

# Crowded, Costly, and Commuting: How Structural Housing Factors Shape Mental Health in the U.S.

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## RESEARCH OBJECTIVE

We study how different **housing problems**, such as high housing costs, overcrowding, poor housing quality, and long commutes, are **related to mental health** across U.S. counties.

In particular, we examine whether different types of housing problems are linked to **different mental health outcomes**, including **day-to-day stress and suicide**.

## POPULATION STUDIED

The analysis uses county-level data from approximately **3,200 U.S. counties** drawn from the County Health Rankings (2023–2025).

## PRINCIPAL FINDINGS

### Affordability and time constraints

- Higher **cost burden** and **long commute** lead more poor mental health days
- Suggests **financial strain and time constraints** drive day-to-day distress

### Housing quality and crowding

- **Overcrowding and lack of facilities** cause higher suicide rates
- Cost burden shows **no clear association with suicide**
- Suggests **living conditions** matter more for severe outcomes

### Geographic variation

- **Effects are stronger in rural counties**, especially for housing quality and crowding

## ACKNOWLEDGEMENTS

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## STUDY DESIGN

We conduct a cross-sectional analysis using multivariable linear regression models. Each housing measure is analyzed separately to capture its association with:

	Variable	Description
Dependent variables	Poor mental health days	Avg. poor mental health days
	Suicide rate	Deaths per 100,000 population
Housing components	Cost burden	% households with high housing cost burden
	Overcrowding	% households with >1 person per room
	Lack of facilities	% lacking plumbing/kitchen
	Long commute	% commuting >30 minutes
	Homeownership	% owner-occupied housing

All models adjust for demographic, socioeconomic, and healthcare-related factors. Additional analyses examine whether results vary by **rural population share** and across **Census regions**.

**Table 1. Descriptive Patterns by Housing Condition**

Outcome	Low	High
<b>Cost Burden</b>		
Poor mental health days	5.2	5.3
Suicide rate	19.4	12.7
<b>Overcrowding</b>		
Poor mental health days	5.2	5.2
Suicide rate	19.2	20.7
<b>Lack of Facilities</b>		
Poor mental health days	5.17	5.26
Suicide rate	18.30	20.59
<b>Long Commute</b>		
Poor mental health days	5.07	5.32
Suicide rate	20.37	18.66

Notes: Values represent mean poor mental health days and suicide rates across counties with low and high levels of each housing condition. “High” and “Low” categories are defined using standard thresholds (e.g.,  $\geq 15\%$  severe cost burden,  $>5\%$  overcrowding,  $>1\%$  lack of basic housing facilities and  $>30\%$  long commute).

## REFERENCES

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## IMPLICATIONS FOR POLICY AND PRACTICE

- **Housing affordability policies** (e.g., rental assistance) may help reduce *day-to-day psychological distress*.
- **Investments in housing quality and infrastructure** may be more effective for addressing *severe outcomes*, including suicide.
- **Targeted interventions in rural areas** may yield larger health benefits, where housing-related risks appear stronger.
- Overall, housing should be addressed as a **multidimensional determinant of health**, rather than a single composite measure.

## CONCLUSION

- This study conceptualizes housing as a **multidimensional constraint**, rather than a single exposure.
- It shows that different housing dimensions are associated with **distinct mental health outcomes**.
- It provides **population-level evidence across U.S. counties** and highlights stronger associations in **rural areas**.
- These findings suggest that housing policies should target **specific constraints**, rather than treating housing as a single determinant of health.

