



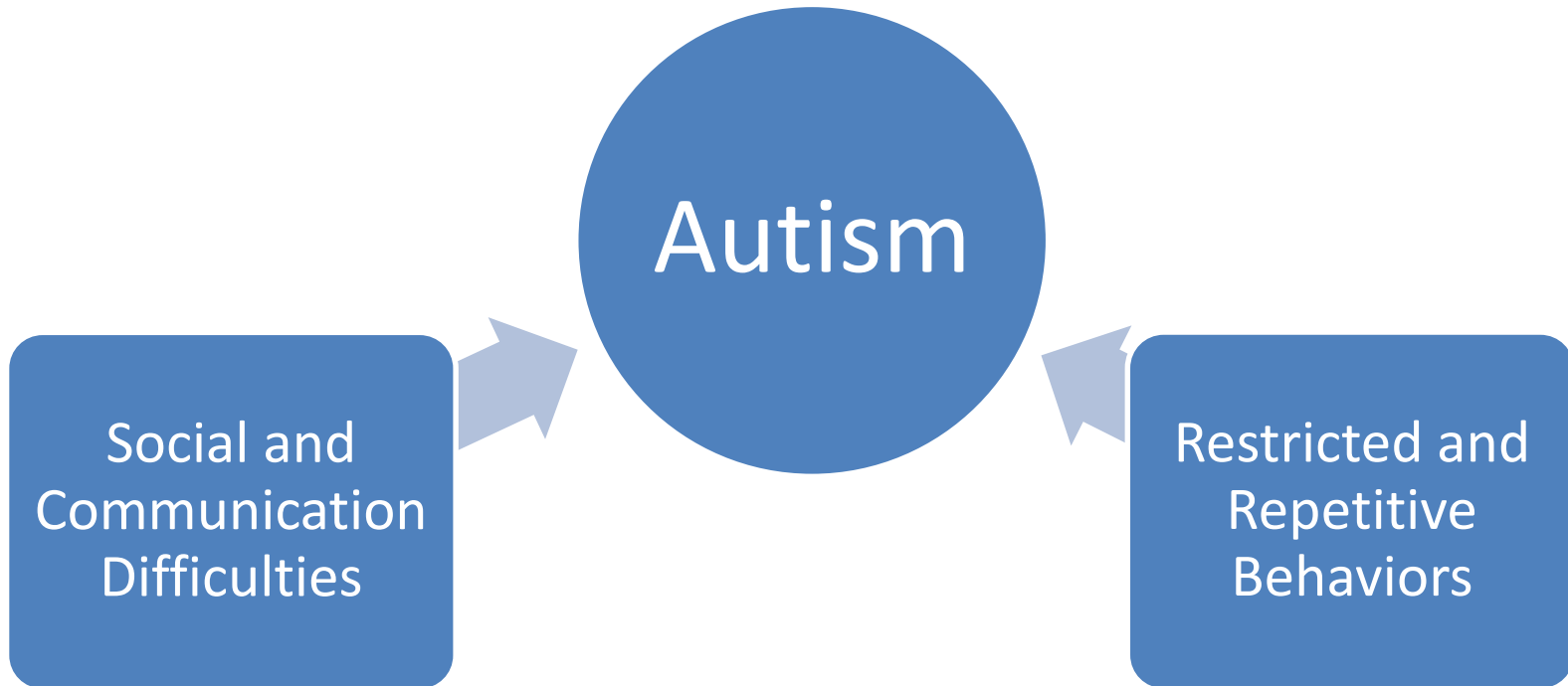
THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

Examining Phenotypic Profiles of Adolescents with Autism in High School Programs

Brianne Tomaszewski, Samuel Odom, John Sideris, Leann Smith DaWalt, Bonnie Kraemer, Laura Hall, & Kara Hume

The research reported here was supported by the Institute of Education Sciences, U.S. Department of Education through Grant R324C120006 awarded to UNC-Chapel Hill. The opinions expressed represent those of the authors and do not represent views of the Institute or the U.S. Department of Education.

