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Neighbourhood Characteristics of Selected Population Groups of Interest

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Analytical Studies: Methods and References

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Abstract

This paper examines whether individuals in population groups of interest—specifically individuals in low-income families, those in single-parent families, those with mood or anxiety disorders, those in designated visible minorities categories and immigrants—tend to reside in neighbourhoods with different characteristics. It does so by using a new, integrated dataset that incorporates neighbourhood measures from multiple sources with the Canadian Community Health Survey. The analysis examines these population groups as a whole and separately for women and men. Bivariate and multivariate results indicate that these populations follow different location patterns compared with the broader population and each other.

1 Introduction

Neighbourhoods contribute to the well-being of residents through social contacts with others, access to goods and services, access to green space, sense of belonging, and other ways. This role is recognized within Canada's National Housing Strategy, which notes that housing and neighbourhoods are integral to well-being, with policy oriented to investing in "... housing that is fully integrated in the community—close to transit, close to work and close to public services." (Government of Canada, 2016, p. 4). The extent to which individuals reside in neighbourhoods characterized by positive and negative features has long been the subject of research inquiry, and it continues to be so. In recent years, this has been accompanied by considerable growth in the stock of neighbourhood-level variables available and development of integrated datasets containing information from a wide range of sources. These developments make it possible to provide information at finer levels of geographic granularity than previously possible and examine broader sets of individual-level and geographic-level variables together. How individuals with different characteristics are distributed across neighbourhoods warrants re-examination in this context.

This study focuses on five population groups of interest: individuals in lower-income households, individuals heading single-parent families, individuals who reported having a mood or anxiety disorder, individuals who reported belonging to at least one racial or cultural group aside from White (i.e., visible minorities) and immigrants to Canada. These population groups were selected on the grounds that their members have an increased likelihood of certain experiences or outcomes as a result of their defining characteristic. Financial capacity is prominent in this respect. Individuals in lower-income families have limited financial resources, by definition, and are vulnerable to negative outcomes associated with poverty and financial constraints. Single-parent families too may face greater financial constraints and uncertainty than two-parent families given the absence of a second adult wage earner that may influence their capacity to choose a neighbourhood that meets their needs. The settlement experiences of immigrants and the impacts of mental health also have important financial dimensions. Visible minorities may be subject to negative forms of discrimination affecting their ability to obtain employment that, in turn, affect their earnings. Individuals in the population groups of interest may face other circumstances that have a bearing on residential decisions, such as balancing work and family as a single parent or facing racism and discrimination as a member of a racialized community.

This study documents the distributions of individuals in the population groups of interest across a set of neighbourhood characteristics and examines whether these distributions differ between women and men. To address this topic, a new, integrated data framework composed of neighbourhood-level measures from multiple sources is used. The data are based on neighbourhood characteristics measured in small geographic units termed dissemination areas (DAs) appended to the survey responses of individuals who completed the Canadian Community Health Survey (CCHS). The data enable the characteristics of the neighbourhoods in which population groups of interest live to be documented using indicators such as population density, access to transit and crime. Importantly, the data make it possible to test whether these patterns persist after controlling for factors that may influence where people reside. People have a choice of where to live, but often that choice is limited—many individuals reside in disadvantaged neighbourhoods because of financial constraints (Hulchanski, 1995; Van Ham et al., 2018). Controlling for these and other basic individual characteristics makes it possible to determine whether there are remaining factors beyond income related to the residential locations of these populations. Identifying these remaining factors is beyond the scope of this paper, but they may be systematic (e.g., stemming from forms of discrimination) or linked to factors affecting decision making, such as stress (Dias-Ferreira et al., 2009; Starcke & Brand, 2012) stemming from individual circumstances or, indeed, neighbourhood characteristics themselves.

Concern with the distribution of the population groups of interest is informed by research that uses life satisfaction as its outcome of interest, with a range of neighbourhood-level factors correlated with it.¹ Among the neighbourhood-level factors found to be significantly correlated with life satisfaction are population density (Berry & Okulicz-Kozaryn, 2009; Helliwell et al., 2018), income (Luttmer, 2005; Helliwell & Huang, 2010; Dittmann & Goebel, 2010; Barrington-Leigh & Helliwell, 2008; Hou, 2014), green space (Van Herzele & de Vries, 2012; Ambrey & Fleming, 2013; Krekel et al., 2016; MacKerron & Mourato, 2013; Kopmann & Rehdanz, 2013), crime (da Palma et al., 2012; Medina & Tamayo, 2012; Di Tella et al., 2008) and access to transit (Ma et al., 2018; Dong & Qin, 2017; Delmelle et al., 2013).

The remainder of the paper is organized as follows. Section 2 provides a brief review of the data and concepts used. While the primary data source for individual characteristics is the CCHS, neighbourhood variables are drawn from multiple sources. Section 3 reviews the characteristics of neighbourhoods in which population groups of interest reside. This involves tabulations of the shares of these populations in neighbourhoods ranked by their underlying characteristics (e.g., access to transit or crime rates) and multivariate analyses that test whether individual characteristics, such as income, account for these differing patterns. Section 4 offers a brief conclusion.

2 Data and concepts

Two sets of variables were used for the analysis in this paper: (1) individual characteristics and (2) neighbourhood characteristics. Individual-level information is drawn primarily from the CCHS² pooled across three years (2015, 2016 and 2017). The sample is limited to CCHS respondents living in 29 of the 35 census metropolitan areas (CMAs) in Canada. The 29 CMAs are those with a complete set of available neighbourhood characteristics (more on this below).³ This yields a sample of just under 50,000 individuals residing in 6,481 DA-level neighbourhoods. Information on these individuals' neighbourhoods is drawn from a variety of sources and appended to the CCHS file.

-
1. Individual characteristics of population groups of interest have also been associated with measures of well-being. For example, mood and anxiety disorders (Tan et al., 2020), low income (Diener & Oishi, 2000; Diener & Biswas-Diener, 2002), single parenthood (Stavrova & Fetchenhauer, 2015), and visible minority and immigrant status (Kirmanoğlu & Başlevent, 2014; Knies et al., 2016) are all linked to lower levels of life satisfaction to some degree.
 2. The CCHS is a cross-sectional survey that collects information related to health status, health care utilization and health determinants for the Canadian population. Data are collected from a large sample of respondents who are aged 12 years or older and living in the 10 provinces and the three territories by using computer-assisted personal and telephone interview software. Data collection runs from January to December. Annual 2015, 2016 and 2017 data were used for this study. The sample for this study was limited to CCHS respondents who were aged 15 or older at the time of the survey and living in provinces excluding Prince Edward Island since it does not have a census metropolitan area. This selection yielded a sample of approximately 49,200 CCHS respondents. More detailed information on the CCHS is available at <https://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=3226>, Canadian Community Health Survey – Annual Component (CCHS).
 3. The six CMAs not included in the study are Barrie, Belleville, Brantford, Calgary, Saguenay and Winnipeg.

