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Food Insecurity and Homelessness in the Journeys Home Survey

Nicolas Herault, Julie Moschion & David C. Ribar

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Food Insecurity and Homelessness in the Journeys Home Survey

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Melbourne Institute of Applied Economic & Social Research (MIAESR)

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This paper uses data collected from the Journeys Home project, a longitudinal survey-based study managed by the MIAESR on behalf of the Australian Government Department of Social Services (DSS). The findings and views reported in this paper, however, are those of the authors and should not be attributed to either the DSS or the MIAESR.

Hardship upon hardship?

- Homelessness is a hardship—uncomfortable, unsafe, uncertain
- Worse, it may beget other hardships, including hunger and food insecurity
- Some logical links
 - Competing needs
 - Lack of kitchen facilities
 - Homelessness associated with many other things that could interfere with food security
- Evidence that food insecurity may be especially consequential for homeless people's health

Our paper

- Examine relationship between homelessness and food outcomes using the Journeys Home survey
- National longitudinal survey of 1,682 disadvantaged Australians who were homeless or at risk of homelessness in 2011
 - Geographic heterogeneity (rural, small cities, big cities)
 - Heterogeneous, albeit disadvantaged, population
 - Several outcome measures, including food security and food outcomes
 - Rich set of observed controls
- Use these data to conduct descriptive and multivariate analyses of associations between homelessness and food outcomes
- Estimate models that account for selectivity

Overview

- Conceptual model
- *Journeys Home* data
- Descriptive analysis of homelessness and food outcomes
- Multivariate analyses of homelessness and food insecurity
- Multivariate analyses of other food outcomes
- Conclusions

Barrett's (2002) food security model

- Modified dynamic health production model
- Household chooses
 - Allocations of time to work and activities
 - Consumption of food and non-food items
 - Engaging in coping behaviours (socially undesirable ways of acquiring food)
 - To maximise life-time utility defined over physical well-being and other consumption
 - Subject to constraints subject to constraints on
 - Production of physical well-being
 - Budget
 - Time
- Personal behaviours lead to achievement of food (in)security

General threats to food security

- Low labour and nonmarket productivity (low earnings)
- Adverse terms of trade (low wages or high prices)
- Limited market access
- Asset poverty
- Borrowing constraints
- Inadequate public and private safety nets
- Food intakes close to food security threshold
- Susceptibility to shocks
- Limits on coping behaviours

How homelessness might affect food security

- Homelessness would reduce people's food security if it increases any of the general threats; for example, might interfere with
 - Work and earnings
 - Health and hence market and non-market productivities
 - Access to markets or some types of food sources
- Special circumstances of homelessness
 - Lack of kitchen facilities
 - Reciprocal obligations from social networks
 - Coping behaviours
 - Wider use of meal services and other food strategies
 - But also greater use of alcohol

Causal?

- Homelessness and housing insecurity are endogenous outcomes
- Barrett's model points to many potential threats to food security
- Many of the characteristics that threaten food security also threaten housing security
- Different types of insecurity (e.g., health insecurity, energy insecurity, expenditure shocks) may cluster
- All of this suggests that omitted variables might lead to mutual associations
- Also some possibility of reverse causality

Journeys Home survey

- Use data from the 5th and earlier waves of the Journeys Home survey
- JH is a national, longitudinal survey of 1,682 disadvantaged Australians who were homeless or at risk of homelessness
 - Initial interviews conducted in 2011; follow-ups every 6 months
 - High initial response rate (62%) and high retention (84% thru Wave 5)
 - Asked about economic, health, demographic and other characteristics
- Unlike other surveys
 - Broad geographic context (most other studies restricted to single cities)
 - Includes housed and homeless people (many studies only consider homeless people or people using services for the homeless)
 - Lots of covariates

Food insecurity

- Wave 5 of JH asked six Household Food Insecurity Access Scale items
- We construct a measure from four items
 - Worry that you would not have enough food
 - Eat a limited variety of foods because of a lack of money
 - Eat some foods that you really did not want to eat because of a lack of money
 - Go a whole day and night without eating anything
- Construct scale by
 - Coding each item: never=0, rarely/sometimes=1, and often=2
 - Summing responses to 0-8 scale

Other food outcomes

- Wave 5 of JH also asked about other food outcomes; we form measures for:
- Usual number of weekly meals from questions about weekly breakfasts, lunches and dinners
- Usual equivalised weekly food expenditures = expenditures divided by the OECD-modified needs scale ($1 + .5 * \text{other adults} + .3 * \text{children}$)
- Food consumption – factor score formed from information on weekly servings of fruit and vegetables and usual days eating seafood, meat, and legumes

