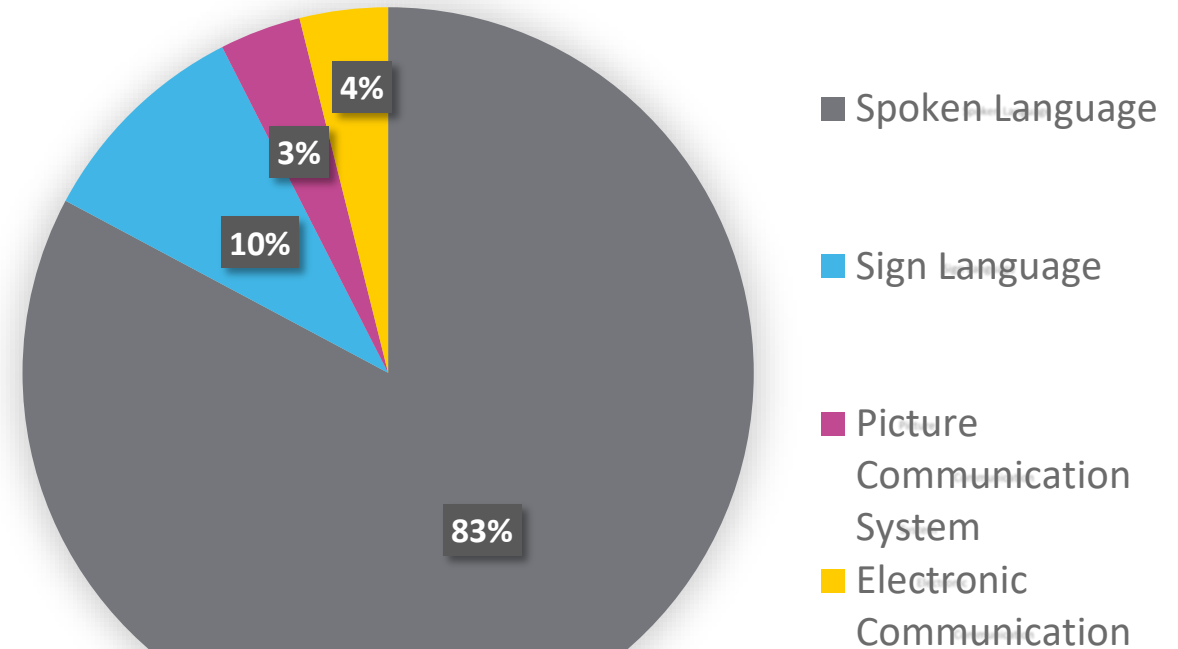


Low: <\$34,282	22 (6.3%)
Moderate: >\$34,282 to <\$54,850	130 (37.1%)
Middle: >\$54,850 to <\$82,276	146 (41.7%)
Upper: >\$82,276	52 (14.9%)
Primary Language at Home	
English	306 (88.2%)
Spanish	27 (7.8%)
Other	14 (4.0%)

Educational Characteristics	Patients (N=367)
Receives services Outside of School?	
Yes	76 (59.4%)
No	52 (40.6%)
Receives Family Services?	
Yes	86 (67.3%)
No	42 (32.8%)
Grade Level	
Preschool	46 (16.7%)
Kindergarten to 8 th Grade	184 (66.7%)
High School	40 (14.5%)
High-School College Concurrent	3 (1.1%)
Other	3 (1.1%)
School Placement	
Public School	245 (92.5%)
Private School	11 (4.2%)
Home School	6 (2.3%)

28wk0d to 31wk6d	6 (2.1%)
32wk0d to 36wk6d	29 (10%)
>37wk0d	254 (87.3%)
History of NICU Stay >4 Days	
Yes	172 (55.7%)
No	137 (44.3%)
Confirmed Diagnosis of ASD	
Yes	44 (12%)
No	323 (88%)
Confirmed Diagnosis of ADHD	
Yes	31 (8.4%)
No	336 (91.6%)

Child's Primary Form of Communication



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BACKGROUND

- Down syndrome (DS) is most common genetic cause of intellectual disability
- Individuals with DS have variable expressive language
- Expressive language impairments include delayed development of babbling, nonverbal requests, first words, and sentences, and challenges with phonetics, articulation, vocabulary, and syntax

OBJECTIVES

- To describe the distribution of expressive language abilities of 4 to 22-year-old individuals with DS in a clinical sample using parent reported data
- To characterize demographic, environmental, and medical factors associated with varying language abilities