2.1 Individual characteristics

The analysis of population groups of interest is structured using six sociodemographic variables: gender, family composition, mental health, income, visible minority status and immigrant status.⁴ These variables are defined as follows.

- **Gender** is defined as men or women.⁵
- **Family composition** is drawn from the CCHS-derived living and family arrangement variable. For sample size and conceptual reasons, the variable is collapsed into six categories, including individuals who are (1) living with a spouse or partner only, (2) living with a spouse or partner and children, (3) a single parent living with children, (4) living alone, (5) a child in a family, and (6) other.
- **Mental health (mood or anxiety disorder)** is defined using a positive response on either or both of two questions. The first asks CCHS respondents if they have a mood disorder, such as depression, bipolar disorder, mania or dysthymia. The second asks if they have an anxiety disorder, such as a phobia, obsessive-compulsive disorder or panic disorder.
- **Income** is defined as CCHS respondents' total family income after tax, adjusted for family size, and is derived from the T1 Family File (T1FF). Income quintiles are constructed, with individuals' position in the first (or lowest) through fifth (or highest) quintile flagged.
- **Visible minority status** is defined using the CCHS as individuals reporting belonging to at least one racial or cultural group aside from White. Further disaggregation by gender and tabulations of group distributions across neighbourhoods result in small cell counts. For this reason, visible minority status is not disaggregated further.
- **Immigrant status** is defined using the CCHS as individuals reporting being either landed immigrants or non-permanent residents. Further disaggregation by gender and tabulations of group distributions across neighbourhoods result in small cell counts. For this reason, immigrant status is not disaggregated further.

One of the concerns when working with survey data is whether there is sufficient sample size to effectively pursue the analysis of subpopulations. Unweighted sample counts of women and men across the population groups of interest, such as single-parent families, are generally high enough to support analysis, with more than a thousand unweighted observations in most cases. However, when a third element is added to their intersection, yielding a group such as women in the first income quintile who report a mood or anxiety disorder, sample sizes become too small for some types of estimates. Hence, statistical estimates will be largely limited to two dimensions of intersectionality at a time. Throughout the tabular and regression analysis, the results are based on sample weights.

2.2 Neighbourhood characteristics

Neighbourhood-level variables are measured at the DA level, with some of these variables constructed using population-weighted averages at the dissemination block (DB) level, an even smaller geographic unit. This approach is intended to better reflect the characteristics that individuals experience in their immediate surroundings. Across Canadian CMAs, the median population of census tracts—the geographic unit often used for neighbourhood analyses—is

4. Indigenous people are not included because sample sizes are not sufficient to support this analysis, particularly when disaggregated by gender and neighbourhood characteristic.

5. This definition is based on the CCHS documentation, in which the question asked is whether the respondent is a man or women.

4,486, while the median population of DAs—the geographic unit used in this analysis—is 544, yielding a detailed geographic perspective.

Information on the DA-level neighbourhood variables used in this analysis is presented in Table 1. Population density and the percentage of the neighbourhood population residing in multiple-unit dwellings are drawn from the 2016 Census of Population, while median adjusted family income in the neighbourhood is derived from the T1FF. Exposure to green space, which is based on satellite imaging data, is measured on a scale of 0 to 1, with higher values representing denser green vegetation within 1,000 metres of a respondent’s postal code. Green space values are then averaged across all postal codes associated with each DA, yielding DA-level estimates. Access to transit is measured using an accessibility (proximity) score and is reported as an index value ranging from 0 to 1, where 1 is the DB with the maximum proximity and 0 is the DB with the least proximity to transit after considering the distance to transit stops within 1,000 metres of the DB and the number of transit trips. The DB index values are averaged to the DA level using DB populations as weights. DA-level crime rates are calculated as the number of property crimes and violent crimes reported in the DA divided by the total population in the DA. Access to grocery stores measures the proximity of a DB to DBs with grocery stores within 1,000 metres walking distance while considering the distance to and size of the grocery stores as measured by revenue. As with the other measures, access to grocery stores in the DA is computed using population-weighted DB-level estimates.

Table 1
Variable definitions

Variable name	Variable definition	Source
Population density	Population weighted density of the dissemination area (DA). It is the population share weighted sum of dissemination block (DB) population densities within a DA.	Census
Percentage of population in multi-unit dwellings	Proportion of the population in a DA in multi-unit housing.	Census
Median DA income	Median after-tax income of families adjusted for family size in the dissemination area (DA).	T1FF
Green index	Index value between 0 and 1 with higher values representing denser green vegetation within 1,000 metres of a respondent’s postal code. Green space values are then averaged across all postal codes associated with each DA, yielding DA-level estimates. Satellite-derived measure of green vegetation values averaged over the summer months from 2002 to 2011.	HAD and CANUE
Property/violent crime	Measured as a rate per person in each DA for violent or property crime.	CCJCSS
Access to transit	Accessibility is measured as the value of DA proximity to transit trips using the average across DBs within each DA, with DB populations as weights. The measure considers the frequency of transit trips to and transit stops in DBs within a 1-km radius of the DB inverse weighted by their distance from the DB.	Proximity measures database
Access to grocery stores	Measures the proximity of DBs to grocery stores taking into account the size (as measured by revenues) of grocery stores within a 1-km radius of each DB inverse weighted by distance. DA accessibility is measured using the population-weighted average index values across DBs within each DA.	Proximity measures database

Notes: T1FF = T1 Family File; CCJCSS = Canadian Centre for Justice and Community Safety Statistics; HAD = Health Analysis Division; CANUE = Canadian Urban Environmental Health Research Consortium.

Source: Statistics Canada.

3 Results

3.1 Descriptive findings

For each of the neighbourhood variables above, neighbourhoods were subsequently sorted from lowest to highest, and four groups of equal size (i.e., quartiles) were constructed. The bottom quartile (Q1) includes the 25% of neighbourhoods with the lowest scores on each specific measure, while the top quartile (Q4) includes the 25% of neighbourhoods with the highest scores. To illustrate, Table 2 below shows the distributions of women and men across population density quartiles from the least to the most densely populated neighbourhoods for a selected set of variables.

