

Previous literature suggests that degree of autism characteristics, cognitive ability, and age contribute to identifying homogenous subgroups of autism, which facilitates prognosis and treatment planning. The present study extends these findings by examining profiles of cognition, age, and autism characteristics (measured by the *Autism Diagnostic Observation Schedule, Second Edition* [ADOS-2]) in a clinical sample of school-aged children presenting with concern for possible autism. Profiles are also described according to whether children received an autism diagnosis and clinician ratings of emotional/behavioral problems, which have been shown to influence diagnostic clarity when assessing for autism.

**Participants and Methods:** We conducted a retrospective chart review of 188 children (68% male) ages 4-17 years ( $M=8.9$ ) who were referred for an autism evaluation. Latent profile analysis was conducted using age, ADOS-2 Social Affect (SA) and RRB scores, and verbal and non-verbal intelligence quotients (VIQ/NVIQ). Model fit comparing 2, 3, 4, and 5-class models was assessed using log-likelihood, AIC, BIC, SABIC, entropy, and Lo, Mendell, and Rubin (LMR) and bootstrap likelihood ratio (BLRT) tests. The frequency of clinical autism diagnosis and ADOS-2 emotional/behavioral problems were calculated across profiles in the best-fitting model.

**Results:** The 5-class model demonstrated the best fit. The following characteristics were observed across five profiles: 1) mean age = 9.5 years, Low Average VIQ/NVIQ, and low SA ( $M=5.2$ ) and RRB ( $M=0.7$ ) scores; 2) mean age = 7.3 years, Average VIQ/NVIQ, and low SA ( $M=3.1$ ) and RRB ( $M=0.8$ ) scores; 3) mean age = 10.1 years, Low Average VIQ/NVIQ, and high SA ( $M=11.3$ ) and RRB ( $M=4.2$ ) scores; 4) mean age = 8.8 years, Average VIQ/NVIQ, and moderately high SA ( $M=9.6$ ) and RRB ( $M=3.4$ ) scores; and 5) Exceptionally High VIQ, Above Average NVIQ, and comparatively mid-level SA ( $M=6.6$ ) and RRB ( $M=3.6$ ) scores. Autism diagnosis and emotional/behavioral problems varied across profiles. Profiles 1 and 2 contained lower diagnosis rates (33% and 10%, respectively). Profiles 3 and 4 contained the highest diagnosis rates (97% in both), followed by profile 5 (75%). In terms of emotional/behavioral problems, Profile 2 exhibited the highest overactivity (56%). Profile 3 demonstrated the highest rate of tantrums/disruptive behaviors (20%).

**Conclusions:** Findings revealed distinct profiles of IQ and autism characteristics within a clinical sample of school-aged children referred for possible autism. Children with the highest scoring ADOS profile were older compared to other profiles. Higher and lower scoring ADOS profiles exhibited both lower and higher IQ scores. Descriptive analyses suggested that the frequency of autism diagnosis was notably higher in moderate and high-scoring ADOS profiles; however, emotional/behavioral problems were salient in only one low and one high-scoring ADOS profile. The findings suggest that higher-scoring ADOS profiles consistently demonstrated high autism diagnosis rates but varied across IQ and behavioral problems. These results have implications for interpreting these characteristics during clinical autism diagnosis.

**Categories:** Autism Spectrum Disorders/Developmental Disorders/Intellectual Disability

**Keyword 1:** autism spectrum disorder

**Keyword 2:** cognitive functioning

**Keyword 3:** assessment

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## 24 Individual Differences in CAMCOG-DS Performance in Children and Adults with Down's Syndrome and Relationship to Language and Reasoning

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**Objective:** The Cambridge Cognitive Examination for Down's Syndrome (CAMCOG-DS) was developed to assess cognitive functioning and dementia-related cognitive decline in people with Down's Syndrome (DS). It has been translated into different languages and is often used in international studies. Although adapted for people with intellectual disabilities

(ID), many tasks involve verbal responses and instructions are presented orally. Therefore, the administration for people with severe language deficits can be challenging. The aim of this retrospective data analysis is to examine the influence of language ability and reasoning on CAMCOG-DS performance. Study 1 examined the relationship between CAMCOG-DS, picture naming, single word comprehension and reasoning in adults with DS. Study 2 replicates and broadens the findings in a sample of children and adults with DS.

**Participants and Methods:** Study 1 included 40 adults with DS between 18 and 51 years ( $M = 28.6$ ,  $SD = 8.4$ ). 25 had a mild and 15 a moderate ID. CAMCOG-DS, the short form of the Boston Naming test (BNT), a test for single word comprehension from the Werdenfeller Testbatterie (WTB) and the Colored Progressive Matrices (CPM) were administered. Study 2 included 38 participants between 8 and 59 years (23 children,  $M = 11.4$ ; 15 adults;  $M = 31.3$ ). 3 had a borderline, 23 a mild, and 12 a moderate ID. The same tasks as in Study 1 were applied, but the CPM was replaced by its successor, the Raven's 2.

**Results:** In Study 1, participants with mild ID performed better in all tasks than those with moderate ID ( $p < .05$ ). Moderate relationships were found between CAMCOG-DS total score and the language tasks ( $r = .56$  and  $r = .46$ ), which remained significant when level of ID was controlled for. There was also a moderate relationship between CAMCOG-DS and reasoning ( $r = .46$ ). Regression analysis showed that BNT performance predicted CAMCOG-DS performance ( $R^2 = .31$ ).

In Study 2, those with mild ID, compared to those with moderate ID, performed better in all tasks ( $p < .05$ ), however, regarding the CAMCOG-DS and language tasks, this effect was larger in adults than in children. Adults performed better than children in the CAMCOG-DS and BNT ( $p < .05$ ), but not in single word comprehension or reasoning. As in Study 1, moderate to large correlations were revealed between CAMCOG-DS and language tasks and between CAMCOG-DS and reasoning ( $r > .52$ ), remaining significant when age and ID level were controlled for. Regression analysis showed that both naming and reasoning but not single word comprehension or age predicted CAMCOG-DS performance ( $R^2 = .69$ ), however, performance was best predicted by naming ( $R^2 = .65$ ).

**Conclusions:** Our results suggest that language ability and reasoning relate to CAMCOG-DS performance, which is best predicted by BNT picture naming. This should be considered in CAMCOG-DS interpretation, as the capabilities of patients with lesser language ability might be underestimated. Future developments of dementia assessments for people with ID should include more nonverbal tasks.

**Categories:** Autism Spectrum Disorders/Developmental Disorders/Intellectual Disability

**Keyword 1:** intellectual disability

**Keyword 2:** dementia - Alzheimer's disease

**Keyword 3:** assessment

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## 25 The Hybrid Learning Environment During Covid-19: A Case Study on IEP Implementation for a Student with Autism Spectrum Disorder

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**Objective:** An effective support system for families with children with an Autism Spectrum Disorder (ASD) consists of multiple methods of educational and therapeutic delivery. Such methods are adapted to meet a family's needs and needs of the time, like the COVID-19 pandemic. Individualized Educational Plan (IEP) are established by schools to support success in academics for children with ASD. IEPs can vary depending on the district and accessibility, thus, the effective implementation and communication between this support system is important for its success. The current case study examines academic and therapeutic outcomes of an IEP implementation during hybrid learning of a child with ASD and their family.

**Participants and Methods:** Purposeful sampling identified a participant from a previous IRB approved study through the UNLV Educational Psychology program that