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Examining Phenotypic Profiles of Adolescents with Autism in High School Programs

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Autism Spectrum Disorder

DSM-5 Diagnostic Criteria

Impairments in social communication and interaction

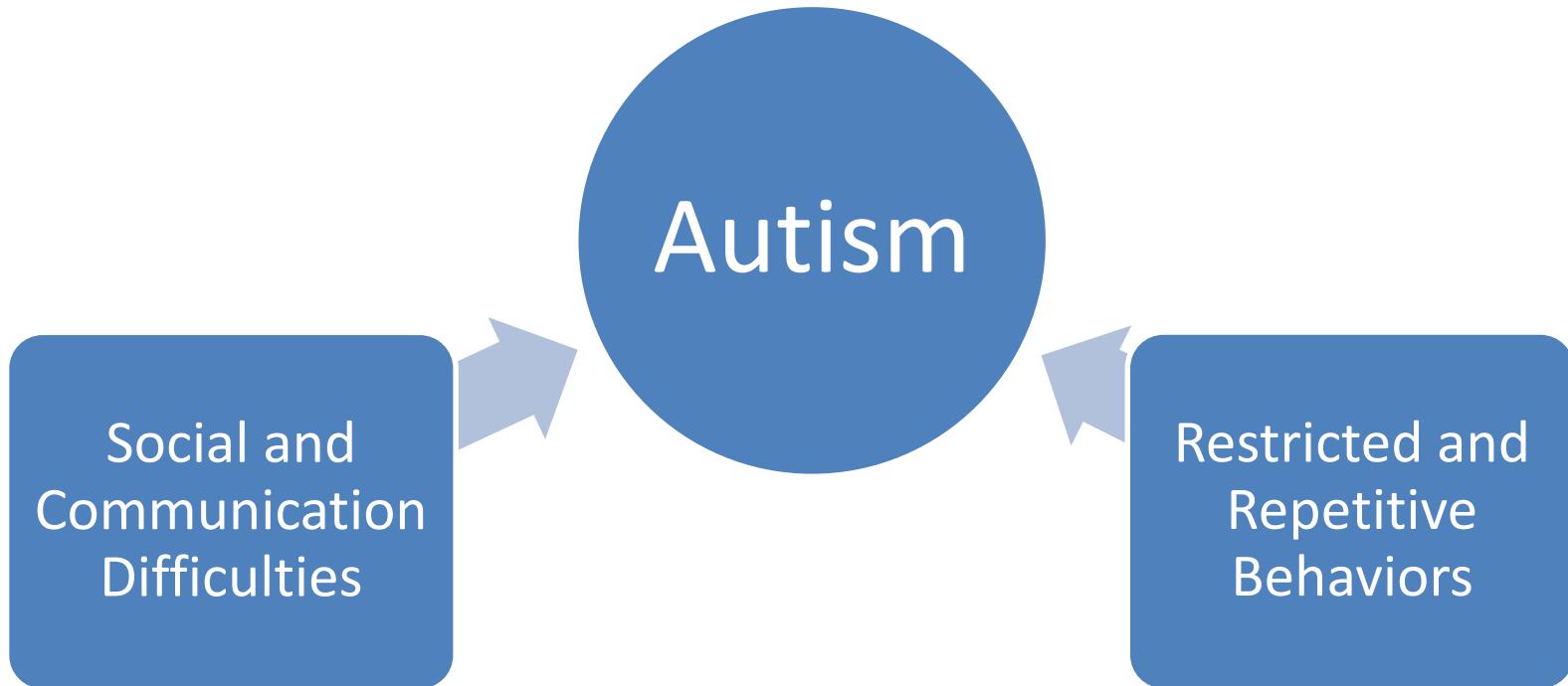
- Deficits in
 - Social-emotional reciprocity
 - Nonverbal communication
 - Developing, maintaining, and understanding relationships

Restricted, repetitive interests, activities, or patterns

- At least two of the following:
 - Repetitive motor movements, use of objects, or speech
 - Inflexibility
 - Restricted and fixated interests
 - Hyper- or hyporeactivity to sensory stimulus



Heterogeneity in Autism Symptoms



- Between-individual variation in symptom severity
- Within-individual variation in symptom severity with age



Phenotypic Profiles in Autism

Adaptive
behavior

Age at diagnosis

Cognition

Language

Sensory
Processing

What about
Adolescence and
Adulthood???



