

The Role of Older Adults in Two- and Three-generation Households: Implications for Diet Quality and Household Food Security



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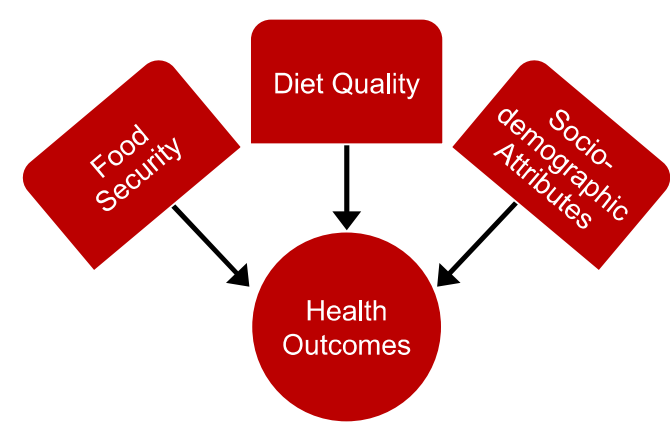
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Abstract

Food insecurity rates have declined overall but have increased significantly among older adults in the past decade. Most older adults in the U.S. also have suboptimal diet quality. An older adult's household role may influence their diet quality and the household's food security status, especially in mixed-generation households. The objective is to explore the relationships between an older adult's household role, the household's food security status, and the older adult's diet quality in mixed-generation households. A cross-sectional analysis of a nationally-representative sample of U.S. households with at least one older adult from the 2011-2016 NHANES was conducted. Households were categorized as: older adult as head of household and child caregiver (HHC); head of household, but not a caregiver (HHNC); and neither head of household nor caregiver (NHH). The U.S. Household Food Security Survey and Healthy Eating Index-2015 (HEI-2015) from a single dietary recall were used to assess food security status and diet quality, respectively. Weighted chi-square and ANOVA tests were used to compare food security status and HEI-2015 scores across household categories, respectively. HHNC households were significantly more likely to be fully food secure (84% FFS; $p < .001$) than HHC households (67% FFS) and NHH households (68% FFS). Older adults as HHNC had significantly higher HEI-2015 scores (mean: 53.7, $p < .001$) than HHC older adults (50.2) and NHH older adults (51.5). Findings suggest that caregiving demands may have a negative influence on food security and diet quality of older adults in mixed generation households. While such relationships have potential bearing on nutrition programming and policy, further research is needed to understand the underlying household dynamics.

Background

- Food insecurity among older adults has more than doubled since 2011.
- Households with grandchildren tend to have poorer food security.
- The presence of a grandparent may be protective against food insecurity.
- Relationships between the role of older adults in mixed-generation households and their diet quality and food security status have been underexplored.



Methods

- **Objective:** To explore the relationships between household food security status with a focus on the influence of an older adult's presence and role within the broader household.
- **Sample:** 8,307 adults living in a household with at least one older adult drawn from the National Health and Nutrition Examination Survey (NHANES), 2011-2016.
- **Household food security status** was determined using the USDA's US Household Food Security Survey Modules.
- **Diet quality** was assessed via Healthy Eating Index (HEI 2015) scores based on a single 24-hour diet recall
- Cases were categorized in one of three ways (see Table 1).
- **Statistical analysis:** Performed using IBM SPSS Statistics
 - **Chi-square analysis** was performed to compare the older adult's role and household food security status
 - **ANOVA** was performed to compare the older adult's role and individual diet quality

Household Role	Definition
Head of Household and Caregiver (HHC)	<ul style="list-style-type: none"> • Older adult is reference person • At least one child is present • No "middle" generation
Head of Household but Not Caregiver (HHNC)	<ul style="list-style-type: none"> • Older adult is reference person • Either no children present or "middle" generation present
Not Head of Household (NHH)	<ul style="list-style-type: none"> • Older adult is not reference person

