

Building the evidence base about economic, health, and social inequities faced by LGBTQ2S+ individuals in Canada

Phase 2 Final Report



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EXECUTIVE SUMMARY

CONTEXT & METHODS

Researchers have frequently reported that, as a group, gender and sexual minorities in Canada – including lesbian, gay, bisexual, transgender, queer, and Two-spirit (LGBTQ2S+) self-identified people – are more likely to live in poverty, face greater barriers to employment, and earn less at work, despite often having higher levels of education than their cisgender, heterosexual counterparts. In addition, gender and sexual minorities tend to report poorer physical and mental health and face social disadvantages, including greater rates of social exclusion. Despite these reports, there are documented data and research gaps, pointing to an urgent need for research that identifies key determinants and mechanisms underlying economic outcomes for gender and sexual minorities, and their links to health and social outcomes.

This multi-phase project, *Building the evidence base about economic, health and social inequities faced by LGBTQ2S+ individuals in Canada*, aims to address these gaps. This report shares findings from Phase 2 of the project, which consists of a quantitative study of the relationship between sexual orientation and economic, health, and social outcomes in the Canadian context.

The study uses data from the Canadian Community Health Survey (CCHS) and the T1 Family File (T1FF), to examine the following research questions: (1) How do self-identified lesbian, gay, and bisexual (LGB) individuals differ from their heterosexual counterparts in terms of their sociodemographic, employment, and health and well-being characteristics?; (2) What are the differences in employment outcomes for LGB individuals in Canada compared to their heterosexual counterparts?; and (3) Which variables drive the earnings differences between LGB individuals in Canada compared to their heterosexual counterparts?

For each respondent, data from the CCHS (cycles 2.1 [2003], 3.1 [2005], and 2007 to 2018) were linked to T1FF files (available from 2003 to 2017) of the same year. Given the absence of data on gender minorities, analyses focused on individuals self-identifying as LGB disaggregated by sex, with heterosexual men as the reference group. While posing some limitations, which we discuss later in this report, this represents some of the highest-quality income data on sexual minority individuals available in Canada to-date.

The analysis comprises three main components: (1) descriptive analyses of the differences in characteristics of sexual minority (lesbian, gay, and bisexual) individuals compared to heterosexual individuals along sociodemographic, employment, and health and well-being characteristics; (2) a series of regression analyses to estimate the relationship between

employment outcomes and sexual orientation, controlling for known determinants; and (3) decomposition analysis of the difference in annual earnings for sexual minority groups and heterosexual individuals at the mean total income as well as across quantiles. In this report, we employ the term ‘drivers’ to refer to possible mechanisms underlying the observed relationships, without implying causality to our findings.

FINDINGS

Sexual minorities earn less compared with heterosexual men

All sexual minority respondent groups had significantly lower median annual earnings compared with heterosexual men. In descriptive analyses, heterosexual men were found to earn the most (\$55,959), followed by gay men (\$50,822), lesbian women (\$44,740), bisexual men (\$31,776), and bisexual women (\$25,290). Controlling for a variety of covariates, earnings gaps remained for lesbian, gay, and bisexual individuals compared to heterosexual men, but also an earnings advantage for lesbian women vis-à-vis heterosexual women. Earnings gaps were most pronounced for bisexual men and women. In sum, the final multivariate model pointed to a hierarchy of annual employment earnings from high to low as follows: heterosexual men, gay men, lesbian women, bisexual men/heterosexual women, and bisexual women. These findings, given the context of the high-quality income data used, offer further evidence of the ongoing wage disparities faced by sexual minorities in Canada, and in particular, by individuals who self-identify as bisexual.

Sexual minorities experience inequities in health and socioeconomic outcomes, with differences between groups

Overall, sexual minority respondents, and especially bisexual men and women, reported lower levels of general and mental health, as well as increased stress, food insecurity, and increased involvement in behaviours such as smoking and drinking, compared with their heterosexual counterparts. In addition, sexual minority respondents reported significantly lower rates of life satisfaction, job satisfaction, and community belonging. In particular, bisexual men and women consistently reported the lowest rates of life satisfaction and community belonging across all groups. Bisexual women reported the lowest rates of job satisfaction.

Similar patterns emerged in our analyses of employment and economic outcomes. All sexual minority groups were less likely to be employed and, if employed, to work full-time compared with heterosexual men. Again, the lowest rates were for bisexual men and women. Bisexual respondents were also more likely to work fewer hours per week compared to all other groups.

These findings point to group-level disparities experienced by sexual minorities, underscoring how important it is to avoid treating the LGB – and, more broadly, the LGBTQ2S+ – community as a single entity. The findings also support the notion that bisexual individuals face distinct barriers to attaining positive economic, health, and social outcomes.

Drivers of earnings disparities are diverse, and interconnected with mental health, but some of the gap remains unexplained

The decomposition analysis identified industry, mental health, and labour supply as key drivers of earnings differences, with demographics (e.g., age, immigration status, race, province of residence) also playing a role. With respect to industry, we found an underrepresentation of sexual minorities in high-paying occupations, such as management as well as trades and transportation. The literature points to industry sorting on the basis of real or perceived discrimination as potential explanations. The role played by labour supply (hours worked) is also consistent with the existing literature, suggesting that gay men and lesbian women work less and more hours, respectively, compared with their heterosexual counterparts, with bisexual individuals working the lowest hours.

For gay men, compositional differences entirely explained any wage differences compared with heterosexual men. For bisexual men, 67 per cent of the earnings gap was explained by differences in demographic characteristics, household composition, hours of work, and well-being. The unexplained part of the earnings gap was attributed to differences in returns to education. For lesbian women compared with heterosexual men, the compositional differences in demographic characteristics, education, hours worked, industry, and mental health explained approximately 89 per cent of the earnings gap. The earnings gap between bisexual women and heterosexual men was mainly driven by differences in demographics, household composition, hours worked, current student status, industry, and well-being. The lesbian women's earnings "advantage" in comparison to heterosexual women was driven by differences in demographics, parent status, hours worked, occupation, and mental health.

