BUILDING THE CASE:
Poverty and Food Insecurity Among Working-Age, Single Adults in Canada

Anthony Musiwa

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community food centres CANADA good food is just the beginning

LAND ACKNOWLEDGEMENT

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cfccanada.ca

80 Ward Street, suite 100 | Toronto, ON | M6H 4A6

416-531-8826

info@cfccanada.ca

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ABBREVIATIONS

CAI	Climate Action Incentive
CIS	Canadian Income Survey
CRA	Canada Revenue Agency
CWAS	Canada Working-Age Supplement
CWB	Canada Workers Benefit
EI	Employment Insurance
MBM	Market Basket Measure
PUMF	Public Use Microdata File
single adults	working-age, single adults without children

KEY TAKEAWAYS

- Analyzing 2018 data on Canadians' incomes, income sources, and individual and household characteristics, we found that:
    - Working-age, single adults in Canada disproportionally experienced poverty and food insecurity.
    - Food insecurity impacted some socio-demographic groups of working-age, single adults more than others in Canada.
    - Single adults who experienced food insecurity were more likely to experience other material deprivations.
- Our 12 key findings inform and build the case for equitable, well-targeted advocacy and policy responses to significantly address poverty and food insecurity among working-age, single adults in Canada.
- Among our four recommendations, we call on the federal government to create a Canada Working-Age Supplement to help address (deep) poverty and (severe) food insecurity among single adults in Canada.
- This study is the first in-depth examination of poverty and food insecurity among working-age, single adults in Canada.

EXECUTIVE SUMMARY

Background: In Canada, working-age, single adults experience the highest and deepest rates of poverty and some of the highest rates of food insecurity. However, they have limited social safety nets to turn to. An in-depth understanding of single adult poverty and food insecurity can inform and build the case for robust, well-targeted income support policies that address poverty and food insecurity.

Objectives: To examine:

- poverty and food insecurity rates among single adults
- food insecurity rates between different single adult groups
- intersections between food insecurity and selected key material deprivation indicators.

Methods: We analyzed publicly available data from the Canadian Income Survey, 2018 to address our research objectives. We conducted chi-square tests to test any significant differences between our observed and expected estimates.

Results: Among our 12 key findings, we estimated that in 2018, 1 in 3 (35%) single adults lived below the poverty line and 1 in 4 (24%) single adults experienced food insecurity. These rates were much higher than the national rates of 8.7% and 17%, respectively. Over half (53%) of all single adults experiencing food insecurity lived below the poverty line and, of these, 2 in 3 (66%) lived in deep poverty. Food insecurity rates were higher among single adults who were in the lowest disposable income quintile, had government transfers as their main income source, received social assistance, were renters, had a core housing need, had lower education levels, and were recent immigrants. All our findings were statistically significant at the .05 level except for food insecurity by length of time since arriving in Canada.

Conclusion: Poverty and food insecurity disproportionately impact single adults more than the average person or household in Canada. These impacts also vary across different socio-demographic groups of single adults. Moreover, single adults who experience food insecurity are more likely to experience other material deprivations. Poverty and food insecurity among single adults in Canada are deeply shaped by inadequate income. Among our recommendations, the federal government must implement a Canada Working-Age Supplement and wraparound supports to enable single adults to meet their basic needs and live healthier lives.

CONTEXT

Single adults are disproportionately affected by poverty and food insecurity

Despite fluctuating poverty trends in Canada, working-age, single adults without children *(single adults)* continue to experience the highest and deepest poverty rates.[1,2] Statistics Canada's recent poverty report indicates that 1 in 5 (21.9%) of all single adults in Canada lives with poverty.[3] This rate is 3 times higher than the national poverty rate (7.4%) and over 5 times higher than the poverty rate among adults in families (4.3%).

How do we define poverty?
In this report, we define *poverty* using the Market Basket Measure (MBM), Canada's official poverty measure. MBM defines poverty in terms of the cost of a minimum basket of goods and services that reflects a modest, basic standard of living. The MBM also defines *deep poverty* as individual or household incomes less than 75% of the MBM threshold. For more details, see Statistics Canada's *Dimensions of Poverty Hub*.

In large part due to this disproportionately high poverty rate, single adults experience higher food insecurity rates, among other material deprivations, than many other household types, including two-parent households.[4] At least 1 in 4 (24%) single adults across the country experiences food insecurity, compared to 1 in 5 (18.4%) people nationally and 1 in 5 (19.8%) adults in families.[2] Disturbingly, this food insecurity rate of 24% among single adults was measured in 2019, before the COVID-19 pandemic.[5] Higher rates of poverty and food insecurity are also strongly related to adverse health experiences among adults, including poor health outcomes, higher healthcare costs, and premature deaths.[6,7,8]

Underlying causes of poverty and food insecurity in Canada are many and complex, but they almost always boil down to income.[9,10,11] Single adults are disproportionately impacted by poverty and food insecurity because they generally rely on only one income stream (mostly employment income) to meet their basic needs.[1,4] Lower incomes limit access to opportunities (e.g., ongoing education and training, and gainful employment) that can enhance one's income.[1,12,13] Most single adults in Canada are trapped in this vicious low-income cycle, exacerbated by growing labour market precarity amid very limited social safety nets, high inflation, and the rising cost of living.[14,15,16,17]

Income support policies can significantly reduce poverty and food insecurity

The unacceptable conditions of poverty and food insecurity, and the resulting high risks of poor health outcomes, cannot be allowed to continue. Robust, evidence-based policies are urgently required to help single adults in Canada meet their basic needs and live healthier and more fulfilling lives.[1,18,19] However, Canada currently provides only a few income support programs for working-age adults that benefit single adults: the Canada Workers Benefit (CWB), GST/HST tax credit, and Climate Action Incentive (CAI).[1,17,18,20] While helpful, these supports are limited. For example, the CWB's parameters exclude substantial numbers of single adults—mainly those outside the labour market, who are most affected by poverty and food insecurity.[1,17,18,20] Additionally, CAI is only available in Alberta, Manitoba, Ontario, and Saskatchewan.

Existing literature clearly demonstrates that income support policies can significantly reduce poverty and food insecurity.[10,17,18] Policies modeled on the Canada Child Benefit or Guaranteed Income Supplement, which have positively impacted families with children and seniors, are likely to significantly improve the lives of single adults living with poverty and food insecurity.[21,22,23]

Robust estimates of poverty and food insecurity among single adults will build the case for targeted income support policies

While current statistics show that single adults are disproportionately impacted by poverty and food insecurity in Canada, they only show the overall picture. Little is known about how poverty and food insecurity affect different socio-demographics of single adults or single adults experiencing other material deprivations. To significantly reduce poverty and food insecurity, income support policies must target the most affected single adults, including those living with deep poverty and severe food insecurity.[3,23,24] Moreover, to build the case for these income support policies, we need robust and in-depth estimates that clearly show how poverty and food insecurity disproportionately impact single adults.

Unfortunately, most existing literature in Canada has focused on the general population and other specific groups, including young adults, women, and older adults.[21,22,25,26] To help address this knowledge gap, our study examined the disproportionate and intersectional impacts of poverty and food insecurity among single adults in Canada.

PURPOSE AND SCOPE

To inform and build the case for targeted anti-poverty and food insecurity policies for single adults in Canada, we examined and characterized poverty and food insecurity among this population group.