Population density is a good place to start the discussion since it is a characteristic observed by residents and planners. Density brings benefits and costs. Denser neighbourhoods are better able to support services (e.g., stores and restaurants) and offer more frequent public transit service, but may also bring noise and less scope for nature. Whether density has a positive or negative effect on well-being cannot be presupposed because it depends on individual needs and preferences. Nonetheless, neighbourhood-level amenities, such as public transit and parks, have been shown to be positively correlated with life satisfaction. These relationships are observed mainly among individuals in the bottom fifth of the income distribution and presumably capture those most constrained in their residential choices (Brown et al., 2021).

Overall, there is little difference in the distributions of women and men across neighbourhood density quartiles, with about 20% of women and men residing in neighbourhoods with the lowest population densities (Q1) and just over 30% residing in neighbourhoods with the highest population densities (Q4) (see Table 2). Across family composition, unattached individuals and women who are single parents are more likely than other family types to reside in high-density neighbourhoods, likely reflecting greater concentration in multi-unit dwellings. Across family income quintiles, women and men in the bottom income quintile are far more likely than those in higher income quintiles to live in denser neighbourhoods.

Table 2
Distribution of women and men across neighbourhood population density quartiles, selected characteristics

Individual characteristics	Population density-Q1	Population density-Q2	Population density-Q3	Population density-Q4
Men – total	20.2	23.0	26.1	30.7
Women – total	20.2	22.7	25.5	31.6
Men				
Family income Q1	13.8	16.3	24.0	45.8
Family income Q2	17.5	19.6	28.6	34.4
Family income Q3	20.9	25.0	25.4	28.7
Family income Q4	20.9	25.9	28.2	25.0
Family income Q5	25.5	26.3	24.3	23.9
Women				
Family income Q1	13.4	18.4	26.0	42.2
Family income Q2	17.5	21.7	24.4	36.4
Family income Q3	21.5	22.2	26.8	29.6
Family income Q4	23.4	25.0	25.7	26.0
Family income Q5	25.1	26.2	24.7	24.0
Men				
Unattached individual	13.5	16.9	23.1	46.5
Living with spouse or partner only	24.9	25.1	23.5	26.6
Living with spouse or partner and children	20.4	24.6	27.5	27.5
Single parent living with children	22.5	24.3	26.0	27.2
Child in family	20.6	24.0	27.9	27.6
Women				
Unattached individual	13.3	18.2	22.5	46.0
Living with spouse or partner only	25.7	23.4	23.8	27.2
Living with spouse or partner and children	22.2	24.9	26.4	26.6
Single parent living with children	15.1	21.1	25.7	38.1
Child in family	20.5	25.1	27.2	27.2
Men				
No mood or anxiety disorder	20.3	23.0	26.0	30.7
Mood or anxiety disorder	18.7	23.3	26.9	31.1
Women				
No mood or anxiety disorder	20.0	22.7	25.5	31.9
Mood or anxiety disorder	21.5	22.7	25.5	30.3

Note: Totals may not add up because of rounding.

Source: Statistics Canada, authors' calculations.

Capturing the other neighbourhood characteristics across the populations of interest would require repeating Table 2 for all the neighbourhood characteristics. This resulting set of results would be unwieldy and make it difficult to compare the distributions of population groups of interest across several neighbourhood characteristics. To address this issue, Table 3 summarizes the data in a more succinct way. It presents the ratio of the share of the population with a characteristic (e.g., mood or anxiety disorder) in a given neighbourhood quartile to the share of the population without that characteristic in the same quartile. Two examples using data from Table 2 illustrate this approach. First, the share of women residing in the most densely populated neighbourhoods (Q4) was 31.6%, slightly more than the 30.7% of men residing in the most densely populated neighbourhoods. The ratio between women and men is $31.6\%/30.7\% = 1.03$. If the ratio is greater than 1, the population of interest is overrepresented relative to the comparison group, and if the ratio is less than 1, the population is underrepresented. In this case, the index differs from 1 by only a small amount, indicating the between-group difference is small. In the second example, the share of women in the bottom family income quintile residing in the most densely populated neighbourhoods (Q4) was 42.2%. Among women across the other four quintiles (second through

the fifth quintiles, inclusively) combined, 29.0% resided in the densest neighbourhoods, yielding a ratio of 1.46.

Results from this exercise are presented in Table 3. The colours in the table (PDF version only) are illustrative only and are not indicative of formally tested levels of significance. Instead, they are used to guide visual inspection, highlighting index values that deviate from 1. Red-shaded cells indicate values above 1 and blue-shaded cells indicate values below 1. The darker the shading, the greater the deviation from 1. Colours are only presented in the PDF version of the paper.

A cursory review of Table 3 reveals clear patterns. Individuals in the first (or lowest) family income quintile are overrepresented in neighbourhoods in the top quartile of population density (index score = 1.55) and underrepresented in neighbourhoods in the bottom quartile (index score = 0.62). Likewise, they are overrepresented in neighbourhoods in the top quartile of multi-unit dwellings (index value = 1.75) and underrepresented in neighbourhoods in the bottom quartile (index score = 0.55). Conversely, individuals in lower-income families are underrepresented in neighbourhoods with the highest incomes and overrepresented in those with the lowest incomes. Finally, lower-income individuals are overrepresented in neighbourhoods characterized by greater proximity to public transit and to grocery stores and underrepresented in neighbourhoods with the most green space. When other population groups of interest are considered, a broadly similar profile is observed among immigrants and individuals who report a visible minority status and are single parents.

The extent to which individuals in population groups of interest reside in neighbourhoods with higher crime rates differs across groups. Individuals in lower-income families, single parents and individuals with a mood or anxiety disorder are overrepresented in neighbourhoods in the top crime quartiles. However, such overrepresentation is not evident or is only weakly evident among immigrants and individuals who report a visible minority status.⁶

Within the population groups of interest, men and women are distributed similarly across neighbourhood characteristics. This is evident in the relatively small differences generally observed in their index values. The only notable exception is between women- and men-led single-parent families, with far larger shares of women-led single-parent families living in neighbourhoods characterized by high density, the prevalence of multi-unit dwellings, lower family incomes and less green space. There is also a tendency for women-led single-parent families to reside in higher-crime neighbourhoods.

