

Behavioral manifestations of sensory hypersensitivity among children with epilepsy

Batya Engel-Yeger¹, Sharon Zlotnick and Eli Shachar²

¹Occupational Therapy Department, University of Haifa, Israel

²Rambam Medical Center, Israel

Epilepsy is a common neurological disorder. Its comorbidities, as motor and cognitive deficiencies are described in the literature. Few studies also refer to sensory processing deficiencies (SPD) in epilepsy. These studies focused on sensory hypersensitivity in a specific modality and used laboratory settings.

This study profiled SPD in children with epilepsy as expressed in behavioral responses to various sensory stimuli in their daily natural environment.

Participants were 52 children aged 6-10.9: 26 with Primary Generalized Epilepsy or Benign Focal Epilepsy and 26 healthy controls. After participants underwent medical examination, their parents filled the "Short Sensory Profile" (SSP) - a standard measure for child's behavioral responses to sensory stimuli in daily life.

Results: higher percentage of children with epilepsy had SPD, as compared to the controls ($\chi^2=26.45^{***}$). SPD were expressed in hypersensitivity in all sensory modalities and in Underresponsive/sensation seeking ($F=17.52^{***}$), mainly related to behaviors representing irritability and low registration. Discriminant analysis correctly classified 72 % of the study group and 92 % of the controls (Kappa=0.71, $p<.001$).

Conclusions: SPD may characterize children with epilepsy. Their hypersensitivity supports previous laboratory reports and together with their Underresponsive/seeking behaviors suggest that SPD may be involved in the comorbidity of epilepsy and ADHD. Information gathered from parents, by the SSP, may raise their awareness to their child's difficulties. Further studies should examine SPD among children with epilepsy and illuminate SPD negative impacts on child's function. This may contribute to intervention based on child's specific needs, to child's performance and well being.

Biography

Dr. Engel-Yeger completed her PhD at the Faculty of Medicine, Technion, Israel and postdoctoral studies from the Hebrew University in Jerusalem. She is a senior lecturer at the University of Haifa. She published over 50 papers in reputed journals and serving as an editorial board member of repute. She supervises Ms. Zlotnik in PhD studies. Prof. Shachar is the head of the child neurology department and epilepsy clinic in Mayer Hospital in Rambam Medical Center.

hyeger@bezeqint.net