

The Effects of Social Determinants of Health on Mental Health in Ohio

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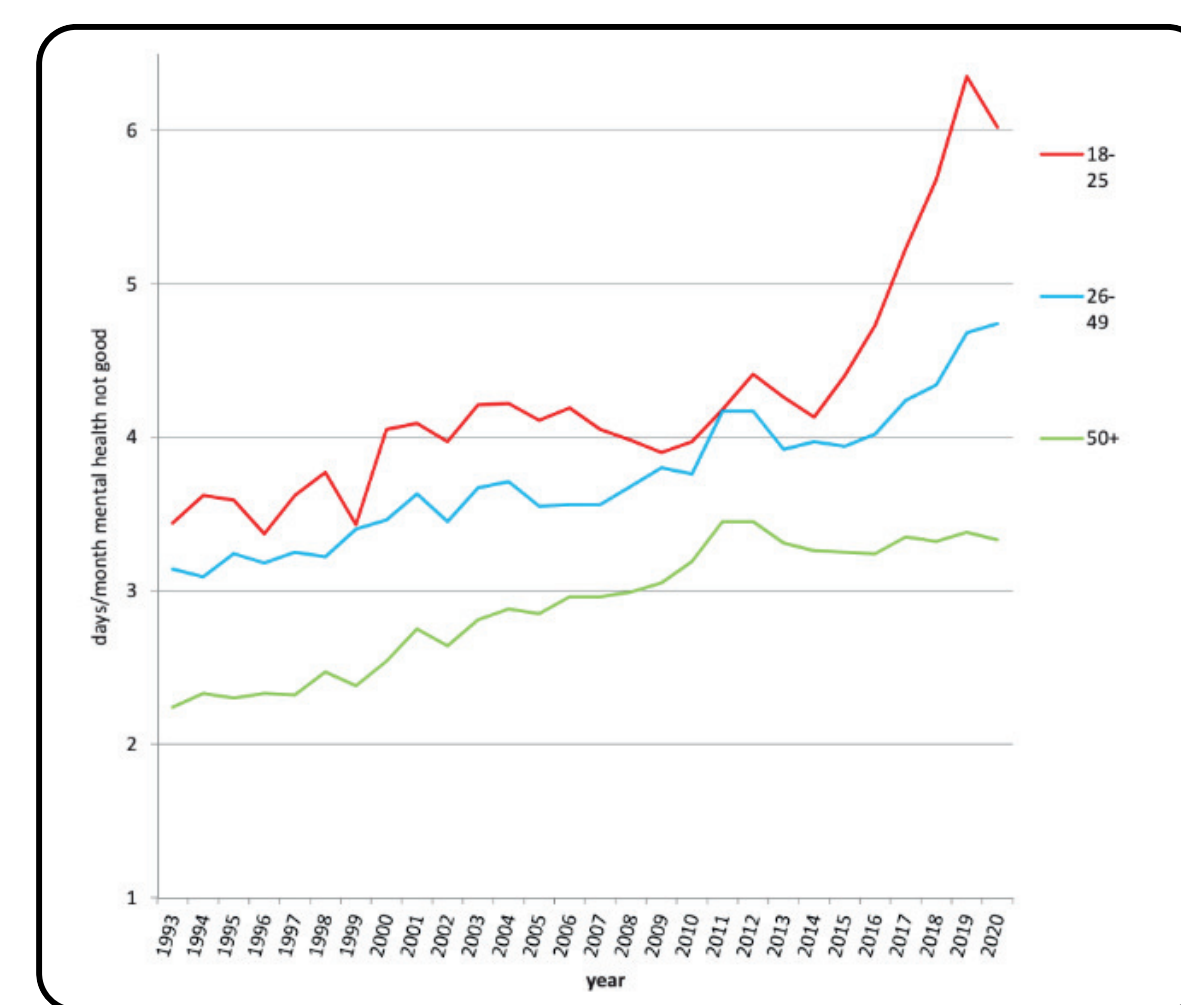
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Statement of Purpose

This study aimed to analyze mental health in Ohio compared to other U.S. states and to determine the effects that availability of mental health providers, median household income, and social connectedness may have on the average number of bad mental health days per month.