6. Visible minorities, regardless of whether they are men or women, tend to be overrepresented in the upper half of the neighbourhood violent crime distribution, but their concentration is not as strong when compared with other populations (e.g., low income). Both visible minorities and immigrants tend to be underrepresented in the lowest violent crime neighbourhoods (Q1).

Table 3

Overrepresentation and underrepresentation of population groups of interest by neighbourhood characteristics

	Population density				Multi-unit housing				DA median income				Green space			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Income quintile (bottom quintile / all others)																
All	0.62	0.73	0.97	1.55	0.55	0.71	1.05	1.75	2.13	1.02	0.66	0.44	1.35	1.16	0.87	0.61
Men	0.65	0.67	0.90	1.66	0.56	0.67	1.06	1.79	2.16	0.93	0.67	0.49	1.37	1.08	0.89	0.64
Women	0.61	0.77	1.03	1.46	0.54	0.74	1.04	1.71	2.11	1.10	0.65	0.40	1.33	1.22	0.84	0.59
Household composition (single parent / not single parent)																
All	0.82	0.95	1.00	1.16	0.64	0.89	1.16	1.28	1.52	0.91	0.98	0.59	1.13	0.93	1.04	0.89
Men	1.12	1.06	1.00	0.88	0.89	1.16	0.92	1.03	1.03	0.94	1.37	0.70	0.92	0.80	1.15	1.16
Women	0.73	0.93	1.01	1.23	0.58	0.82	1.20	1.34	1.66	0.91	0.86	0.57	1.18	0.97	1.01	0.82
Visible minority																
All	0.34	0.63	1.18	1.82	0.61	0.77	1.10	1.58	2.00	1.05	0.72	0.52	1.52	1.33	0.85	0.39
Men	0.30	0.62	1.20	1.88	0.60	0.76	1.14	1.61	2.10	0.98	0.72	0.54	1.50	1.38	0.85	0.38
Women	0.37	0.64	1.17	1.77	0.62	0.78	1.07	1.56	1.90	1.12	0.72	0.50	1.54	1.28	0.85	0.40
Immigrant																
All	0.41	0.69	1.12	1.80	0.65	0.78	1.02	1.64	1.74	1.03	0.79	0.63	1.50	1.27	0.87	0.45
Men	0.41	0.65	1.12	1.86	0.64	0.75	1.08	1.67	1.81	0.98	0.78	0.66	1.51	1.25	0.89	0.46
Women	0.40	0.72	1.12	1.74	0.66	0.81	0.97	1.61	1.69	1.09	0.80	0.59	1.49	1.30	0.85	0.44
Mood or anxiety disorder																
All	1.02	1.00	1.01	0.98	0.89	0.99	0.99	1.12	1.16	1.01	0.96	0.87	1.03	1.02	1.00	0.95
Men	0.92	1.01	1.03	1.01	0.89	1.02	0.94	1.13	1.20	1.04	0.91	0.86	1.04	1.11	0.97	0.86
Women	1.08	1.00	1.00	0.95	0.90	0.97	1.00	1.11	1.12	1.00	0.98	0.89	1.02	0.97	1.01	1.01

Notes: DA = Dissemination area. Q1 indicates the first quartile, Q2 the second quartile, Q3 the third quartile, and Q4 the fourth quartile of ranked neighbourhoods for each characteristic. The colours are used to guide visual inspection, highlighting index values that deviate from 1, with red-shaded cells indicating values above 1 and blue shaded below 1. The darker the shading the greater the deviation from 1. The colours in the table are illustrative only and are not indicative of formally tested levels of significance.

Source: Statistics Canada, authors' calculations.

Table 3

Overrepresentation and underrepresentation of population groups of interest by neighbourhood characteristics (continued)

	Violent crime				Property crime				Transit proximity				Grocery store proximity			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Income quintile (bottom quintile/all others)																
All	0.68	0.91	1.05	1.49	0.81	0.96	1.09	1.22	0.72	0.85	1.27	1.13	0.65	0.80	0.98	1.54
Men	0.76	0.88	1.01	1.46	0.78	0.99	1.09	1.22	0.71	0.82	1.27	1.19	0.66	0.83	0.92	1.58
Women	0.61	0.94	1.08	1.51	0.83	0.94	1.09	1.21	0.73	0.89	1.28	1.09	0.65	0.78	1.03	1.50
Family composition (single parent/not single)																
All	0.80	0.84	1.11	1.31	0.90	1.00	0.99	1.14	0.95	0.99	1.07	0.98	0.84	0.93	1.10	1.11
Men	0.95	0.87	0.97	1.24	1.03	1.07	0.93	0.94	1.11	1.18	0.87	0.87	1.07	0.98	1.18	0.81
Women	0.75	0.82	1.15	1.33	0.87	0.99	1.01	1.18	0.91	0.95	1.12	1.00	0.79	0.92	1.08	1.18
Visible minority																
All	0.80	1.09	1.06	1.07	1.03	1.06	0.95	0.95	0.67	1.05	1.37	0.93	0.65	0.82	1.14	1.37
Men	0.81	1.13	1.04	1.04	0.96	1.10	0.95	0.99	0.66	1.11	1.33	0.93	0.66	0.82	1.11	1.42
Women	0.79	1.05	1.08	1.10	1.09	1.02	0.95	0.91	0.69	1.00	1.41	0.93	0.65	0.83	1.16	1.33
Immigrant																
All	0.88	1.09	1.06	0.97	1.04	1.08	0.95	0.91	0.71	0.96	1.35	1.00	0.66	0.85	1.11	1.39
Men	0.87	1.12	1.05	0.97	1.02	1.06	0.97	0.93	0.72	0.95	1.36	1.00	0.65	0.86	1.10	1.41
Women	0.88	1.06	1.07	0.98	1.05	1.10	0.93	0.89	0.71	0.98	1.34	0.99	0.68	0.84	1.11	1.37
Mood or anxiety disorder																
All	0.84	0.85	1.09	1.28	0.76	0.94	1.12	1.28	1.01	0.95	1.06	0.98	0.96	0.94	1.00	1.09
Men	0.85	0.89	1.06	1.25	0.74	0.97	1.15	1.22	0.99	0.95	1.13	0.92	0.91	0.93	1.00	1.15
Women	0.83	0.82	1.11	1.29	0.78	0.92	1.10	1.30	1.02	0.96	1.01	1.02	1.00	0.94	1.00	1.05

Notes: DA = Dissemination area. Q1 indicates the first quartile, Q2 the second quartile, Q3 the third quartile, and Q4 the fourth quartile of ranked neighbourhoods for each characteristic. The colours are used to guide visual inspection, highlighting index values that deviate from 1, with red-shaded cells indicating values above 1 and blue shaded below 1. The darker the shading the greater the deviation from 1. The colours in the table are illustrative only and are not indicative of formally tested levels of significance.