Heterogeneity in Autism Symptoms



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



Phenotypic Profiles in Autism

Adaptive
behavior

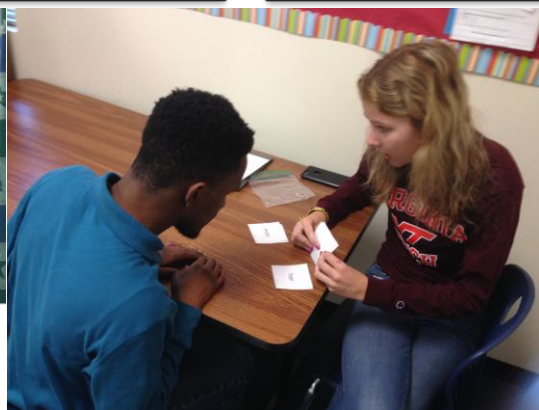
Age at diagnosis

Cognition

Language

Sensory
Processing

What about
Adolescence and
Adulthood???



THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

(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

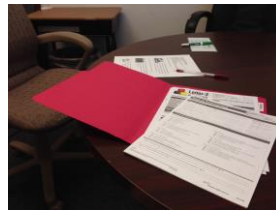


Research Goal

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

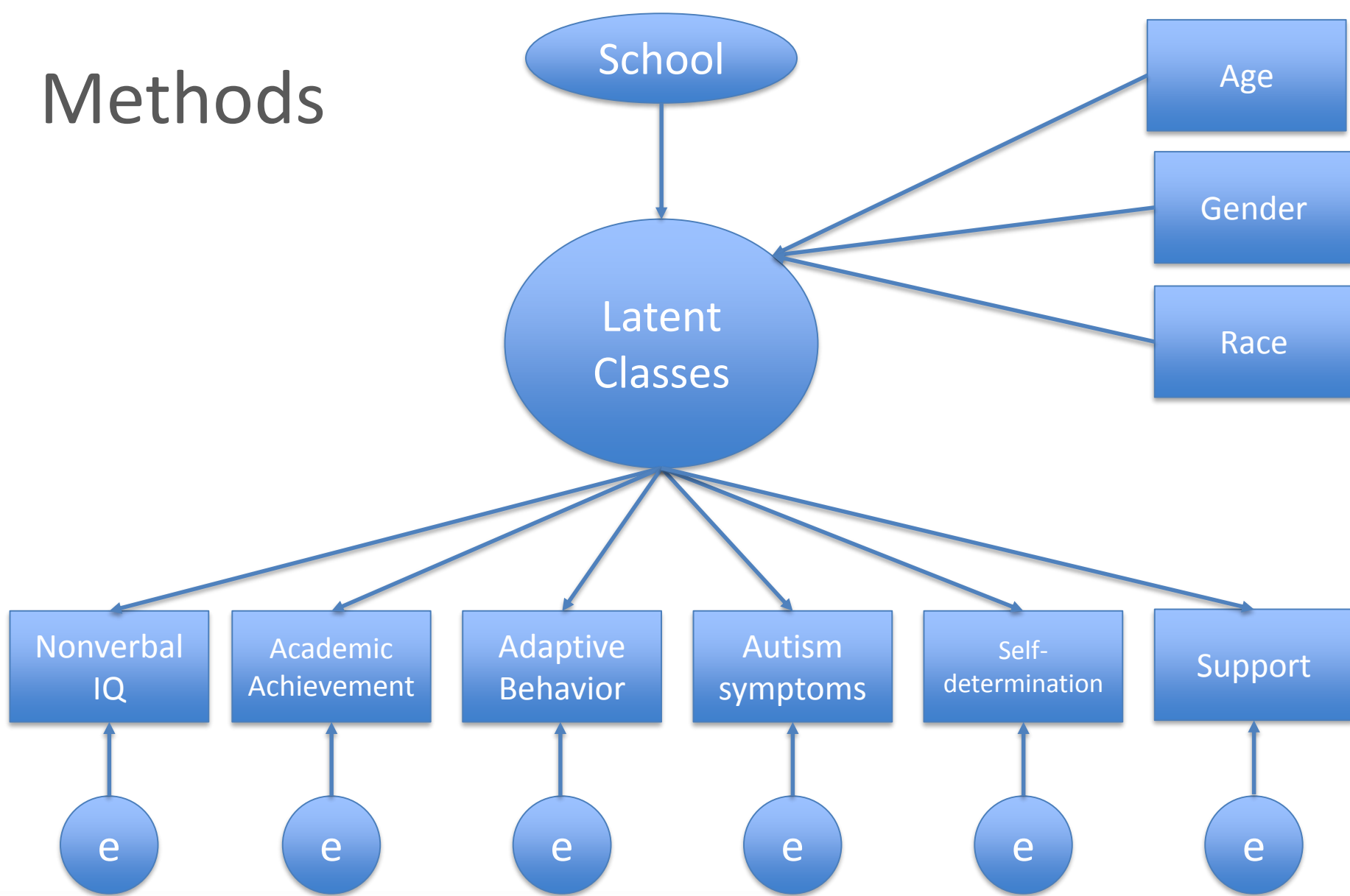
Social

Advocacy

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



Methods



Results

Model Fit Statistics

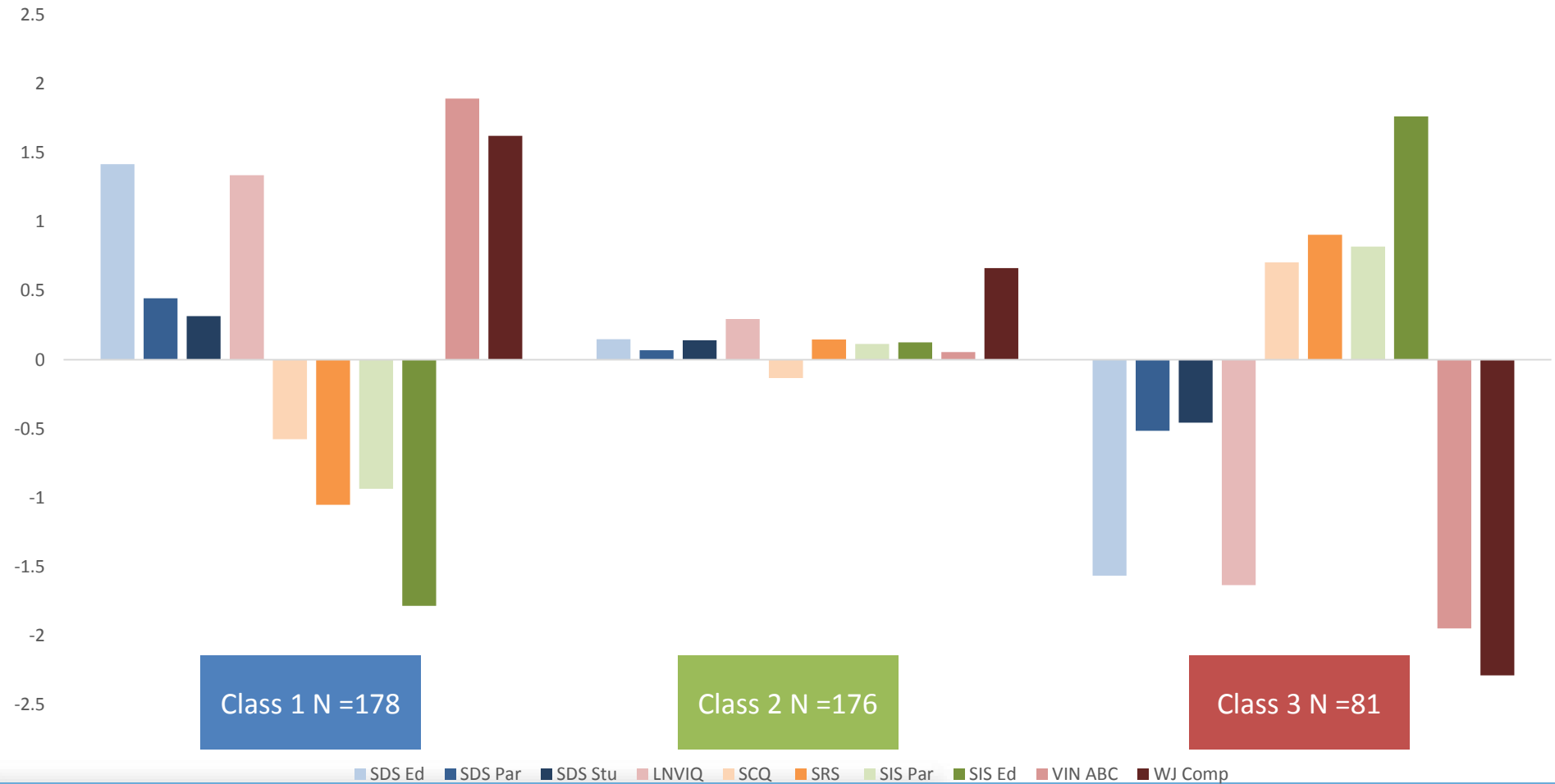
No. of Profiles	AIC	BIC	Entropy	LMR	BLRT
2	20,469.75	20,612.39	.898	1177.75***	1191.59***
3	20,090.31	20,294.08	.867	404.68**	409.44***
4	19,965.98	20,240.87	.840	152.53(ns)	154.32***