More specifically, we addressed these questions:

1. What are the trends of poverty and food insecurity rates among single adults in Canada?

2. How does food insecurity impact different socio-demographic groups of single adults in Canada?

3. What does food insecurity look like when it intersects with other key material deprivations among single adults in Canada?

METHODS

The Canadian Income Survey (CIS) is an annual cross-sectional survey conducted by Statistics Canada to understand Canadians' incomes, income sources, and individual and household characteristics.[27] We analyzed secondary data from the CIS 2018 *Public Use Microdata File* (PUMF)—that is, publicly available, anonymized secondary data for CIS 2018.[28,29]

We chose CIS 2018 data because it was the latest publicly available Statistics Canada dataset before the COVID-19 pandemic. Hence, the data give a more accurate picture of poverty and food insecurity in Canada as they are not subject to the biasing changes that occurred during the pandemic, including higher-than-usual unemployment rates and rapid changes in income based on benefits related to COVID-19. Statistics Canada's recent CIS 2021 report also contains poverty and food insecurity estimates that mirror pre-pandemic levels, further showing that the CIS 2018 data, to a large extent, reflects the present situation.[3]

For further methodological details, see Appendix 1. Note that due to rounding, some totals in this report may differ marginally from the sum of their associated figures (e.g., totals of rates for different levels of food insecurity).

FINDINGS AND DISCUSSION

Twelve key findings, grouped by themes

Our 12 key findings span three themes (see Figure 1). The three findings in Theme 1 demonstrate the disproportionately high rates of poverty and food insecurity among single adults relative to the average Canadian individual or household. The seven key findings in Theme 2 drill down into more detail, highlighting how food insecurity differently impacted some socio-demographic groups of single adults more than others in Canada. Finally, the two key findings in Theme 3 detail two ways that single adults who experience food insecurity are more likely to experience other material deprivations.

Collectively, our key findings point to the urgent need for targeted income support policies to enable single adults in Canada to meet their basic needs and live healthier lives.

Figure 1: Themes and key findings of this study

THEME 1

Single adults experienced disproportionately higher rates of poverty and food insecurity in Canada

KEY FINDINGS

1.1 Single adults experienced poverty at rates more than 4 times higher than the average Canadian.

1.2 Single adults were more likely to be food insecure than the average Canadian household.

1.3 Over half of all single adults experiencing food insecurity in Canada lived below the official poverty line.

THEME 2

Food insecurity impacted some socio-demographic groups of single adults more than others in Canada

KEY FINDINGS

2.1 Single adults who received government transfers as their main source of income experienced higher food insecurity rates than the average Canadian.

2.2 Single adults who received social assistance experienced higher rates of food insecurity than single adults earning other income.

2.3 Most single adults are renters. Single adults who rent were more likely to be food insecure than those who own a house.

2.4 Food insecurity was higher among single adults who had been in Canada for less than 10 years, compared to those who had been in Canada longer.

2.5 Single adults who did not attain a high school diploma were more likely to be food insecure than those with a university degree or certificate.

2.6 Single adults aged 45–54 years and 55–64 years were more likely to be food insecure than younger adults.

2.7 Single adults were equally as likely to be food insecure, regardless of their sex.

THEME 3

Single adults who experienced food insecurity were more likely to experience other material deprivations

KEY FINDINGS

3.1 Single adults on lower incomes experienced food insecurity at over 3 times the rate of single adults on higher incomes.

3.2 Single adults with a core housing need experienced food insecurity at over twice the rate of single adults with no core housing need.

THEME 1: Single adults experienced disproportionately higher rates of poverty and food insecurity in Canada

Key finding 1.1: Single adults experienced poverty at rates more than 4 times higher than the average Canadian

Our findings demonstrated that 1 in 3 (35% or 1.4 million) single adults in Canada lived below the official poverty line in 2018. When compared to the then national poverty rate of 1 in 11 (8.7% or 3.2 million) Canadians, this meant that single adults experienced poverty at rates more than 4 times higher than the average Canadian.[30] Single adults in fact comprised 44% of all Canadians living with poverty. Additionally, our analysis indicated that at least 1 in 4 (25% or 976,000) single adults lived in deep poverty in 2018.

We also know from the existing literature that single adults continue to experience the highest and deepest rates of poverty in Canada—even despite some national-level reductions between 2015 and 2020, mainly due to federal benefits related to COVID-19.[2,3,18,19] With the ending of COVID-19 benefits, along with ongoing high inflation and the increasing cost of living,[14,15,16,19] poverty rates among single adults (and Canada overall) increased slightly in 2021. These recent poverty rates are quite similar to those before the pandemic, and some organizations that work with people living with poverty and food insecurity across Canada have warned that these rates will worsen if Canada fails to step up its poverty mitigation efforts.[31] Our analysis lends new insights into this situation, demonstrating that single adults across Canada have been and continue to be disproportionately impacted by poverty.

Key finding 1.2: Single adults were more likely to be food insecure than the average Canadian household

THE FOUR LEVELS OF FOOD SECURITY

In our analysis, we used four levels of food security:

- *Food secure:* no income-related problems of food access.
- *Marginally food insecure:* some concern or problem of food access.
- *Moderately food insecure:* compromises in quality or quantity of food consumed.
- *Severely food insecure:* extensive compromises in quality or quantity of food consumed, including reduced food intake.

Our total food insecurity rates combine estimates for marginal, moderate, and severe food insecurity. For further details on how we measured food insecurity, see Appendix 2.

Our analysis indicated that 1 in 4 (24% or 959,000) single adults in Canada were food insecure in 2018, which was consistent with Statistics Canada's 2018 CIS report.[30] Of these people, 1 in 20 (5%) were marginally food insecure, 1 in 10 (10%) were moderately food insecure, and 1 in 11 (9%) were severely food insecure. In general, 1 in 3 (38%) food insecure single adults were severely food insecure in 2018. The 2018 single adult food insecurity rate was higher than the then national average rate of 17%, thus generating our key finding that single adults in 2018 were more likely to be food insecure than the average Canadian household.

While all provinces had single adult food insecurity rates above 20%, these rates varied from 22% in Quebec to 31% in New Brunswick. The recent Statistics Canada report on CIS 2021 shows similar geographical patterns across Canada's 10 provinces (note that CIS does not yet measure food insecurity in Canada's three territories).[3] The low rates in Quebec can be attributed to the province's relatively generous social policies.[32,33] New Brunswick has some of the lowest welfare incomes for single adults in Canada, which may explain the high food insecurity rates among single adults in our study.[32] The Atlantic provinces continue to be most impacted by food insecurity due to high unemployment rates and higher cost of living.[34]

Key finding 1.3: Over half of all single adults experiencing food insecurity in Canada lived below the official poverty line

Our study revealed deep intersections between poverty and food insecurity among single adults in Canada. Over half (53% or 513,000) of all single adults who experienced food insecurity lived below Canada's poverty threshold. About 2 in 3 (66% or 340,000) of all single adults who experienced food insecurity lived in deep poverty. Furthermore, of the total single adults who both experienced food insecurity and lived below the poverty line, 2 in 5 (43% or 222,000) were severely food insecure, and the majority (70%) lived in deep poverty.

The relationship between poverty, or low income, and food insecurity is well-documented in Canada as it pertains to the general population and other specific groups like youth, female-led families, and seniors.[9,25,26] However, research indicating similar intersections among single adults is limited. Our results for single adults contribute much-needed evidence that builds the case for targeted anti-poverty and food insecurity policies for single adults in Canada.

