Defining & Classifying Idiopathic Sensory Processing Disorder

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This study examined the developmental profiles and behavioral characteristics of children who did not meet criteria for any neurodevelopmental condition, but who were identified as having symptomology relating to one or more of the types of Sensory Processing Disorder (SPD) as described by the typology by Miller et al. (2007). Relations among specific types and subtypes of SPD, adaptive behavior and psychosocial-emotional functioning were examined as a step towards in understanding how other similar neurodevelopmental and mental disorders may be distinguished from SPD, and to explore the validity of current sensory processing and integration disorder types and subtypes. A retrospective, non-experimental design applying descriptive and correlational analyses was used. Data were obtained from an existing data set that had been extracted and compiled from the records of children seen at a clinic for a developmental and/or diagnostic evaluation from 2014-2017 in the Northeastern USA. Children seen ranged in age from 1 to 7 years of age, and had been evaluated by an interdisciplinary team of professionals including a developmental pediatrician, occupational therapist, and others as needed. Data were extracted from the clinic medical records by a trained researcher following procedures approved by the author's Institution's IRB. Cases selected were children between 2 and 7 years of age; with SPD symptoms based on atypical scores from the Sensory Profile (Dunn, 2014); and with no documented neurodevelopmental or mental disorder such as ASD. Children with unspecified motor, communication, or cognitive delays were included as long as delays in development were not associated with a known developmental, intellectual, or mental disorder. Assessment data from 78 children ranging in age from 24 to 70 months (mean- 46.5 months) were included and 78.5% of the children were from Caucasian families. Factor and Area scores from the Sensory Profile-2 or Sensory Profile, or Infant/toddler version were used to identify and classify children with SPD types and subtypes. Standard scores from The Child Behavior Checklist (CBCL; Achenbach & Ruffle, 2000), a measure of externalizing and internalizing behaviors organized by 8 syndrome scales such as anxious/depressed, withdrawn/depressed, and attention problems was used to examine mental health behaviors. The Vineland Adaptive Behavior Scales-2 (Sparrow, Cicchetti, & Balla, 2005) was used to examine adaptive behavior in social, communication, daily living and motor areas. Results indicated that both internalizing and externalizing behaviors fell in the borderline dysfunctional range. Adaptive behavior for all developmental domains was below average, and the severity of SPD symptoms moderately correlated with behaviors associated with mental disorders, and with adaptive behavior scores. The results depicted SPD as a multi-dimensional construct and all SPD types in the typology by Miller et al.(2007) were well represented, with the most common being sensory modulation, over-responsivity. Many children exhibited more than one SPD type. To conclude, the results provided evidence suggesting that SPD exists as its own diagnostic entity, and impacts adaptive behavior. Furthermore, symptoms associated with various types and subtypes overlap substantially, so that we may be considering more SPD types than exist or are clinically useful. It is vital for occupational therapists to advocate for SPD as a valid condition while exploring alternate typologies, support further studies of the neural mechanisms involved in sensory processing, and develop more psychometrically sound measures of sensory processing in order to validate SPD as its own diagnostic condition.

References

Mulligan, S., Douglas, S., & Armstrong, C. (2021). Characteristics of idiopathic sensory processing disorder in young children. *Frontiers in Integrative Neuroscience, 15*, 647928. https://doi.org/10.3389/fnint.2021.647928

Miller, L.J., Anzalone, M.E., Lane, S., Cermak, S., & Olsten, E,T, (2007). Concept evolution in sensory integration: A proposed nosology for diagnosis. *American Journal of Occupational Therapy, 61*,135-140. https://doi.org/10.5014/ajot.61.2.135

Dunn, W. (2014), Sensory Profile 2 manual. San Antonio TX: Psychological Corporation.

Borkowska, A. R., & Sklodowska M. C. (2017). Sensory processing disorders: Diagnostic and therapeutic controversies. *Current Issues in Personality Psychology 5*(3), 196-205. https://doi-org.libproxy.unh.edu/10.5114/cipp.2017.70140