Importantly, the findings suggest that several common factors drive earnings gaps for some, but not all, sexual minority group. This reinforces the interconnected nature of health, social, and economic drivers and outcomes for LGB individuals in Canada, as well as the importance of holistic approaches to addressing inequities. The identification in the decomposition analysis of mental health as a primary driver of sexual orientation earnings gaps is among this study's more novel findings, pointing to the need for policy responses that consider socioeconomic and health outcomes in tandem.

Substantial data gaps limiting our understanding of the full LGBTQ2S+ community

Persistent data gaps continue to limit our understanding of the socioeconomic and health outcomes of the full LGBTQ2S+ community. Importantly, we were unable to measure the experiences of gender minority (e.g., trans binary or non-binary) individuals using currently-available data. This represents a significant limitation to the study, particularly given the acknowledged importance of recognizing diversity in experiences and outcomes among gender and sexual minority individuals. Further, there is a lack of questions in national-level surveys that are likely relevant for the LGBTQ2S+ community, including those about partnership status, outness and disclosure in different domains (e.g., work, home, etc.), gender expression and presentation, workplace experiences, and perceived and anticipated instances of discrimination.

CONCLUSION AND RECOMMENDATIONS

Our findings suggest that, as a group, sexual minorities in Canada continue to face persistent and inequitable outcomes across a range of domains compared to their heterosexual counterparts. Building on all the project findings to-date, the report discusses the following recommendations:

- Explore further potential drivers of socioeconomic and health outcomes of LGBTQ2S+ individuals;
- Pursue interventions that are multi-sectoral and group-specific in nature;
- Support research and data collection on specific subpopulations within the LGBTQ2S+ community; and
- Promote the inclusion of questions about workplace and employment-related experiences in national-level surveys.

The report ends by highlighting plans for the subsequent Phase 3 of the project, which will focus on an in-depth qualitative exploration of the experiences of LGBTQ2S+ individuals across Canada who are currently or recently employed. Our team will continue to build and refine recommendations for data, research, and policy, including continual updates to the conceptual framework for understanding the mechanisms of labour market disadvantage experienced by individuals identifying as LGBTQ2S+ in Canada.

INTRODUCTION

Researchers have frequently reported that, as a group, gender and sexual minorities in Canada – including lesbian, gay, bisexual, transgender, queer, and Two-spirit (LGBTQ2S+^a) self-identified people – are more likely to live in poverty, face greater barriers to employment (including stigma and discrimination), and earn less at work, despite often having higher levels of education than their cisgender, heterosexual counterparts.¹⁻⁴ In addition, gender and sexual minorities tend to report poorer physical and mental health and face social disadvantages, including greater rates of social exclusion.⁵⁻⁸

This is an emerging area of research, and significant knowledge gaps remain. Much of the existing research focuses on LGBTQ2S+ individuals as a group, failing to examine differences in outcomes within this diverse community. Further, there is still considerable progress to be made by drawing connections between economic (including labour market), health, and social outcomes for gender and sexual minorities, despite the fact that these disparities are likely mutually reinforcing.^{9,10} Research on outcomes for LGBTQ2S+ people in Canada that takes an explicitly intersectional approach – recognizing distinct outcomes result from an individual occupying multiple social locations – is also scarce.

Importantly, these gaps can be partially explained by the lack of high-quality data on gender and sexual orientation in Canada, serving as a major barrier to building a comprehensive understanding of LGBTQ2S+ individuals' experiences.¹¹ Overall, LGBTQ2S+ people do not find themselves identified in national survey data in Canada; when there is opportunity to self-identify, questions are frequently limited to sexual orientation.¹² One major implication of this is that individuals who identify under the trans umbrella (including as transgender, non-binary, and genderqueer) are excluded from self-identifying, and remain invisible in most population-level research. Moreover, much existing work relies on samples of same-sex couples. This results in the exclusion of single LGBTQ2S+ individuals, ongoing reliance on sex rather than gender as a measure, and the methodological erasure of bisexual individuals through the aggregation of bisexual people with gay and lesbian or heterosexual people on the basis of partnership.¹¹

Canada's First Poverty Reduction Strategy identifies LGBTQ2S+ people as being at greater risk of poverty, and aims to address barriers that prevent LGBTQ2S+ people from equal participation in

^a Note that there are many acronyms to describe and refer to the community of people self-identifying as gender and sexual minorities (e.g., 2SLGBTQIA+, LGBT, LGBTTQQAAP). These acronyms sometimes combine identities that articulate gender identity and sexual orientation, which may or may not be appropriate in all instances. We use the term LGBTQ2S+ in this report while acknowledging that the terminology is constantly evolving. As it can be challenging to select an acronym that makes everyone feel included, the plus sign is intended to represent the entire community, not just those who identify with the terms contained in the acronym.

the labour market as one means of alleviating income insecurity. In this context, the gaps in both the data landscape and literature point to the urgent need for research that identifies key determinants and mechanisms of economic outcomes for gender and sexual minorities, with a view to positioning these outcomes within a broader framework that also considers social and health inequities. Further, there is value in mapping these outcomes and their determinants in relation to Canada's current data landscape, and making recommendations for future population-level surveys to help expedite this type of research. This project, described below, aims to contribute to this goal.