THEME 2: Food insecurity impacted some socio-demographic groups of single adults more than others in Canada

Key finding 2.1: Single adults who received government transfers as their main source of income experienced higher food insecurity rates than the average Canadian

Single adult Canadians have limited income options and often must survive on just one income.[1,4,18,32] Their low purchasing power is exacerbated by, on the one hand, very limited social safety nets and, on the other hand, a labour market that pays low wages, has fewer benefits and protections, and brings huge uncertainty in both wages and work hours.[1,14,15,16,17] In Canada, low-income households that receive government transfers as their main source of income are more likely to be food insecure, the most affected being households that receive social assistance as their main source of income.[5] Available data indicates that at least 3 in 5 (61%) households that receive social assistance as their main source of income and 2 in 5 (39%) that receive Employment Insurance (EI) benefits as their main source of income are food insecure.[5] This is unsurprising, given the inadequacy of social assistance and EI benefits in Canada, including their low payment rates.[32,35] While exact estimates of single adults who receive government transfers are scarce, we know that most recipients of social assistance are single adults.[18,32,36] Consequently, single adults experience some of Canada's worst rates of food insecurity.[1,4,5,23]

Consistent with our expectations, our analysis revealed that nearly half (48%) of single adults who received government transfers were food insecure: About 1 in 13 (8%) were marginally food insecure, 1 in 6 (18%) were moderately food insecure, and 1 in 5 (22%) were severely food insecure. This food insecurity rate of 48% was nearly 3 times the national food insecurity rate of 17%.

Surprisingly, our analysis also gave a lesser-known but equally important perspective: Only a small proportion (19%) of single adults received government transfers as their main source of income. This suggests:

- Contrary to popular misconceptions, the vast majority of single adults in Canada receive employment income as their main source of income and relatively little support from public benefits.
- Even employed single adults in Canada experience food insecurity.

But regardless of whether they are employed or unemployed, single adults in Canada mostly survive on only one income, which is barely enough to meet their basic needs, including nourishing food. They therefore experience higher food insecurity rates.

Key finding 2.2: Single adults who received social assistance experienced higher rates of food insecurity than single adults earning other income

As noted in key finding 2.1, most recipients of social assistance are single adults and all single adults experience higher food insecurity rates.[1,4,5,23] For a more in-depth understanding, we examined the extent of food insecurity based on *the amount of social assistance received* by single adults.

Social assistance should be a viable component of social safety nets.[32,37] Some people access social assistance to augment their income from other sources including wages, while others receive social assistance as their sole or main income.[32] Whatever the case, social assistance must enable people to meet their basic needs.[32] Yet, social assistance rates are often kept low to incentivize paid work, and these low rates often achieve the exact opposite: They trap people in poverty.[18,32,37] Today, no province or territory in Canada has welfare incomes equal to or above the MBM threshold.[32]

In our study, only 1 in 8 (12%) single adults received social assistance in 2018, which demonstrates that the vast majority of single adults rely on other income sources, including paid work, for their basic living needs. We found that no single adult received social assistance commensurate with the 2018 Low-Income Measure threshold for a single person of $25,609 (incomes within this threshold are below 50% of the national median after-tax adjusted income). The vast majority of these single adults (88.2%) received less than $15,000 in social assistance, while 9.2% received between $15,000 and $20,000, and only 2.6% received more than $20,000. Single adults who received less than $15,000 in social assistance likely had other income sources (e.g., wages), while those who received $15,000 or more in social assistance likely had social assistance as their main source of income.

In our study, the impact of these woefully low social assistance rates was reflected in the high food insecurity rates among single adults who received social assistance. We found that 3 in 5 (62%) of all single adults who received social assistance experienced food insecurity: About 1 in 10 (10%) were marginally food insecure, 1 in 4 (24%) were moderately food insecure, and 1 in 4 (28%) were severely food insecure.

Additionally, 61% of single adults who received social assistance of less than $15,000 experienced food insecurity. In comparison, 68% of single adults who received more than $15,000 in social assistance experienced food insecurity. These findings reveal at least two key issues. First, regardless of the amount, single adults who receive social assistance are more likely to be disproportionately impacted by food insecurity. Second—and this reflects a key finding of our study—the prevalence of food insecurity is higher among

single adults who do not have any other source of income besides social assistance (in our study, such single adults received higher social assistance amounts).

Clearly, low social assistance rates are a potent driver of poverty and food insecurity in Canada, especially among single adults.[18,32,37] As most social assistance recipients have limited to no other sources of income, making social assistance rates more generous can go a long way in addressing food insecurity. This is especially so among the group that disproportionately experiences food insecurity: single adults.[1,32,37]

Key finding 2.3: Most single adults are renters. Single adults who rent were more likely to be food insecure than those who own a house

In income-constrained contexts, people normally compromise on buying other basic necessities, including food, to pay rent.[4,38,39] As such, renters—in contrast to homeowners—are more likely to experience higher levels of material deprivation, including food insecurity.[4,38,39] Recent reports suggest that 26% of families who rent are food insecure, compared to 14% of families with a mortgage and 7% of families who own their homes outright without a mortgage.[5] Although exact estimates for single adults are generally scarce in the existing literature, it is plausible to hypothesize that single adults who rent are more likely to experience higher food insecurity rates, especially given that they usually have to make do with only one income.[1,4]

Against this background, our analysis demonstrated that the majority (61%) of single adults in Canada were renters. Furthermore, the food insecurity rate among renting single adults was 12 percentage points higher than that for single adults who were homeowners. That is, 1 in 3 (29%) renting single adults were food insecure: one in 17 (6%) marginally and 1 in 9 (11%) moderately and severely apiece. On the other hand, 1 in 6 (17%) single adults who owned a house were food insecure: 1 in 25 (4%) marginally, 1 in 14 (7%) moderately, and 1 in 17 (6%) severely.

Note that while the food insecurity rate among single adults who owned a house was lower than that for single adults who rented, it was still as high as the national household food insecurity rate for 2018.[5]

Key finding 2.4: Food insecurity was higher among single adults who had been in Canada for less than 10 years, compared to those who had been in Canada longer

People born outside Canada experience worse socio-economic disadvantages than those born in Canada.[40,41] The former typically fall into one or more socio-demographic categories that exacerbate their disadvantage: racialized, young, highly educated but under-employed or unemployed, and living on lower incomes.[40,41] They are also more likely to experience poverty and material deprivation, particularly if they are recent arrivals to Canada.[5,41,42] Existing evidence shows that people born outside Canada are more likely (9%) to experience poverty than those born in Canada (7%).[42] Over half (56%) of all people who arrived in Canada within 10 years are renters and 31% spend at least 30% of their income on housing.[43,44] In contrast, 27% of people born in Canada are renters, and 18% spend more than 30% of their income on housing.[43,44]

Existing research does not show significant differences in food insecurity rates between households that have at least one person born outside Canada and those that do not.[5] However, our study gave new insights into food insecurity rates among single adults who were born outside Canada. We found that 1 in 5 (or 22%) single adults born outside Canada were food insecure: About 1 in 14 (7%) were marginally food insecure, 1 in 10 (10%) were moderately food insecure, and 1 in 20 (5%) were severely food insecure. Furthermore, we found that food insecurity rates slightly declined with the length of time since arriving in Canada. Hence, 1 in 4 (24%) single adults who had been in Canada for less than 10 years were food insecure, compared to 1 in 5 (19%) single adults who had been in Canada for 30 or more years.

However, the differences in food insecurity among single adults based on their length of time since arriving in Canada were not statistically different, meaning we could not infer these differences at the population level. This means that additional factors—most likely the socio-demographic categories in our opening paragraph for this key finding—explain why single adults who have been in Canada for less than 10 years are more likely to be food insecure.

Key finding 2.5: Single adults who did not attain a high school diploma were more likely to be food insecure than those with a university degree or certificate

Formal education enhances opportunities for more stable and better-paying work as well as social mobility, which are all linked to positive health outcomes.[13,45,46] In comparison to families or individuals with higher levels of formal education, families or individuals with lower levels of formal education are more likely to experience precarious work, lower income, limited social

mobility, and material deprivations like food insecurity.[1,12,13,47] While estimates specifically for single adults in Canada are scarce, we currently know that food insecurity rates among households whose highest education level is less than a high school diploma are about double (20%) those of households with at least an undergraduate level of university education (11%).[5]

Consistent with these food insecurity experiences among households in Canada, we found in our study that single adults whose highest level of education was less than a high school diploma experienced the highest food insecurity rates. One in 3 (37%) of these single adults were food insecure: 1 in 17 (6%) marginally, 1 in 6 (17%) moderately, and 1 in 7 (15%) severely. This rate of 37% was nearly 3 times higher than that among single adults whose highest education level was a university degree or certificate (13%).

In a similar vein to some of our previous key findings, we draw particular attention to the higher food insecurity rates among single adults with lower levels of formal education; at the same time, we stress that food insecurity among those with higher levels of formal education is still unacceptable.

Key finding 2.6: Single adults aged 45–54 years and 55–64 years were more likely to be food insecure than younger single adults

Working age is a very broad category, and evidence about the relationships between age and food insecurity in Canada is mixed. For example, some research shows that food insecurity rates are much higher in the age range of 55–64 years compared to other age ranges.[26,48] However, further studies report lower food insecurity rates in the 55–64 age range compared to other age ranges below this bracket.[5]

Despite these and other variations, there is shared agreement that food insecurity among seniors (65+ years) is much lower than in the working-age range (18–64 years), in large part due to Canada's generous social policies for seniors such as Old Age Security and the Guaranteed Income Supplement. Similar research focusing on single adults appears scarce in the existing literature, and once again, our study helps to address this gap.

Our analysis demonstrated that food insecurity rates among single adults increased with age, from 21% in the 18–29 years range, to 23% in the 30–44 years range, and peaking in the 45–54 years range at 29% before declining to 27% in the 55–64 years range. Despite these variations, we highlight the fact that all of these age-specific food insecurity rates for single adults are higher than national average rates.[5] The limited social safety nets for working-age adults, compared to seniors, partly explain these findings.[22,48]

The existing literature does not explain the relatively higher food insecurity rates among single adults in the 45–54 years group. However, the second-highest rates in the 55–64 age group are echoed in previous research.[22,48] Available evidence often characterizes the "middle ages" (45–59 years) as a peak earning and relatively financially stable age group. Thus, having the highest food insecurity rates in this age group among single adults is a paradox that merits further investigation.

Key finding 2.7: Single adults were equally as likely to be food insecure, regardless of their sex

How did CIS 2018 define "sex"?

The CIS 2018 data described participants' sex as either male or female. This ciscentric and colonial categorization failed to capture data that was specific to people whose gender identity is different from the sex that they were assigned at birth, including Two-Spirit, trans, and non-binary people.

In drawing on CIS 2018 data, we were therefore unable to report on food insecurity rates among gender-diverse people. Among our recommendations in this report, we call for more intersectional and inclusive research and data collection to yield more nuanced and equitable understandings (see recommendation 4).

In Canada, women and gender-diverse people have historically experienced inequalities in social and economic aspects, including in employment and education settings.[49,50] As such, they have earned lower incomes and experienced higher rates of poverty and food insecurity than cisgender men, although gender-sensitive policies in the last 40 years or so have helped to significantly reduce these disparities, at least between cisgender women and cisgender men.[13,21,23] Recent reports suggest that current poverty rates in Canada are relatively similar among cisgender women (7.9%) and cisgender men (8.2%), but transgender men (12.9%) and transgender women (12.0%) are still more likely to experience poverty than their cisgender counterparts.[42]

Statistics Canada data for 2020 indicates that food insecurity rates (in this case, moderate plus severe only) are similar between females (11.5%) and males (10.8%).[51] These rates, which allow comparisons between females and males, have remained relatively unchanged since 2018.[51]

Consistent with existing literature, our study found that single adult females were equally as likely as single adult males to be food insecure. One in 4 (25%) single females were food insecure: 1 in 20 (5%) marginally, 1 in 9 (11%) moderately,

and 1 in 13 (8%) severely. Similarly, 1 in 4 (24%) single adult males were food insecure: 1 in 20 (5%) marginally, 1 in 11 (9%) moderately, and 1 in 10 (10%) severely. Moreover, these food insecurity rates of 25% and 24% among single adult females and males respectively were much higher than the national household food insecurity rate of 17%.[5]

It is important to note that although the food insecurity rates among females and males in our study were similar, they were also statistically significantly different. Therefore, we can infer that female and male experiences of food insecurity are not necessarily the same, and more research is needed to parse these differences.

In addition, we stress that the food insecurity rates among females and males that we have presented here are only group-level averages. Female and male single adults experience poverty and food insecurity differently based on their social locations, including their ethno-racial identity, Indigenous status, (dis) Ability, citizenship status, etc. More intersectional—and, as we have noted, less ciscentric—analyses can give further insights into this important topic.[1,49,50]

THEME 3: Single adults who experienced food insecurity were more likely to experience other material deprivations

Key finding 3.1: Single adults on lower incomes experienced food insecurity at over 3 times the rate of single adults on higher incomes

Besides being a main source of income for most people, disposable or after-tax income is a proven indicator of the adequacy of resources that an individual or household may have to spend on basic necessities like food and rent.[9,14,37] Despite the paucity of estimates specifically on single adults, studies conducted with all Canadian families and other specific groups like children and young adults demonstrate that individuals or families in the lowest after-tax income quintiles are more likely to experience food insecurity than those in the highest after-tax income quintile.[9,22,52]

Similarly, our findings indicated that 1 in 3 (36%) single adults in the lowest disposable income quintile (earning less than $16,350 per year) and 1 in 3 (34%) in the second-lowest quintile ($16,351 to $27,804 per year) experienced food insecurity. In contrast, 1 in 10 single adults (10%) in the highest quintile ($53,244+ per year) experienced food insecurity (note that our separate analysis using CIS 2018's economic family after-tax income revealed similar results). These findings reinforce existing research in demonstrating that food insecurity among single adults, as with all other population groups, is an income problem.[9,10,21]

Key finding 3.2: Single adults with a core housing need experienced food insecurity at over twice the rate of single adults with no core housing need

What is a core housing need?

According to the CIS 2018 PUMF Data Dictionary, an individual or family is in *core housing need* if their "dwelling is considered unsuitable, inadequate or unaffordable and [if their] … income levels are such that they could not afford alternative suitable and adequate housing in their community."

For further details on how we defined a core housing need, see Appendix 2.