Introduction

- Mental health in the U.S. has continued to worsen over the years, with adults of all age groups reporting poorer mental health in 2020 as compared to 1993 (Figure 1).¹
- Previous research shows how social conditions shape mental health, including how food insecurity can increase stress and depression² and how strong social support can ease stress and support healthier mental states.³
- Poor mental health also affects physical health, with medications for psychiatric conditions being associated with cardiovascular risks⁴ and individuals with mental illnesses facing a loss of 10–20 years of life due to cardiac conditions.⁵



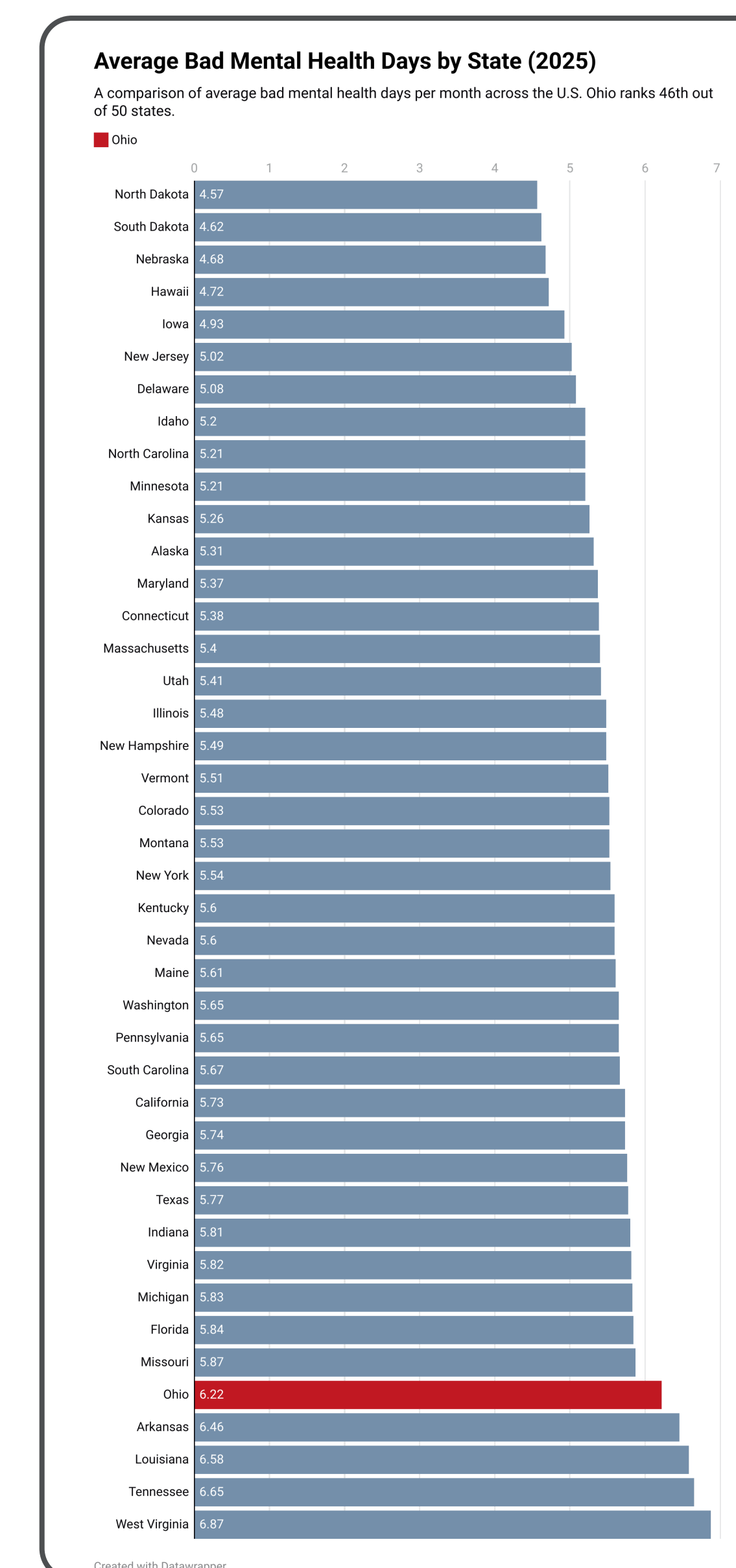
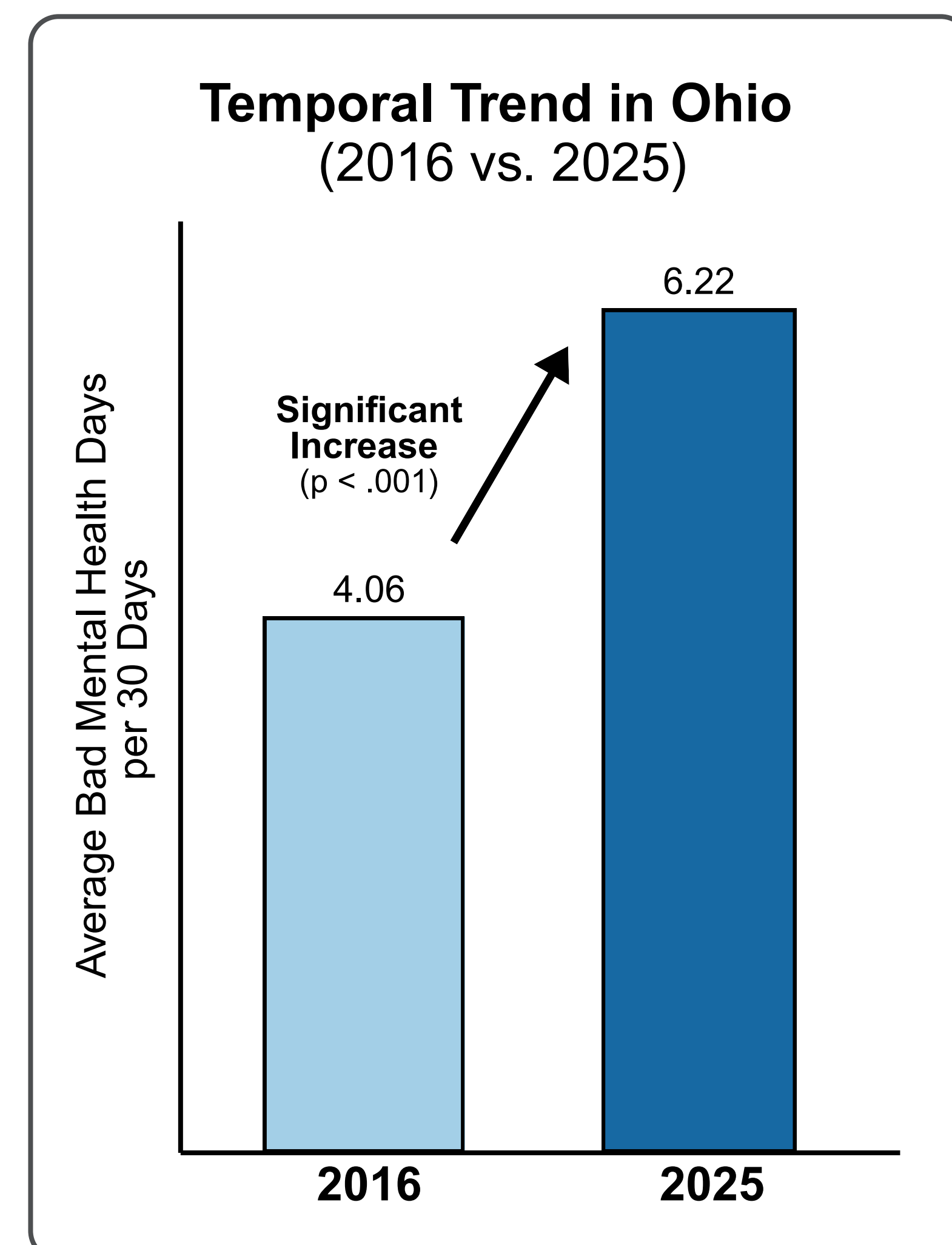
(Figure 1) Days of poor mental health among U.S. adults, by age group and year, 1993–2020¹

