

Social determinants of health and food insecurity in older adults: An exploratory analysis

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Background

- **One in every 14** U.S. seniors aged 60 and over reported food insecurity in 2019.
- Past research suggests **food insecurity disproportionately affects socially marginalized communities**. However, little is known about how these **systematic inequalities independently and jointly affect food insecurity in older adults**.
- This exploratory study used the **social ecological model** to examine the **interplay across the dimensions of the social ecological model and food insecurity**.

Methods

Participants (N = 4186; age 69 ± 7.57) from the United States were drawn from the **Panel Study of Income Dynamics 2019** for this study. Using 17 variables to represent the social ecological model domains, a **classification and regression tree (CART)** was grown to identify key factors and subgroups of food insecurity. All analyses were conducted in R with package 'rpart'.

Results

- The **poverty to income ratio (PIR)** was the most potent predictor of food insecurity status in the older adult population.
- Variables that amplified this relationship include housing ownership, number of household members, psychological distress, whether receiving food assistance, marital status, and the U.S. region participant currently live in.
- **Three subgroups** were observed with food insecurity level above scaled food insecurity cutoff score 2.2.

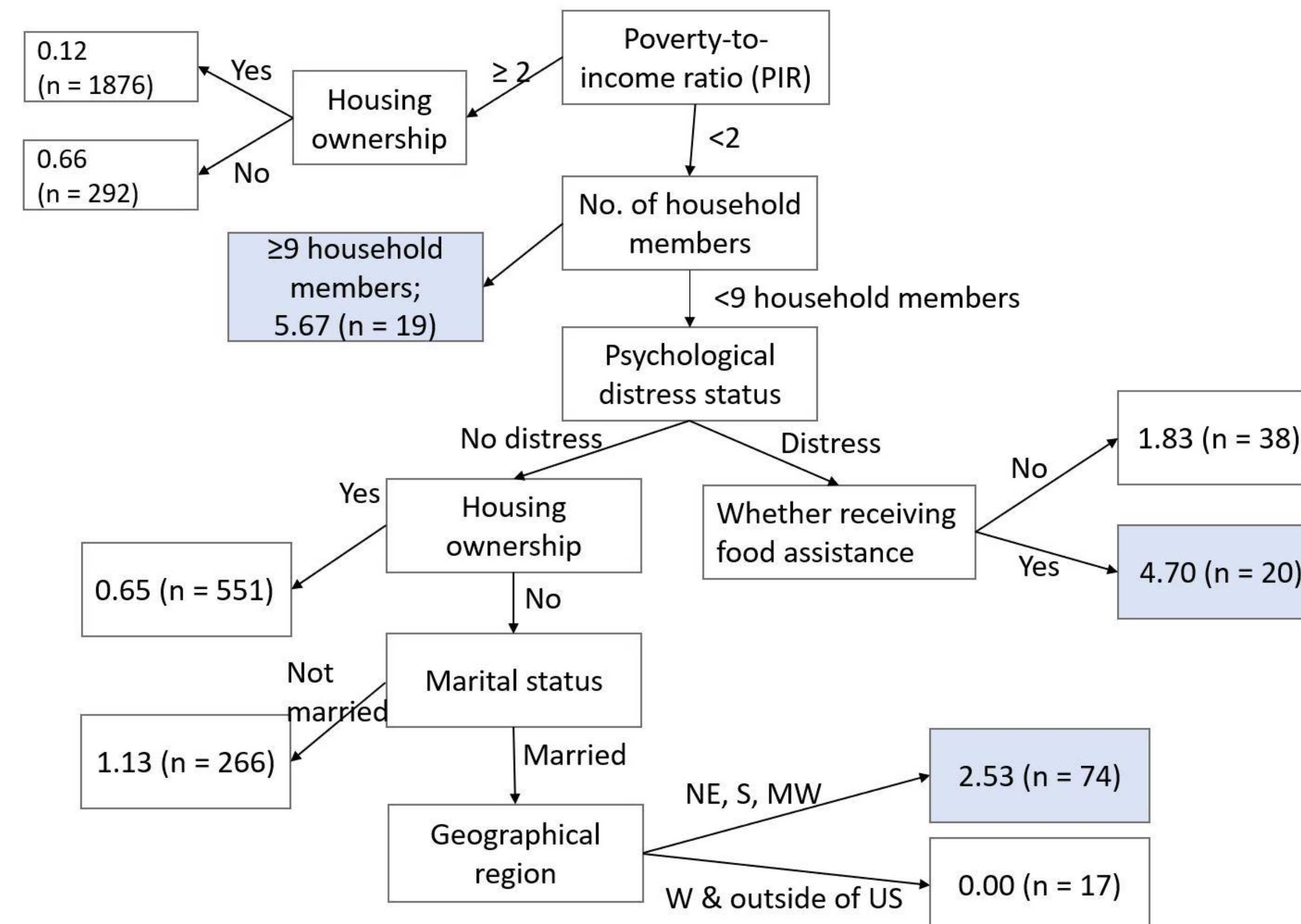


Figure 1. CART of food insecurity in older adults of the Panel Study of Income Dynamics 2019. Values in nodes represent food insecurity levels and number of participants of particular node, respectively. Blue boxes indicate nodes with food insecurity levels higher than cutoff score (2.2). Split information indicates variable criteria. NE = Northeast region; S = South region; MW = Midwest region; W = West region

Implications

- Emphasized the roles of social inequalities on food insecurity outcomes in a sample of older adults.
- Confirmatory studies are needed to test the interactive hypotheses derived from this analysis. If confirmed, these findings may help in designing specific intervention programs to combat food insecurity and maintain quality of life for older adults.

Acknowledgements

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References

1. Panel Study of Income Dynamics, public use dataset. Produced and distributed by the Survey Research Center, Institute for Social Research, University of Michigan, Ann Arbor, MI (2023).