Source: Statistics Canada, authors' calculations.

With these patterns established, the analysis now determines whether the tendency for the population groups of interest to reside in different neighbourhoods holds when individual characteristics are estimated independently in a multivariate model. This also allows the characteristics of women and men to be taken into account when measuring neighbourhood differences between them.

3.2 Multivariate results—base models

To build on the descriptive results above, a series of multivariate models were run to estimate the correlations between individual-level characteristics and the propensity to live in a specific type of neighbourhood. A multinomial logistic regression model was run to estimate the correlation between each individual-level characteristic and the likelihood of the respondents residing in a neighbourhood at the bottom (Q1), upper middle (Q3) or top (Q4) of each neighbourhood quartile variable. The second quartile (Q2) of each neighbourhood variable was excluded to serve as the reference category.

The models test the statistical significance of the patterns observed in Table 3 while simultaneously taking into account other variables in the model. Unless otherwise indicated, the model includes the five variables used to identify population groups of interest, as well as age and educational attainment. Additionally, variables are included indicating whether respondents reside in Toronto, Montréal, Vancouver or other CMAs. These variables take into account the concentration of some population groups in Canada's three largest CMAs. For instance, a higher concentration of visible minority and immigrant populations in denser neighbourhoods may result from their tendency to live in Toronto, Montréal and Vancouver rather than a general tendency to reside in denser neighbourhoods per se.⁷

The results from the multinomial logit model are presented in Table 4. Relative risk ratios—the multinomial logit model analogue of odds ratios that are commonly reported when presenting binary logit model results—are reported. For example, the relative risk ratio (or, perhaps better put, the ratio of relative risks) for a single-parent family residing in a high-density neighbourhood (Q4) is the ratio of the risk (probability) of them residing in a high-density neighbourhood divided by their risk of living in a Q2-density neighbourhood (the comparison category) to the same relative risk for the reference group (i.e., individuals living with a spouse or partner and children). A value above 1 indicates a higher relative risk of single-parent families living in high-density neighbourhoods, while a value below 1 indicates a lower relative risk for single-parent families compared with the reference group. For single-parent families, the relative risk ratio is 1.5, indicating that, net of other characteristics in the model, they have a higher relative risk of living in a high-density neighbourhood than couples with children.

The relative risk ratios associated with age and education are significant and below 1, indicating that older and less-educated individuals are less likely to reside in the 25% of neighbourhoods that are most densely populated (Q4). The decline in relative risk ratios across family income quintiles indicates that lower-income families are more likely than higher-income families to reside in more densely populated neighbourhoods.

The relative risk ratios associated with being in Q4 of population density are significant and above 1 for visible minority status and immigrant status,⁸ net of other factors, as are the risk ratios for individuals living alone and in single-parent families. There is no tendency for individuals with a

7. The models were also run with a full slate of CMA fixed effects (binary variables). However, the models did not converge in several instances because of the number of parameters to be estimated and the sample size. For the models that did converge, the results are qualitatively similar to the ones presented here, providing some reassurance that using a more limited set of CMA controls is sufficient.

8. For the results presented below, separate models will be run with only immigrants and visible minorities included in the model. See Footnote 9 for further discussion.

mood or anxiety disorder to live in more densely populated neighbourhoods than individuals without such a disorder.

Table 4
Multinomial logistic regression results on likelihood of living in lower (Q1), moderate (Q3) or higher (Q4) population density neighbourhood

	Q1	Q3	Q4
	relative risk ratio		
Women (reference group = Men)	1.026	0.958	0.818 **
Age	1.003 **	0.991 **	0.977 **
Less than bachelor degree (reference group = bachelor or above)	1.068	1.022	0.753 **
Family income			
Family income Q1	0.923	1.461 **	2.305 **
Family income Q2	0.890 †	1.300 **	1.692 **
Family income Q3	0.932	1.218 **	1.311 **
Family income Q4	0.874 *	1.159 *	1.058
Family status			
Unattached individual	0.778 **	1.362 **	3.302 **
Living with spouse or partner only	1.073	1.088	1.580 **
Single parent living with children	0.872	1.104	1.527 **
Child in family	1.063	0.788 **	0.518 **
Other	1.073	1.034	0.711 **
Other controls			
Visible minority (reference group = not visible minority)	0.686 **	1.388 **	1.471 **
Immigrant (reference group = not immigrant)	0.727 **	1.175 **	1.505 **
Yes-mood or anxiety disorder (reference group = no-mood or anxiety disorder)	0.959	1.057	1.079
Montreal	0.603 **	1.360 **	4.526 **
Toronto	0.681 **	1.778 **	5.559 **
Vancouver	0.750 **	1.738 **	5.111 **
	number		
Observations	47,603	47,603	47,603

* significantly different from reference category ($p < 0.05$)

** significantly different from reference category ($p < 0.01$)

† significantly different from reference category ($p < 0.10$)

Notes: The excluded category for family status is living with a spouse or partner and children and the excluded category for income is family income Q5. The reference group for Montréal, Toronto and Vancouver is the remaining census metropolitan areas in the sample.

Source: Statistics Canada, authors' calculations

To estimate the relative risks of population groups residing in neighbourhoods with other characteristics, multivariate models like the one in Table 4 were run for each neighbourhood characteristic. The resulting relative risk ratios and their significance are shown in Table 5.

After other characteristics are controlled for in the model, several of the population groups of interest continue to have a higher relative risk of residing in neighbourhoods with specific characteristics. Starting with lower-income families (i.e., Q1), higher relative risks are observed in terms of their residence in high-density neighbourhoods (Q4), in neighbourhoods in which multi-unit dwellings are prevalent (Q4) and in neighbourhoods with lower median incomes (Q1). In addition, individuals in lower-income families are more likely than others to live in neighbourhoods characterized by higher levels of access to public transit and grocery stores (Q4), but less likely to live in neighbourhoods offering more exposure to green space. Finally, individuals in lower-income families are more likely than others to live in neighbourhoods at the higher ends of the neighbourhood-level property and violent crime rate distributions.

