

Harnessing the Benefits and Mitigating the Challenges of Neurosensitivity for Learners: A Mixed Methods Study

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Abstract : People vary in how they perceive, process, and react to internal, external, social, and emotional environmental factors; some are more sensitive than others. Compassionate people have a highly reactive nervous system and are more impacted by positive and negative environmental conditions (Differential Susceptibility). Further, some sensitive individuals are disproportionately able to benefit from positive and supportive environments without necessarily suffering negative impacts in less supportive environments (Vantage Sensitivity). Environmental sensitivity is underpinned by physiological, genetic, and personality/temperamental factors, and the phenotypic expression of high sensitivity is Sensory Processing Sensitivity. The hallmarks of Sensory Processing Sensitivity are deep cognitive processing, emotional reactivity, high levels of empathy, noticing environmental subtleties, a tendency to observe new and novel situations, and a propensity to become overwhelmed when over-stimulated. Several educational advantages associated with high sensitivity include creativity, enhanced memory, divergent thinking, giftedness, and metacognitive monitoring. High sensitivity can also lead to some educational challenges, particularly managing multiple conflicting demands and negotiating low sensory thresholds. A mixed methods study was undertaken. In the first quantitative study, participants completed the Perceived Success in Study Survey (PSISS) and the Highly Sensitive Person Scale (HSPS-12). Inclusion criteria were current or previous postsecondary education experience. The survey was presented on social media, and snowball recruitment was employed (n=365). The Excel spreadsheets were uploaded to the statistical package for the social sciences (SPSS)26, and descriptive statistics found normal distribution. T-tests and analysis of variance (ANOVA) calculations found no difference in the responses of demographic groups, and Principal Components Analysis and the posthoc Tukey calculations identified positive associations between high sensitivity and three of the five PSISS factors. Further ANOVA calculations found positive associations between the PSISS and two of the three sensitivity subscales. This study included a response field to register interest in further research. Respondents who scored in the 70th percentile on the HSPS-12 were invited to participate in a semi-structured interview. Thirteen interviews were conducted remotely (12 female). Reflexive inductive thematic analysis was employed to analyse data, and a descriptive approach was employed to present data reflective of participant experience. The results of this study found that compassionate students prioritize work-life balance; employ a range of practical metacognitive study and self-care strategies; value independent learning; connect with learning that is meaningful; and are bothered by aspects of the physical learning environment, including lighting, noise, and indoor environmental pollutants. There is a dearth of research investigating sensitivity in the educational context, and these studies highlight the need to promote widespread education sector awareness of environmental sensitivity, and the need to include sensitivity in sector and institutional diversity and inclusion initiatives.

Keywords : differential susceptibility, highly sensitive person, learning, neurosensitivity, sensory processing sensitivity, vantage sensitivity

Conference Title : ICCN 2023 : International Conference on Cognitive Neuroscience

Conference Location : New York, United States

Conference Dates : September 11-12, 2023