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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)

February 2016

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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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