THIS PROJECT

Funded by Women and Gender Equality Canada (WAGE), this multi-phase project *Building the evidence base about economic, health and social inequities faced by LGBTQ2S+ individuals in Canada* is led by the Social Research Demonstration Corporation (SRDC), in partnership with Dr. Sean Waite at the University of Western Ontario, Pride at Work Canada (PAWC), and the Labour Market Information Council (LMIC). The current phase (Phase 2) consists of a quantitative study of the relationship between sexual orientation and labour, health, and social outcomes in the Canadian context. Given the absence of data identifying gender minority individuals in most population-level datasets in Canada – including those analyzed here – Phase 2 focuses exclusively on sexual minority individuals, and more specifically those self-identifying as lesbian, gay, or bisexual (LGB). The limitations and implications of this approach are discussed in greater detail throughout this report.

The project aims to address four key research questions, outlined in Table 1 below. This report shares the findings from Phase 2 of the project, primarily addressing the third research question, highlighted in bold.

Table 1 Overall project research questions

Research question	Relevant phase(s)
What are key determinants of economic and labour market outcomes for LGBTQ2S+-identified individuals in Canada?	1
What nationally, provincially, and/or territorially representative datasets exist that allow for the exploration of the relationship between an LGBTQ2S+ identity and labour market outcomes?	1
What is the association between these determinants and economic outcomes such as labour force status, earnings, household income, and total income?	2
What are the experiences of employment (and career pathways) for LGBTQ2S+-identified individuals who are currently employed?	3

More specifically, drawing from the Canadian Community Health Survey linked to T1 Family File as data sources, Phase 2 addresses the following sub-questions:

1. How do lesbian, gay, and bisexual-identified individuals differ from their heterosexual counterparts in terms of their sociodemographic, employment, and health and well-being characteristics?
2. What are the differences in employment outcomes for lesbian, gay, and bisexual-identified individuals in Canada compared to their heterosexual counterparts?
3. Which variables drive the earnings differences between lesbian, gay, and bisexual-identified individuals in Canada compared to their heterosexual counterparts?

This report serves as the final deliverable for Phase 2.

KEY INSIGHTS FROM PHASE 1

Phase 2 of this project is informed by and builds on the previous phase, which comprised a literature search, key informant interviews, and a data scan. Through these methods, Phase 1 sought to understand and document the key determinants of economic and labour market outcomes for LGBTQ2S+ people that have been identified for Canada to-date, as well as map the current data landscape including how information on sexual and gender minority individuals is collected.¹³

The following points summarize key insights that emerged from Phase 1:

- **Poorer economic outcomes are prevalent for gender and sexual minority individuals in Canada.** Poverty and homelessness remain pressing issues for LGBTQ2S+ individuals, with existing research pointing to particularly dire outcomes for transgender individuals and those whose experiences are further shaped by race, ability, and so forth.^{1,9,14-16} Available data for those in employment, imply a general hierarchy of earnings on the basis of sexual orientation as well as gender and/or sex, with heterosexual men reporting the highest earnings followed by gay men, lesbian women, bisexual men, heterosexual women, and bisexual women reporting the lowest earnings.^{3,4,12,17} Employment earnings data for gender minority individuals is not systematically available.
- **In addition to earnings, LGBTQ2S+ individuals have distinct outcomes related to other labour market characteristics, including access and attainment, formality and precarity, type, sector, and location of employment.**^{2-4,17,18} These characteristics serve to explain partially other labour market outcomes. Within employment, the literature also

points to LGBTQ2S+ individuals experiencing challenges related to discrimination, concealment, and social or workplace exclusion.^{19–21}

- **Available data point to additional differential outcomes for LGBTQ2S+ individuals, which may be mutually reinforcing with economic and labour market outcomes.** Sexual minority individuals experience poorer mental health outcomes compared to their heterosexual counterparts, with bisexual individuals faring the worst.^{8,22–24} Again, the absence of data on gender minority individuals represents a significant knowledge gap.
- **The explanations for differential outcomes for LGBTQ2S+ individuals are numerous, spanning multiple disparate fields of study.** Key mechanisms identified in Phase 1 include discrimination (in healthcare, housing, and employment), experiences of prejudice and violence, homo/trans/biphobia, family and parental relationships (and more specifically, a lack thereof), concealment of gender and sexual identity, gender presentation and occupational sorting, geography, family status and formation, and the accumulation of disadvantage over time.¹³ In Phase 1, we proposed a draft conceptual framework of known and theorized mechanisms of disadvantage for LGBTQ2S+ people. Findings from subsequent phases of the project assist in validating and refining this framework. The current iteration of the framework is presented later in this report.
- **While there is movement towards increased inclusivity in regard to survey measures related to gender and sexual minority identities, limitations remain.** There is an ongoing reliance on binary and biological terms (e.g., male/female) to define both gender and sex, including in Statistics Canada datasets. Measurement of gender diversity at the population-level is extremely limited, generally excluding identification of non-binary, genderqueer, and/or Two-spirit respondents. While several of the datasets provide the option of identifying as gay/lesbian, heterosexual, or bisexual, other sexual identities (e.g., asexual, pansexual, queer) are typically not included. Questions about outness and/or disclosure regarding both gender and sexual orientation, are rare. Population and sample sizes of sexual and gender minorities limit quantitative analytical options.
- **Lack of data on LGBTQ2S+-specific experiences, including research bridging economic, health, and social outcomes, serves as a key barrier** to designing programs and interventions to address inequities experienced by this community.

Phase 2 is informed by – and, where feasible and relevant, builds on – these earlier findings from Phase 1. Using among the highest-quality income and earnings data available, it aims to address the research questions posed as they relate to lesbian, gay, and bisexual (LGB) and heterosexual individuals in Canada.

THIS REPORT

Following this introduction and summary of key findings from Phase 1, the methods section details the methodology pursued in Phase 2. Subsequently, the report outlines findings organized by three main themes, aligning with the previously-noted research questions:

1. Differences in sociodemographic, employment, and health and well-being characteristics of lesbian, gay, and bisexual-identified individuals in comparison their heterosexual counterparts;
2. Differences in employment outcomes between lesbian, gay, and bisexual-identified individuals and their heterosexual counterparts; and
3. Drivers of earnings differences between lesbian, gay, and bisexual-identified individuals and their heterosexual counterparts.

