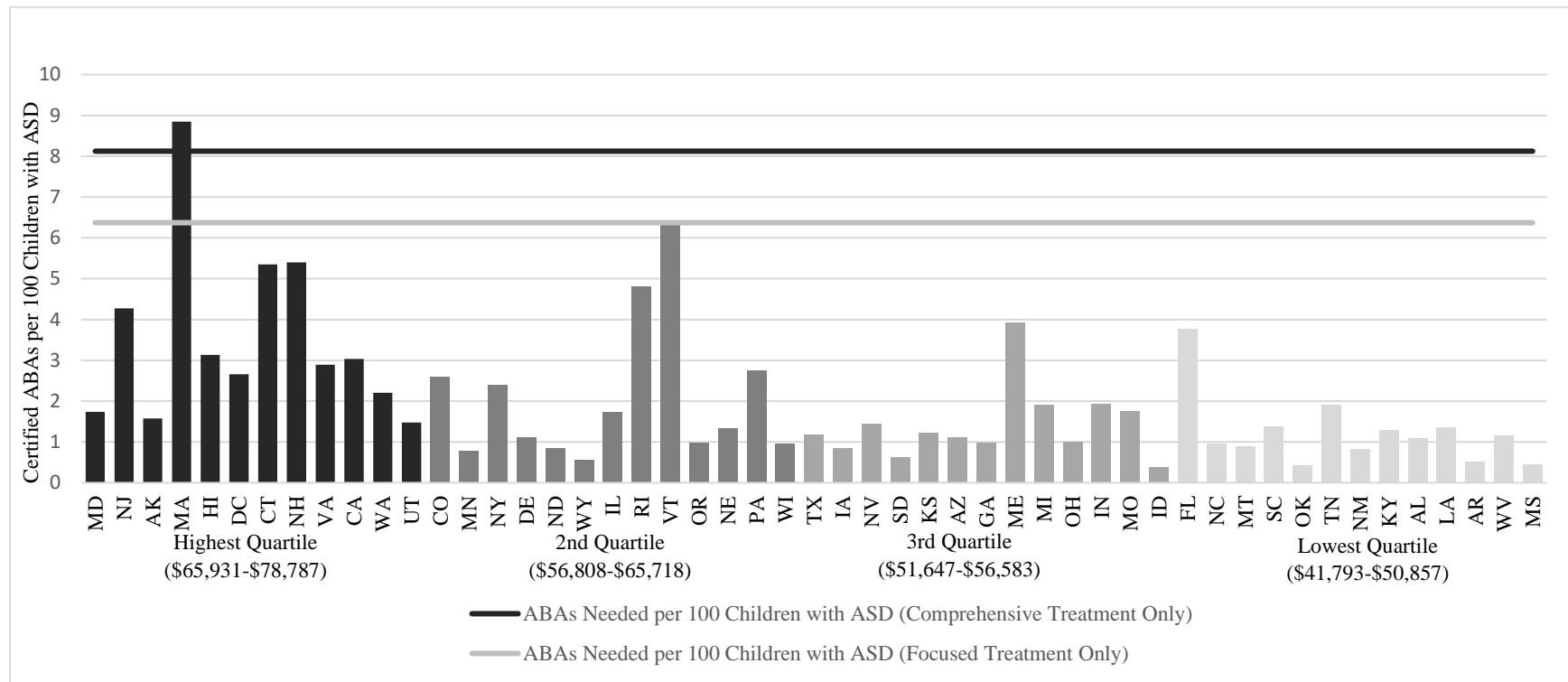


Supply of Certified Applied Behavior Analysts in the U.S.: Implications for
Service Delivery for Children with Autism

Online Supplements

Variation in Certified ABA Supply by Quartiles of State Median Household Income



Note: States are ranked by median household income from the highest to the lowest.