Methods

- A paired T-test and a one-way ANOVA were used to address temporal changes in bad mental health days from 2016 to 2025. (RQ1)
- Data from County Health Rankings and Roadmap⁶ was used to analyze the number of bad mental health days in Ohio and all across the United States. (RQ2)
- Exclusion criteria included Washington D.C., Rhode Island, and several Connecticut counties due to limited data.
- A Spearman correlation and a stepwise linear regression were used to analyze how availability of mental health providers, median household income, and social connectedness impact bad mental health days. (RQ3 and RQ4)
- “Bad mental health days” were defined by asking adults the following question; “Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?”

Results

- Ohio’s mental health has worsened in the past decade
 - Bad mental health days rose 4.06 → 6.22 average days per month from 2016–2025 ($p < .001$)
- Ohio ranks among the worst states nationally
 - Worse than 46/50 states; only AR, LA, TN, and WV had higher averages



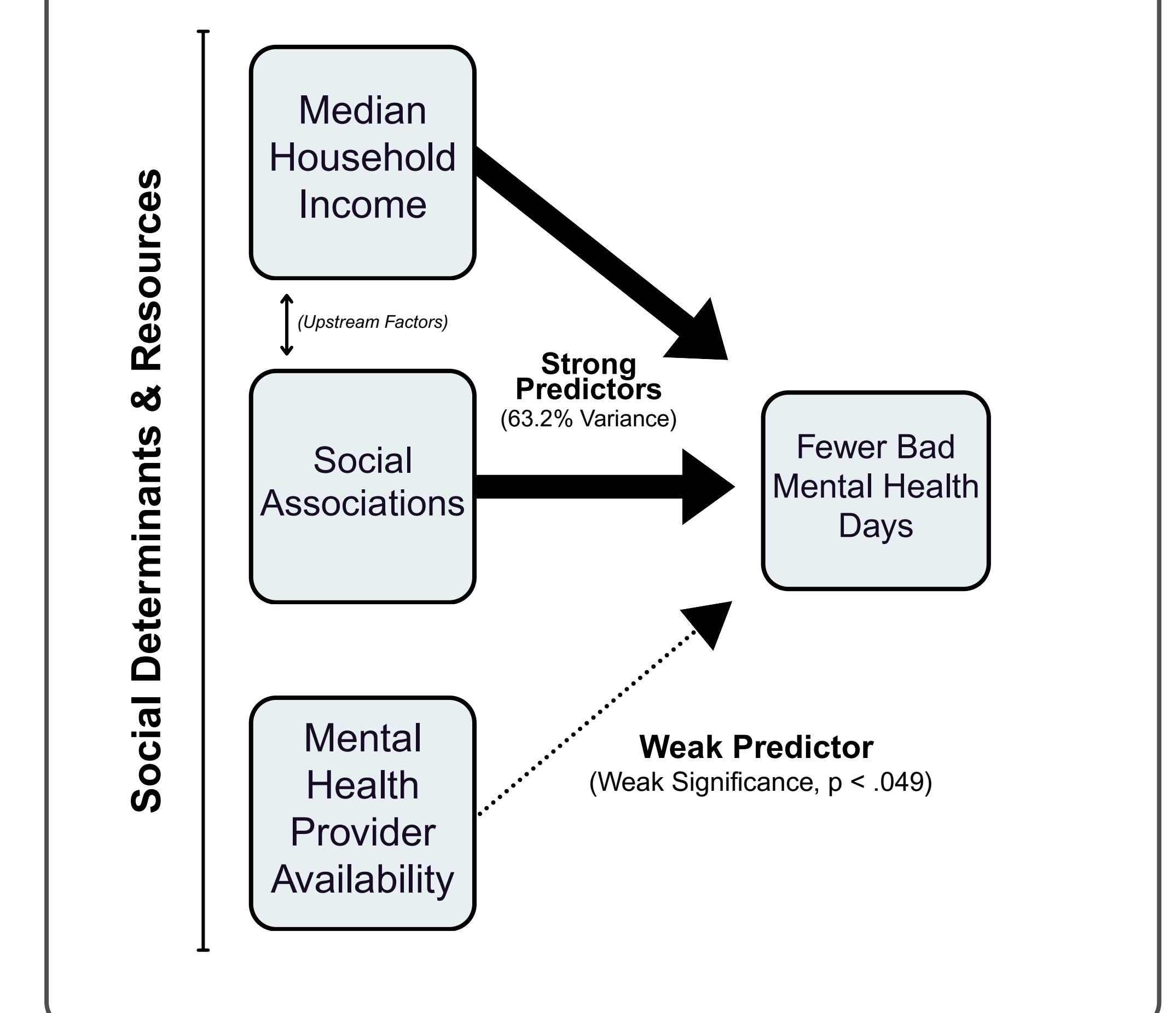
- Income appears to be the strongest protective factor
 - Higher median household income = significantly fewer bad mental health days
- Social connectedness matters a lot
 - Higher social association rates strongly predicted better mental health. Social association was defined as “number of membership associations per 10,000 population in a county” (i.e. civic, political, religious, sports and professional organizations)
- Provider availability has only a weak impact
 - Ratio of mental health providers showed a very small negative correlation ($r = -.210$)
- Upstream factors outweigh clinical access
 - Economic stability + social support appear to be more predictive than provider availability numbers

Discussion/Conclusion

Our study was **limited by** the restricted nature of the data set, the exclusion of several states with inadequate data, possible confounding variables, and reliance on a single data source, which may reduce generalizability. **Future research** should evaluate the impact of additional social-determinants of health (i.e. **safe housing, insurance coverage, and local policy interventions**) to better capture the myriad factors influencing mental health outcomes.

This study shows that **mental health in Ohio has worsened substantially over the past decade** and now ranks among the poorest in the nation. While **access to mental health providers is important, our findings demonstrate that higher economic stability and social connectedness play a more significant role** in predicting fewer bad mental health days in 2025. These results highlight the need for public health strategies that **focus not only on clinical access but also on reducing economic burdens and strengthening community networks** to improve mental well-being across Ohio.

Key Predictors of Mental Health (2025 Regression Analysis)



Citations

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