Income-constrained individuals or families who rent more often experience a core housing need.[53,54,55] Individuals or families with a core housing need are also more likely to experience higher material deprivations, including food insecurity and negative health outcomes.[6,7,8,38,54] While studies on the intersections between food insecurity and core housing need in Canada are limited, including among single adults, we anticipated in our analysis that the food insecurity rate would be much higher among single adults with a core housing need compared to those without.

Our prediction was correct. One in 5 (19%) single adults had a core housing need. Of these, nearly half (47%) experienced food insecurity: 1 in 11 (9%) were marginally food insecure, 1 in 6 (18%) were moderately food insecure, and 1 in 5 (21%) were severely food insecure.

This led to our key finding: The 47% rate of food insecurity among single adults with a core housing need was more than twice that for single adults without a core housing need (18%).

While we draw attention to the deplorable food insecurity rates among single adults with a core housing need, the food insecurity rates for those without this need also remain unacceptable.

CONCLUSIONS AND RECOMMENDATIONS

Our study aimed to examine and characterize poverty and food insecurity among single adults in Canada. Using CIS 2018 PUMF, we: (1) examined how poverty and food insecurity disproportionately impacted single adults in Canada, (2) demonstrated how food insecurity impacted different socio-demographic groups of single adults in Canada, and (3) highlighted how food insecurity intersected with two key material deprivations among single adults in Canada.

To our knowledge, our study is the first in-depth examination of poverty and food insecurity among single adults in Canada. The evidence we generated provides crucial insights to inform and build the case for equitable, well-targeted advocacy and policy responses to significantly address poverty and food insecurity among single adults in Canada.

Our analysis points to urgent policy directions for the federal government, as well as associated areas for policy/advocacy organizations to focus their advocacy efforts. Below, we detail key four recommendations.

Recommendation 1: Create a Canada Working-Age Supplement

We call on the federal government to develop robust social safety nets specifically designed for single adults. Such policies must enhance disposable or after-tax incomes among single adults. As some of our findings demonstrated (e.g., see key finding 3.1), poverty and food insecurity among single adults, as with all other population groups, is an income inadequacy problem.

Working with Maytree, we recently developed a proposal for a Canada Working-Age Supplement (CWAS), which aims to transform the CWB and support working-age people, including single adults, who are living on lower incomes. We urge the federal government to seriously consider the CWAS as a viable policy tool to help address (deep) poverty and (severe) food insecurity among single adults in Canada.[18]

Recommendation 2: Expedite affordable housing for single adults

The federal government should expedite, and interested policy/advocacy organizations should advocate for, affordable housing for single adults. Initially targeting single adults experiencing a core housing need would be a prudent start while the government scales up to other single adults based on ongoing learning and impact. To reiterate one key finding (3.2), core housing need intersects with food insecurity among single adults in Canada. Therefore, supporting single adults with affordable housing will go a long way in addressing food insecurity among this group.

Recommendation 3: Apply whole-of-government and inter-sectoral approaches to address poverty and food insecurity

Too often, government policies are sectoral and operate in silos. The intersections reflected in our study between food insecurity and other key factors like income, education, core housing need, and immigration status demonstrate the need for a whole-of-government approach to address poverty and food insecurity among single adults in Canada.

Likewise, non-profit advocacy efforts in Canada are often issue-based and sectoral. From our findings, virtually all sectors are implicated in the work to address poverty and food insecurity among single adults. Inter-sectoral collaboration is necessary for far-reaching and more sustainable solutions to supporting single adults in Canada, a neglected group that disproportionately experiences poverty and food insecurity.

Recommendation 4: Support and conduct more intersectional and inclusive research to better understand poverty and food insecurity among single adults

Last but not least, additional research and more inclusive forms of data collection are required to investigate poverty and food insecurity among single adults who occupy different social locations, such as ethno-racial, Indigenous, (dis)Ability, and gender (including non-cisgender) locations. The CIS 2018 PUMF that we used did not include these kinds of data, and yet such data are critical for more nuanced, and therefore more effective and equitable, understandings and responses.

REFERENCES

1. Herd, D., Kim, Y., & Carrasco, C. (2020, September). *Canada's forgotten poor? Putting singles living in deep poverty on the policy radar*. Institute for Research on Public Policy. https://irpp.org/wp-content/uploads/2020/09/Canada-Forgotten-Poor-Putting-Singles-Living-in-Deep-Poverty-on-the-Policy-Radar.pdf

2. Statistics Canada. (2022, March 23). *Canadian Income Survey, 2020*. https://www150.statcan.gc.ca/n1/daily-quotidien/220323/dq220323a-eng.htm

3. Statistics Canada. (2023, May 2). *Canadian Income Survey, 2021*. https://www150.statcan.gc.ca/n1/daily-quotidien/230502/dq230502a-eng.htm

4. Tang, J., Galbraith, N., & Truong, J. (2019, July 24). *Living alone in Canada. Insights on Canadian society*. Statistics Canada. https://www150.statcan.gc.ca/n1/pub/75-006-x/2019001/article/00003-eng.htm

5. Tarasuk, V., Li, T., & Fafard St-Germain, A. A. (2022). *Household food insecurity in Canada 2021*. Research to Identify Policy Options to Reduce Food Insecurity (PROOF). https://proof.utoronto.ca/wp-content/uploads/2022/08/Household-Food-Insecurity-in-Canada-2021-PROOF.pdf

6. Men, F., Gundersen, C., Urquia, M. L., & Tarasuk, V. (2020). Association between household food insecurity and mortality in Canada: A population-based retrospective cohort study. *Canadian Medical Association Journal, 192*(3), E53–E60. https://doi.org/10.1503/cmaj.190385

7. Raphael, D., Bryant, T., Mikkonen, J., & Raphael, A. (2020). *Social determinants of health: The Canadian facts* (2nd ed.). Ontario Tech University Faculty of Health Sciences and York University School of Health Policy and Management. https://thecanadianfacts.org/The_Canadian_Facts-2nd_ed.pdf

8. Tarasuk, V., Cheng, J., de Oliveira, C., Dachner, N., Gundersen, C., & Kurdyak, P. (2015). Association between household food insecurity and annual health care costs. *Canadian Medical Association Journal, 187*(14), E429–E436. https://doi.org/10.1503/cmaj.150234

9. Loopstra, R., & Tarasuk, V. (2013). Severity of household food insecurity is sensitive to change in household income and employment status among low-income families. *The Journal of Nutrition, 143*(8), 1316–1323. https://doi.org/10.3945/jn.113.175414

10. Research to Identify Policy Options to Reduce Food Insecurity (PROOF). (2022, October 13). *Food insecurity: A problem of inadequate income, not solved by food*. https://proof.utoronto.ca/resource/food-insecurity-a-problem-of-inadequate-income-not-solved-by-food/

11. Sarlo, C. A. (2019). *The causes of poverty*. The Fraser Institute. https://www.fraserinstitute.org/sites/default/files/causes-of-poverty.pdf

12. Cross, P. (2021). *The minimum wage, lost jobs, and poverty in Canada*. The Fraser Institute. https://www.fraserinstitute.org/sites/default/files/minimum-wage-lost-jobs-and-poverty-in-canada.pdf

13. Simard-Duplain, G., & St-Denis, X. (2020). Exploration of the role of education in intergenerational income mobility in Canada: Evidence from the Longitudinal and International Study of Adults. *Canadian Public Policy, 46*(3), 369–396. https://doi.org/10.3138/cpp.2019-072

