

Title: Caregiver reported behavior and mental health symptoms in children with Down syndrome compared to dual diagnosis Down syndrome and autism spectrum disorder

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Introduction: Approximately 16-18% of individuals with Down syndrome also have co-occurring autism spectrum disorder (DS-ASD; Richards et al., 2015). In autistic individuals with intellectual disability without Down syndrome (DS), there are significant concerns for behavior difficulties, emotion dysregulation, and co-occurring mental health needs (Plesa Skwerer et al, 2019). Individuals with DS-ASD are found to have increased behavior difficulties compared to DS alone (Capone et al., 2005). However, little is known about the mental health and emotion regulation needs of those with DS-ASD. The purpose of the present study is to evaluate caregiver reported behavior, mental health, and emotion regulation needs in children and adolescents with DS and DS-ASD.

Methods: Fifty-two children and adolescents with Down syndrome (Male=59.6%; White=82.7%; Hispanic/Latino=15.4%; Mean age=10.25 years, SD=3.70, Range=4-18) were seen in a multidisciplinary consultation clinic for pediatric patients with Down syndrome at a large children's hospital. Seven (9.4%) of the children evaluated had a DS-ASD. Behavior was assessed using the Strengths and Difficulties Questionnaire (SDQ; Goodman et al., 2003). Broad mental health concerns were assessed using the Anxiety Depression and Mood Scale (ADAMS; Esbensen et al., 2004) and emotion regulation was evaluated using the Emotion Dysregulation Inventory (EDI; Mazefsky et al., 2018). Mann-Whitney U tests were run to determine differences in SDQ, ADAMS, and EDI scores between DS only and DS-ASD groups.

Results: Children with a dual DS-ASD diagnosis exhibited higher scores on the Manic Hyperactive subscale (mean rank = 33.20) and Depressed Mood on the ADAMS (mean rank = 35.20) compared to those with only DS (20.53; 20.26), $U = 39$, $z = -2.144$, $p = .032$; $U = 29$, $z = -2.587$, $p = .010$. On the SDQ, only Prosocial Skills subscale for children with DS only (mean rank = 27.20) were statistically higher than for children with DS-ASD (15.07), $U = 77.5$, $z = -2.057$, $p = .039$. There were no significant differences in broad behavior as measured by the EDI between DS only and DS-ASD groups nor were there differences on other subscales of the ADAMS and SDQ ($p > .05$).

Discussion: Results suggest that individuals with DS-ASD may exhibit some increased behavior difficulties, social problems, and depressed mood compared to those with DS alone. While the sample size for DS-ASD is small, this initial analysis supports the need to further investigate the differences in emotional and behavioral needs of those with DS-ASD. Data collection is ongoing. Limitation and future directions will be discussed.

References:

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