The distribution of single-parent families across neighbourhood characteristics yields a similar profile to the one sketched out for lower-income families. Net of other characteristics in the model such as family income, single-parent families have higher relative risks of residing in high-density neighbourhoods, neighbourhoods in which multi-unit dwellings are prevalent and lower-income neighbourhoods, as well as neighbourhoods offering proximity to public transit and groceries, but lower exposure to green space. They also have a high relative risk of residing in the 25% of neighbourhoods with the highest crime rates.

Similar profiles are observed among immigrants or individuals who report a visible minority status.⁹ As with individuals in lower-income and single-parent families, these individuals have high relative risks of residing in neighbourhoods that are densely populated, have a prevalence of multi-unit dwellings, are lower income and are more proximate to grocery stores. They also have high relative risks of residing in neighbourhoods characterized by relatively high levels of proximity to public transit (defined as Q3 of that variable) but not in neighbourhoods with particularly weak or strong proximity to public transit (defined as Q1 and Q4, respectively). Immigrants and visible minorities also have a high relative risk of having less exposure to green space. Again, the relative risks of residing in higher-crime neighbourhoods are generally not significantly higher among immigrants and individuals reporting a visible minority status than among individuals born in Canada or not reporting a visible minority status, respectively. However, these same populations have a lower relative risk of residing in the neighbourhoods with the least crime (Q1). It is important to remember that these patterns are observed for immigrants and visible minorities after considering family income, suggesting it is not financial constraints that account for these patterns.

Finally, individuals who reported a mood or anxiety disorder, compared to the other populations, have fewer significantly different risks of residing in neighbourhoods for many of the characteristics considered, although their high relative risks of living in the top quartiles for multi-unit dwelling prevalence, proximity to groceries and violent crime are notable. They also tend to have a higher relative risk of residing in lower-income neighbourhoods (Q1) and a lower relative risk of living in neighbourhoods with high levels of green space (Q4).

9. For these two groups, the model used to estimate the results presented in Table 5 is modified, with the immigrant results based on a model that excludes visible minority status and the visible minority results based on a model that excludes immigrant status. When the model is estimated with both immigrants and visible minorities included, the results reflect the association between immigrant status and neighbourhood choice after taking into account visible minority status and visible minority status and neighbourhood choice after taking into account immigrant status. This leads to a narrower interpretation in which the parameters capture the neighbourhood choices of immigrants who are not visible minorities and visible minorities who are not immigrants. Since the choices of these broader groups are of more interest, the model was run separately with only one of these two groups represented in the model. The results presented in Table 5 reflect this approach.

Table 5
Multinomial logit model estimates: Distribution of population groups of interest across dissemination area neighbourhood characteristics

	Q1	Q3	Q4
	relative risk ratio		
Low income family			
Population density	0.923	1.461 **	2.305 **
Multi-unit housing	0.647 **	1.519 **	2.598 **
DA median income	2.110 **	0.604 **	0.339 **
Green space	0.998	0.702 **	0.584 **
Transit proximity	0.970	1.440 **	1.380 **
Grocery store proximity	0.767 **	1.194 *	1.701 **
Property crime	0.967	1.339 **	1.604 **
Violent crime	0.664 **	1.158 †	1.730 **
Single parent family			
Population density	0.872	1.104	1.527 **
Multi-unit housing	0.665 **	1.416 **	1.934 **
DA median income	1.467 **	1.000	0.659 **
Green space	1.331 **	1.083	0.852
Transit proximity	0.810 *	1.121	1.191 †
Grocery store proximity	0.925	1.212 *	1.667 **
Property crime	0.862	1.171	1.791 **
Violent crime	1.024	1.375 **	1.827 **
Visible minority			
Population density	0.571 **	1.524 **	1.865 **
Multi-unit housing	0.814 **	1.264 **	1.625 **
DA median income	1.827 **	0.818 **	0.554 **
Green space	1.191 **	0.751 **	0.439 **
Transit proximity	0.631 **	1.212 **	0.750 **
Grocery store proximity	0.801 **	1.162 **	1.226 **
Property crime	0.887 *	1.002	0.954
Violent crime	0.802 **	0.981	0.999
Immigrant			
Population density	0.626 **	1.396 **	1.836 **
Multi-unit housing	0.830 **	1.204 **	1.803 **
DA median income	1.673 **	0.879 *	0.679 **
Green space	1.271 **	0.776 **	0.492 **
Transit proximity	0.727 **	1.293 **	0.902 *
Grocery store proximity	0.787 **	1.099 †	1.265 **
Property crime	0.902 *	1.043	1.018
Violent crime	0.848 **	1.015	0.952
Mood or anxiety disorder			
Population density	0.959	1.057	1.079
Multi-unit housing	0.943	0.940	1.123 †
DA median income	1.123 *	0.976	0.944
Green space	1.024	0.945	0.885 *
Transit proximity	1.039	1.150 *	1.028
Grocery store proximity	1.022	1.110 †	1.208 **
Property crime	0.816 **	1.050	1.085
Violent crime	1.025	1.207 **	1.248 **

* significantly different from reference category (p < 0.05)

** significantly different from reference category (p < 0.01)

† significantly different from reference category (p < 0.10)

Note: DA = Dissemination area.

Source: Statistics Canada, authors' calculations.

3.3 Multivariate results—interaction terms

While the multivariate results above provide insight into the relationships between the characteristics of population groups of interest and neighbourhoods of residence, they do not shed light on the additional intersection of gender. In this section, interaction terms are added to the multivariate models presented above to explore intersectionality within the five population groups of interest.

Table 6 includes the intersection of gender and family status. It shows the association between these combined variables and the relative risk of living in a green neighbourhood. After family income, mental health, age, education, visible minority status, immigrant status and location of residence are taken into account, the relative risks of living in neighbourhoods with less green space (i.e., Q1) are similar among women and men in each category. Among unattached individuals, for example, the relative risks of men and women residing in the least green neighbourhoods are 1.642 and 1.622, respectively, relative to the common comparison group of men in couples with children. Visual inspection of Table 6 shows that the correlations for women and men are generally close. That said, women in couples with children have a higher relative risk of living in greener neighbourhoods (Q3 and Q4) than men in couples with children.

Table 6
Multinomial logistic regression results on likelihood of living in low (Q1), moderate (Q3) or high (Q4) green neighbourhood, with sex interacted with family and living arrangements

	Q1	Q3	Q4
	relative risk ratio		
Age	0.992 **	1.007 **	1.013 **
Less than bachelor degree (reference group = bachelor or above)	0.980	0.945	1.063
Family income			
Family income Q1	1.003	0.714 **	0.604 **
Family income Q2	0.957	0.727 **	0.692 **
Family income Q3	0.952	0.873 *	0.854 *
Family income Q4	0.852 *	0.870 *	0.930
Family status			
Woman-living with spouse or partner and children	1.044	1.306 **	1.362 **
Man-living with spouse or partner only	1.187 *	0.998	0.900
Woman-living with spouse or partner only	1.290 **	1.012	0.977
Man-single parent	1.326	1.467 †	1.305
Woman-single parent	1.384 **	1.254 *	0.993
Man-unattached individual	1.642 **	0.842 *	0.557 **
Woman-unattached individual	1.622 **	0.834 *	0.490 **
Man-child in family	0.854	1.501 **	1.609 **
Woman-child in family	0.791 *	1.348 **	1.587 **
Man-other	1.004	1.076	1.128
Woman-other	1.063	1.485 **	1.194
Other controls			
Visible minority (reference group = not visible minority)	1.048	0.826 **	0.567 **
Immigrant (reference group = not immigrant)	1.246 **	0.854 *	0.645 **
Yes-mood or anxiety disorder (reference group = no-mood or anxiety disorder)	1.026	0.956	0.909
Observations	47,470	47,470	47,470

* significantly different from reference category ($p < 0.05$)

** significantly different from reference category ($p < 0.01$)

† significantly different from reference category ($p < 0.10$)

Notes: The excluded category for family status is men living with a spouse or partner and children. The excluded category for income is family income Q5. The model also includes binary variable controls for the three largest census metropolitan areas by population (Toronto, Montréal and Vancouver).

Source: Statistics Canada, authors' calculations

With interaction terms included in the models, the challenge of succinctly presenting results while preserving their message is compounded. This issue is addressed in Table 7, which presents the results in a binary form that indicates whether there are significant positive or negative correlations (at the 0.05 level) between women and men in each population group of interest and each neighbourhood characteristic.

Table 7 presents results for women and men in lower-income families (Q1), with men in the top income quintile families (Q5) used as the reference group. Against this common benchmark, women and men in lower-income families have high relative risks of residing in more densely populated neighbourhoods, as indicated by their positive and significant correlations with both Q3 and Q4 of that variable. Likewise, women and men in lower-income families have high relative risks of residing in neighbourhoods composed of large shares of multi-unit dwellings (Q3 and Q4) and low relative risks of residing in neighbourhoods with small shares of multi-unit dwellings (Q1). Relative risks among women and men in lower-income families are also the same in terms of direction and significance across proximity to transit and rates of property crime.

The relative risks of residing in neighbourhoods characterized in terms of median family income, green space, proximity to groceries and rates of violent crime are again much the same among women and men in lower-income families. Across the other variables, modest differences are observed, with a tendency for more significant results for women in the upper half of the distribution (e.g., green space). Overall, the relative risks of women and men in lower-income families residing in neighbourhoods with specified characteristics are much the same.

Results are also largely the same among women and men who are immigrants or who report a visible minority status. Women and men in these groups both have high relative risks of residing in neighbourhoods with the now-familiar constellation of high densities, multi-unit dwellings, lower incomes, greater proximity to public transit (Q3) and groceries, and low exposure to green space.

In contrast, relative risks observed among women and men differ more among single parents. Relative to a common benchmark, single parents who are women have significantly higher relative risks of residing in neighbourhoods with a greater prevalence of multi-unit dwellings, lower income, greater proximity to grocery stores and public transit, and less exposure to green space, whereas single parents who are men do not.¹⁰ These results are broadly in line with the univariate patterns presented in Table 3, in which patterns for men- and women-led single-parent families often run in different directions. Similarly, women with a mood or anxiety disorder have a significant higher relative risk of residing in neighbourhoods with higher rates of violent crime, as well as significant higher relative risks of residing in neighbourhoods with higher incomes and proximity to groceries. These results are not observed among men with a mood or anxiety disorder.

10. There is also the question of whether the residential patterns of single parents who are men or women differ significantly from each other. With women in single-parent families as the reference group, there is a statistically significant lower relative risk of men in single-parent families residing in DAs with higher densities and shares of residents in multi-unit housing, but they have a higher relative risk of residing in neighbourhoods with more green space and higher DA median incomes.

Table 7

Multinomial logit model estimates: Selected populations groups of interest neighbourhood choice for men and women

	Low Income									Single parent									Visible minority								
	Men-yes			Women-yes			Woman-no			Men-yes			Women-yes			Woman-no			Men-yes			Women-yes			Woman-no		
	Q1	Q3	Q4	Q1	Q3	Q4	Q1	Q3	Q4	Q1	Q3	Q4	Q1	Q3	Q4	Q1	Q3	Q4	Q1	Q3	Q4	Q1	Q3	Q4	Q1	Q3	Q4
Population density	+	+	+	-	+	+	+	-	-	-	-	-	-	+	+	+	-	-	-	+	+	-	+	+	+	-	-
Multi-unit housing	-	+	+	-	+	+	+	+	+	-	+	-	-	+	+	+	-	-	-	+	+	-	+	+	+	+	-
Green space	+	-	-	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Transit proximity index	+	+	+	+	+	+	+	-	-	-	-	-	-	+	+	+	-	-	-	+	+	-	+	-	+	-	+
Grocery proximity index	-	+	+	-	+	+	-	-	-	+	+	+	-	+	+	-	-	-	-	+	+	-	+	+	+	-	-
DA median income	+	-	-	+	-	-	-	+	+	-	+	-	-	+	+	-	+	+	+	-	-	+	-	-	-	+	+
Property crime	-	+	+	+	+	+	-	+	+	-	+	+	-	+	+	-	-	-	-	-	-	+	-	-	-	-	+
Violent crime	-	+	+	-	+	+	-	-	-	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	+	-	-

* significantly different from reference category (p < 0.05)

Notes: DA = Dissemination area. The reference categories are as follows: mood or anxiety disorder = men without the disorder; visible minority = non-visible minority men; single parent = men with spouse or partner and children; immigrant = non-immigrant men; and low income (bottom quintile) = top quintile men. + indicates a positive association, and - indicates a negative association. To further assist with visual inspection of the results, cells and +/- signs are shaded blue or red when the estimated relationship is statistically significant. Blue indicates a positive association and red indicates a negative association.

