

SPD Proposal
Summary Responses for DSM On-Line Application

Question 1: Describe New Disorder – providing proposed diagnostic criteria

100 character summary – Sensory Processing Disorder: persistent atypical over-responsivity or under-responsivity to neutral sensation

Responses to Question 1:

Sensory Processing Disorder is characterized by persistent atypical over- or under-responsivity to neutral sensations. The existence of a unique syndrome is supported by data in the five syndrome validation areas outlined by Pennington (1991, 2002): neuropathology, signs and symptoms, developmental trajectory, etiology, and treatment effectiveness (Pennington, 2002). Neuropathology data (from human and primate studies) have found that some autonomic and central nervous system functions of individuals with SPD are abnormal compared to typical controls. Signs and symptoms data demonstrate that individuals with SPD can be discriminated from typically developing individuals in areas of attention, emotion, and sensory processing on both behavioral and physiological measures resulting in problems in daily life functioning. Developmental trajectory studies in animal and human models have demonstrated that behavioral signs and symptoms, along with sensory gating (one likely underlying mechanism of SPD), improve with maturity. Etiology findings based on twin studies and animal models have linked SPD to genetic factors, prenatal and birth risk factors, environmental exposures, and developmental and health factors. Finally, treatment effectiveness data demonstrate that sensory-based interventions for SPD result in better outcomes compared to no-treatment and active-placebo controlled treatments.

Question 2: Literature currently available in support of the claim that the new disorder describes a condition that is not adequately covered by the existing DSM-IV-TR categories.

Summary Response to Question 2:

Discriminant validity studies of SPD have found significant differences compared to existing DSM-IV conditions of ADHD, Autistic Spectrum Disorder, and Fragile X Syndrome. Both physiological and behavioral data highlight that SPD is the only condition that has sensory processing impairment as a universal and specific feature. Cases of “pure SPD” have been identified in which subjects did not meet criteria for other DSM-IV conditions, but did meet criteria for SPD.

Question 3: Literature available in support of the claim that adding the disorder will improve clinical utility.

Summary Response to Question 3:

Studies of prevalence have found that 5% of children in the general population exhibit signs and symptoms of SPD severe enough to qualify for a diagnosis. Pilot consumer surveys suggest that parents support inclusion of a diagnosis of SPD in the DSM, primarily due to experiences of positive outcomes of sensory-based treatment for their children's sensory symptoms, after having no responses to treatments for other diagnoses (e.g., ADHD, anxiety disorders, etc.). Surveys and focus groups of physicians have found that a majority of physicians are aware of SPD and do support the inclusion of SPD in the revised DSM. (65%) A majority of both consumers and physicians anticipate that the inclusion of SPD will lead to better outcomes for a significant majority of individuals with symptoms of SPD.

Question 4: Literature currently available in support of the claim that there will be a low risk of false positives resulting from the addition of the new disorder.

Response to Question 4:

Several valid and reliable parent and self-report screening measures exist to evaluate SPD. In addition, three performance measures exist. The newest performance measure (SensOUR; Sensory Over-responsivity/Under-responsivity Scale), demonstrates a low false positive rate using a cut-point of -2 standard deviations (False Positive rate: 1.3%; False Negative rate: 10.7%; Overall Hit rate 88%).

Question 5: Data sets currently available that might be reanalyzed in order to support the proposal for a new disorder

Summary Response to Question 5:

As scientists have not historically been asking the set of questions needed to identify Sensory Processing Disorder, no current national or NIH archived data sets contain sufficient items needed to diagnose SPD—with the exception of the data sets used by members of the SPD Scientific Work Group (referred to in Appendix A of this proposal). While it is possible that other existing data sets may contain information related to sensory-based items, and item analyses might identify those that have relevance to SPD (e.g., the MTA ADHD study by NIH), it is unlikely that those data sets would include all items needed to identify individuals who meet criteria for SPD.