Experiences of food insecurity among a sample of people who regularly inject drugs in Australian capital cities in 2022.

Tarryn Beardmore, Peter Higgs, Robyn Dwyer and Paul Dietze

This report was prepared by Latrobe University and the Burnet Institute
For further information: paul.dietze@burnet.edu.au

Key Findings

National 2022 IDRS

75.6% (n=584) of respondents were at risk of moderate to severe food insecurity.

42.3% (n=327) were at risk of severe food insecurity, scoring the highest possible food insecurity experience score.

Respondents in unstable accommodation were 2.4 times more likely to indicate food insecurity than their peers with stable accommodation.

Experiencing food insecurity was also more likely to be reported by participants who: had lower income; reported lower ratings of general health; or reported any mental health problem in the last 6 months.

Introduction

To be food insecure is to be deprived of access to safe, nutritionally adequate, culturally appropriate food required to support a healthy life (1). This broad definition encompasses experiences such as being unable to afford food, experiencing hunger, relying on a diet consisting of limited nutrition, undesirable, or even unsafe food, and needing to resort to personally unacceptable methods of obtaining food (2). While experiences of food insecurity among people who use drugs are yet to be investigated in the Australian context, overseas research describes a large prevalence of food insecurity among this population as well as concerns that it may exacerbate other problems such as the health-harms associated with injection drug use (3,4). In these studies, food insecurity has been shown to be associated with increased risk of metabolic diseases, communicable disease, experiences of violence, anxiety, depression, and mortality (5,6).

In this bulletin, we aimed to determine the percentage of food insecurity among people who regularly inject drugs in Australia along with key correlates in the sociodemographic, drug use and health and wellbeing domains.

Last update: 28 June 2023

Methods

Data were collected nationally as part of the Illicit Drug Reporting System (IDRS). These interviews were conducted with people residing in capital city areas of Australia who reported having injected illicit drugs at least monthly during the preceding six months and were aged 18 or older. These interviews were conducted primarily face-to-face by trained interviewers, as well as by telephone when required for accessibility. Please refer to Illicit Drug Reporting System (IDRS) Interviews 2022: Background and Methods for more details, including details regarding the characteristics of the IDRS sample (7). The data for this Bulletin were drawn from 773 interviews.

Data collected included demographic information, characteristics of recent drug purchasing and drug use, and details of participant wellbeing and specific health outcomes. The Food Insecurity Experience Scale (FIES) was also included in the 2022 IDRS interview schedule. The FIES module is a validated tool of eight questions (Box 1), developed by the Food and Agriculture Organization (FAO) of the World Health Organization, and measures and categorises individual level food insecurity experiences along a continuum from being "food secure" to experiencing "severe food insecurity" (8). The approach to analysing FIES data involves applying FAO's FIES analysis tool, available online (9).

Box 1. Food Insecurity Experience Scale (FIES) Survey Module
During the last 12 months, was there a time when, because of lack of money or other resources:
1. You were worried you would not have enough food to eat?
2. You were unable to eat healthy and nutritious food?
3. You ate only a few kinds of foods?
4. You had to skip a meal?
5. You ate less than you thought you should?
6. Your household ran out of food?
7. You were hungry but did not eat?
8. You went without eating for a whole day?

Seven items were used to calculate food insecurity percentage; item eight "You went without eating for a whole day?" was omitted following issues with reliability determined by the online tool. A complete case approach was adopted in relation to the analyses, in which the analysis sample was limited to those with complete responses on the FIES and selected demographic, drug use, and wellbeing variables. Descriptive statistics on reported food insecurity were generated, and respondents were classified as experiencing "moderate or severe" food insecurity or food secure for binary logistic regression analyses of the relationship between food insecurity and selected key variables outlined below.

