Hispanic Residential Isolation, ADHD Diagnosis and Stimulant Treatment among Medicaid-insured Youth

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Abstract

Objective:
This study aimed to evaluate a conceptual framework that assessed the effect of Hispanic residential isolation on Attention Deficit Hyperactivity Disorder (ADHD) health service utilization among 2.2 million publicly insured youth.

Design:
Cross-sectional.

Setting:
Medicaid administrative claims data for ambulatory care services from a US Pacific state linked with US census data.

Participants:
Youth, aged 2-17 years, continuously enrolled in 2009.

Main Outcome Measures:
The percent annual prevalence and odds of ADHD diagnosis and stimulant use according to two measures of racial/ethnic residential isolation: 1) the county-level Hispanic isolation index (HI) defined as the population density of Hispanic residents in relation to other racial/ethnic groups in a county (<.5; .5-.64; ≥.65); and 2) the proportion of Hispanic residents in a ZIP code tabulation area (<25%; 25%-50%; >50%).

Results:
Among the 47,364 youth with a clinician-reported ADHD diagnosis, 60% received a stimulant treatment (N = 28,334). As the county level, HI increased, Hispanic residents of ethnically isolated locales were significantly less likely to receive an ADHD diagnosis (adjusted odds ratio [AOR]=.92 [95% CI=.88-.96]) and stimulant use (AOR=.61 [95% CI=.59-.64]) compared with Hispanic youth in less isolated areas. At the ZIP code level, a similar pattern of reduced ADHD diagnosis (AOR=.81 [95% CI=.77-.86]) and reduced stimulant use (AOR=.65 [95% CI=.61-.69]) was observed as Hispanic residential isolation increased from the least isolated to the most isolated ZIP code areas.

Conclusions:
These findings highlight the opportunity for Big Data to advance mental health research on strategies to reduce racial/ethnic health disparities, particularly for poor and vulnerable youth. Further exploration of racial/ethnic residential isolation in other large data sources is needed to guide future policy development and to target culturally sensitive interventions.