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

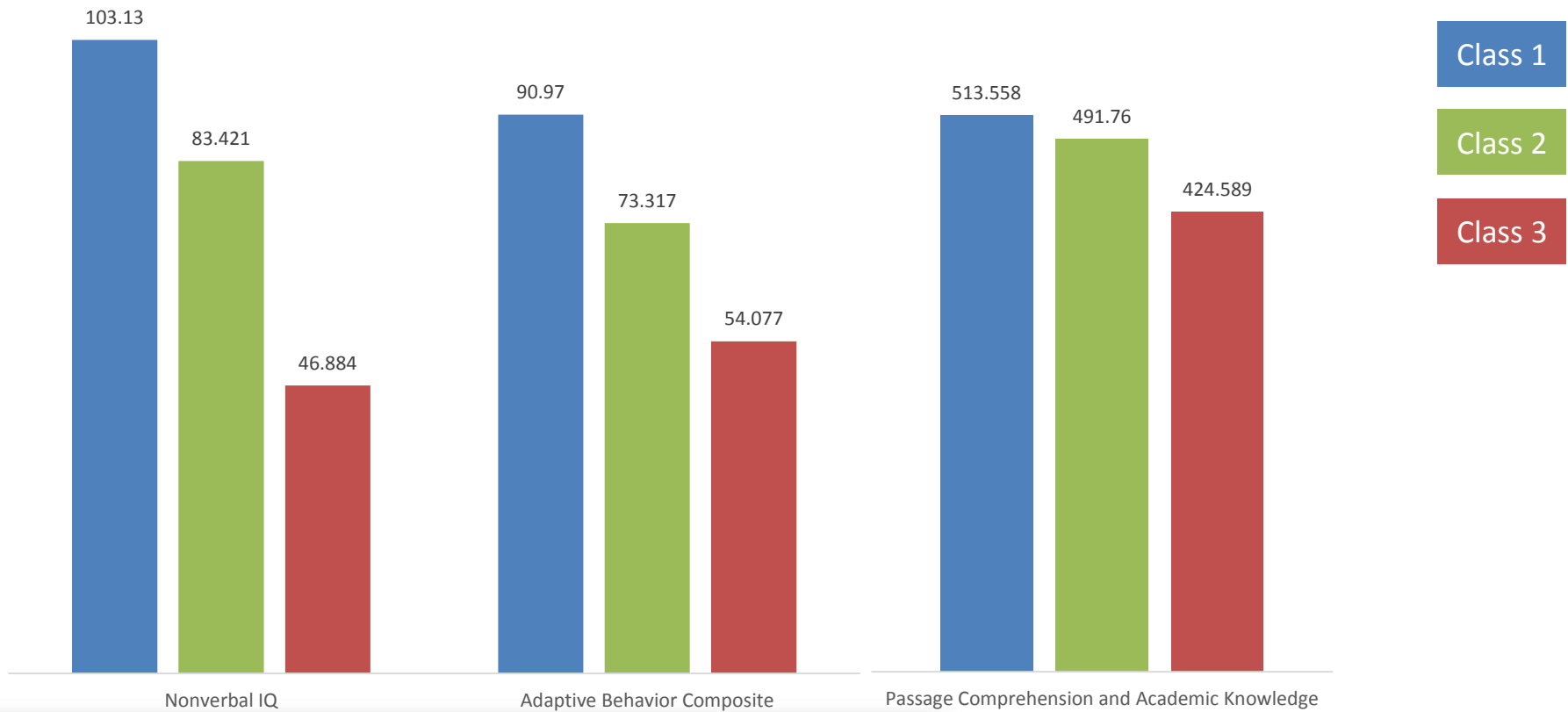


Results

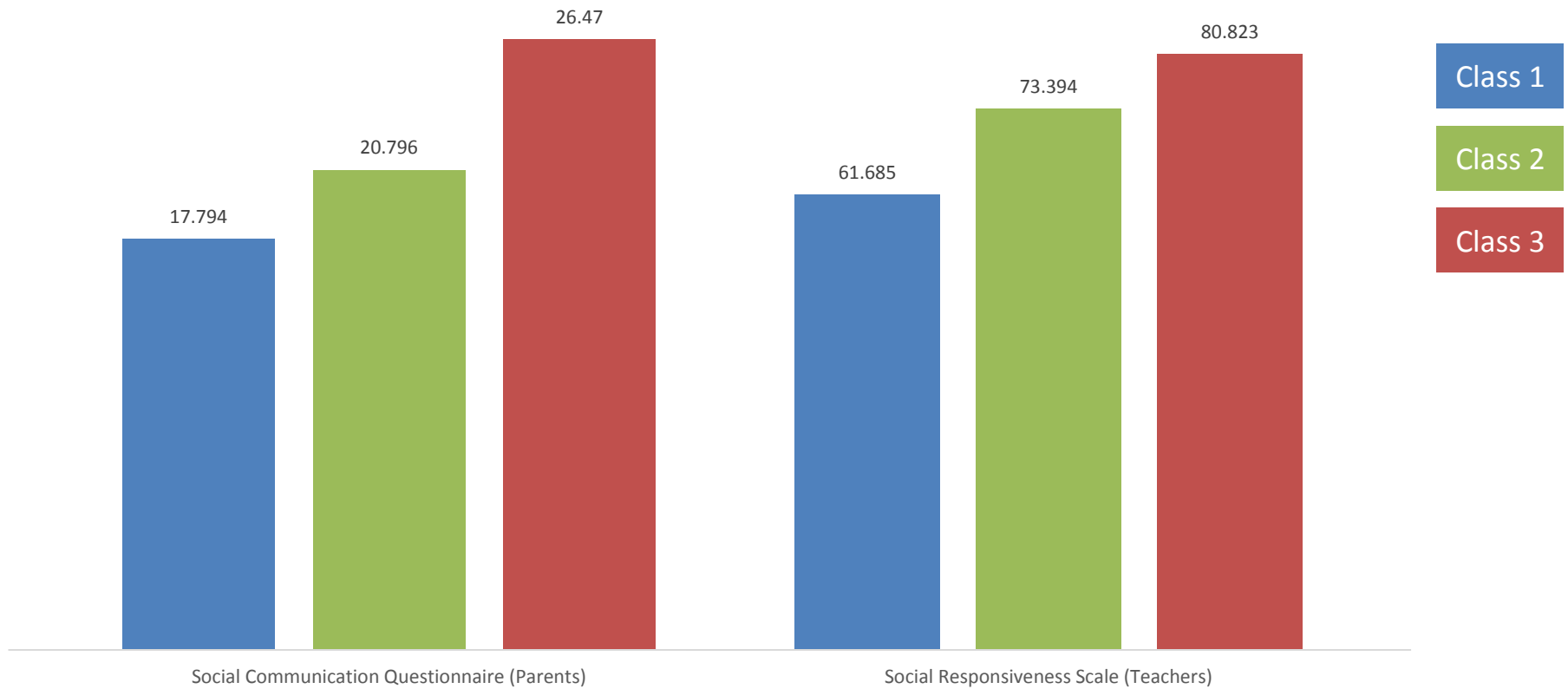