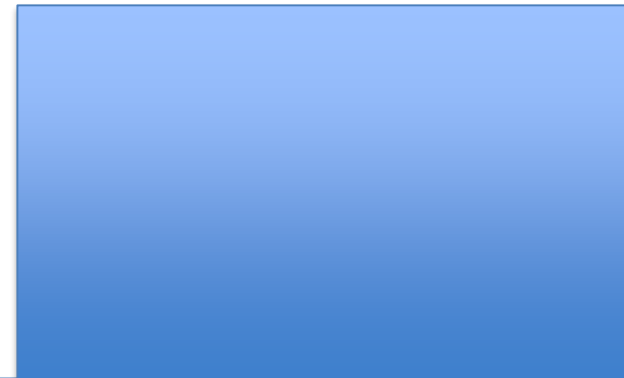
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(Georgiades et al., 2013; Klopper et al., 2017; Kim et al., 2016; Matthews et al., 2015; Wiggins et al., 2017)

Additional Adolescence and Adulthood Phenotype Characteristics

Self-
determination

Support
Needs

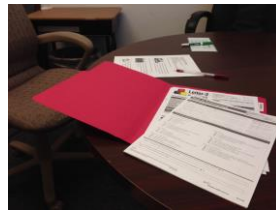


Research Goal

To identify underlying subgroups of adolescents with autism across autism symptom severity, cognition and adaptive behavior, self-determination, and supports at home and in the classroom.



Methods



Variable	Assessment	Students	Parents	Teachers
Nonverbal IQ	Leiter-3 BRIEF IQ (Roid, Miller, Pomplun, & Koch, 2013)	X		
Academic Achievement	Woodcock Johnson III Passage Comprehension/ Academic Knowledge (Woodcock, McGrew, & Mather, 2007)	X		
Adaptive Behavior	Vineland-II Teacher Form (Sparrow et al., 2005)			X
Autism symptoms	Social Responsiveness Scale (Constantino & Gruber, 2012)			X
	Social Communication Questionnaire (Constantino, 2002)		X	
Self-Determination	AIR Self-Determination Scale (Wolman et al., 1994)	X	X	X
Support	Supports Intensity Scale (Thomson et al., 2004)		X	X



Self-Determination Scale Student and Teacher

Self-Determination

Capacity

Opportunity

Ability

Knowledge

Perception

Home

School



Self-Determination Scale Parent

Self-determination

Ability

Opportunity

Things my
Child Does

Home

School



Supports Intensity Scale

Home Living

Community & Neighborhood

School Participation

School Learning

Health and Safety

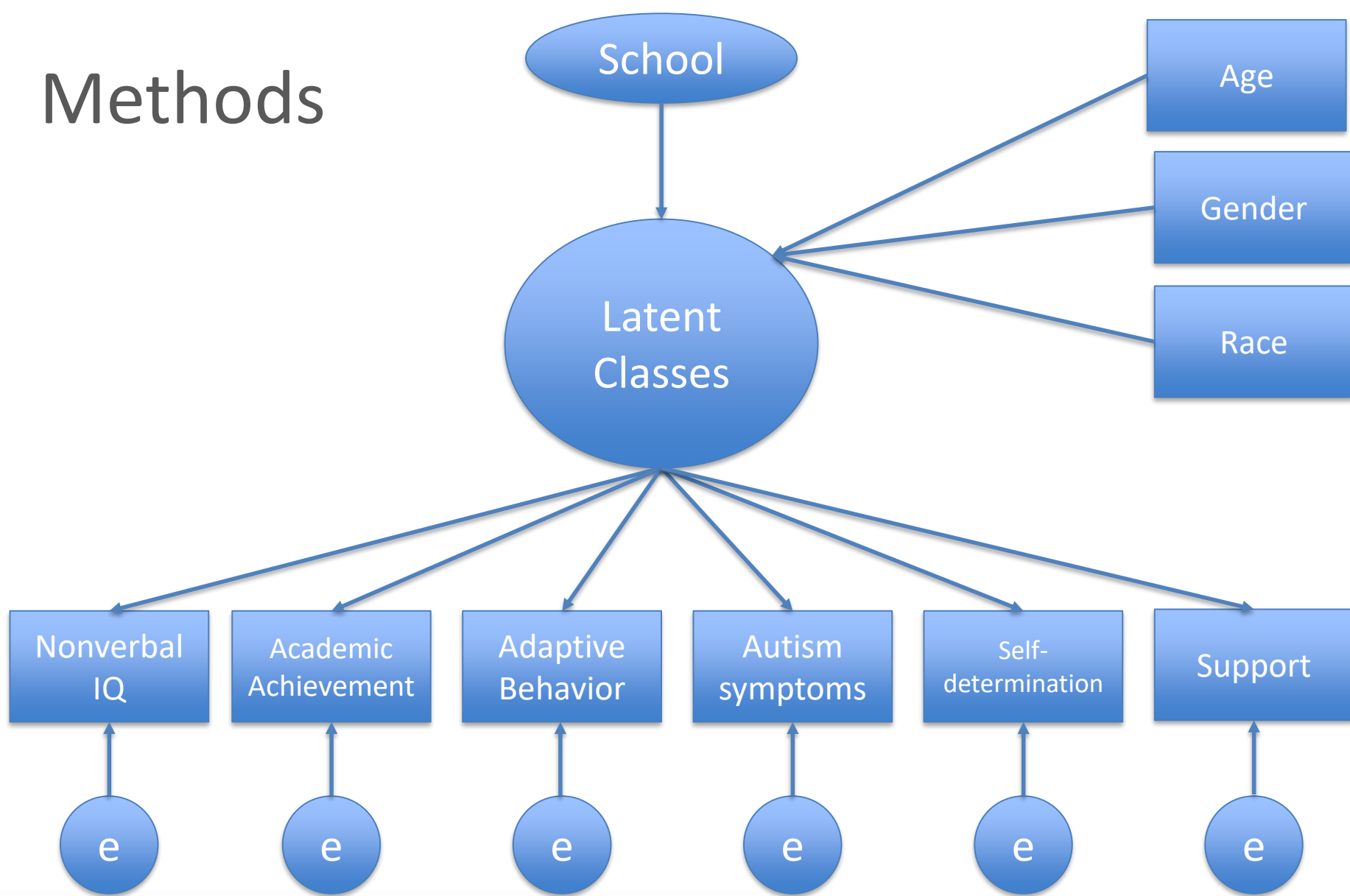
Social

Advocacy

No extra support needed		Medium support needed		Total support needed
1	2	3	4	5



Methods



Results

Model Fit Statistics

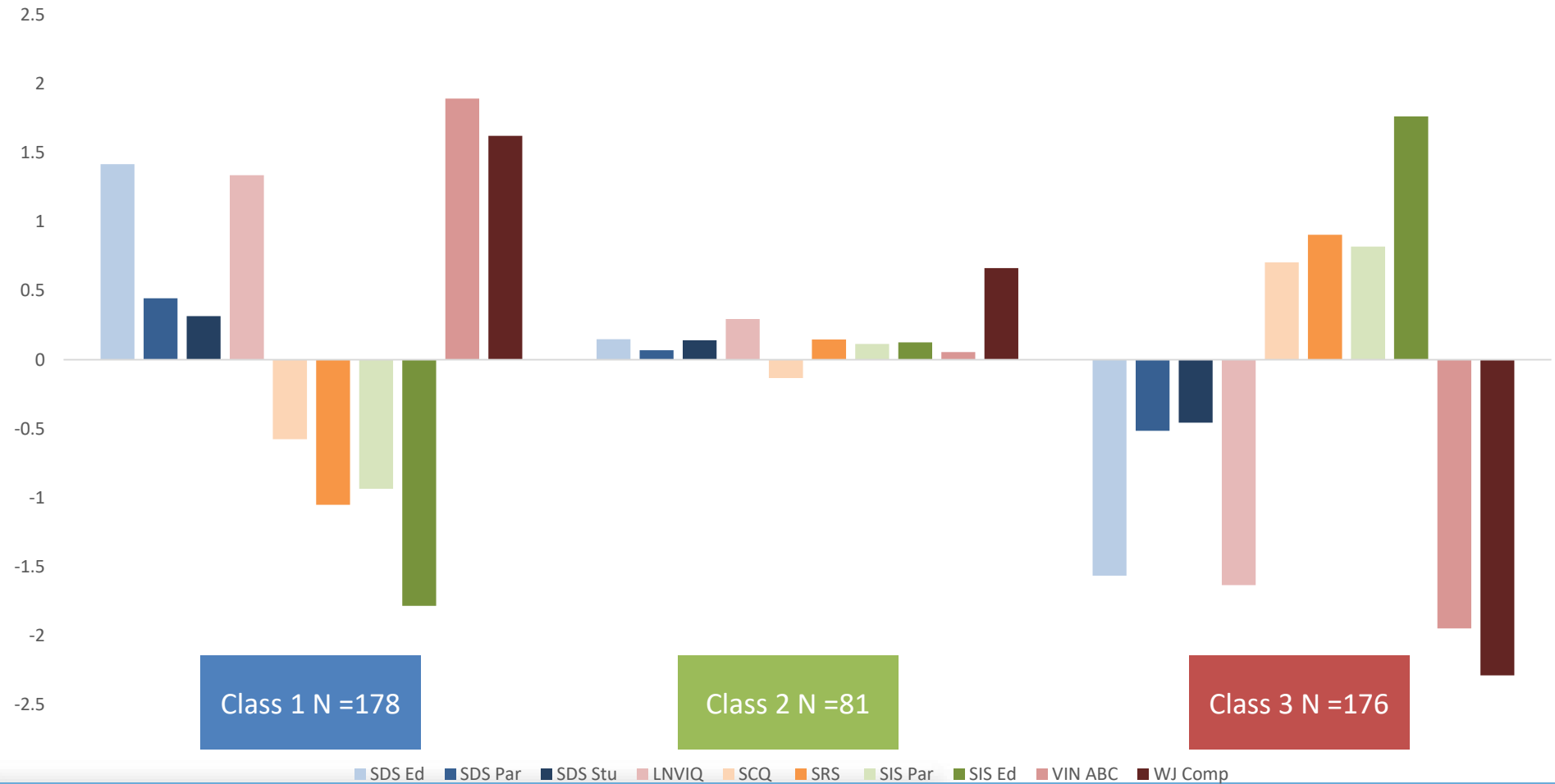
No. of Profiles	AIC	BIC	Entropy	LMR	BLRT
2	20,469.75	20,612.39	.898	1177.75***	1191.59***
3	20,090.31	20,294.08	.867	404.68**	409.44***
4	19,965.98	20,240.87	.840	152.53(ns)	154.32***

