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# "Quality food is too expensive to afford": 1 in 2 Tasmanians are food insecure in 2022 due to the rising cost of living

THE TASMANIA PROJECT REPORT 61

#### December 2022 | Prepared by:

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# **Acknowledgment of Country**

The University of Tasmania pays its respects to elders past and present and to the many Aboriginal people that did not make elder status and to the Tasmanian Aboriginal community that continues to care for Country. We acknowledge the profound effect of climate change on this Country and seek to work alongside Tasmanian Aboriginal communities, with their deep wisdom and knowledge, to address climate change and its impacts.

The Palawa people belong to one of the world's oldest living cultures, continually resident on this Country for over 65,000 years. They have survived and adapted to significant climate changes over this time, such as sealevel rise and extreme rainfall variability, and as such embody thousands of generations of intimate place-based knowledge.

We acknowledge with deep respect that this knowledge represents a range of cultural practices, wisdom, traditions, and ways of knowing the world that provide accurate and useful climate change information, observations, and solutions.

The University of Tasmania likewise recognises a history of truth that acknowledges the impacts of invasion and colonisation upon Aboriginal people, resulting in forcible removal from their lands.

Our island is deeply unique, with cities and towns surrounded by spectacular landscapes of bushland, waterways, mountain ranges, and beaches.

The University of Tasmania stands for a future that profoundly respects and acknowledges Aboriginal perspectives, culture, language, and history, and a continued effort to fight for Aboriginal justice and rights paving the way for a strong future.

# **Key findings**

The Tasmania Project Cost of Living Survey (TTP8) was open between 21 September and 9 October 2022. It asked about how Tasmanians are coping with the increased costs of living and measured food insecurity using a validated survey tool. Food insecurity is when people or households struggle to put enough healthy food on the table every day because of limited money or other resources.

This is the fourth time The Tasmania Project has reported the prevalence and severity of food insecurity experienced by Tasmanians since the beginning of the COVID-19 pandemic in 2020. In 2022, global conflict and natural disasters have resulted in supply chain disruptions and rapid inflation. This has increased cost of living pressures including for food.

#### THE PREVALENCE & SEVERITY OF FOOD INSECURITY

- One in two (51%) of Tasmanian households has experienced food insecurity over the previous month. This is nearly double the rate recorded in May 2021 (27%).
  - 7% experienced marginal food security (anxiety over a shortage of food in the house), similar to the levels reported in 2021.
  - 23% have low food security (reduced quality and variety of food eaten), double the levels reported in 2021.
  - 20% have very low food security (regularly skipping meals and going hungry), nearly triple the levels reported in 2021.

#### GROUPS AT HIGH RISK OF FOOD INSECURITY

- Most young adults in Tasmania aged 18-24 years experienced food insecurity over the previous month (92%), a figure which comprises marginal, low and very low food security.
- Other at-risk groups included Tasmanians who are unemployed (85% food insecure), temporary residents (84%), single parents with dependents (78%), people living with a disability (76%), and Aboriginal and Torres Strait Islander identifying people (76%).

#### COPING WITH THE RISING COST OF FOOD

- Most food insecure households reported being 'very or extremely' impacted by the rising cost of grocery staples, meat and fresh produce.
- Food insecure households used many coping strategies to put food on the table, such as buying less meat and fresh produce, buying food on credit, and seeking food from their social networks. Very few food insecure households sought emergency food relief from a food bank (10%).

#### WHERE NEXT?

- Without intervention, the number of Tasmanians going hungry is likely to continue to remain at these extremely high levels due to the ongoing pressures on food and other household expenses, coupled with the increasing frequency of extreme weather events.
- Support for long-term, collaborative solutions is required to sustainably address food insecurity in Tasmania.

