criterion and Akaike Information Criterion (lower values suggest better model fit). Once the best fitting model has been determined for each diagnostic group, any significant standardized regression coefficients will be interpreted.
Discussion: This research will shed light on the relative relationship between child deficits and family impact among those with varying types of neurological and mental health conditions. With a large, nationally representative sample, we can draw conclusions about the importance of physical, social-emotional, behavioral, and cognitive impairments on the mental, work, and family life of families of youth with different diagnostic conditions. Ultimately, by focusing on the deficits that are heavily linked to poor family outcomes for specific diagnostic groups, we can encourage better targeted interventions for these families.

References/Citations: