**Paper Title**: Psychosocial factors related to self-injurious behavior within a cohort of children with intellectual and developmental disabilities

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**Introduction**: Self- injurious behavior (SIB) is a dynamic and heterogeneous interfering behavior. The emergence and persistence of SIB are not well understood. Individuals with intellectual and developmental disabilities (I/DD) are at increased risk for engaging in SIB. Previous research on trends in SIB and the psychosocial factors associated with SIB and severity over time for children with I/DD are inconsistent. The purpose of this study was to evaluate the trends in SIB within a clinical cohort of children with I/DD in relation to communication, repetitive and sensory behavior, and emotion regulation skills.

**Method**: We recruited a cohort of children (n=46; 28% female, age 1-14 yrs (M=6 yrs, SD= 3 yrs)) receiving clinical care at a medical center for I/DD, developmental delay, or related disabilities. Remote assessments were administered on average every 4- months over a 3-year time period (i.e., average number of assessment timepoints was 4, range= 2-12 timepoints). The assessments included a direct observation of play and structured activities via videoconferencing and caregiver reported electronic surveys to assess SIB, repetitive/sensory behavior, and emotion regulation behaviors. We evaluated the cohort’s behavioral repertoires using the repetitive behavior scale for early childhood (RBS-EC; Wolff et al., 2016), the sensory experiences questionnaire (SEQ 2.1; Baranek, 1999), Go4KIDDS brief adaptive scale (Perry et al., 2015, the Emotion Regulation Checklist (ERC; Shields & Cicchetti, 1995), demographics and service utilization over time. We evaluated SIB trends using descriptive analyses, behavioral associations with Spearman Rank correlations, mean differences, and odds-ratio analyses.

**Results**: The cohort consisted of 65% with autism, 70% with Global Developmental Delay and 26% with co-occurring genetic linked syndromes. Caregivers endorsed at least one form of SIB for 91% of the cohort over time with an average interference score of 1.18 (with 3 being the highest). Persistent SIB estimates (i.e., SIB endorsed at each timepoint) was 59%. The odds of engaging in persistent SIB was 3.7 times higher among minimally verbal children and 3.9 times higher among autistic children compared to children with developmental delay within the cohort. SIB severity was positively associated with emotion dysregulation, hypo-responsivity, hyper-responsivity, and sensory seeking behaviors (*r*s = .69, *p* <.001; *r*s = .84, *p* = <.001; *r*s = .50, *p* = <.001); and negatively associated with adaptive scores over time (*r*s = -.56, *p* = <.001). Service utilization included 81% receiving speech and language therapy but only 23% receiving behavioral intervention services.

**Discussion**: The study’s results show that SIB was persistent and severity was associated with greater emotional dysregulation and sensory features, as well as autism. These results are consistent with previous findings within I/DD. Future research and clinical care should focus on how to increase behavioral supports earlier to address SIB and prevent it from significantly interfering with quality of life.

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