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22 Resilience and Functional Impairment in Latino Patients with Pediatric Brain Tumor (PBT)

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Objective: Children with pediatric brain tumors (PBT) are at increased risk of psychosocial challenges (e.g., emotional distress, social difficulties), which in turn can result in functional impairment, or problems engaging appropriately across settings. These concerns have been shown to be especially pronounced in patients with lower socioeconomic status (SES), which tends to be overrepresented among ethnic minorities, such as Latino populations. On the other hand, resilience (the ability to utilize resources to alleviate stress and overcome adversity) can act as a protective factor against functional impairment. While resilience has been found to be lower among Latino survivors of pediatric cancer, little is known about the potential role of resilience in mitigating functional impairment among Latino patients with PBT. The authors hypothesized poorer resilience and increased functional impairment among Latino patients with PBT compared to normative expectations, in an attempt to explore need for additional support within this population.

Participants and Methods: 42 Latino patients with PBT ages 2-20 ($\bar{x}$=11.08 years, SD=5.24) completed neuropsychological evaluation between 2018 and 2022. The sample was split relatively equally in terms of sex (47.6% male, 52.4% female), tumor location (45.2% infratentorial, 54.8% supratentorial), and household language (47.6% predominantly English, 52.4% predominantly Spanish). Outcome variables included Resiliency and Functional Impairment content scales from the Behavior Assessment Scale for Children – Third Edition: Parent Rating Scales (BASC-3: PRS). Standardized T-scores ($\bar{x}$=50; SD=10) were derived using age-appropriate normative data, with higher T-scores indicating better resiliency, yet poorer functional impairment. Median household income for specific neighborhoods was used as a proxy for SES.

Results: The sample as a whole did not deviate from age expectations in terms of resiliency [t(41)=-.469, p=.642] or functional impairment [t(38)=.118, p=.907]. However, when separated by household language, participants from English speaking households demonstrated lower resiliency and increased functional impairment as compared to both normative expectations [t(19)=-2.748, p=.006; t(18)=1.882, p=.038, respectively] and participants from Spanish speaking households [t(40)=-3.327, p=.002; t(37)=2.717, p=.010, respectively]. In contrast, participants from Spanish speaking households performed similarly to same-aged peers in terms of both resiliency [t(21)=1.931, p=.067] and functional impairment [t(19)=-1.969, p=.064]. Furthermore, household language predicted both resiliency [F(2, 39)=8.639, p=.0008] and functional impairment [F(2, 36)=6.203, p=.005] above and beyond SES, explaining an additional 29.4% (p=.0002) and 24.3% (p=.002) of the variation in these variables, respectively.

Conclusions: Latino patients with PBT from Spanish speaking households had better reported resiliency and lower functional impairment than their counterparts from English speaking households. Given the subjective nature of parent reported outcomes and the importance of appropriately supporting patients and families from underserved populations, the roles of culturally-ingrained protective factors and cultural/linguistic differences in perceiving or articulating distress need further exploration. Future research, including comparison of parent report with objective measurement of impairment, is needed to better understand relationships between home language and these important variables. Additionally, examination of diagnostic and treatment-related factors will be beneficial to determine the best approaches to interventions and resources within this population.

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23 Tamoxifen Effects on Cognition and Language in Women with Breast Cancer

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Objective: Cognitive changes following adjuvant treatment for breast cancer (BC) are well documented particularly following chemotherapy. However, limited studies have examined cognitive and/or language functions in chemotherapy-naive women with BC taking tamoxifen (TAM). While there is some compelling evidence TAM affects cognitive and language domains, language has not been studied beyond semantics (i.e., content of language), which is just one aspect of language. Using ambulatory cognitive assessment, we investigated the trajectory of cognitive and language changes during early period of adjuvant endocrine treatment (tamoxifen) in women with BC at two time periods (pre-treatment and two months after treatment begins).

Participants and Methods: Four women with BC (mean age = 62.25 years, SD = 8.38) and 18 cognitively healthy age-matched controls (mean age = 59.77, SD = 7.45) completed 3 cognitive tasks using smartphones, during a short time period (5 days) and repeated at two time periods. Symbol search, dot memory and color dots tasks were used to measure the cognitive constructs - processing speed and working memory. Response times were recorded in milliseconds. To determine language ability, language samples were collected at two time periods, where the participants described two stories from two wordless picture books and samples were assessed using core lexicon analyses.

Results: Wilcoxon-signed rank test was computed to identify cognitive and linguistic changes during early period of TAM administration in women with BC at two time periods. No significant within group or between group differences were seen on the cognitive and language tasks at the two time periods, however, a trend for decline in performance was seen in some BC participants across different tasks.

Conclusions: This is the first study to our knowledge to use ambulatory cognitive assessment method and study discourse-level language function during this early period (pre-treatment and 2 months post-TAM). Findings from the current study advance our understanding of trajectories of cognition and language changes during the initial course of adjuvant endocrine treatment for women with BC with ER+ tumors. Using a measurement-burst design and ambulatory cognitive assessment, we were able to apply better precision measurement to identify distinct cognitive constructs affected by adjuvant endocrine treatment. In addition, insight into changes in discourse ability are impactful for numerous reasons: (1) better understanding of how adjuvant endocrine therapy impacts communication and (2) discernment into language domains that may require early behavioral intervention.

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24 Adaptive Functioning and Academic Achievement in Survivors of Childhood Acute Lymphoblastic Leukemia

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Objective: Executive functioning (EF) and socioeconomic status (SES) are associated with functional outcomes (adaptive functioning and academic achievement) in healthy controls and pediatric populations with executive dysfunction. However, these relationships have yet to be investigated in survivors of childhood acute lymphoblastic leukemia (ALL), a population with EF impairment resulting from disease and treatment characteristics. The objective of this study was to examine the associations of functional outcomes with EF and SES