### Key Takeaways

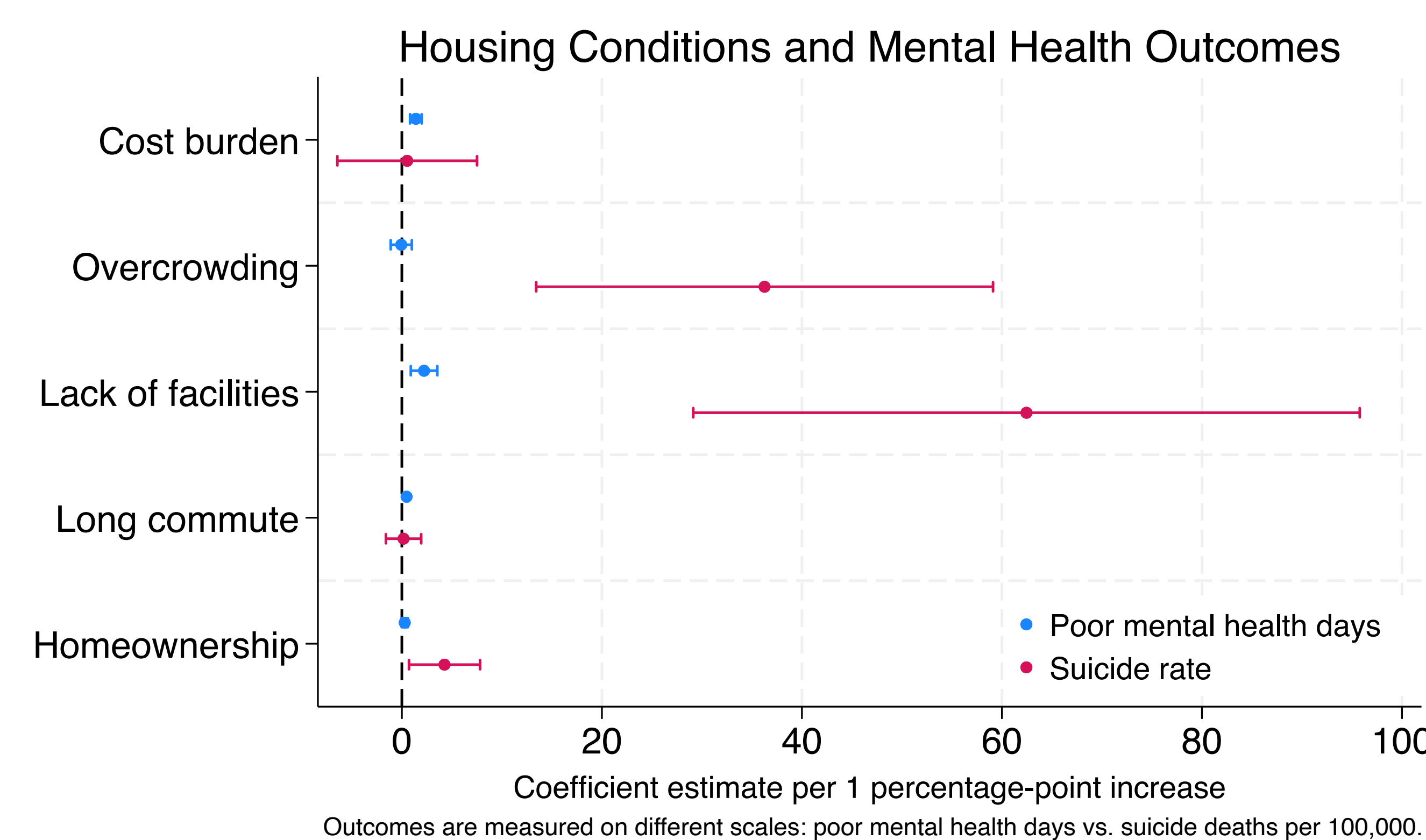
- Housing conditions are associated with mental health through **different pathways**, not a single mechanism.
- **Affordability and commuting** are more closely linked to *psychological distress* (poor mental health days).
- **Overcrowding and housing quality** are more strongly associated with *suicide mortality*.
- These patterns suggest that housing should be treated as a **multidimensional determinant of health**, rather than a single composite measure.

### Future Research

- Examine individual-level mechanisms linking housing and mental health
- Explore causal effects using longitudinal or quasi-experimental designs

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**Figure 1. Association between housing conditions and mental health outcomes.**

Points represent estimated regression coefficients, and horizontal lines indicate 95% confidence intervals. The x-axis shows the change in outcome associated with a one–percentage–point increase in each housing measure. Models adjust for demographic, socioeconomic, and healthcare-related factors.