This is followed by a discussion of findings arising from as well as strengths and limitations of the analyses. The report concludes with next steps as well as recommendations based on the findings to-date.

METHODS

DESIGN

This study used data from the Canadian Community Health Survey (CCHS) linked with the T1 Family File (T1FF) to examine the relationship between sexual orientation and labour, health, and social outcomes in the Canadian context. More specifically, the analysis aimed to better understand the research sub-questions:

1. How do lesbian, gay, and bisexual self-identified individuals differ from their heterosexual counterparts in terms of their sociodemographic, employment, and health and well-being characteristics?
2. What are the differences in employment outcomes for lesbian, gay, and bisexual individuals in Canada compared to their heterosexual counterparts?
3. Which variables drive the earnings differences between lesbian, gay, and bisexual individuals in Canada compared to their heterosexual counterparts?

Mirroring these questions, the analysis comprised three main components. First, we conducted descriptive analyses of the differences in characteristics of sexual minority (lesbian, gay, and bisexual) individuals compared to heterosexual individuals in Canada across sociodemographic, employment, and health and well-being characteristics. Second, we conducted a series of regression analyses to estimate the relationship between employment outcomes and sexual orientation, controlling for known determinants. Third, we conducted a decomposition analysis of the difference in annual earnings for sexual minority groups and heterosexual individuals at the mean total income and across different quantiles. The decomposition method was used to explore the degree to which employment characteristics, sociodemographic characteristics, health and well-being factors influence differential earnings between groups.

Given the noted differences between sexual minority groups identified in Phase 1 (for instance, the especially poor economic and health outcomes for bisexual individuals), this report is intentional in disaggregated findings both by sexual orientation as well as sex to facilitate description of differences in outcomes within this diverse community.

DATA SOURCES

The analysis used within this report is based on the Canadian Community Health Survey linked to the T1 Family File. Different cycles of the CCHS (cycles 2.1 [2003], 3.1 [2005], and 2007 to 2018) were pooled and linked to the T1FF files which were available from 2003 to 2017.

The CCHS is a nationally-representative, cross-sectional survey of a sample of individuals aged 12 and older residing in Canada at the time of interview. The survey relies on a large sample of respondents (around 130,000 in 2003, 2005 and 65,000 respondents starting in 2007) and is designed to provide reliable estimates at the health region level.²⁵ Excluded from the CCHS sampling frame are individuals living on First Nations reserves and Crown lands, those residing in institutions at the time of data collection, full-time members of the Canadian Forces, and residents of remote regions (e.g., Northwest Territories, Nunavut, and Yukon). Topically, the CCHS focuses primarily on health status and determinants of health of the Canadian population while also capturing socioeconomic information, including income and employment status. Most importantly for this study, the CCHS includes a question about respondents' sexual orientation.

The T1FF captures information on census families, individuals, and seniors, derived primarily from income tax returns provided by the Canada Revenue Agency (CRA) two years after the reference tax year. For the most part, tax returns were filed in the spring of the year following the reference year. The T1FF contains information on sources of income, individual wages and salaries, household income, employment insurance, social assistance, and some demographic indicators. The T1FF approximates the total Canadian population.²⁶

For each respondent, our study linked data from the CCHS to T1FF files of the same year. While not without limitations (described in forthcoming sections), this is the among the highest-quality income data available on LGB individuals in Canada to answer the research questions posed.

STUDY SAMPLE

Given the data sources' inability to identify gender minority individuals, the sample focuses exclusively on sexual minorities, which in the case of the CCHS includes lesbian-, gay-, and bisexual- identified individuals. The population of interest were individuals of working age. Moreover, as the sexual orientation question is asked only of respondents aged 18 to 59,^b therefore the sample is limited to respondents in this age range. The total sample for the descriptive analyses was 312,425. Of the descriptive sample, 50.3 per cent were heterosexual

^b Starting in 2015, the sexual orientation question is asked to respondents aged 15 or older. To make the analysis consistent over the period of interest, the sample used here was restricted to respondents aged 18 to 59.

women, 47.3 per cent were heterosexual men, 0.8 per cent were gay men, 0.7 per cent were bisexual women, 0.5 per cent were lesbian women, and 0.3 per cent were bisexual men.

While we conducted descriptive analyses of self-employment, self-employed respondents were dropped in subsequent analyses with a view to focusing solely on those employed in the labour market. The analytical sample used for the linear regression and decomposition analyses is also restricted to individuals employed with an annual income above \$5,000.^c However, the descriptive statistics and logistic regression included individuals who were not employed or who had lower annual incomes in order to identify potential differences in employment status by sexual orientation. The working population was then isolated in order to explore earnings gaps by sexual orientation. The final analytical sample size was 226,285. Of the total analytical sample, 106,520 were heterosexual men (47.1 per cent), 1,920 were gay men (0.8 per cent), 750 were bisexual men (0.3 per cent), 114,060 were heterosexual women (50.4 per cent), 1,410 were lesbian women (0.6 per cent), and 1,625 were bisexual women (0.7 per cent).

STUDY VARIABLES

Dependent variables

The main dependent variable explored in this report is total annual earnings, using a log of respondents' total annual earnings based on their tax records, adjusted to 2017 dollars. Notably, we focus here on *earnings* rather than *income*, whereby the former comprises the sum of wages and salaries reported on T4 slips, and the latter includes this in addition to other sources of income (e.g., government transfers). While many studies have used self-reported income available in the CCHS, self-reported income can suffer from reporting bias. The linkage with the T1FF files enables analyses of the differences in earnings between sexual minority groups using real annual earnings as reported on tax records, which is a preferable measure.¹²

While the focus of this report is on differences in annual earnings on the basis of sexual orientation, we recognize that using annual earnings excludes individuals who are not employed, or who have sources of income other than employment earnings (expanded on more fully in the Discussion and Strengths & limitations sections of this report). In order to provide more context on those individuals, we conducted the following analyses:

^c The cutoff at \$5,000 was to exclude individuals who are “not active” in the labour market. This restriction is used for both earnings and total annual income in the regression and decomposition analyses.

