Cultural Associations with Pediatric Oncology Pain

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Objective: Pediatric cancer patients frequently experience pain throughout treatment. Each patient interprets their pain and discomfort distinctively, and also conveys their reactions in various manners. The cold pressor task (CPT) is a common method used to induce experimental pain in pediatric populations to examine factors that may impact pain response. This study was designed to examine the role of culture in the pain response of children undergoing treatment for cancer using the CPT.

Methods: A sample of 72 children ages 6-18 years receiving treatment for cancer participated in the current study. Of the 72 children, 45 reported a primary language of English at home and 27 reported Spanish as the primary language at home. Children completed the CPT and provided self-report ratings of their pain and upset severity at 30 second intervals throughout the task. Ratings were obtained using a 0-10 numeric rating scale; analysis was conducted with ratings obtained when children removed their hand from the cold water. Independent samples t-tests were used to examine differences in children’s ratings of pain and upset as function of primary language spoken at home.

Results: Participants were 11.67 years of age (SD = 3.79), mostly boys (61.6%), and primarily diagnosed with leukemias (57%). Comparison of mean upset and pain ratings revealed significant differences between groups. Specifically, Spanish-speaking children reported significantly higher upset scores (5.04 ± 3.72) compared to English-speaking children (1.93 ± 3.31), t(70) = -3.68, p < 0.001. In addition, Spanish-speaking children also reported significant higher pain scores (6.56 ± 3.22) compared to English-speaking children (4.44 ± 3.67), t(70) = -2.47, p = 0.013.

Conclusion: Under the conditions of this study, we found that children whose primary language at home was Spanish experienced greater pain and upset compared to children with primarily English-speaking families. Given literature that supports language as a proxy for acculturation, we can infer that cultural factors impact the pain response in children. Future research should examine the mechanisms behind this association to ensure culturally relevant pain interventions for children with cancer.