Variation in Certified ABA Supply across Census Regions, State Public Education Spending Quantiles, and State Median Household Income Quantiles

	Number of Certified Applied Behavior Analysts per 100 Children with ASD		
	Mean ^a	SD	PCC ^b
Census Regions			Not applicable
Northeast (REF)	4.90	1.94	
West	1.56***	0.91	
South	1.47***	0.90	
Midwest	1.25***	0.47	
State-level Public Education (Elementary and Secondary) Spending per Pupil			0.54***
Highest Quartile (REF) (\$14,713-\$22,366)	3.84	2.43	
2 nd Quartile (\$11,432-\$14,206)	1.96*	1.01	
3 rd Quartile (\$9,693-\$11,348)	1.17***	0.38	
Lowest Quartile (\$6,953-\$9,575)	1.34**	0.96	
State-level Median Household Income			0.51***
Highest Quartile (REF) (\$65,931 - \$78,787)	3.55	2.14	
2 nd Quartile (\$56,808 - \$65,718)	2.09	1.73	
3 rd Quartile (\$51,647-\$56,583)	1.41**	0.89	
Lowest Quartile (\$41,793 - \$50,857)	1.24***	0.87	
State-level Average	2.04	1.70	

Notes: * p<0.05 **p<0.01 ***p<0.001

^a p-values were calculated using Wald tests

^b PPC: Pearson Correlation Coefficient

Running head: SUPPLY OF CERTIFIED APPLIED BEHAVIOR ANALYSTS IN THE U.S.

Variations in the Supply of ABA and Other Health and Mental Health Providers across Regions, State Public Education Spending Quantiles, and State Median Household Income Quantiles

	Applied Behavior Analysts per 10,000 people (N=51)				Speech Language Pathologists per 10,000 people (N=49) [†]				Psychiatrists with MD per 10,000 people (N=51)				Psychologists/Counselors per 10,000 people (N=49) ^{††}			
	Mean ^a	SD	PCC ^b	CV ^c (%)	Mean ^a	SD	PCC ^b	CV ^c (%)	Mean ^a	SD	PCC ^b	CV ^c (%)	Mean ^a	SD	PCC ^b	CV ^c (%)
Census Region			N/A	66.02			N/A	16.26			N/A	42.83			N/A	28.20
Northeast (REF)	1.67	0.65			5.81	1.54			2.02	0.62			25.48	4.91		
West	0.62 ^{***}	0.35			4.52	1.65			0.93 ^{***}	0.94			17.07 ^{***}	4.04		
South	0.54 ^{***}	0.30			4.14 ^{**}	0.81			1.12 ^{**}	0.34			15.09 ^{***}	9.01		
Midwest	0.49 ^{***}	0.18			4.44 [*]	1.04			0.88 ^{***}	0.15			14.95 ^{***}	4.34		
State-level Public Education (Elementary and Secondary) Spending per Pupil			0.52 ^{***}	58.76			0.57 ^{***}	19.97			—	—			—	—
Highest Quartile (REF) (\$14,713-\$22,366)	1.32	0.81			6.05	1.75			—	—			—	—		
2 nd Quartile (\$11,432-\$14,206)	0.73 [*]	0.35			4.38 [*]	1.09			—	—			—	—		
3 rd Quartile (\$9,693-\$11,348)	0.45 ^{***}	0.16			4.48 [*]	0.96			—	—			—	—		
Lowest Quartile (\$6,953-\$9,575)	0.53 ^{**}	0.34			3.88 ^{***}	0.72										
State-level Median Household Income			0.54 ^{***}	49.51			0.17	10.68			0.54 ^{***}	40.18			0.63 ^{***}	30.64
Highest Quartile (REF) (\$65,931 - \$78,787)	1.29	0.69			4.61	1.22			1.77	1.10			23.25	8.95		
2 nd Quartile (\$56,808 - \$65,718)	0.75 [*]	0.55			5.38	1.85			1.30	0.65			21.09	6.04		
3 rd Quartile (\$51,647-\$56,583)	0.54 ^{**}	0.28			4.23	1.16			0.81 ^{**}	0.24			13.53 ^{**}	3.81		
Lowest Quartile (\$41,793 - \$50,857)	0.46 ^{***}	0.29			4.30	0.84			0.85 ^{**}	0.19			12.53 ^{***}	2.78		
State-level Average	0.75	1.70			4.62	1.35			1.17	0.74			17.50	7.35		

Notes: * p<0.05 **p<0.01 ***p<0.001

^a p-values were calculated using Wald tests

^b PCC: Pearson Correlation Coefficient

^c CV: Coefficient of Variation (by region or by quartile of the variable of interest)

N/A: Not applicable.