Homelessness

- Primary explanatory variable is a binary indicator of whether the person was homeless any time during the preceding month
- Adopt a “cultural” definition of homelessness that includes
 - Primary homelessness – being without an accommodation
 - Secondary homelessness – living temporarily rent-free with friends or relatives
 - Tertiary homelessness – living in arrangements that are below community standards, including boarding houses and caravans/trailers
- Did not detect significant differences between these types of homelessness in preliminary analyses

Other explanatory variables

- Age, age squared
- Aboriginal/Torres Strait Islander
- Non-English-speaking migrant
- Schooling (2 dummies)
- Childhood in foster other care
- Non-intact family at age 14
- Childhood abuse/violence
- Married, family contact
- Number of children
- Health, disability, psych. distress
- Work experience, employment
- HH income, debt, credit card
- Social, meal services or supports
- Poor & non-poor social networks
- Drinking, substance abuse
- Violence, incarceration
- Distance to public transportation
- Kitchen facilities
- Urban/rural
- Skipped meals

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Analysis sample

- Sample selection:
 - 1,425 Wave 5 respondents
 - 1,406 responded to food security questions
 - 1,172 after dropping respondents who did not participate in Wave 4 (no lagged variables) or who had missing values
- Split sample by gender
 - 625 men – 24% homeless
 - 547 women – 13% homeless

Food outcomes by homelessness status

	Men		Women	
	<i>Housed</i>	<i>Homeless</i>	<i>Housed</i>	<i>Homeless</i>
Food insecurity index	0.87	1.75 ***	1.09	1.75 ***
Consumption factor score	-0.01	0.08	-0.03	-0.06
Meals consumed during the week	15.44	14.75	15.41	14.37
Weekly equivalised food expenditures	106.35	90.72 **	107.18	94.78

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Ordered probit analyses of food insecurity

- Estimate ordered probit models of categorical food insecurity scale
- Models account for scale not being cardinal
- Estimate three specifications
 - No controls – check of specification
 - Add exogenous background controls
 - Add potentially endogenous, lagged controls, including past food problems (similar to lagged dependent variable)
 - Estimate ML dummy endogenous variable specification (being on a public housing waiting list is the excluded/identifying variable)
- Estimate models separately by gender

Ordered probit homelessness results

Specification	Men	Women
No controls	0.573*** (0.106)	0.330** (0.153)
Exogenous background controls	0.558*** (0.107)	0.329** (0.159)
All controls	0.549*** (0.121)	0.214 (0.165)
Dummy endogenous variable specification	1.078* (0.556)	-0.872 (0.539)

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Other characteristics associated with FI

Men

- Previous food problems (+)
- Psychological distress (+)
- Social services (+)
- Family contact (+)
- Chronic cond. & poor health (+)
- Married (+)
- Income (-)
- Employed (+)
- Credit card (+)

Women

- Previous food problems (+)
- Psychological distress (+)
- Social services (+)
- Family contact (+)
- Unemployed, homeless friends (+)
- Social support (-)

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Homelessness and other food outcomes

Specification	Men			Women		
	Food cons.	Meal cons.	Food expend.	Food cons.	Meal cons.	Food expend.
Exogenous controls	0.080 (0.068)	-0.546 (0.448)	-0.158** (0.065)	-0.045 (0.079)	-1.110 (0.679)	-0.026 (0.065)
All controls	0.132* (0.075)	-0.193 (0.467)	-0.134* (0.069)	0.029 (0.082)	-0.136 (0.726)	0.003 (0.070)
Dummy endog. model	0.023 (0.168)	-1.571 (3.187)	-0.828*** (0.288)	0.982*** (0.169)	-0.201 (2.700)	-0.844*** (0.247)

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Conclusions – food insecurity

- Confirm unconditional associations between homelessness and food insecurity
- Different multivariate results for men and women
- Men's food insecurity
 - Men's homelessness is consistently negatively associated with food insecurity
 - Even in models that account for the endogeneity of homelessness
- Women's food insecurity
 - Unconditional associations diminish once full set of observed controls are included
 - Disappear in models that account for endogeneity of homelessness

Conclusions – other food outcomes

- Men
 - Homelessness associated with lower food expenditures
 - Homelessness possibly associated with fewer meals but results are statistically imprecise
 - Homelessness not associated with food consumption
- Women
 - Same pattern of unconditional associations but statistically imprecise
 - No associations in models that treat homelessness as exogenous
 - Positive associations with consumption and negative associations with expenditures in models that treat homelessness as endogenous

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