- Descriptive statistics included additional factors such as employment status;
- Regression analysis examined differences in employment (employed/not employed) by sexual orientation; and
- A sensitivity analysis for the earnings regression models used total annual income in place of total annual earnings in order to identify any potential differences.

Explanatory variables

The primary explanatory variable in the study, self-reported sexual orientation, was based on the CCHS question: “Do you consider yourself to be: a) heterosexual (sexual relations with people of the opposite sex)? b) Homosexual, that is lesbian or gay (sexual relations with people of your own sex)? c) Bisexual (sexual relations with people of both sexes)?”^d

As noted previously, the CCHS cycles used for this study do not facilitate the identification of gender minority respondents, including those who identify as transgender. Due to this limitation, our quantitative analyses focused exclusively on comparisons between sexual minority (e.g., lesbian, gay, and bisexual) individuals and their heterosexual counterparts. Notably, the most recent (2021) CCHS cycle includes a two-step gender question in alignment with current Statistics Canada practices; as such, future analyses employing the methodology outlined here may be better suited to identify and account for gender minority individuals in their approach.²⁸

Recognizing the role of gender/sex in further shaping outcomes, we created categories of sexual orientation disaggregated by sex^e for the purpose of analysis, namely: heterosexual men, heterosexual women, gay men, lesbian women, bisexual men, and bisexual women. This allowed for comparison of known labour market disparities on the basis of sex, with analyses comparing all groups to heterosexual men, as well as conducting separate analyses comparing lesbian and bisexual women to heterosexual women.

^d It is important to stress that LGBTQ2S+ identity is complex and contains several distinct, but interacting elements relating to sexual orientation and gender. Sexual orientation refers to the direction of a person's attraction; gay, lesbian, bisexual, asexual, and pansexual are all examples of sexual orientation, which may change throughout a person's life. While the CCHS survey question asked individuals to identify with one of these categories, their definitions refer to sexual relations (i.e., behaviour) with individuals of the “same” or “opposite” sex, which may or may not be the same as the sexual orientation with which they identify.

^e Note that while the current CCHS question refers to the respondents' sex, and not gender, we opted to use the terms, ‘men’ and ‘women,’ when describing participants.

Independent variables and covariates

The analysis presented in this report includes several independent variables and covariates. These were selected based on findings from Phase 1 of this project, which included a comprehensive literature review and scan of current Canadian data. Independent variables and covariates used in Phase 2 are listed in Table 2 below.

Table 2 Independent variables and covariates

Categories	Independent variables and covariates
Employment factors	<ul style="list-style-type: none"> ▪ Employment status (Employed/Not employed) ▪ Full-time employment status ▪ Self-employment ▪ Type of occupation ▪ Type of industry ▪ Hours worked
Demographics – Individual	<ul style="list-style-type: none"> ▪ Immigration status ▪ Aboriginal identity ▪ Racial identity ▪ Language ▪ Age
Demographics – Geography	<ul style="list-style-type: none"> ▪ Area of residence – Rural/Population centre ▪ Census Metropolitan Area (CMA) of residence ▪ Province of residence
Demographics – Family	<ul style="list-style-type: none"> ▪ Marital/Partnership status ▪ Children
Demographics – Education	<ul style="list-style-type: none"> ▪ Highest level of education ▪ Current student

Categories	Independent variables and covariates
Health and well-being	<ul style="list-style-type: none">▪ Work stress▪ Life stress▪ General health▪ Mental health▪ Life satisfaction▪ Job satisfaction▪ Satisfaction with family▪ Satisfaction with friends▪ Sense of belonging▪ Smoke cigarettes, currently▪ Smoke cigarettes, ever▪ Alcohol consumption▪ Food security – actual▪ Food security – worry

Definitions for all study variables, including their original composition and response structure as well as any transformations performed during analyses, can be found in Appendix A.

ANALYTICAL APPROACH

The analytical approach employed in this report consists of three stages.

First, a set of descriptive analyses outlined the empirical differences between lesbian, gay, and bisexual individuals as well as heterosexual individuals in Canada, with respect to the variables of interest (as provided in Appendix A).

In the **second** stage, we empirically estimated the relationship between labour market/economic outcomes and sexual orientation, controlling for other factors/determinants. We used logistic regression analyses to estimate the relationship between identifying as a sexual minority and labour force status and a linear (Ordinary Least Squares) regression to estimate the relationship for total annual earnings and total annual income (continuous variables). Based on the current literature, we hypothesized that identifying as lesbian, gay, or bisexual would be associated with lower rates of being employed and of full-time labour force participation, along with lower

earnings and total income, in comparison heterosexual men.^{3,4,17,19,29} We also hypothesized that differences would exist between these groups, on the basis of sex as well as sexual orientation.