Overall Latent Profiles



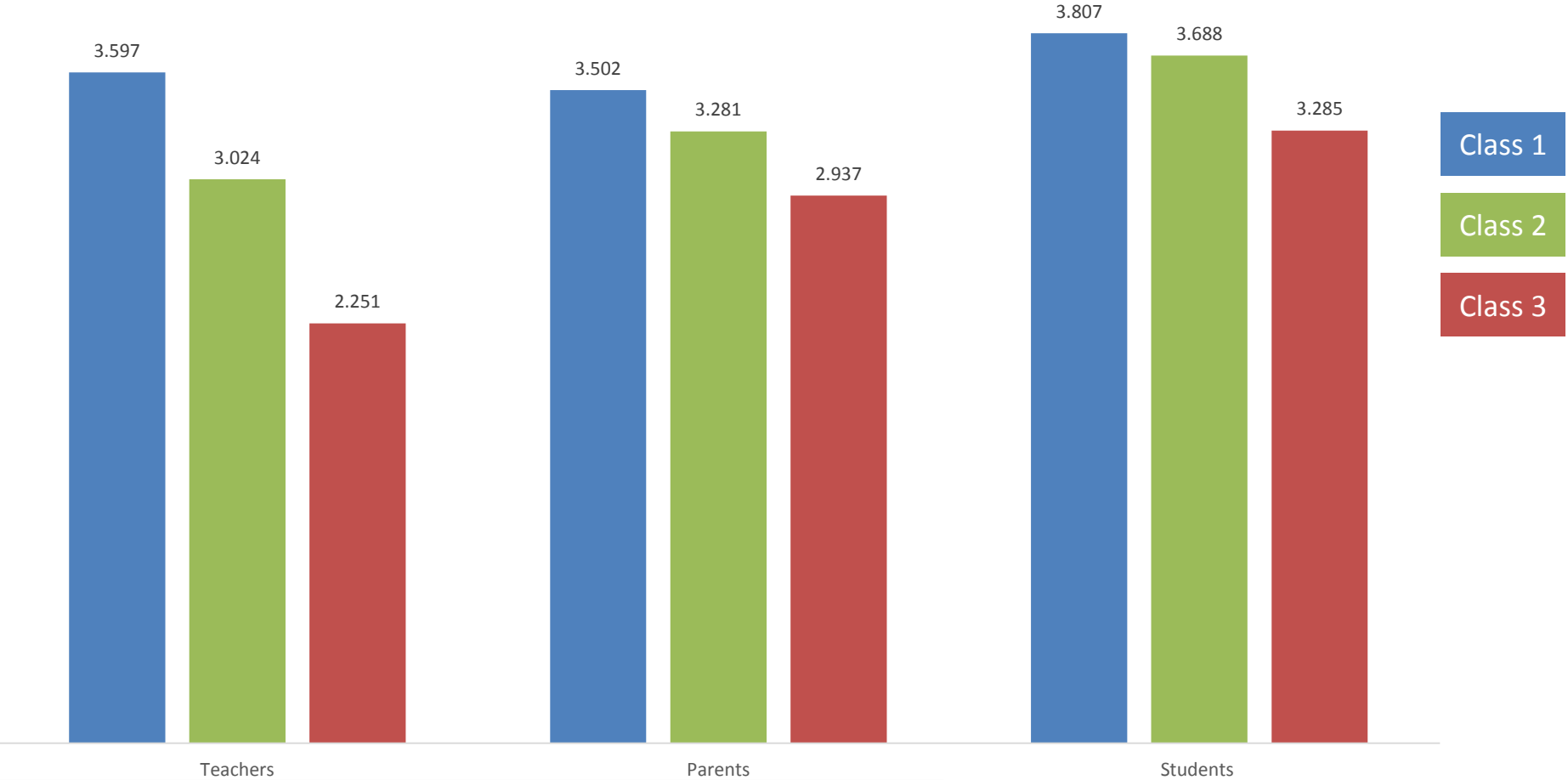
Cognition and Adaptive Behavior



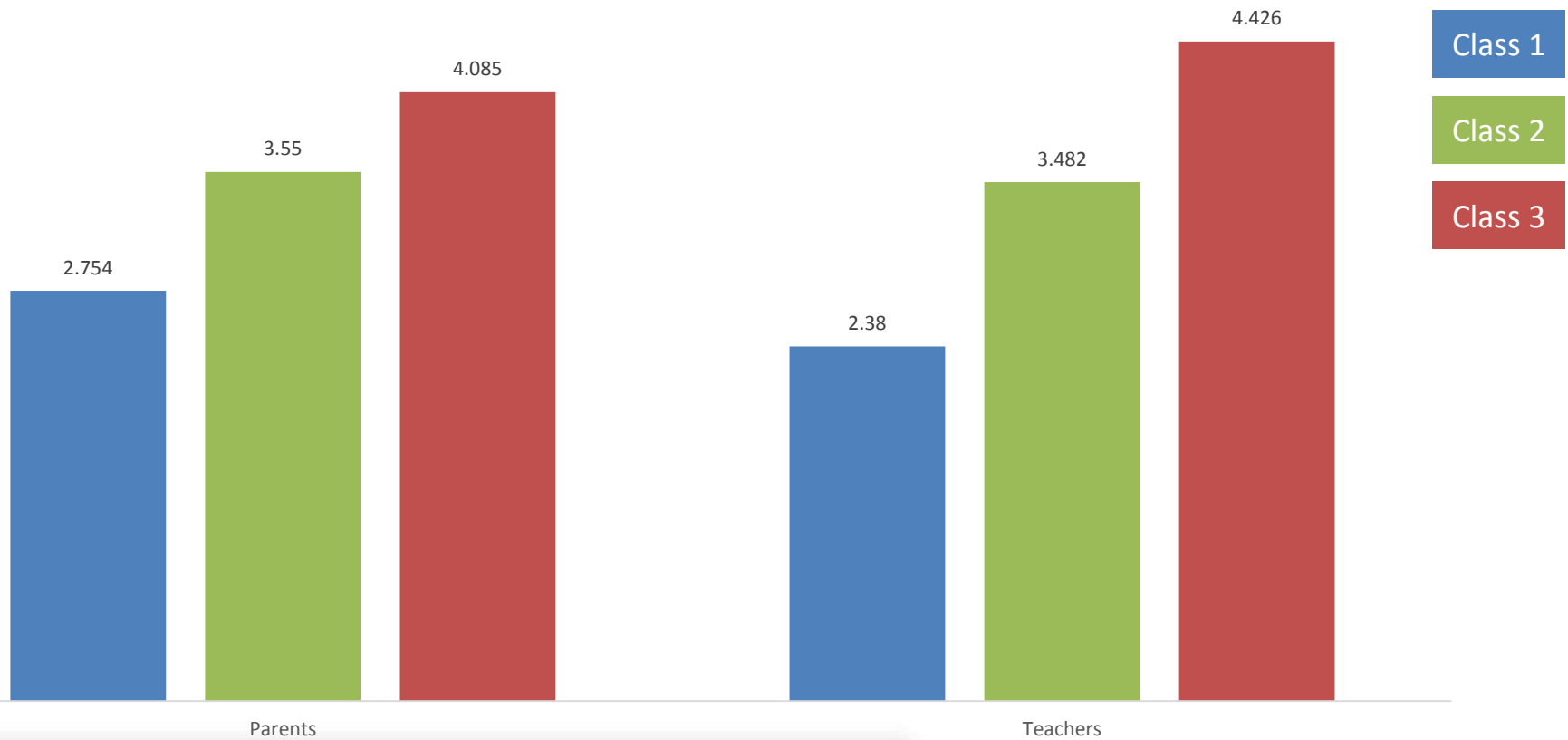