### 1. Introduction

# 1.1 THE TASMANIA PROJECT COST OF LIVING SURVEY (TTP8)

The Tasmania Project Cost of Living Survey (TTP8) was open between 21 September and 9 October 2022. The survey asked respondents, Tasmanians aged 18 and over, a variety of questions about how they were coping with rising costs of living (for an overview of the full survey results see the <u>report by Seivwright & Kocar (2022)</u>). The survey also used the USDA Household Food Security Survey Module 6-item short form to determine the prevalence and severity of food insecurity. The methodology for measuring and calculating food security status, including the survey questions, is outlined at the end of this report.

A total of 1,284 responses were collected. The sample was more than two-thirds female (67.8%), skewed older (53.0% aged 55 and over), and educated (87.3% with post-secondary qualifications). Half the sample resided in the Hobart Statistical Area Level 4 (SA4), 19.5% in Launceston and North East, 17.8% in West and North West and 11.1% in South East. The data were weighted against these variables to ensure that the sample is more demographically representative of Tasmanian residents, overall. For detailed information about the methodology used to weight the data, please see the accompanying <a href="Technical Report">Technical Report</a> (Kocar, 2022). All results presented in tables and figures in this report are based on weighted data.

#### 1.2 THIS REPORT

In this report, we present the survey-weighted prevalence of food insecurity and severity of food insecurity experienced by Tasmanian households. We compare these statistics to a previous survey from The Tasmania Project from May 2021. We also present the coping strategies Tasmanians used to deal with the rising cost of living and use direct quotes from open ended questions to bring further context to the statistics.

# 2. Food Insecurity in 2022

#### 2.1 WHAT IS FOOD INSECURITY

Food security occurs when all people at all times have enough food for an active, healthy life. In contrast, food insecurity is when people or households are struggling to put enough healthy food on the table every day because of limited money or other resources.

The experience of food insecurity includes concerns about running out of food before there is money to buy more, the inability to afford a balanced diet, going hungry, missing meals, and in extreme cases, not eating for whole days because of a lack of food and money for food.

The prevalence of household food insecurity in Tasmania matters because food insecurity is a powerful social determinant of health. Good food and nutrition are vital for health. Therefore, food-insecure people are much more likely to suffer from chronic physical and mental health

problems. These preventable health outcomes have profound influences on the health of Tasmanians and the state's health system.

#### 2.2 THE PREVALENCE & SEVERITY OF FOOD INSECURITY

Our survey asked six questions designed to measure household food insecurity resulting from limited financial resources (see full details of the survey questions and coding used in the survey methodology section at the end of this report). Drawing on data from 1,284 adults who participated in TTP8, the survey weighted estimated prevalence of food insecurity shows that:

# 50.6% of Tasmanian households have experienced some level of food insecurity over the past month.

Food insecurity can be classified into 3 categories of severity:

- Marginal food security: Worry about running out of food and/or limited food selection due to a lack of money.
- Low food security: Compromise in quality and/or quantity of food due to a lack of money for food.
- Very low food security: Missing meals, reducing food intake and, at extremes, go day(s) without food.

Our results show that, of Tasmanian households:

7% have marginal food security23% have low food security20% have very low food security

Not only is food insecurity alarmingly high, but most who are food insecure are experiencing severe impacts (Figure 1).

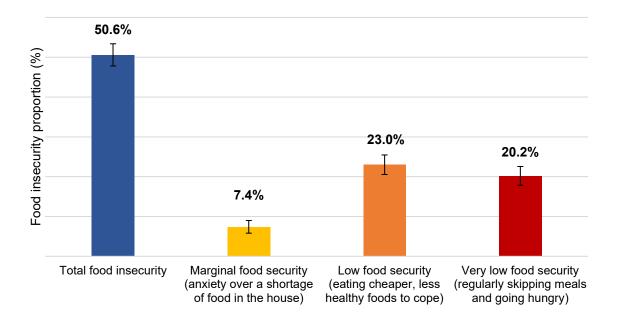


Figure 1 Proportion of Tasmanian households estimated to be experiencing marginal, low and very low food security using survey-weighted data.

Estimates of food insecurity presented in this report are post-survey weighted, adjusted for age, sex, region (SA4) and education against the 2021 Census to better reflect the Tasmanian population. Error bars represent 95% Confidence Intervals for each category of food insecurity.

The Tasmania Project has measured and reported the prevalence of food insecurity at three other timepoints since the first lockdown of the COVID-19 pandemic. We previously reported that the prevalence of food insecurity was 28% during the first COVID-19 lockdown, 20% when restrictions had eased and 23% 1-year post-lockdown, when the JobKeeper and JobSeeker rates were withdrawn and/or reduced (Kent et al., 2022a). These statistics are based off data that was age- and gender-standardised to the Tasmanian population.

In this report, survey data are adjusted for age, sex, region (Statistical Area Level 4, SA4) and education to best reflect the Tasmanian Census 2021 population. To allow for a meaningful comparison, we have now also weighted the survey data collected in May 2021 for the same characteristics. Figure 2 shows that the post-survey-weighted prevalence of food insecurity has approximately doubled between May 2021 and October 2022, from 26.8% to 50.6%. The prevalence of marginal food security has stayed about the same, whereas the proportion of Tasmanians experiencing low food security has doubled and those experiencing very low food security has nearly tripled in the past year (Figure 2).

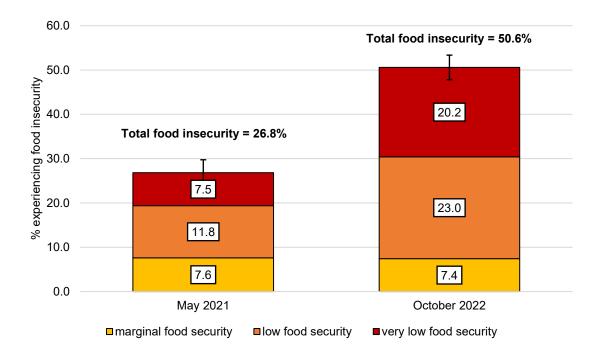


Figure 1 The prevalence of marginal, low and very low food security between May 2021 and October 2022.

Estimates of food insecurity presented in this report are post-survey weighted, adjusted for age, sex, region (SA4) and education against the 2021 Census to better reflect the Tasmanian population. Error bars represent 95% Confidence Intervals for total food insecurity.

Of the participants that completed The Tasmania Project survey in May 2021 (TTP4) and October 2022 (TTP8) for whom matching data was possible (n=246), the overall prevalence of food insecurity more than doubled. Using the matched data, almost two thirds (64.4%) of survey respondents who were classified as food insecure in TTP8 are newly food insecure, meaning they have transitioned from food secure to food insecure between May 2021 and October 2022.

This translates to more than 280,000 Tasmanians who may be living in households with inadequate or insecure access to food in 2022.

#### 2.4 TASMANIANS AT HIGHEST RISK

Further analysis of TTP8 data identified several 'at-risk' groups for whom urgent and targeted interventions and support are required. The proportion of each 'at-risk' group experiencing food insecurity is depicted in Figure 3 (see full data tables at the end of this report). The demographic groups at risk of food insecurity are the same as previous TTP surveys, however the proportion of food insecurity experienced within these groups has increased (Kent et al., 2020).

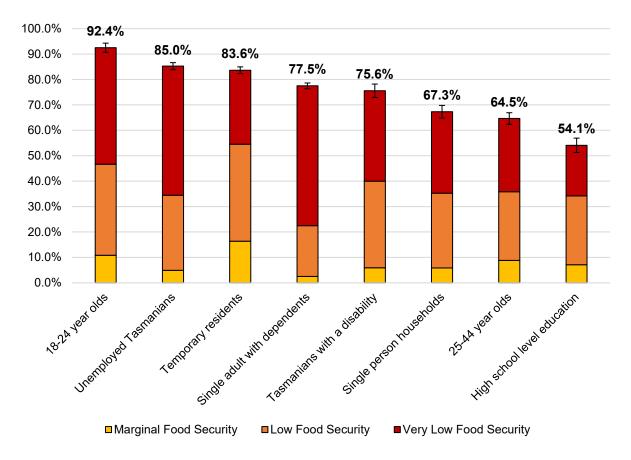


Figure 3 The proportion of selected sociodemographic groups at significantly greater risk of experiencing food insecurity.