The Food Insecurity Experience Scale; Categorisation and Percentage

Table 1. Frequency and Percentage of Food Insecurity

Food Insecurity Experience Scale		
Categorisation and raw score	Frequency (Total n=733)	% respondents
Food Secure (raw score = 0)	96	12.4%
Experienced any food insecurity (raw score 1+)	677	87.6%
Food insecure, moderate and severe experience (raw score 3+)	584	75.6%
Severe food insecurity (raw score 7)	327	42.3%

Figure 1. Distribution of Raw FIES Scores
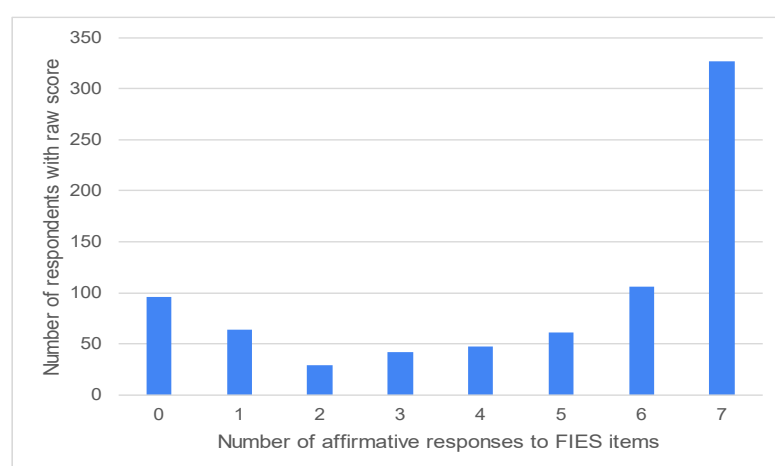
Of the n=733 respondents, 96 (12.4%) did not report experiencing any indicator of food insecurity, 584 respondents (75.6%) selected that they experienced 3 or more indicators and were therefore classified as being at risk of moderate or severe food insecurity (hereafter 'food insecurity'), and 327 respondents (42.3%) selected seven items and were categorised as at risk of severe food insecurity (Table 1). Figure 1 gives the distribution of cumulative scores on the FIES.

*Raw scores are defined as the sum total of affirmative responses to FIES items.

Food Insecurity and Respondent Demographic Characteristics

Table 2 shows multiple bivariate relationships between food insecurity and demographic variables. After adjusting for the other variables included in the model, food insecurity remained significantly associated with respondents reporting unstable housing (AOR 2.40 (95% CI = 1.68-3.43) $p<0.01$) and respondents with a weekly income lower than sample median (AOR 1.67 (95% CI = 1.16-2.42) $p=0.01$).

Table 2. Demographics and Food Insecurity

Variable	n=733 (%)	OR (95%CI)	p value	Adjusted OR (95%CI) *	p value *
Gender					
Male	510 (66.0%)	1 (ref)	.	.	.
Non-male	263 (34.0%)	1.22 (0.86-1.74)	0.27	1.27 (0.86-1.89)	0.23
Education					
Education completion <year 10	236 (30.5%)	1.21 (0.84-1.74)	0.26	1.05 (0.70-1.58)	0.80
Education completion ≥ year 10	537 (69.5%)	1 (ref)	.	.	.
Housing Status					
Stable Housing	258 (33.4%)	1 (ref)	.	.	.
Unstable Housing #	515 (66.6%)	2.77 (1.98-3.88)	0.00	2.40 (1.68-3.43)	0.00
Weekly Income					
Total weekly income < sample median ($415 AUD)	437 (56.5%)	1.70 (1.23-2.37)	0.00	1.67 (1.16-2.42)	0.01
Total weekly income ≥ sample median ($415 AUD)	336 (43.5%)	1 (ref)	.	.	

*Regressions adjusted for gender, indigenous status, age, education, housing status, income, resident state, mental health, and incarceration history.
Unstable housing is defined as currently living in public housing, boarding house or hostel, shelter or refuge, couch surfing, or rough sleeping and squatting. Conversely respondents were classified as residing in stable housing if they reported their residence as their own home, a rental property or their parents' home.

Food Insecurity and Respondent Drug Use Characteristics

Table 3 shows that there were few relationships between the drug use variables included and food insecurity. A bivariate relationship between food insecurity and methamphetamine use in the 6 months prior to the survey was evident, however this relationship did not remain following adjusted analysis.