14. Statistics Canada. (2022, June 9). *Rising prices are affecting the ability to meet day-to-day expenses for most Canadians*. https://www150.statcan.gc.ca/n1/daily-quotidien/220609/dq220609a-eng.htm

15. Statistics Canada. (2022, November 21). *To buy or to rent: The housing market continues to be reshaped by several factors as Canadians search for an affordable place to call home*. https://www150.statcan.gc.ca/n1/daily-quotidien/220921/dq220921b-eng.htm

16. Standing Committee on Human Resources, Skills and Social Development and the Status of Persons with Disabilities (HUMA). (2019). *Precarious work: Understanding the changing nature of work in Canada. A report of the Standing Committee on Human Resources, Skills and Social Development and the Status of Persons with Disabilities*. https://www.ourcommons.ca/Content/Committee/421/HUMA/Reports/RP10553151/humarp19/humarp19-e.pdf

17. Tabbara, M. (2021, October). *What is the Canada Workers Benefit, and how could it be better?* Maytree. https://maytree.com/wp-content/uploads/What-is-the-Canada-Workers-Benefit.pdf

18. Kapoor, G. T., Tabbara, M., Hanley, S., & McNicoll, S. (2022, September). *How to reduce the depth of single adult poverty in Canada: Proposal for a Canada Working-Age Supplement*. Maytree and Community Food Centres Canada. https://maytree.com/wp-content/uploads/canada-working-age-supplement-report.pdf

19. The National Advisory Council on Poverty. (2022). *Transforming our systems: The 2022 report of the National Advisory Council on Poverty.* Employment and Social Development Canada. https://www.canada.ca/content/dam/esdc-edsc/documents/programs/poverty-reduction/national-advisory-council/reports/2022-annual/NACP_2022-Report-EN-final.pdf

20. Government of Canada. (2023, April 7). *Canada workers benefit – Overview*. https://www.canada.ca/en/revenue-agency/services/child-family-benefits/canada-workers-benefit.html

21. Brown, E. M., & Tarasuk V. (2019). Money speaks: Reductions in severe food insecurity follow the Canada Child Benefit. *Preventive Medicine, 129*, Article 105876. https://doi.org/10.1016/j.ypmed.2019.105876

22. McIntyre, L., Dutton, D. J., Kwok, C., & Emery, J. C. (2016). Reduction of food insecurity among low-income Canadian seniors as a likely impact of a Guaranteed Annual Income. *Canadian Public Policy, 42*(3), 274–286. https://doi.org/10.3138/cpp.2015-069

23. Notten, G., Zohora, F. T., Plante, C., & Laforest, R. (2022). *Two decades of poverty reduction politics in Canada: Better for single parent families and single working age adults?* (Working Paper #2203E.) Department of Economics, University of Ottawa. https://ruor.uottawa.ca/bitstream/10393/43745/1/Notten%20Zohora%20Plante%20Laforest%20Single%20parent%20families%20and%20single%20adults-2203E%20WP.pdf

24. Domelen, J. (2007, May). *Reaching the poor and vulnerable: Targeting strategies for social funds and other community-driven programs* (Social Protection Discussion Paper No. 0711). World Bank. https://web.archive.org/web/20221125224309/https://web.worldbank.org/archive/website01536/WEB/IMAGES/0711.PDF

25. Bhawra, J., Kirkpatrick, S. I., & Hammond, D. (2021). Food insecurity among Canadian youth and young adults: Insights from the Canada Food Study. *Canadian Journal of Public Health/Revue canadienne de sante publique, 112*(4), 663–675. https://doi.org/10.17269/s41997-020-00469-1

26. Green-Lapierre, R. J., Williams, P. L., Glanville, N. T., Norris, D., Hunter, H. C., & Watt, C. G. (2012). Learning from "Knocks in Life": Food insecurity among low-income lone senior women. *Journal of Aging Research, 2012*, Article 450630. https://doi.org/10.1155/2012/450630

27. Statistics Canada. (2020, February 21). *Canadian Income Survey (CIS)*. https://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&Id=1275662

28. Brent, D. M., & Lucas, R. E. (2013). Secondary data analysis. In T. D. Little (ed.), *The Oxford handbook of quantitative methods in psychology: Vol. 2: Statistical analysis* (pp. 665–677). Oxford Academic. https://doi.org/10.1093/oxfordhb/9780199934898.013.0028

29. Statistics Canada. (2023, March 29). *Canadian Income Survey: Public Use Microdata File*. https://www150.statcan.gc.ca/n1/pub/72m0003x/72m0003x2021001-eng.htm

30. Statistics Canada. (2020, February 24). *Canadian Income Survey, 2018*. https://www150.statcan.gc.ca/n1/daily-quotidien/200224/dq200224a-eng.htm

31. Maytree. (2022, November 23). *Latest Welfare in Canada report finds depth of poverty worse in 2021, after 2020 bump*. *https://maytree.com/media-releases/latest-welfare-in-canada-report-finds-depth-of-poverty-worse-in-2021-after-2020-bump/*

32. Laidley, J., & Tabbara, M. (2022, November). *Welfare in Canada, 2021*. Maytree. https://maytree.com/wp-content/uploads/Welfare_in_Canada_2021.pdf

33. Men, F., Urquia, M. L., & Tarasuk, V. (2021). The role of provincial social policies and economic environments in shaping food insecurity among Canadian families with children. *Preventive Medicine, 148*, Article 106558. https://doi.org/10.1016/j.ypmed.2021.106558

34. Research to Identify Policy Options to Reduce Food Insecurity (PROOF). (2023, May 2). *New data on household food insecurity in 2022*. https://proof.utoronto.ca/2023/new-data-on-household-food-insecurity-in-2022/

35. Men, F., & Tarasuk, V. (2023). Employment Insurance may mitigate impact of unemployment on food security: Analysis on a propensity-score matched sample from the Canadian Income Survey. *Preventive Medicine, 169*, Article 107475. https://doi.org/10.1016/j.ypmed.2023.107475

36. Finnie, R., Irvine, I., & Sceviour, R. (2005, May). *Social assistance use in Canada: National and provincial trends in incidence, entry and exit* (Analytical Studies Branch Research Paper Series). Statistics Canada. https://www150.statcan.gc.ca/n1/en/pub/11f0019m/11f0019m2005245-eng.pdf?st=JCff55Q3

37. Hillel, I. (2020, August). *Holes in the social safety net: Poverty, inequality and social assistance in Canada* (CSLS Research Report 2020-06). Centre for the Study of Living Standards. http://www.csls.ca/reports/csls2020-02.pdf

38. Fafard St-Germain, A. A., & Tarasuk, V. (2020). Homeownership status and risk of food insecurity: Examining the role of housing debt, housing expenditure and housing asset using a cross-sectional population-based survey of Canadian households. *International Journal for Equity in Health, 19*(1), Article 5. https://doi.org/10.1186/s12939-019-1114-z

39. Fafard St-Germain, A. A., & Tarasuk, V. (2018). Prioritization of the essentials in the spending patterns of Canadian households experiencing food insecurity. *Public Health Nutrition 21*(11), 2065–2078. https://doi.org/10.1017/S1368980018000472

40. Boulet, M., & Boudarbat, B. (2015). The economic performance of immigrants with Canadian education. *Regional and Sectoral Economic Studies, 15*(2), 23–38. https://www.usc.es/economet/reviews/eers1522.pdf