Estimates of food insecurity presented in this report are post-survey weighted, adjusted for age, sex, region (SA4) and education against the 2021 Census to better reflect the Tasmanian population. Error bars represent 95% Confidence Intervals for total food insecurity.

#### Young adults

- Food insecurity is disproportionately affecting young adults, and the risk of food insecurity steadily decreases with age.
- Young Tasmanians aged 18-24 are at the highest risk of food insecurity, with 92% of this age
  group reporting some level of food insecurity. They are 2.1 times more likely to be food
  insecure compared to those aged 65+.
- Almost two thirds (65%) of Tasmanians aged 25-44 also experienced food insecurity.

#### **Household structure**

- Compared to those living as a couple with no dependants, all other households are at higher risk of food insecurity.
- Most single people with dependants experience food insecurity (78%) and are 1.7 times more likely to be food insecure compared to couples with no dependants.
- Single person households (with no dependants) are at four times increased risk of food
  insecurity, and people in share houses are at 1.5 times increased risk compared to couples
  with no dependants.

#### **Disability**

 Most people living with disabilities that affect their daily life are food insecure (76%) and people with health conditions/disabilities that limit their activity 'a lot' are at 1.6 times increased risk of food insecurity compared with people without a disability.

#### **Employment**

 Most unemployed Tasmanians (85%) are experiencing food insecurity and are at 1.5 times increased risk compared to those employed full-time, and at almost twice the risk compared to retirees. Students are also at 1.5 times increased risk of food insecurity compared to retired Tasmanians.

#### Lower levels of education

• Those with a high school education (54%) experience higher levels of food insecurity compared to those with a university education (42%), which is likely related to lower incomes.

#### Residents

• Most temporary residents experience food insecurity (84%) and are at 1.7 times increased risk compared with citizens.

# 3. Coping with the rising cost of food

It has been previously reported that most respondents to TTP8 (88.1%) had undertaken some sort of action related to food to help manage expenses in 2022 (Seivwright & Kocar 2022).

#### 3.1 IMPACT OF PRICE RISES ON FOOD ACCESS

#### "The cost of fresh vegetables has skyrocketed."

Food insecure participants were significantly more likely to indicate they were impacted by the rising cost of food. More than half of food insecure participants (61%) reported they were 'extremely' or very' impacted by the increased cost of general groceries (e.g., milk, bread, pasta, rice), compared to 21% of food secure participants. Close to two-thirds of food insecure participants (63%) reported being 'extremely' or very' impacted by the increased cost of fresh fruit and vegetables compared to 26% of food secure participants. More than half of food insecure participants (56%) were 'extremely' or very' impacted by the increased cost of meat compared to 23% of food secure participants.

#### "We cannot afford to eat red meat ... "

#### 3.2 COPING WITH FOOD INSECURITY

We know that food insecure Tasmanians face a lot of challenges when trying to put healthy food on the table (Kent et al., 2022b). In TTP8, Tasmanians told us how they are coping with the rising costs of living. It was clear that food insecure households were using many more coping

strategies to deal with their poor access to healthy food, but many are only turning to emergency food relief as a last resort.

Two-thirds of food insecure households (64%) ate lower quality food than they would prefer compared to only 14% of food secure households.

# "I can buy a pack of 6 doughnuts from Woolworths for \$2 when on special or 6 apples for \$6.50... too often the deciding factor is money and feeling 'full'"."

More than half of food insecure participants (56%) are eating less food to manage rising costs of living, compared to only 6% of food secure households.