Source: Statistics Canada, authors' calculations.

Table 7

Multinomial logit model estimates: Selected populations groups of interest neighbourhood choice for men and women (continued)

	Immigrant									Mood and anxiety								
	Men-yes			Women-yes			Woman-no			Men-yes			Women-yes			Woman-no		
	Q1	Q3	Q4	Q1	Q3	Q4	Q1	Q3	Q4	Q1	Q3	Q4	Q1	Q3	Q4	Q1	Q3	Q4
Population density	-	+	+	-	+	+	+	-	-	-	+	-	+	+	-	+	-	-
Multi-unit housing	-	+	+	-	+	+	+	+	-	-	-	-	+	+	+	+	+	-
Green space	+	-	-	+	-	-	+	+	+	-	-	-	+	+	+	+	+	+
Transit proximity index	-	+	-	-	+	-	+	-	+	+	+	-	+	+	+	+	-	+
Grocery proximity index	-	+	+	-	+	+	-	-	-	-	+	+	+	+	+	+	-	-
DA median income	+	-	-	+	-	-	-	+	+	+	+	+	+	+	+	+	+	+
Property crime	-	+	+	-	+	+	+	+	+	-	+	+	-	+	+	+	+	+
Violent crime	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+	-	-

* significantly different from reference category (p < 0.05)

Notes: DA = Dissemination area. The reference categories are as follows: mood or anxiety disorder = men without the disorder; visible minority = non-visible minority men; single parent = men with spouse or partner and children; immigrant = non-immigrant men; and low income (bottom quintile) = top quintile men. + indicates a positive association, and - indicates a negative association. To further assist with visual inspection of the results, cells and +/- signs are shaded blue or red when the estimated relationship is statistically significant. Blue indicates a positive association and red indicates a negative association.

Source: Statistics Canada, authors' calculations.

Testing the effects of intersectionality beyond gender is hampered by limited sample sizes. However, since women-led single-parent families are concentrated in the lowest income quintile, it is possible to examine whether this group resides in different neighbourhoods than women-led single-parent families in higher income quintiles. In short, the analysis is limited to single parents who are women and highlights the neighbourhood differences between those with lower (Q1) and higher (Q2 to Q4) incomes. According to Table 8, the coefficients above 1 highlight the degree to which single parent women with lower incomes have a higher relative risk of residing in neighbourhoods with high density, a prevalence of multi-unit dwellings, and lower incomes. The positive and negative aspects of density are again evident because single parent women with lower family incomes are more likely than those with higher family incomes to reside in neighbourhoods with greater proximity to grocery stores and public transit, but with less access to green space. The positive correlations observed between single-parent families and higher-crime neighbourhoods are not observed in Table 8, perhaps because samples sizes are stretched too thin to be statistically significant.

Table 8
Multinomial logit model estimates: Population groups of interest neighbourhood choice estimates, lower-income relative to higher-income women-led single-parent families

	Q1	Q3	Q4
	relative risk ratio		
Population density	1.418	2.019 **	2.609 **
Multi-unit housing	0.675 †	1.266	1.744 **
Green space	1.061	0.759	0.500 **
Transit proximity index	0.544 *	0.904	0.793
Grocery proximity index	0.662 *	1.034	1.551 *
DA median income	1.509 *	0.551 **	0.538 **
Property crime	0.708	0.990	1.161
Violent crime	0.655 †	0.846	1.155

* significantly different from reference category ($p < 0.05$)

** significantly different from reference category ($p < 0.01$)

† significantly different from reference category ($p < 0.10$)

Notes: DA = dissemination area. The models includes controls for age, education, mood or anxiety disorder, visible minority and immigrant status. It also includes location in the top three census metropolitan areas by population, Toronto, Montréal and Vancouver.

Source: Statistics Canada, authors' calculations.

4 Conclusions

This paper investigates the degree to which individuals in population groups of interest reside in different neighbourhoods compared with the rest of the population, and whether the likelihood of doing so is different for women and men in these groups. Thus, the paper provides something of a stocktaking that documents the distributions of women and men in five population groups across eight neighbourhood characteristics. The growing suite of geospatial data available from Statistics Canada makes this possible. For this study, neighbourhood-level variables were drawn from a variety of sources and integrated with the CCHS responses, yielding information from a representative sample of just under 50,000 individuals, residing in 6,481 neighbourhoods across 29 CMAs in Canada.

Of the population groups considered, a greater likelihood of residing in neighbourhoods with specific characteristics was observed among individuals in lower-income families, among single parents, among immigrants and among visible minorities. These population groups tend to reside in neighbourhoods with higher population densities, a prevalence of multi-unit dwellings and lower median family incomes. Financial capacity is no doubt one underlying factor. Lower-income families have limited financial resources by definition, single-parent families cannot muster multiple earners and many immigrants face labour market challenges in the years after landing. But choice and preference cannot be dismissed. Indeed, these relationships hold when the constraining effect of income on neighbourhood choice is considered.

Higher population densities in these neighbourhoods help to support access to grocery stores and access to public transit—two important amenities that likely weighed in the residential choices made by individuals and families. Availability of green space is a further consideration in such deliberations. Low-income and single-parent families have a higher relative risk of residing in neighbourhoods with greater proximity to public transit and grocery stores, and single-parent families have a higher relative risk of residing in the neighbourhoods with the least green space. Individuals in visible minority categories and immigrants also have a higher relative risk of residing in neighbourhoods with less green space, but a lower relative risk of residing in neighbourhoods with low proximity to groceries and public transit.

Lastly, in terms of crime, low-income families, single-parent families and individuals with mood or anxiety disorders have a higher relative risk of residing in higher-crime neighbourhoods. This is not the case for immigrants and visible minorities, whose relative risk of residing in higher-crime neighbourhoods is not significantly higher than that of the broader population, but whose relative risk of living in neighbourhoods with low crime rates (bottom quartile) is lower.

The relative risks of women and men in several population groups of interest residing in neighbourhoods with specific characteristics are broadly similar in terms of direction and significance. For example, the relative risks of residing in neighbourhoods that are densely populated, have a prevalence of multi-unit dwellings and are lower income are the same among women and men in lower-income families, among immigrants and among visible minorities. In other population groups of interest, specifically single parents, the relative risks differ more between women and men.

When taken as a whole, the findings illustrate that neighbourhood characteristics of population groups of interest differ from the broader population with, at times, variation extending across genders.

5 References

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