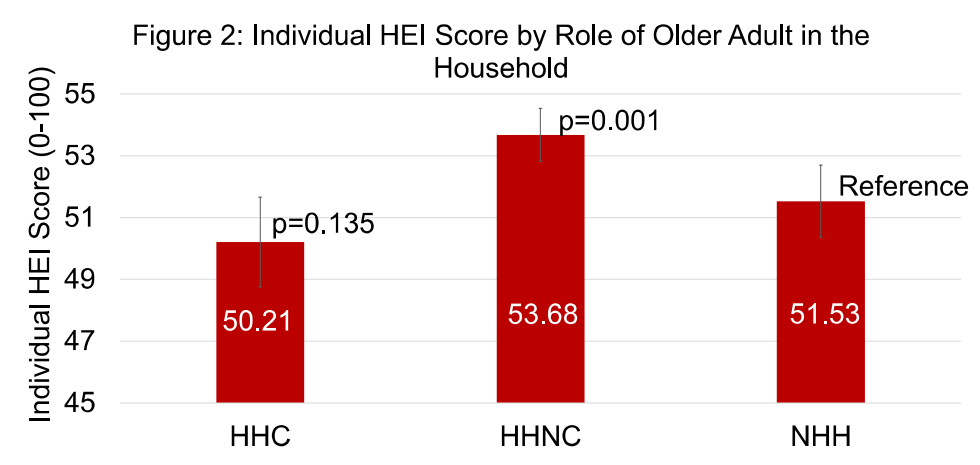
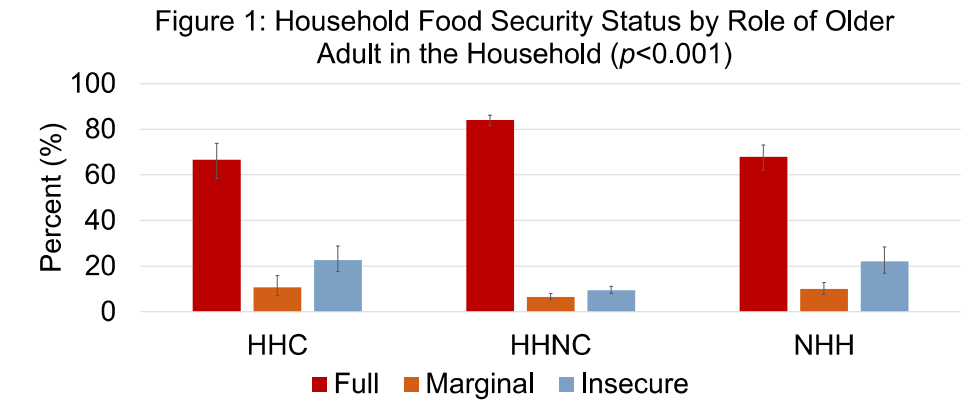
Table 1: Definitions of Older Adult Roles

Results

Socio-demographic Variables	Household Food Security Status			p value
	Fully Secure (Mean)	Marginally Secure (Mean)	Food Insecure (Mean)	
Respondent's Age	61.02	54.28	50.81	<0.001
Reference Person's Age	66.12	62.29	60.55	<0.001
Income to Poverty Ratio	3.25	1.67	1.41	<0.001
Respondent's Gender				0.627
Male	79.8%	7.1%	13.1%	
Female	79.5%	7.8%	12.7%	

Table 2: Socio-demographic Variables by Household Food Security Status

Results



Conclusion and Future Implications

- Households with an older adult in the role of HHC had lower food security status compared to older adults in different roles.
- Older adults in such households also had lower average diet quality compared to older adults in other roles.
- Our findings suggest the added demand of caregiving may have a tangible impact on both household food security and individual diet quality for older adults.
- Continued research in this area is needed to understand the underlying household dynamics responsible for the discovered relationships, and their health implications for older adults and other household members.
- **Acknowledgements:** This research was supported by the Ohio State University Institute for Population Research via center grant (P2CHD058484) awarded by the National Institute of Child Health and Human Development.