

60 Family Functioning Effects on Cognitive Abilities in Children with Sickle Cell Disease

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Objective: Psychosocial factors show a significant relationship between child behavior problems, family functioning, and cognitive performance in children with Sickle Cell Disease, marking those as important targets for intervention among this population. The purpose of this research is to address the effects of psychosocial factors impact on specific cognitive domains.

Participants and Methods: Archival data from the National Institutes of Health's Cooperative Study of Sickle Cell Disease was used. Data was restricted to individuals aged 14 or younger ($N = 2,408$), with 47.8% ($n = 1,152$) identified as female and 52.2% ($n = 1,256$) as male. Black or African American (96.9%, $n = 2,334$) children made up the majority of the sample, with the remainder coded as "other" (2.8%, $n = 68$). The measures utilized included the Wechsler Intelligence Scale for Children-Revised (WISC-R), Wechsler Intelligence Scale for Children-Third Edition (WISC-III), Peabody Picture Vocabulary Test (PPVT), Achenbach Child Behavior Checklist, and Family Environment Scale (FES).

Results: Bivariate correlations were completed with significant correlations found between FES and performance on the WISC-R/III and PPVT. Supportiveness subscale on the FES demonstrated several statistically significant correlations with WAIS FSIQ ($r = .21$, $p = .000$) as well as the Information ($r = .22$, $p = .000$), Similarities ($r = .17$, $p = .001$), Arithmetic ($r = .13$, $p = .021$), Block Design ($r = .11$, $p = .036$), Vocabulary ($r = .22$, $p = .000$), Object Assembly ($r = .12$, $p = .033$), Comprehension ($r = .19$, $p = .000$), and Digit Span ($r = .13$, $p = .014$) subscales. A statistically significant correlation was observed between the PPVT and the Supportiveness subscale ($r = .34$, $p = .000$).

Conclusions: Various areas of cognitive functioning are affected by family dynamics. Improvement in family functioning would benefit the cognitive functioning of children with SCD. To increase aspects of family functioning including supportiveness, early identification of children with SCD, targeted interventions, and

family and/or individual therapy for caregivers are suggested.

Categories: Medical/Neurological Disorders/Other (Child)

Keyword 1: sickle cell disease

Keyword 2: pediatric neuropsychology

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Coffee Break

3:15 - 3:30pm Friday, 3rd February, 2023

Exhibit Hall - Town & Country Ballroom A

Invited Symposium 3: Pediatric Neuropsychology Medical Advances and Life Span Outcomes

Co-Chairs: Celiane Rey-Casserly and Lana Harder

Presenters: Adam R. Cassidy, Andrew Heitzer, Jennifer Longoria

3:30 - 4:55pm

Friday, 3rd February, 2023
Pacific Ballroom A

Abstract & Learning Objectives:

Medical advances continue to improve the outlook for pediatric patients with a variety of acquired and congenital medical conditions. Such critical advances have an impact on lifespan outcomes for affected individuals. Neuropsychology plays a critical role in evaluating outcomes and informing clinical care for pediatric patients, with an increasing role in prevention. Neuropsychologists are essential members of interdisciplinary teams and ongoing medical management. Our symposium will present examples of the latest progress made over the last decade in the areas of sickle cell disease, demyelinating disorders, congenital heart disease, and cancer. Highlights include recent research on neurocognitive surveillance for pediatric patients with sickle cell disease including identification of risk and resilience