# "I sacrifice my portions to my husband as he is currently the income earner"

Most food insecure households (77%) reported they had bought less meat and 66% had bought cheaper cuts of meat to manage rising costs of living, compared to only a third of food secure households.

# "I am eating less protein than I should be because it is expensive. I should be eating more dairy as well."

Two thirds of food insecure households (65%) relied on buying frozen fruits and vegetables instead of fresh, but less than half (40%) bought groceries in bulk, presumably due to upfront cost and storage issues.

#### "Don't have a fridge. Hard to be organised."

Most food insecure households (80%) had reduced dining out or buying takeaway food to manage rising costs of living. A third (33%) of food insecure households sought food from their social networks to cope. A quarter (25%) reported borrowing money for food of buying food on credit.

# "With the price increase, we've had to borrow money out of savings some fortnights to cover basics."

Only a minority of food insecure households (10%) sought emergency food relief from a food bank. The low numbers of people accessing these services may be in part due to the stigma and shame felt by some participants who accessed these services:

"I eat a lot of cheap carbohydrates, specials, loaf of bread for free from Vinnie's (white, zero nutrition) or out of date food from foodbank that you virtually have to beg for and humiliate yourself."

Some food insecure households (8%) also reported foraging for food to put something on the table:

#### "I have resorted to stealing a lot of food from the major supermarkets, as well as dumpster diving."

Few food insecure households grew their own food (31%) or participated in a community garden (5%) demonstrating opportunities for intervention to support food security.

#### 3.3 HEALTHY EATING

Most food secure Tasmanians (92%) reported that overall, they thought their diet was good, very good or excellent. More than half (54%) of Tasmanians experiencing food insecurity reported their diet was fair, poor or very poor (Figure 4).

# "Quality food is too expensive on a below poverty line income"

A more detailed report on the impact of food insecurity on diet, including estimated intake of all food groups and diet quality will be published separately.

# Proportion of food secure and food insecure participants responses to the question: "In general, how healthy is your overall diet?"

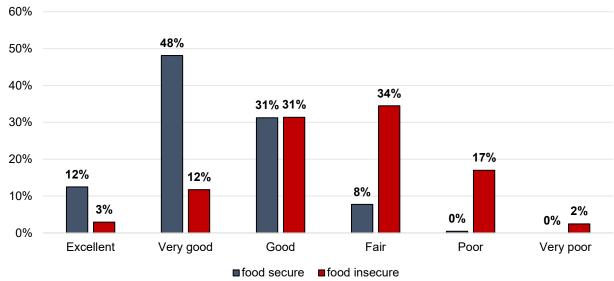


Figure 4 Proportion of food secure and food insecure respondents responses for how healthy they considered their overall diet.

Data presented in this report are survey-weighted, adjusted for age, sex, region (SA4) and education to best reflect the Tasmanian Census 2021 population.

## 4. Where next?

#### Urgent action is needed to address food insecurity.

- Everyone in Australia has the right to an <u>adequate standard of living including enough food to</u> meet their needs.
- Tasmania currently relies on an emergency food relief model to address food insecurity.
   However, our research shows that this approach is not helping the majority of people experiencing food insecurity.
- There is an urgent need to transition from "food relief to food resilience" in line with Premier's Economic and Social Recovery Advisory Council (PESRAC)'s <u>Interim Report</u> (Recommendation 62) and <u>Final Report</u> (page 49). It has been acknowledged that this requires extensive investment in community-led solutions.
- The draft "Food Relief to Food Resilience Action Plan" by the Tasmanian Government sent out for consultation documents a plan to transition Tasmania towards food security over 3 years. The new data presented in this report underscores the need for an appropriate level of funding to be committed by the Tasmanian Government for a range of community programs to create long-term change.
- A food security coaltion including diverse stakeholders with expertise in food insecurity and food systems could be established and supported to advocate for an equitable, sustainable and resilient food system in Tasmania. A coalition could coordinate, implement and evaluate sustainable community food security programs that improve access to affordable healthy food and build resilient local communities.
- Timely, transparent, representative and comprehensive data related to food insecurity in Tasmania is essential for informing solutions. UTAS researchers will continue to monitor food insecurity and work with community to evaluate the effectiveness of scalable food security solutions.