41. Picot, G., & Hou, F. (2016). Immigration, poverty and income inequality in Canada. In D. A. Green, W. Craig Riddell, & F. St-Hilaire (Eds.), *Income inequality: The Canadian story* (The art of the state: Vol. 5, pp. 175–211). Institute for Research on Public Policy. https://irpp.org/wp-content/uploads/2019/10/Immigration-Poverty-and-Income-Inequality-in-Canada.pdf

42. Statistics Canada. (2022, November 9). *Census in brief: Disaggregated trends in poverty from the 2021 Census of Population*. https://www12.statcan.gc.ca/census-recensement/2021/as-sa/98-200-x/2021009/98-200-x2021009-eng.pdf

43. Wong, D. (2021, November 29). *One in five Canadians are in "shelter poverty" and it's worse for new immigrants*. Better Dwelling. https://betterdwelling.com/one-in-five-canadians-are-in-shelter-poverty-and-its-worse-for-new-immigrants/

44. Randle, J., Hu, Z., & Thurston, Z. (2021, November 22). *Housing experiences in Canada: Recent immigrants in 2018*. Statistics Canada. https://www150.statcan.gc.ca/n1/pub/46-28-0001/2021001/article/00005-eng.htm

45. Shankar, J., Ip, E., Khalema, E., Couture, J., Tan, S., Zulla, R. T., & Lam, G. (2013). Education as a social determinant of health: Issues facing indigenous and visible minority students in postsecondary education in Western Canada. *International Journal of Environmental Research and Public Health, 10*(9), 3908–3929. https://doi.org/10.3390/ijerph10093908

46. Veenstra, G., & Vanzella-Yang, A. (2021). Intergenerational social mobility and self-rated health in Canada. *SSM – Population Health, 15,* Article 100890. https://doi.org/10.1016/j.ssmph.2021.100890

47. Frennette, M. (2007, February). *Why are youth from lower-income families less likely to attend university? Evidence from academic abilities, parental influences, and financial constraints (*Analytical Studies Branch Research Paper Series). Statistics Canada. https://www150.statcan.gc.ca/n1/en/pub/11f0019m/11f0019m2007295-eng.pdf?st=qx_cnRfF

48. Leroux, J., Morrison, K., & Rosenberg, M. (2018). Prevalence and predictors of food insecurity among older people in Canada. *International Journal of Environmental Research and Public Health, 15*(11), Article 2511. https://doi.org/10.3390/ijerph15112511

49. Canadian Women's Foundation. (2022, April 6). *The facts about women and poverty in Canada*. https://canadianwomen.org/the-facts/womens-poverty/#:~:text=Overall%2C%20in%202021%2C%20women's%20economic,(Statistics%20Canada%2C%202022)

50. Women's Legal Education and Action Fund. (2009). *Women and poverty.* https://www.leaf.ca/wp-content/uploads/2011/01/WomenPovertyFactSheet.pdf

51. Statistics Canada. (2023, May 30). *Food insecurity by selected demographic characteristics*. https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1310083501&pickMembers%5B0%5D=1.1&cubeTimeFrame.startYear=2018&cubeTimeFrame.endYear=2020&referencePeriods=20180101%2C20200101

52. Caron, N., & Plunkett-Latimer, J. (2022, May 3). *Canadian Income Survey: Food insecurity and unmet health care needs, 2018 and 2019* (Income Research Paper Series). Statistics Canada. https://www150.statcan.gc.ca/n1/pub/75f0002m/75f0002m2021009-eng.htm

53. Canada Mortgage and Housing Corporation (CMHC). (2019). *Core housing need characteristics by population and gender* [Data set]. https://www.cmhc-schl.gc.ca/en/professionals/housing-markets-data-and-research/housing-data/data-tables/household-characteristics/core-housing-need-status-selected-characteristics-gender

54. Dunn, J. R., Hayes, M. V., Hulchanski, J. D., Hwang, S. W., & Potvin, L. (2006). Housing as a socio-economic determinant of health: Findings of a national needs, gaps and opportunities assessment. *Canadian Journal of Public Health/Revue Canadienne de Santé Publique, 97*(Suppl. 3), S12–S17. https://doi.org/10.1007/BF03405392

55. Statistics Canada. (2022, September 21). *Core housing need in Canada*. https://www150.statcan.gc.ca/n1/pub/11-627-m/11-627-m2022056-eng.htm

56. Statistics Canada. (2023, May 3). *Labour Force Survey.* https://www.statcan.gc.ca/en/survey/household/3701

57. McHugh M. L. (2013). The Chi-square test of independence. *Biochemia Medica, 23*(2), 143–149. https://doi.org/10.11613/bm.2013.018

58. StataCorp LLC. (2023). *Stata: Statistical software for data science.* Stata. https://www.stata.com/

59. Statistics Canada. (2018). *Canadian Income Survey, 2018: Public use microdata file. Data dictionary.* https://www150.statcan.gc.ca/n1/pub/72m0003x/2021001/2018-eng.zip

60. Statistics Canada. (2018). *User guide for the Canadian Income Survey Public Use Microdata File, 2018.* https://www150.statcan.gc.ca/n1/pub/72m0003x/2021001/2018-eng.zip

APPENDICES

APPENDIX 1: Methods

The CIS and CIS PUMF

As noted earlier in the main text (see *Methods*), CIS is an annual cross-sectional survey conducted by Statistics Canada to understand Canadians' incomes, income sources, and individual and household characteristics.[27]

CIS compiles income data by linking participants to their tax data from the Canada Revenue Agency (CRA) for the given reference year.[27] It also imputes income data for participants whose tax data are not available from the CRA.[27]

CIS combines its data with data from the Labour Force Survey, a monthly Statistics Canada survey that measures the current state of Canada's labour market.[56] By including data for the Labour Force Survey, CIS captures participants' labour market activity, among other issues, in a reference year.[27]

The CIS PUMF is a publicly available, non-aggregated, carefully modified, and anonymized version of the CIS master data file, only with fewer variables.[29]

Analysis

For our population of interest, we combined CIS 2018's samples of non-elderly male and female individuals not in an economic family.[29] We limited this sample to single adults aged 18–64 to align with our definition of working-age, single adults. To avoid introducing unnecessary statistical noise or biasing our estimates, we removed cases with MBM disposable incomes of $0 or negative values (*Note:* We performed separate analyses with samples that included individuals with $0 and negative income values. Our results, available on request, showed very minute differences from the ones in this report). Ultimately, our total weighted sample was nearly 4 million single adults (3,980,562 to be exact), 42% of whom were female.

Our main variables of interest were *adult food insecurity* and *poverty/MBM gap ratios*. Other variables of interest were our socio-demographic factors (*age, economic family type, education level, house ownership, length of time since immigrating to Canada, main source of income, province, sex,* and *social assistance received*) and our material deprivation indicators (*core housing need* and *MBM disposable income*) (for full definitions and coding of these variables, see Appendix 2). Our study was limited to

variables in the CIS 2018 PUMF. We could not examine other equally important factors that were not included in the dataset, including ethno-racial identity, Indigenous status, (dis)Ability, and gender identity.

After conducting data management (e.g., data cleaning and re-coding), we calculated poverty and food insecurity rates and cross-tabulated food insecurity and our variables of interest outlined above. We performed chi-square tests to assess the significance of differences between our observed and expected estimates.[57] That is, we tested if the differences in, say, food insecurity rates between single adults in the lowest vs. highest income quintiles reflected population-level differences. We performed all our analyses in the statistical software package Stata (v. 14).[58]

Research ethics

No ethics approvals were necessary for our study since we analyzed publicly available microdata.