Table 3. Drug Use Characteristics and Food Insecurity

Variable	n=733 (%)	OR (95%CI)	p value	Adjusted OR (95%CI) *	p value *
Heroin use in previous 6 months					
Did not use Heroin in the last 6 months	365 (47.2%)	1 (ref)	.	.	.
Have used heroin in the last 6 months	408 (52.8%)	1.32 (0.95-1.83)	0.10	1.24 (0.83-1.84)	0.30
Any methamphetamine use in the last 6 months					
Did not use any Methamphetamines in the last 6 months	150 (19.4%)	1 (ref)	.	.	.
Have used any Methamphetamines in the last 6 months	623 (80.6%)	1.67 (1.13-2.47)	0.01	1.34 (0.86-2.09)	0.20
Injection drug injection frequency					
Injection frequency < daily	449 (58.1%)	1 (ref)	.	.	.
Injection frequency daily or more	324 (41.9%)	1.27 (0.91-1.78)	0.16	1.34 (0.92-1.94)	0.12
Receipt of any drug treatment in previous 6 months					
Have not received any drug treatment in the last 6 months	434 (56.1%)	1 (ref)	.	.	.
Has received any drug treatment in the last 6 months	339 (43.9%)	1.22 (0.87-1.70)	0.25	1.03 (0.71-1.50)	0.88

*Regressions adjusted for gender, indigenous status, age, education, housing status, income, resident state, mental health, and incarceration history.

Food Insecurity and Respondent Health, Wellbeing and Safety

Table 4 shows significant bivariate relationships between food insecurity and all the included variables pertaining to health and wellbeing. In the adjusted model, food insecurity remained significantly associated with respondents who reported poor/fair general health (AOR 1.79 (95% CI = 1.23-2.60) $p<0.01$) and who reported experiencing mental health problems in the last 6 months (AOR 1.91 (95% CI = 1.31-2.79) $p<0.01$).

Table 4. Food Insecurity and Respondent Health and Wellbeing

Variable	n=733 (%)	OR (95%CI)	p value	Adjusted OR (95%CI) *	p value *
How would you rate your general health from poor to excellent					
Opinion of general health (poor / fair)	323 (41.8%)	1.76 (1.25-2.49)	0.00	1.79 (1.23-2.60)	0.00
Opinion of general health (good / very good / excellent)	450 (58.2%)	1 (ref)	.	.	.
Have you experienced any mental health problems in the last 6 months?					
No mental health problems in the last 6 months	407 (52.7%)	1 (ref)	.	.	.
Experienced mental health problems in previous 6 months	366 (47.4%)	1.91 (1.36-2.28)	0.00	1.91 (1.31-2.79)	0.00
Have you been the victim of a violent crime in the past month?					
Did not report being victim to a violent crime	652 (84.4%)	1 (ref)	.	.	.
Experienced being victim to a violent crime	114 (14.8%)	2.01 (1.17-3.47)	0.01	1.66 (0.93-2.97)	0.09
Arrest within the last 12 months					
Has not been arrested in last 12 months	594 (76.84%)	1 (ref)	.	.	.
Has been arrested in the last 12 months	179 (23.16%)	1.42 (0.94-2.15)	0.09	0.94 (0.59-1.49)	0.79
Incarceration History					
Ever been in prison: No	291 (37.7%)	1 (ref)	.	.	.
Ever been in prison: Yes	482 (62.4%)	1.46 (1.04-2.03)	0.03	1.35 (0.91-1.98)	0.13

*Regressions adjusted for gender, indigenous status, age, education, housing status, income, resident state, mental health, and incarceration history.

Discussion

Around three quarters of the IDRS 2022 respondents reported some degree of food insecurity, with approximately 40% classified as experiencing severe food insecurity. These figures are similar to studies of people who inject drugs conducted overseas; in Los Angeles and San Francisco, 58% of participants reported food insecurity in 2016 (10), in West Virginia this was 83% in 2018 (11), and in Iran food insecurity was reported by 91% of respondents in 2019 (12).

Our findings suggest a percentage of food insecurity among the IDRS sample that is much higher than the most recent estimate of 21% in the general Australian population (13).

In adjusted analysis correlates of food insecurity included unstable housing, lower income, reporting less than good opinion of general health and experiencing any mental health problem in the previous 6 months. These findings are comparable with those from similar studies (5,10,11,14), and highlight that housing and income are strong markers of deprivation. Food and shelter are basic human needs, and the finding that these factors are highly correlated underscores the need for improved housing opportunities for people who inject drugs.

Experiences of food insecurity are pervasive among respondents to the 2022 IDRS study. Over three quarters of respondents reported experiencing moderate or severe food insecurity and this risk was associated with markers of poverty and poorer physical and mental health. Interventions to improve living conditions and health of people who inject drugs may be associated with improvements in food security for this group of people experiencing significant marginalisation.