METHODS

- Cross sectional analysis of 367 children with DS, age 4 to 22 between, March 2018 to August 2021
- Latent Profile Analysis of expressive language related survey items from the Autism Spectrum Disorder-Parent Report for Outcome Monitoring (ASD-PROM©)
- Logistic regression to explore associations between class membership and independent variables

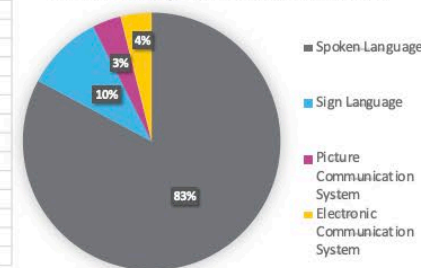
DEMOGRAPHICS

Demographic Characteristics	Patients (N=367)
Sex	
Male	164 (44.7%)
Female	203 (55.3%)
Age	
4.0-6.9 years	112 (30.5%)
7.0-11.9 years	144 (39.2%)
12.0-17.9 years	98 (26.7%)
18.0-24 years	13 (3.5%)
Median Income (Zip Code)	
Low: <\$34,282	22 (6.3%)
Moderate: >\$34,282 to <\$54,850	130 (37.1%)
Middle: >\$54,850 to <\$82,276	146 (41.7%)
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Private School	11 (4.2%)
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Residential School	3 (1.1%)

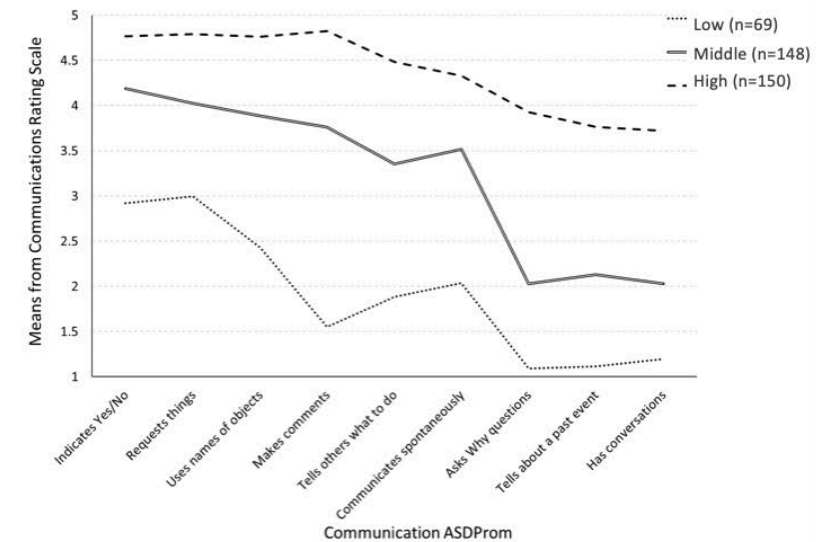
Clinical Characteristics	Patients (N=367)
Type of DS	
Trisomy 21	336 (96.6%)
Translocation	6 (1.7%)
Mosaicism	6 (1.7%)
History of Prenatal Complications	
Yes	93 (30.2%)
No	215 (69.8%)
Gestational Age	
<28wk0d	2 (0.7%)
28wk0d to 31wk6d	6 (2.1%)
32wk0d to 36wk6d	29 (10%)
>37wk0d	254 (87.3%)
History of NICU Stay >4 Days	
Yes	172 (55.7%)
No	137 (44.3%)
Confirmed Diagnosis of ASD	
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No	323 (88%)
Confirmed Diagnosis of ADHD	
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No	336 (91.6%)

Child's Primary Form of Communication



LATENT PROFILES

Expressive language profiles of children, age 4-22, with Down syndrome



Low Expressive Language Profile: Age 4-6.9 years, Picture or Electronic Communication User, ASD, Residential Placement

High Expressive Language Profile: Male sex, Age 7-17.9 years, Spoken Language User, Better Pronunciation

CONCLUSION

- Three profiles of expressive language ability emerged
- Profiles correlated with sex, age, language modality, pronunciation, ASD diagnosis, and residential placement.
- May help development of targeted interventions
- Future directions include expansion of covariates and comparison across time of patient class membership

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- Martin GE, Klusek J, Estigarribia B, Roberts JE. Language Characteristics of Individuals with Down Syndrome. *Top Lang Disord*. 2009;29(2):112-132.