Title: County-level Variation in Geographic Access to Board Certified Behavior Analysts among Children with Autism Spectrum Disorder in the United States

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Introduction: The primary driver behind the expansion of health care insurance coverage for the treatment of autism spectrum disorder (ASD) has been the demand for applied behavior analytic services provided by Board Certified Behavior Analysts (BCBAs).¹,² In response to an increased demand for these services,³ the number of BCBAs in the U.S. has skyrocketed; from 28 in 1999 to 27,289 in 2019.⁴ However, whether BCBAs are evenly distributed so that all children with ASD have access to their services remains unclear. In the existing literature, families report delayed or reduced treatment utilization as a result of difficulties in accessing behavior analysts.⁵ Despite mandates for healthcare insurance coverage of treatment for ASD, anecdotal evidence indicates significant unmet need.⁶–¹⁰ In this study, we examine geographic access to BCBAs, an important first step toward promoting optimal outcomes for children with ASD.

Method: Between March and May 2019, we integrated publicly available data from the U.S. Department of Education’s Civil Rights Data Collection, the Behavior Analyst Certification Board’s certificant registry, and the U.S. Census. The study sample included all U.S. counties and county equivalents (e.g., parishes, independent cities) in 48 of the 49 contiguous states and D.C. (N=3,108). Using geographic information systems software, we assigned BCBAs to counties based on their residence, allocated children via school districts to counties, and generated per-capita ASD/BCBA ratios. Using a modified Jenks Natural Breaks Classification method, we assigned counties to six categories of per-capita ratios. We conducted sensitivity analyses using the general child population in counties (per-capita child/BCBA ratios). To illustrate distribution, we developed several national maps.

Results: Findings demonstrate very uneven county-level BCBA distribution across the U.S. Approximately half of all counties had no BCBA. Counties in the highest accessibility category had ≤17.1 children with ASD per BCBA (n=770) while counties in the lowest accessibility category had ≥137.1 children with ASD per BCBA (n=12). Fifty-five of the 129 counties with highest ASD prevalence (≥12.5 children with ASD per 1,000 enrolled) had no BCBA. Ten of the 129 counties with highest ASD prevalence had no BCBA in that county or in neighboring counties (scattered primarily in the Idaho-Minnesota region and in Appalachia). National maps illustrate clusters of high and low accessibility.

Discussion: The observed differences in BCBA distribution cannot be fully explained by the county-level variation of ASD prevalence, suggesting that demand for applied behavior analytic services is not necessarily driving provider supply. To improve access to services, it will be important to identify the primary factors driving unequal distribution that can inform efforts to reach underserved populations, such as incentivizing providers to work in underserved areas and implementing evidence-based strategies such as telehealth service delivery.

References:


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