Without quick intervention, the number of Tasmanians going hungry is likely to continue to remain at these extremely high levels due to the ongoing pressures on food prices and rising household costs, coupled with the increasing frequency of extreme weather events that impact the food supply system.



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# 6. Methodology

#### 6.1 QUESTIONNAIRE

This study determined the prevalence and severity of food insecurity using the United States Department of Agriculture 6-item Household Food Security Survey Module (HFSSM). This tool has been used in all Tasmania Project surveys. The questions are:

- 1. "The food that (I/we) bought just didn't last, and (I/we) didn't have money to get more." Was that often, sometimes, rarely or never true?
- 2. (I/we) couldn't afford to eat balanced meals." Was that often, sometimes, rarely or never true?
- 3. In the last 30 days, did (you/you or other adults in your household) ever cut the size of your meals or skip meals because there wasn't enough money for food? Yes, No or Don't know
- 4. [IF YES ABOVE, ASK] How often did this happen? (anything 3 days or above is coded as affirmative)
- In the last month, did you ever eat less than you felt you should because there wasn't enough money for food? Yes, No or Don't know
- In the last month, were you ever hungry but didn't eat because there wasn't enough money for food? Yes, No or Don't know

#### 6.2 CODING

Participant responses to the HFSSM were coded and assessed in accordance with the user notes (Bickel et al., 2000), where each affirmative response was assigned a score of 1, and summed raw scores were used to describe the severity of food insecurity. Scores are then used to categorize respondents as having high (0), marginal (1), low (2 - 4) or very low food security (5 - 6). This study combines marginal food security (a single instance of food insecurity) in our classification of 'food insecure' which is in line with recommendations from some research teams internationally to classify marginal food security as food insecure (Tarasuk, Mitchell and Dachner 2018), including the latest national food security reports in Canada (Tarasuk & Fafard, St Germain 2021). A binary variable was also generated for food secure (a score of 0 or high food security) or food insecure (score of 1 or more comprising marginal, low and very low food security groups).

Table 1 Overview of coding of food security status using the 6-item HFSSM

Food security status		Description	Coding	
Food	High Food	No report of income-related problems of food access.	0 affirmative	
Food Insecure	Marginal food	Some indication of worry or an income-related barrier to	1 affirmative	
insecure	Low food	Compromise in quality and/or quantity of food consumed	2-4 affirmative	
	Very low food	Disrupted eating patterns and reduced food intake	5-6 affirmative	

#### 6.3 FOOD SECURITY FOR DEMOGRAPHIC GROUPS

Table 2 Prevalence (n;%) of food insecurity for each sociodemographic groups accounting for age, sex, region (SA4) and education.