Autism Symptoms



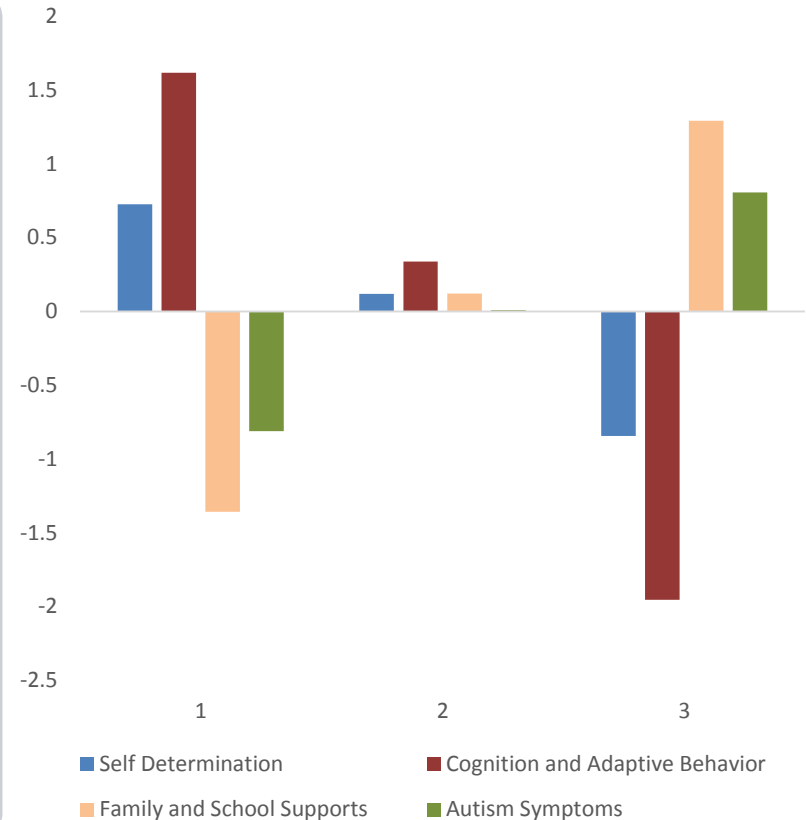
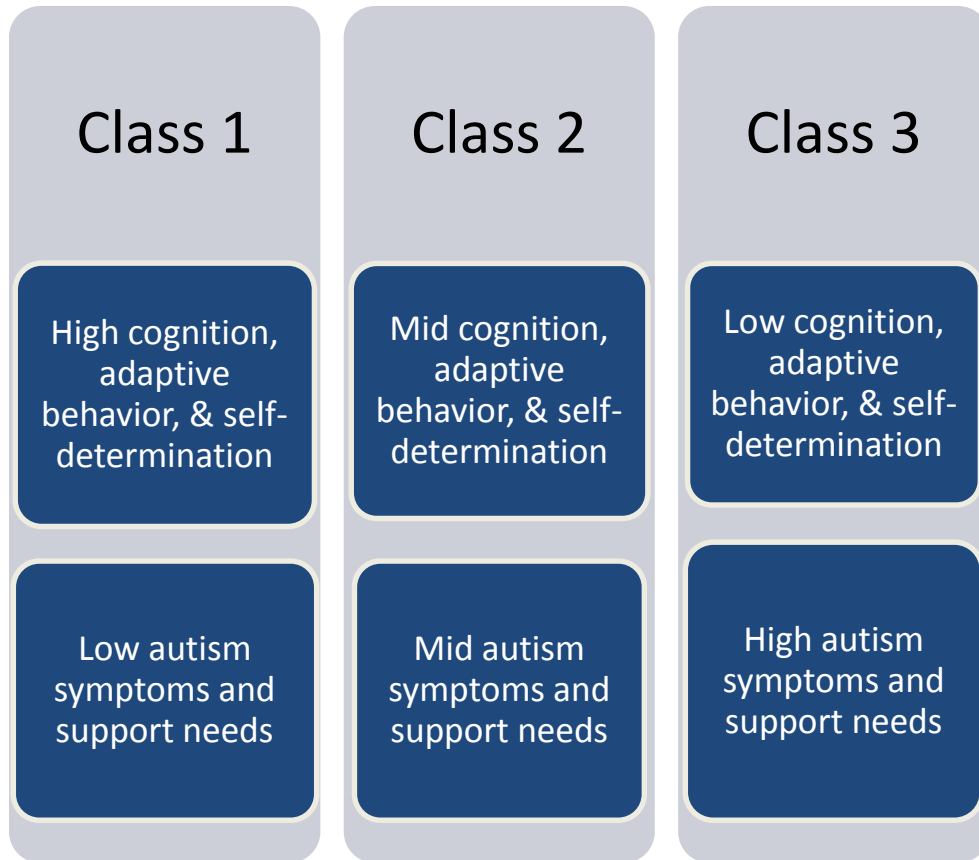
Self-Determination



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



Acknowledgements



The entire CSESA research team as well as all of the students, families, teachers, and schools who are a part of the project!

Funding

NIH T32HD04012

IES R324C120006



THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL