

The Role of Parental Stress in the Association of Neighborhood Disadvantage and Childhood ADHD

Background: Attention-deficit/hyperactivity disorder (ADHD) is a neurodevelopment disorder marked by symptoms of inattention and/or impulsivity/hyperactivity. It has a prevalence of approximately 8.4 percent in the U.S. population. Studies have shown that children coming from neighborhoods of greater disadvantage (i.e., neighborhoods with higher rates of income poverty, unemployment rates, and lower quality housing), are more at risk for ADHD than children coming from neighborhoods with less disadvantage. However, it is unclear whether parental stress, perhaps stemming from neighborhood disadvantage, might explain the relationship between neighborhood disadvantage and childhood ADHD. This study will examine whether the association of neighborhood disadvantage and childhood ADHD explained (i.e., statistically mediated) by parental stress.

Method: We recruited 210 kindergarteners from Madison, WI. Neighborhood disadvantage was measured using zip codes of the residences of our families that are then mapped on to the [Neighborhood Atlas](#), an adaptation of the Area Deprivation Index (ADI) that ranks neighborhoods in the U.S. based on census data collected on areas of education, household income, employment, and housing quality within that zip code (see Figure 1). ADHD symptomology and parental stress are measured via clinical interviews and standardized questionnaires conducted with participants in our lab. Our statistical plan is to conduct a mediation analysis, where child ADHD symptoms will first be regressed on the data from the Neighborhood Atlas for each participant (i.e., c, or the total effect pathway). Then, we will test the indirect pathways for this association, including links between the Neighborhood Atlas data and parental stress (i.e., a pathway), parental stress and childhood ADHD (i.e., b pathway), and finally, Neighborhood Atlas and childhood ADHD after controlling for the parental stress (i.e., c pathway, or the direct effect).

Expected Results: We expect that greater neighborhood disadvantage will predict greater parental stress, which will in turn predict greater child ADHD. We expect that the association between neighborhood disadvantage and child ADHD will be mostly explained by parental stress.

Conclusions: This study may provide further insight into how and why neighborhood disadvantage affects mental health in children. Findings may provide future directions for public policy. Identification of at-risk neighborhoods can lead to intervention targets and special educational arrangements.

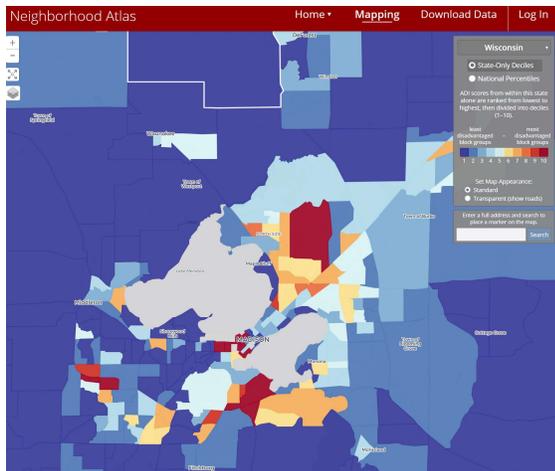


Figure 1. Map of neighborhood diversity from the Neighborhood Atlas for Madison, WI.