	High Food Security (Food Secure)	Marginal Food Security (Food Insecure)	Low Food Security (Food Insecure)	Very Low Food Security (Food Insecure)	Total Food Insecure
Male	343 (55.4%)	35 (5.7%)	112 (18.1%)	129 (20.8%)	276 (44.6%)
Female	283 (45.1%)	59 (9.4%)	173 (27.6%)	112 (17.9%)	344 (54.9%)
18-24 years	9 (7.5%)	13 (10.8%)	43 (35.8%)	55 (45.8%)	110 (92.4%)
25-34 years	76 (35.3%)	19 (8.8%)	58 (27.0%)	62 (28.8%)	138 (64.5%)
35-44 years	82 (42.9%)	17 (8.9%)	43 (22.5%)	49 (25.7%)	109 (57.1%)
45-54 years	97 (49.0%)	14 (7.1%)	53 (26.8%)	34 (17.2%)	101 (51.0%)
55-64 years	124 (58.2%)	10 (4.7%)	43 (20.2%)	36 (16.9%)	89 (41.8%)
65 years or older	242 (73.3%)	23 (7.0%)	52 (15.8%)	13 (3.9%)	88 (26.7%)
High School Education	251 (45.9%)	39 (7.1%)	148 (27.1%)	109 (19.9%)	296 (54.1%)
TAFE or Diploma Education	195 (49.5%)	21 (5.3%)	86 (21.8%)	92 (23.4%)	199 (50.5%)
University level Education	186 (57.8%)	36 (11.2%)	58 (18.0%)	42 (13.0%)	135 (42.1%)
Inner Regional	387 (49.6%)	50 (6.4%)	179 (22.9%)	164 (21.0%)	394 (50.4%)
Outer Regional	27 (45.0%)	1 (1.7%)	9 (15.0%)	23 (38.3%)	33 (55.0%)
Rural or Remote	190 (48.8%)	42 (10.8%)	92 (23.7%)	65 (16.7%)	199 (51.2%)
not Aboriginal or Torres Strait Islander	609 (50.9%)	93 (7.8%)	273 (22.8%)	221 (18.5%)	586 (49.0%)
Aboriginal or Torres Strait Islander	13 (24.1%)	2 (3.7%)	19 (35.2%)	20 (37.0%)	41 (75.9%)
Do not identify as LGBTQI+	573 (53.7%)	90 (8.4%)	233 (21.8%)	171 (16.0%)	495 (46.3%)
Identify as LGBTQI+	51 (30.5%)	4 (2.4%)	55 (32.9%)	57 (34.1%)	116 (69.5%)
Prefer not to say	8 (28.6%)	1 (3.6%)	4 (14.3%)	15 (53.6%)	20 (71.4%)
Australian citizen	595 (51.6%)	81 (7.0%)	257 (22.3%)	221 (19.2%)	559 (48.4%)
Australian permanent resident	28 (51.9%)	5 (9.3%)	14 (25.9%)	7 (13.0%)	26 (48.1%)
Australian temporary resident	9 (16.4%)	9 (16.4%)	21 (38.2%)	16 (29.1%)	46 (83.6%)
Couple family	345 (67.9%)	32 (6.3%)	95 (18.7%)	36 (7.1%)	163 (32.1%)

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Person living alone	100 (32.7%)	18 (5.9%)	90 (29.4%)	98 (32.0%)	206 (67.3%)
Couple with dependents	122 (52.4%)	27 (11.6%)	52 (22.3%)	32 (13.7%)	111 (47.6%)
Single person with dependents	9 (22.5%)	1 (2.5%)	8 (20.0%)	22 (55.0%)	31 (77.5%)
Multiple family or multigenerational	26 (41.3%)	3 (4.8%)	15 (23.8%)	19 (30.2%)	36 (58.1%)
Non-related adults sharing	17 (25.0%)	11 (16.2%)	22 (32.4%)	18 (26.5%)	52 (75.4%)
Other (please specify)	12 (26.7%)	3 (6.7%)	11 (24.4%)	19 (42.2%)	33 (73.3%)
No Disability	429 (57.7%)	61 (8.2%)	147 (19.8%)	107 (14.4%)	315 (42.3%)
Disability: Life impacted a lot	33 (24.4%)	8 (5.9%)	46 (34.1%)	48 (35.6%)	102 (75.6%)
Disability: Life impacted a little	166 (44.1%)	26 (6.9%)	100 (26.6%)	84 (22.3%)	209 (55.7%)
Employed, worked full-time (including self-employed)	202 (53.7%)	29 (7.7%)	96 (25.5%)	49 (13.0%)	173 (46.1%)
Employed, worked part-time (including self-employed)	134 (54.7%)	21 (8.6%)	51 (20.8%)	39 (15.9%)	111 (45.3%)
Unemployed (or permanently unable to work)	9 (14.8%)	3 (4.9%)	18 (29.5%)	31 (50.8%)	51 (85.0%)
Retired (including voluntarily inactive)	215 (74.7%)	19 (6.6%)	43 (14.9%)	11 (3.8%)	74 (25.6%)
Performing home or caring duties	16 (39.0%)	1 (2.4%)	6 (14.6%)	18 (43.9%)	25 (61.0%)
Student	32 (18.9%)	14 (8.3%)	58 (34.3%)	65 (38.5%)	138 (81.2%)
Other	22 (30.6%)	6 (8.3%)	19 (26.4%)	25 (34.7%)	51 (69.9%)