*** $p < .001$ ** $p < .05$

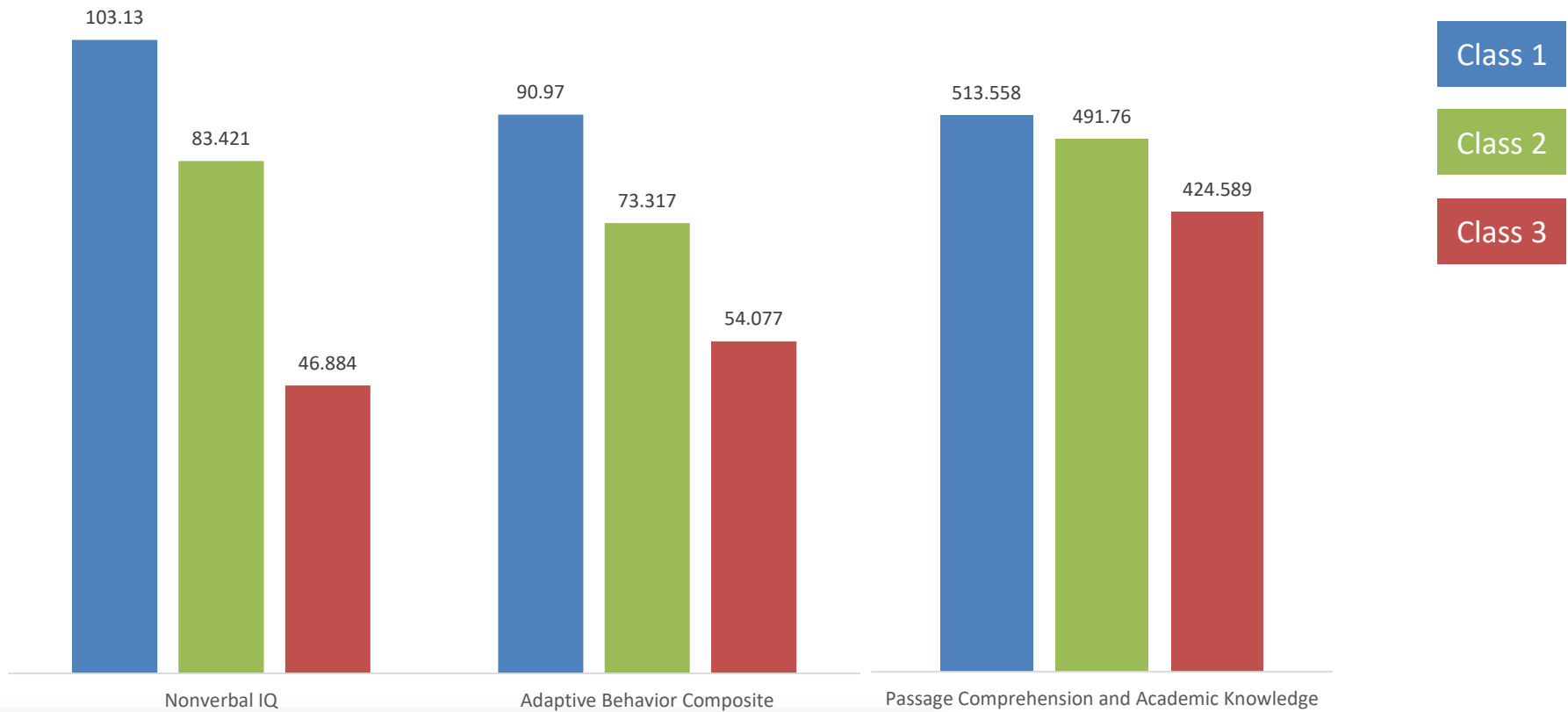


Results

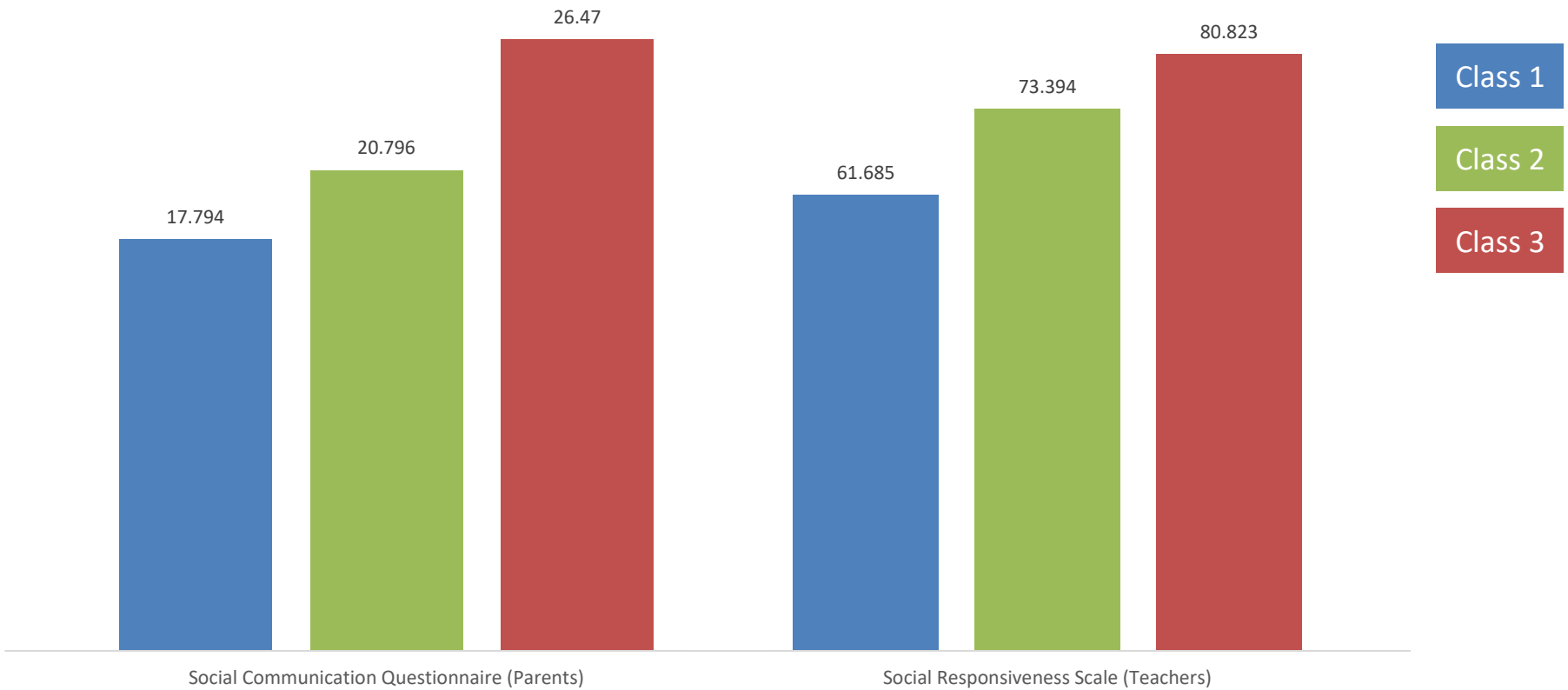
Overall Latent Profiles



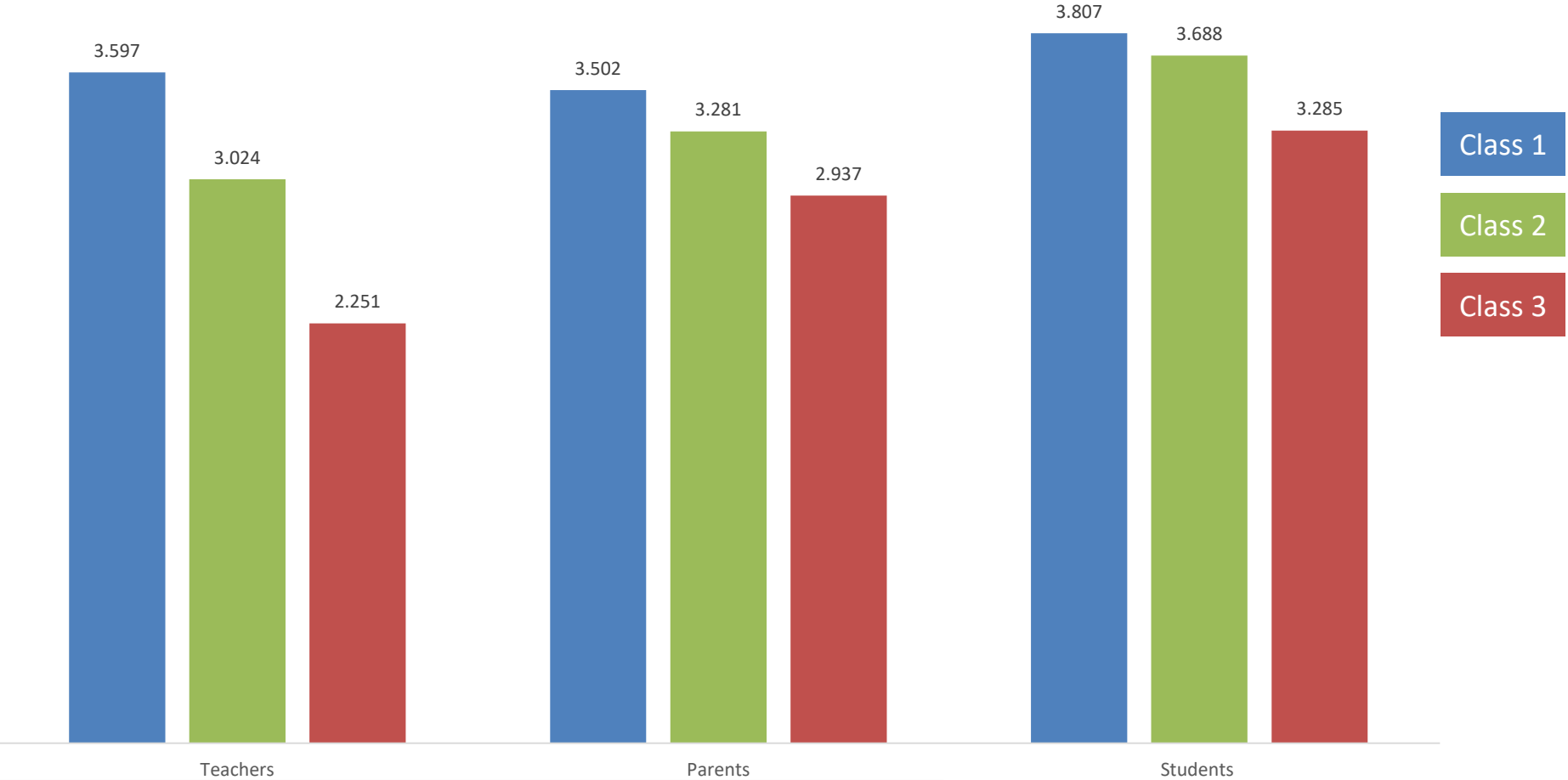