References

1. Coming to Terms with Terminology [Internet]. Food and Agriculture Organisation; 2012 [cited 2023 Mar 7]. Available from: https://www.fao.org/3/md776e/md776e.pdf

2. Loopstra R. Interventions to address household food insecurity in high-income countries. Proc Nutr Soc. 2018 Aug;77(3):270–81.

3. Miewald C, McCann E, McIntosh A, Temenos C. Food as harm reduction: barriers, strategies, and opportunities at the intersection of nutrition and drug-related harm. Crit Public Health. 2018 Oct 20;28(5):586–95.

4. Whittle HJ, Sheira LA, Frongillo EA, Palar K, Cohen J, Merenstein D, et al. Longitudinal associations between food insecurity and substance use in a cohort of women with or at risk for HIV in the United States. Addiction. 2019;114(1):127–36.

5. Strike C, Rudzinski K, Patterson J, Millson M. Frequent food insecurity among injection drug users: correlates and concerns. BMC Public Health. 2012;12:1058.

6. Sypsa V, Flounzi E, Roussos S, Hatzakis A, Benetou V. Food insecurity among people who inject drugs in Athens, Greece: a study in the context of ARISTOTLE programme. Public Health Nutr. 2021 Apr;24(5):813–8.

7. Sutherland R, Uporova J, King C, Jones F, Karlsson A, Gibbs D, et al. Illicit Drug Reporting System (IDRS) Interviews 2021: Background and Methods. Sydney: National Drug and Alcohol Research Centre, UNSW; 2022.

8. Cafiero C, Viviani S, Nord M. Food security measurement in a global context: The food insecurity experience scale. Measurement. 2018 Feb 1;116:146–52.

9. FAO. Using the FIES app [Internet]. 2020 [cited 2023 Apr 11]. Available from: https://www.fao.org/3/ca9318en/ca9318en.pdf

10. Schmitz J, Kral AH, Chu D, Wenger LD, Bluthenthal RN. Food insecurity among people who inject drugs in Los Angeles and San Francisco. Public Health Nutr. 2016 Aug;19(12):2204–12.

11. Rouhani S, Allen ST, Whaley S, White RH, O'Rourke A, Schneider KE, et al. Food access among people who inject drugs in West Virginia. Harm Reduct J. 2021;18:1–9.

12. Khezri M, Karamouzian M, Sharifi H, Ghalekhani N, Tavakoli F, Mehmandoost S, et al. Willingness to utilize supervised injection facilities among people who inject drugs in Iran: Findings from 2020 national HIV bio-behavioral surveillance survey. Int J Drug Policy. 2021 Nov 1;97:103355.

13. Miller K, Li E. Foodbank Hunger Report 2022. 2022;

14. McLinden T, Moodie EEM, Harper S, Hamelin AM, Anema A, Aibibula W, et al. Injection drug use, food insecurity, and HIV-HCV co-infection: a longitudinal cohort analysis. AIDS Care. 2018 Oct 3;30(10):1322–8.

Recommended Citation

Beardmore T, Higgs P, Dwyer R & Dietze P. Experiences of food insecurity among a sample of people who regularly inject drugs in Australian capital cities in 2022. Drug Trends Bulletin Series. Sydney: National Drug and Alcohol Research Centre, UNSW Sydney; 2023. Available from: 10.26190/9mv5-b936

Participating Researchers and Research Centres

- Dr Rachel Sutherland, Fiona Jones, Antonia Karlsson, Julia Uporova, Daisy Gibbs, Olivia Price, Cate King, Professor Louisa Degenhardt, Professor Michael Farrell and Associate Professor Amy Peacock, National Drug and Alcohol Research Centre, University of New South Wales, New South Wales;

- Joanna Wilson, Associate Professor Peter Higgs and Professor Paul Dietze, Burnet Institute, Victoria;

- Yalei Wilson and Associate Professor Raimondo Bruno, School of Psychology, University of Tasmania, Tasmania;

- Dr Jodie Grigg and Professor Simon Lenton, National Drug Research Institute and enAble Institute, Curtin University, Western Australia; and

- Catherine Daly, Dr Jennifer Juckel, Dr Natalie Thomas and Associate Professor Caroline Salom, Institute for Social Science Research, The University of Queensland, Queensland.