APPENDIX 2: Definitions and (re-)coding of variables used in this study

Tables 1 to 3 summarize the sources, definitions, and (re-)coding procedures for the variables we used in our study.

Table 1: Definitions and (re-)coding of main variables of interest

VARIABLE	DEFINITION AND (RE-)CODING
Adult food insecurity	*Food insecurity* is "the inability to acquire or consume an adequate diet quality or sufficient quantity of food in socially acceptable ways, or the uncertainty that one will be able to do so" (see Statistics Canada's *Household food insecurity in Canada: Overview*. CIS measures food insecurity using the Household Food Security Survey Module, which identifies four levels of food security: (1) *Food secure*: no income-related problems of food access; (2) *Marginally food insecure*: some concern or problem of food access; (3) *Moderately food insecure*: compromises in quality or quantity of food consumed; and (4) *Severely food insecure*: extensive compromises in quality or quantity of food consumed, including reduced food intake. In CIS 2018 PUMF, adult food insecurity is captured by the *FSCADLTM* variable. For our total adult food insecurity rates, we combined levels 2 to 4 above.
Poverty/MBM gap ratios	CIS 2018's PUMF Data Dictionary defines the *MBM gap ratios* as follows: "For persons living in economic families with disposable income below the … [MBM] threshold, the depth of low income is the difference between their disposable income and their MBM threshold, expressed as a percentage of that threshold. Values of 0[%] indicate that the disposable income is equal to the MBM; values greater than 0[%] indicate that the disposable income is lower than the MBM. If their family disposable income is less than [$]0, this variable is set to 100[%]" (p. 74).[59] We used CIS 2018's MBM gap ratio variable, *MBSCD18*, to operationalize poverty and deep poverty. We defined "total poverty" as all single adults with MBM gap ratios of 0–100%, "less poor" as those with MBM gap ratios of 0–24%, and "deeply poor" as those with MBM gap ratios of 25–100%.

Table 2: Definitions and (re-)coding of socio-demographic characteristics of interest

VARIABLE	DEFINITION AND (RE-)CODING
Age	Captured by *AGEGP*, this variable describes the participant's age group as of December 31 of the reference year. We re-coded it as follows, consistent with current studies: 0 = 1–17 years, 1 = 18–29 years, 2 = 30–44 years, 3 = 45–54 years, 4 = 55–64 years, and 5 = 65 and over. We limited our analysis to groups 1 to 4 to capture the working-age range.
Economic family type	The *CIS 2018 PUMF User Guide* defines *economic family* as: "A group of two or more people who live in the same dwelling and are related to each other by blood, marriage, common law, adoption or a foster relationship. A person not in an economic family is a person living either alone or with others to whom he or she is unrelated, such as roommates or a lodger" (p. 13).[60] CIS 2018 PUMF captured at least 15 economic family types using the variable *EFTYP*. We used the variable as is and selected cases by "non-elderly males and females not in an economic family" (groupings 13 and 14 of *EFTYP*) to operationalize "single adults" in our analysis.
Education level	Captured by the variable *HLEV2G*, highest level of education is defined in terms of the following groups, which we used as is: 1 = less than high school graduation, 2 = graduated high school or partial post-secondary education, 3 = non-university post-secondary certificate or diploma, and 4 = university degree or certificate.
House ownership	Per the CIS 2018 PUMF Data Dictionary, *dwelling ownership* "refers to whether the household owns or rents their dwelling" (p. 75).[59] The CIS 2018 PUMF captures this using the variable *DWTENR*, coded as 1 = [dwelling] owned by a member of the household and 2 = not owned by a member of the household. We used it as is to operationalize house ownership in our study.
Length of time since immigrating to Canada	Captured by *YRIMMG* in the CIS 2018 PUMF, this variable measures the number of years since an individual immigrated to Canada. It was coded in CIS 2018 in years as follows: 1 = less than 10, 2 = 10–19, 3 = 20–29, 4 = 30–39, and 5 = 40 and more. For our analysis, we re-coded *YRIMMG* to 0 = less than 10, 1 = 10–19, 2 = 20–29, and 3 = 30 and above. Following existing research,[5] we combined the original groupings 4 (30–39 years) and 5 (40 years and more) into "30 and above," as the difference between them did not make any significant effect in estimating poverty or food insecurity among immigrant populations.

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Table 2: Definitions and (re-)coding of socio-demographic characteristics of interest

VARIABLE	DEFINITION AND (RE-)CODING
Main source of income	We used the variable *EFMJSI* for "major source of income for the economic family" in CIS 2018 (p. 37).[59] According to the *CIS 2018 PUMF User Guide, EFMJSI* was coded as 1 = no income, 2 = wages and salaries, 3 = self-employment income, 4 = government transfers, 5 = investment income, 6 = retirement pensions, and 7 = other income. Following existing literature,[5] we re-coded *EFMJSI* for our analysis as follows: 0 = no income, 1 = wages and salaries, 2 = self-employment income, 3 = government transfers, and 4 = other (including the original "other income," investment income, and retirement pensions). Government transfers included federal and provincial benefits, including child benefits, Canada/Quebec pension plan, Old Age Security, Guaranteed Income Supplement, EI benefits, social assistance, workers' compensation benefits, GST/HST credit, and provincial tax credits.
Province	We captured Canada's 10 provinces (excluding the territories) using the variable *PROV* in the CIS 2018 PUMF. We applied it as is to indicate each single adult's province of residence.
Sex	Captured by *SEX*, this variable describes the participant's sex as either 1 = male or 2 = female. We used it in our analysis as is, but have noted its considerable limitations (see key finding 2.7).
Social assistance received	In CIS 2018, social assistance benefits for economic families were captured under the variable *EFSAPIS*. The *EFSAPIS* variable contained continuous numerical values that represented amounts (if any) a family received from provincial social assistance programs in Canada. We used it as is without any re-coding.

Table 3: Definitions and (re-)coding of material deprivation indicators of interest

VARIABLE	DEFINITION AND (RE-)CODING
Core housing need	Per the CIS 2018 PUMF Data Dictionary, an individual or family is in *core housing need* if their "dwelling is considered unsuitable, inadequate or unaffordable and [if their] … income levels are such that they could not afford alternative suitable and adequate housing in their community. Housing standards are defined as follows: a) adequate housing is reported by their residents as not requiring any major repairs; b) affordable housing has shelter costs equal to less than 30% of total before-tax household income; c) suitable housing has enough bedrooms for the size and composition of resident households according to the National Occupancy Standard … requirements" (p. 78).[59] The CIS 2018 PUMF captured core housing need using the variable *CHNEED*, which we used in our study as is.
MBM disposable income	The *CIS 2018 PUMF User Guide* defines *MBM disposable income* as "income [remaining] after deducting not only income taxes but also several non-discretionary expenditures. These expenditures are Employment Insurance, Canada Pension Plan, Quebec Pension Plan and Registered Pension Plan contributions, union dues (including professional membership dues and malpractice liability insurance premiums), child care expenses incurred in order to hold a paid job, support payments paid, public health insurance premiums and direct medical expenses including private insurance premiums" (p. 22).[60] The CIS 2018 PUMF captures MBM disposable income using the variable *EFMBIN18*. We used this variable to develop income quintiles, leaving out incomes $0 and below to avoid biasing or introducing unnecessary statistical noise to our estimates.