Cognition and Adaptive Behavior



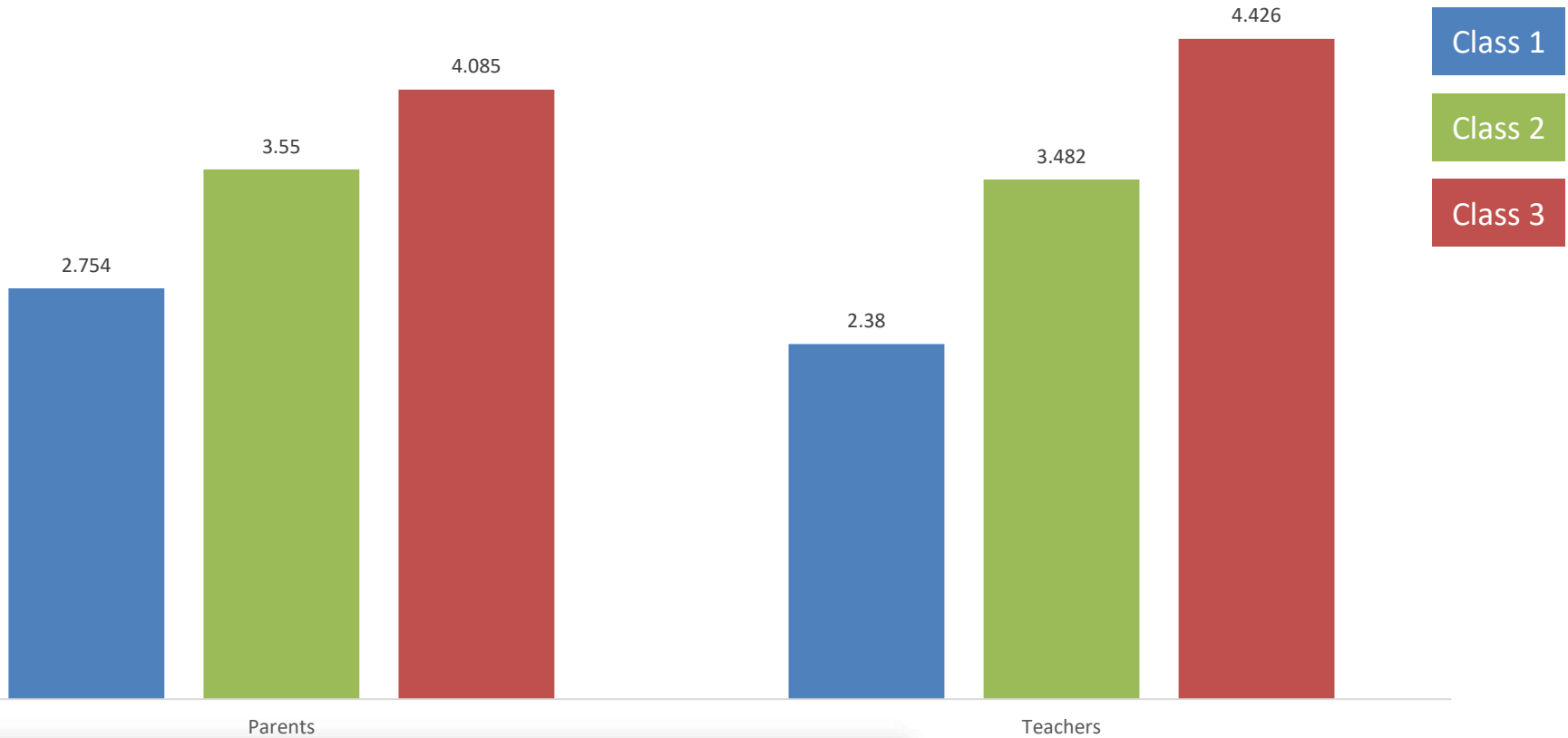
Autism Symptoms



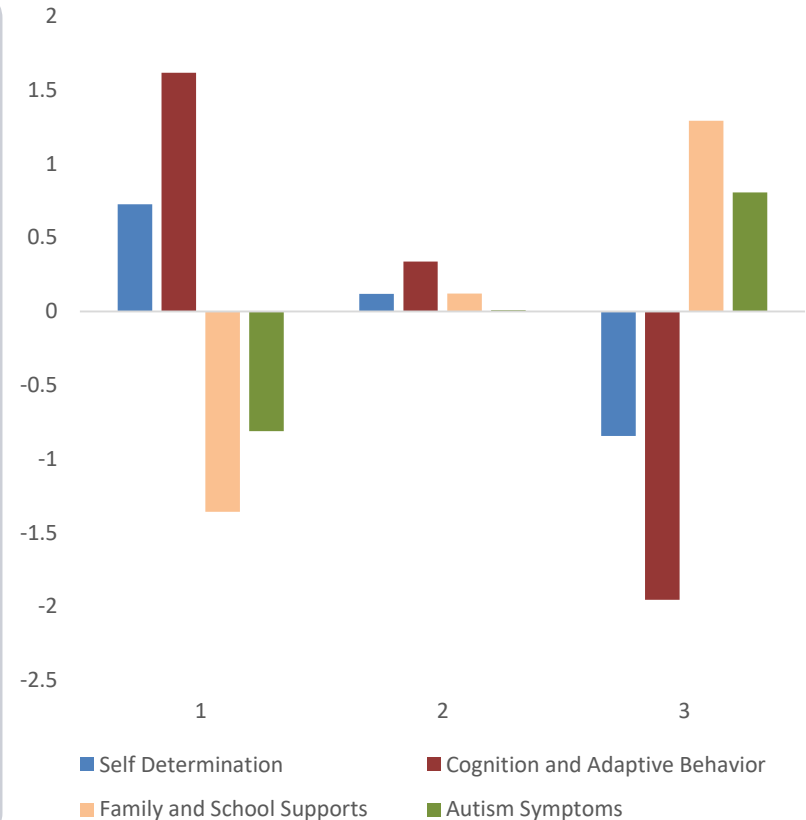
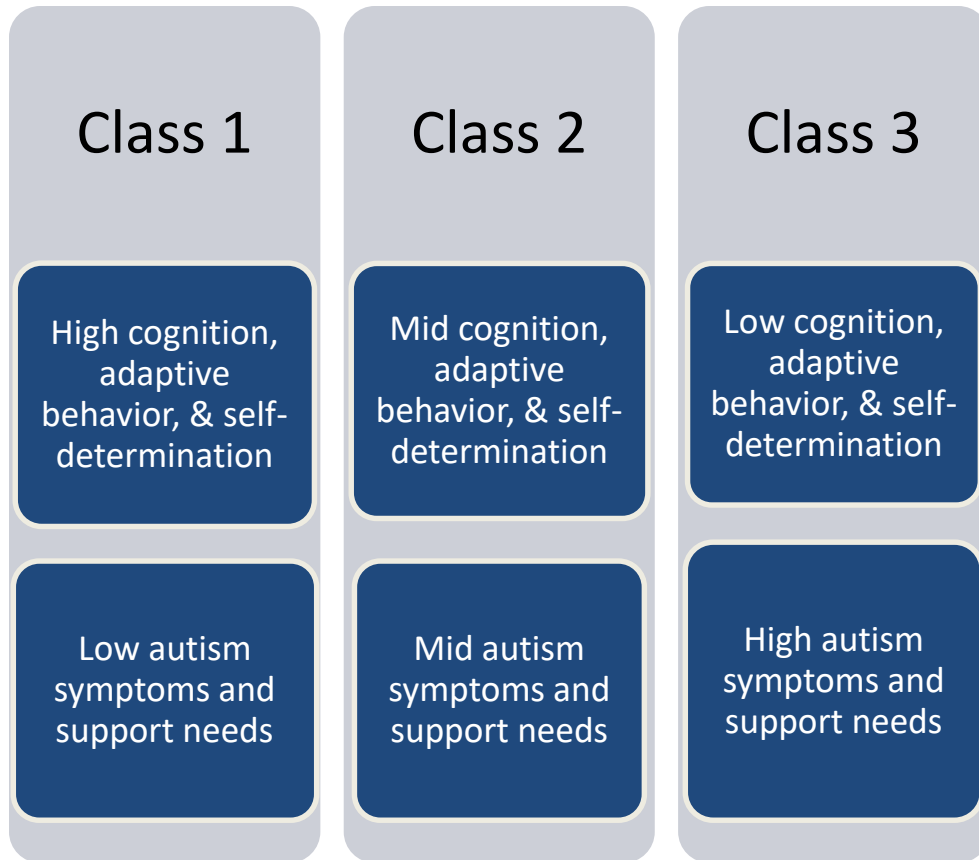
Self-Determination



Family and School Supports



Conclusion



Discussion

- Heterogeneity present in large sample of diverse adolescents
- Classes may require different targeted interventions to promote skills
- Next Steps: Examining LPA as a moderator of CSESA treatment



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