#### 6.4 MULTIPLE BINOMIAL LOGISTIC REGRESSION

Below we present the results of multiple binomial logistic regression analysis of the data to show our at-risk groups using survey-weighted, adjusted for age, sex, region (SA4) and education to best reflect the Tasmanian Census 2021 population. We have estimated the relative risk of food insecurity for a particular characteristic compared to another group (Table 3). The relative risk is the ratio of the risks for an event (food insecurity) for one demographic characteristic compared to another (risk factor), such as a younger age group compared to older age group. If the relative risk is <1, the risk of food insecurity is lower for that demographic characteristic; if the relative risk >1, the risk of food insecurity are increased for that demographic characteristic compared to the reference category.

Table 3 Socio-demographic predictors of food insecurity, multiple binomial logistic regression, accounting for age, sex, Statistical Area 4, and education

Independent/predictor variable	Coefficient	Standard error	p value	
Sex				
Male	reference category			
Female	0.138	0.145	0.340	
Age group				
18-24 years	2.309***	0.472	<0.001	
25-34 years	1.168***	0.322	<0.001	
35-44 years	0.807*	0.321	0.012	
45-54 years	0.471	0.303	0.120	
55-64 years	0.161	0.258	0.533	
65 years or older	reference ca	reference category		
Highest qualification				
University level Education	Jniversity level Education			
TAFE or Diploma Education	0.696***	0.194	<0.001	
High School Education	0.724***	0.199	<0.001	
Remoteness				
Inner Regional		reference category		
Outer Regional	-0.103	0.287	0.720	
Rural or Remote	0.252	0.157	0.108	
Indigenous status				
Not Aboriginal or Torres Strait Islander		reference category		
Aboriginal or Torres Strait Islander	0.268	0.383	0.484	
LGBTIQA+ identification				
Do not identify as LGBTQIA+		reference category		
Identify as LGBTQIA+	-0.256	0.261	0.327	
Prefer not to say	0.266	0.508	0.601	
Status in Australia				
Australian citizen	reference category			
Australian permanent resident	0.120	0.336	0.720	
Australian temporary resident	1.930***	0.439	<0.001	
Household composition				
Couple family	reference category			
Person living alone	0.990***	0.188	<0.001	

Couple with dependents	0.343	0.212	0.106	
Single person with dependents	1.526**	0.440	0.001	
Multiple family or multigenerational household	0.588	0.321	0.067	
Non-related adults sharing house/apartment/flat	1.086**	0.357	0.002	
Other	1.285*	0.503	0.011	
Health condition/disability				
No health condition or disability		reference category		
Health condition/disability: Life impacted a lot	1.405***	0.265	<0.001	
Health condition/disability: Life impacted a little	0.835***	0.163	<0.001	
Employment status				
Employed, worked full-time		reference category		
Employed, worked part-time	-0.245	0.193	0.206	
Unemployed or permanently unable to work	1.317**	0.408	0.001	
Retired (including voluntarily inactive)	-0.653*	0.277	0.018	
Performing home or caring duties	0.438	0.388	0.259	
Student	0.360	0.282	0.202	
Other	0.506	0.317	0.110	
Constant	-2.148***	0.312	<0.001	
Pseudo R Squared	0.231			

<sup>\*\*\*</sup>p<0.001, \*\*p<0.01, \*p<0.05