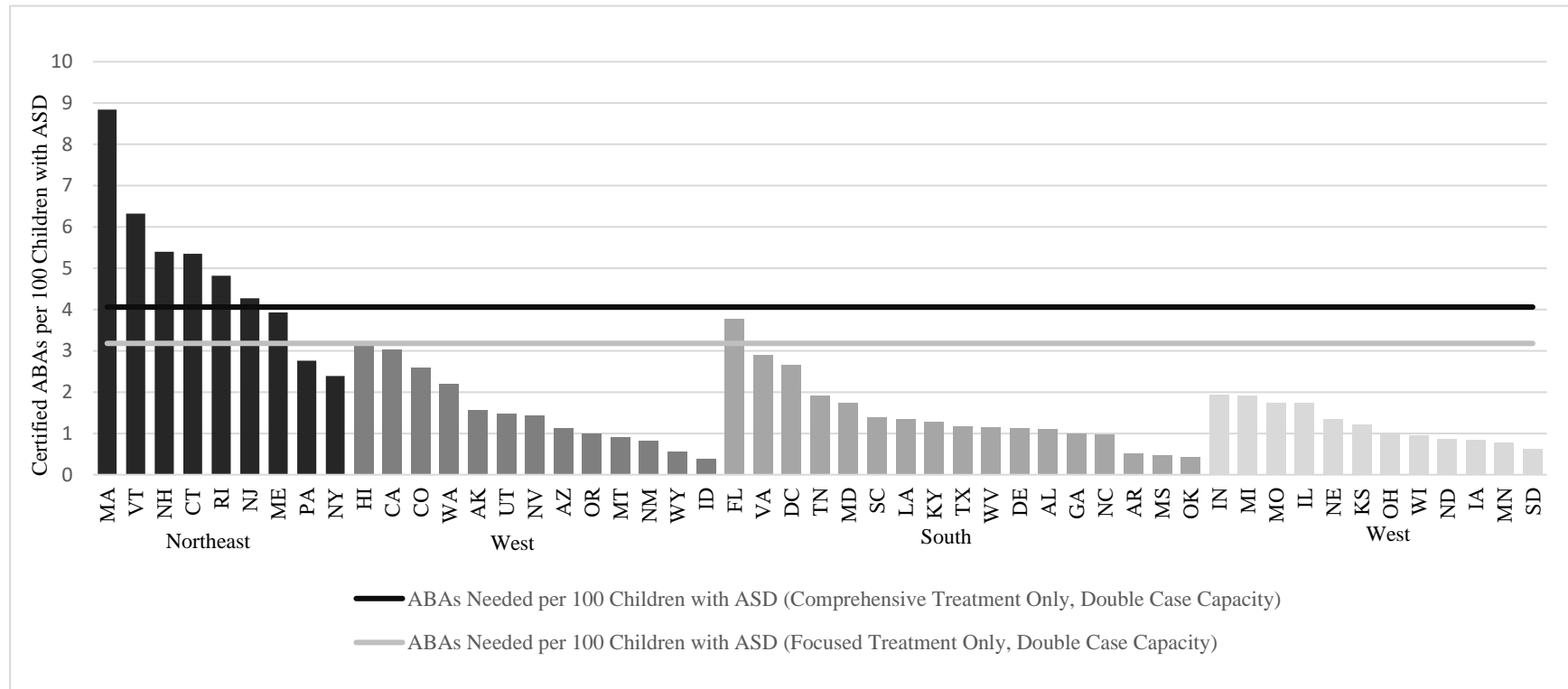
f Data is missing for Alaska and District of Columbia in AHRF.

f f Psychologist data is missing for North Dakota and South Dakota in AHRF.

Because the supply of psychiatrists and psychologists/counselors are affected mainly by policies in the health sector, we did not compare them across quartiles of state public education spending.

Running head: SUPPLY OF CERTIFIED APPLIED BEHAVIOR ANALYSTS IN THE U.S.

Sensitivity Analysis: Comparing Certified ABA Supply with Alternative Benchmarks Based on the Assumption that the Average Case Capacity of ABAs is Double that in the Board Guidelines



Note: The alternative benchmarks assumes that 3.2 and 4.1 behavior analysts are needed to treat 100 children with ASD in either focused or comprehensive treatment, respectively. These numbers were calculated based on the assumption that the average case capacity per behavior analyst is approximately 31.4 children in focused therapy and 24.6 children in comprehensive therapy, which is twice the caseload that we used in our main analysis based on the BACB guidelines.