In the **third** stage, decomposition analyses explored the degree to which demographic and employment characteristics, as well as health and well-being factors influence differential earnings between groups. The Oaxaca-Blinder approach informed the decomposition of the earnings gap between sexual minority groups and heterosexual individuals into “explained” and “unexplained” effects. In addition, using the mean masks considerable variation so we decompose the entire distribution: factors that influence the differential earnings between groups may vary at different points along the earnings distribution. To do this, we used Firpo, Fortin, and Lemieux’s approach to decompose across the quantiles of the earnings distribution using unconditional quantile regression.³⁰

Our analysis is grouped by sex in addition to sexual orientation. This is aligned with best practices, and reflects the ongoing role sex plays in shaping labour market and economic outcomes. Our analytic approach in this respect also aimed to reflect the tenets of Gender-Based Analysis Plus (GBA+) and intersectional approaches to quantitative research. In the absence of data on gender, we conducted analyses by sex. Other sociodemographic factors (e.g., age, racial/cultural group, immigration status, education) were introduced to the models to examine the ways in which various aspects of individuals’ social location influence earnings. However, adding interaction terms and using additional methods for conducting intersectional analyses³¹ were not possible due to both scope and analytical constraints, which are explored more fully in the Discussion and Strengths & limitations sections.

Table 3 provides a summary of the objectives, data sources, and methods used to conduct our analyses in Phase 2.

Table 3 Phase 2 summary

Sub-question	Data sources	Methodology
How do lesbian, gay, and bisexual identified individuals differ from each other and their heterosexual counterparts in regard to their demographic characteristics, sociodemographic characteristics, employment characteristics, and health and well-being?	Canadian Community Health Survey linked to the T1 Family Files	Descriptive statistics
What are the differences in employment outcomes for lesbian, gay, and bisexual identified individuals in Canada compared to their heterosexual counterparts?		Linear regression Logistic regression
Which variables drive the earnings differences between lesbian, gay, and bisexual identified individuals in Canada compared to their heterosexual counterparts?		Decomposition methods: Oaxaca/Blinder decomposition Unconditional quantile regression decomposition

Variables were grouped together and introduced to the analyses using a staged approach, as outlined in Appendix B. As the analysis progressed, the focus narrowed to variables that had strong theoretical links to the study hypothesis (based on the results of Phase 1 research), as well as those which were identified as having strong links to the relationship between sexual orientation and earnings based on previous stages of analyses. In sum, this approach allowed us to balance theoretical considerations with analytical findings and constraints.

PHASE 2 FINDINGS

The following section presents the Phase 2 findings, organized by the following sub-questions:

1. How do lesbian, gay, and bisexual-identified individuals differ from each other and their heterosexual counterparts in terms of their demographic, employment, and health and well-being characteristics?
2. What are the differences in employment outcomes for lesbian, gay, and bisexual-identified individuals in Canada compared with their heterosexual counterparts?
3. Which variables drive the earnings differences between lesbian, gay, and bisexual-identified individuals in Canada compared with their heterosexual counterparts?

DIFFERENCES IN KEY CHARACTERISTICS

The findings presented here are the results of the first stage of analysis, comprising descriptive analyses examining the empirical differences between sexual minorities and heterosexual individuals in Canada, with respect to the key variables of interest.

Differences in employment characteristics

Lesbian, gay, and bisexual respondents were significantly different with respect to several income, earnings, and employment-related characteristics compared with their heterosexual counterparts (Table 4).

First, all sexual minority respondent groups were found to have significantly lower median annual earnings and income compared with heterosexual men, with particularly large earnings differences for subgroups of sexual minority respondents.^f The differences were starkest for bisexual respondents: the median annual earnings for bisexual women were \$25,289 (vs. \$39,179 for heterosexual women), and \$31,775 for bisexual men (vs. \$55,959 for heterosexual men). Both gay men and lesbian women earn less than heterosexual men; however, lesbian women experience a wage advantage compared to heterosexual women.

^f Annual earnings refer specifically to employment income, including total earnings from T4 slips and other employment income. Annual income includes employment-related income in addition to other forms of income, including income derived from government transfers, investments, and other sources. A full account of the income sources associated with these variables is provided in Appendix A.

A similar pattern emerged in terms of employment status: all sexual minority groups were less likely to be employed and to work full-time if employed compared with heterosexual men. Employment rates were lowest among bisexual men and women compared to their heterosexual counterparts. Bisexual respondents were also more likely to work fewer hours per week compared to all other groups. A slightly different pattern emerged for lesbian women, who were more likely to be employed and work full-time compared with heterosexual women.

Finally, there are differences in industry and occupation for sexual minority respondents compared to heterosexual respondents. For instance, in terms of occupation, sexual minority men as a group were more likely to work in health, art/culture/recreation/sport, and sales and service jobs compared to heterosexual men; and less likely to work in trades and transport-related jobs as well as those in natural resources, agriculture, and manufacturing. Further, sexual minority women were more likely to work in sales and service, and trades and transport-related jobs, and less likely to work in business/finance/administration and health occupations, compared with heterosexual women.

Table 4 Employment characteristics, by sexual orientation and sex

	Heterosexual men	Gay men	Bisexual men	Heterosexual women	Lesbian women	Bisexual women
Annual earnings (median) [†]	\$55,959	\$50,822	\$31,776	\$39,180	\$44,740	\$25,290
Annual income (median) [†]	\$54,400	\$49,891	\$32,088	\$40,408	\$44,740	\$27,232
Employed	92.1%	83.7%	82.2%	83.7%	89.7%	81.6%
Working full-time [‡]						
No	7.7%	12.5%	15.1%	20.8%	13.1%	26.6%
Yes	92.3%	87.5%	84.9%	79.2%	86.9%	73.4%
Self-employed						
No	82.3%	87.8%	86.0%	88.2%	89.9%	89.1%
Yes	17.7%	12.2%	14.0%	11.8%	10.1%	10.9%

	Heterosexual men	Gay men	Bisexual men	Heterosexual women	Lesbian women	Bisexual women
Industry[†]						
Primary industries	5.2%	0.8%	3.2%	1.7%	0.9%	1.2%
Secondary industries	28.3%	8.5%	18.5%	7.6%	7.9%	7.8%
Wholesale trade and transportation and warehousing	11.7%	5.9%	9.2%	4.7%	5.3%	3.9%
Retail trade	9.4%	11.0%	14.9%	12.3%	11.7%	16.8%
Information and cultural industries	2.6%	4.3%	4.2%	2.0%	4.3%	3.0%
Finance and insurance and real estate and rental and leasing	5.5%	8.0%	2.3%	7.6%	4.5%	4.4%
Professional, scientific, and technical services and Management of companies and enterprises	8.5%	9.7%	10.3%	7.1%	5.7%	7.0%
Admin, support, waste management, remediation services	4.1%	4.9%	4.6%	3.7%	3.8%	4.5%
Educational services	4.9%	6.8%	4.3%	10.9%	11.8%	8.8%
Health care and social assistance	4.1%	11.4%	4.5%	22.0%	20.7%	13.8%
Arts, entertainment, and recreation	2.1%	4.4%	4.0%	2.3%	2.1%	5.5%
Accommodation and food services	4.3%	10.5%	12.5%	7.3%	8.6%	15.3%
Other services	3.7%	5.6%	4.2%	4.9%	6.3%	4.9%
Public administration	5.5%	8.2%	3.2%	6.0%	6.4%	3.2%

	Heterosexual men	Gay men	Bisexual men	Heterosexual women	Lesbian women	Bisexual women
Occupation[†]						
Management occupation	11.2%	11.1%	5.2%	7.1%	7.0%	4.1%
Business, finance, and administration	11.0%	18.0%	8.4%	25.6%	18.7%	18.3%
Natural and applied science and related	12.4%	9.6%	13.2%	3.8%	4.2%	3.2%
Health occupations	2.5%	7.6%	3.5%	12.6%	11.6%	8.7%
Occupations in education, law, social/community/gov services	5.7%	10.7%	5.3%	15.3%	16.5%	11.7%
Occupations in art, culture, recreation, and sport	3.0%	8.8%	7.2%	3.9%	5.9%	6.8%
Sales and services occupation	18.1%	27.2%	30.1%	26.5%	27.9%	39.5%
Trades, transport, equipment operators and related occ	26.2%	4.0%	21.1%	1.9%	5.0%	3.3%
Natural resources, agriculture and related occupations and Occupations in manufacturing and utilities	9.9%	3.1%	5.9%	3.3%	3.2%	4.4%
Hours worked[†]						
0 to 14 hrs	2.5%	3.4%	4.9%	5.7%	3.7%	7.7%
15 to 34 hrs	8.9%	14.3%	15.3%	24.0%	15.8%	29.4%
35 to 49 hrs	57.5%	60.1%	52.1%	57.1%	64.6%	48.8%
50+ hrs	31.1%	22.2%	27.8%	13.2%	15.9%	14.1%
N	147,790	2,530	1,015	157,255	1,785	2,050

Notes: The total sample was 312,425. Industry and occupation were not answered in 2003-2004 and 2005-2006, hence are based on a smaller sample than the totals shown. [†] shows a statistically significant difference (5% level) using either a t-test or a chi-squared test.

Differences in sociodemographic characteristics

Individual characteristics

Our results show differences in individual demographic characteristics by sexual orientation (Table 5). For example, immigrant respondents (compared to those born in Canada) were less likely to identify as a sexual minority while those reporting an Indigenous identity (identified as an Aboriginal person in the CCHS, compared to those who did not) were more likely to identify as a sexual minority. In fact, as many as 9 per cent of bisexual women (compared to 3.6 per cent heterosexual women) and over 5 per cent of bisexual men (compared to 3.5 per cent of heterosexual men) identified as Indigenous.⁹ Importantly, sexual minority respondents, and bisexual respondents in particular, were significantly younger compared with their heterosexual counterparts.

Table 5 Individual demographic characteristics, by sexual orientation and sex

	Heterosexual men	Gay men	Bisexual men	Heterosexual women	Lesbian women	Bisexual women
Immigration status[†]						
No	77.4%	83.6%	79.3%	78.2%	84.5%	86.2%
Yes	22.6%	16.4%	20.7%	21.8%	15.5%	13.8%
Aboriginal identity[†]						
No	96.5%	96.1%	94.7%	96.4%	94.5%	91.0%
Yes	3.5%	3.9%	5.3%	3.6%	5.5%	9.0%
Racial/cultural group, including Aboriginal[†]						
White	79.9%	85.7%	78.5%	80.1%	85.0%	82.6%
Aboriginal	3.0%	3.5%	4.7%	3.1%	4.9%	8.2%
Visible minority	17.1%	10.8%	16.9%	16.8%	10.1%	9.2%

⁹ Tables and graphs presented throughout this report use the term “Aboriginal,” in alignment with the language used in the CCHS. For in-text, narrative discussion, we use the term “Indigenous” to reflect current terminology as well as the language used in the United Nations Declaration of the Rights of Indigenous Peoples.

	Heterosexual men	Gay men	Bisexual men	Heterosexual women	Lesbian women	Bisexual women
Language[†]						
English only	61.8%	49.9%	58.5%	59.8%	56.4%	60.7%
French only	10.0%	10.7%	8.2%	12.1%	14.4%	8.7%
More than one language	25.8%	38.6%	32.3%	25.8%	28.3%	29.9%
Neither English nor French	2.4%	0.8%	1.0%	2.3%	0.9%	0.7%
Age						
18-24 years	14%	13%	26%	14%	14%	34%
25-29 years	12%	18%	17%	12%	16%	20%
30-34 years	12%	11%	11%	12%	11%	14%
35-39 years	12%	11%	6%	12%	9%	10%
40-44 years	13%	14%	11%	13%	15%	8%
45-49 years	13%	11%	9%	13%	15%	4%
50-59 years	24%	21%	21%	24%	22%	9%
N	147,790	2,530	1,015	157,255	1,785	2,050

Notes: The total sample was 312,425. [†] shows a statistically significant difference (5% level) using either a t-test or a chi-squared test.

Geographic location

Compared with their heterosexual counterparts, lesbian, gay, and bisexual individuals were all more likely to live in urban, higher density areas, such as Toronto, Vancouver, or Montreal (Table 6).

Table 6 Geographic characteristics, by sexual orientation and sex

	Heterosexual men	Gay men	Bisexual men	Heterosexual women	Lesbian women	Bisexual women
Area of residence[†]						
Rural area	17.3%	7.0%	12.8%	16.7%	13.4%	10.3%
Population centre	82.7%	93.0%	87.2%	83.3%	86.6%	89.7%
CMA of residence						
No CMA assigned	19.9%	9.0%	14.1%	19.6%	16.1%	14.4%
Montreal	8.2%	16.5%	9.4%	8.6%	11.1%	9.1%
Toronto	12.2%	15.4%	13.8%	12.2%	10.8%	11.6%
Vancouver	5.1%	6.6%	7.8%	5.1%	5.3%	8.4%
Others	54.6%	52.4%	54.9%	54.5%	56.8%	56.5%
Province of residence						
Atlantic region	6%	6%	6%	7%	6%	6%
Quebec	23%	34%	23%	24%	33%	22%
Ontario	38%	36%	37%	39%	35%	37%
Manitoba	4%	2%	5%	3%	3%	4%
Saskatchewan	3%	1%	2%	3%	3%	2%
Alberta	13%	8%	12%	11%	9%	12%
British Columbia	13%	13%	15%	13%	11%	17%
N	147,790	2,530	1,015	157,255	1,785	2,050

Notes: The total sample was 312,425. [†] shows a statistically significant difference (5% level) using a chi-squared test.

Family composition

In terms of family composition, compared with their heterosexual counterparts, lesbian, gay, and bisexual individuals were less likely be in a married or common law relationship, and less likely to have children (Table 7). Compared to the roughly one-third of heterosexual men and women

who reported having children, approximately 18 per cent of bisexual women, 16 per cent of bisexual men, 11 per cent of lesbian women, and just under 5 per cent of gay men reported having children.

Table 7 Family composition, by sexual orientation and sex

	Heterosexual men	Gay men	Bisexual men	Heterosexual women	Lesbian women	Bisexual women
Marital/Partnership status[†]						
Married or common law	66%	36%	34%	64%	48%	36%
Ever married	6%	6%	7%	10%	7%	9%
Never married	28%	58%	59%	26%	45%	55%
Have children[†]						
No	69.8%	95.4%	83.8%	70.4%	88.9%	81.6%
Yes	30.2%	4.6%	16.2%	29.6%	11.1%	18.4%
N	147,790	2,530	1,015	157,255	1,785	2,050

Notes: The total sample was 312,425. [†] shows a statistically significant difference (5% level) using a chi-squared test.

Education

Gay men and lesbian women reported consistently higher levels of education compared to their heterosexual counterparts (Table 8). While bisexual men and women were less likely to report higher levels of education than their heterosexual counterparts, they were more likely to be current students. These trends were especially pronounced for bisexual women.

Table 8 Education, by sexual orientation and sex

	Heterosexual men	Gay men	Bisexual men	Heterosexual women	Lesbian women	Bisexual women
Highest level of education[†]						
Less than high school	8.4%	3.0%	6.3%	5.4%	5.0%	7.2%
High school certificate	25.5%	18.6%	36.2%	23.6%	20.9%	33.7%
Trade certificate or diploma	15.1%	7.4%	9.3%	7.7%	7.6%	7.3%
College or university certificate below degree	24.5%	30.2%	24.9%	32.5%	33.3%	25.8%
Bachelor's degree	17.7%	27.2%	13.3%	21.9%	22.8%	17.1%
University certificate, diploma, or degree above bachelor's level	8.8%	13.7%	10.1%	9.0%	10.4%	8.9%
Current student[†]						
No	91.1%	86.4%	86.6%	87.9%	88.5%	75.9%
Yes	8.9%	13.6%	13.4%	12.1%	11.5%	24.1%
N	147,790	2,530	1,015	157,255	1,785	2,050

Notes: The total sample was 312,425. [†] shows a statistically significant difference (5% level) using a chi-squared test.

Differences in health and well-being

Several noteworthy findings emerged with regards to respondents' health and well-being characteristics, which are reported below by three of the following categories:

1. **Physical and mental health** (e.g., self-reported general and mental health, health behaviours, such as smoking and drinking, and food security).
2. **Stress** (e.g., experiences of work stress and life stress).
3. **Well-being** (e.g., measures of satisfaction with life, work, family, and friends, as well as sense of community belonging to a local community).

Physical and mental health

Overall, sexual minority respondents, and especially bisexual men and women, reported poorer self-reported physical and mental health compared with their heterosexual counterparts. Lesbian, gay, and bisexual men and women were also more likely to report regularly engaging in behaviours, such as smoking cigarettes and alcohol consumption. Further, compared with their heterosexual counterparts, sexual minority respondents, and especially bisexual men and women, were more likely to worry often or sometimes about food insecurity and to report actual food insecurity.

Table 9 Physical and mental health, by sexual orientation and sex

	Heterosexual men	Gay men	Bisexual men	Heterosexual women	Lesbian women	Bisexual women
General health[†]						
Excellent	25.4%	27.7%	19.8%	25.7%	23.5%	14.2%
Very good	41.6%	41.4%	43.7%	42.2%	42.4%	40.7%
Good	27.2%	24.9%	28.3%	26.0%	27.8%	35.1%
Fair	4.9%	5.1%	6.2%	5.3%	5.7%	8.2%
Poor	0.8%	0.9%	1.9%	0.8%	0.7%	1.7%
Mental health[†]						
Excellent	39.8%	33.8%	26.1%	35.4%	33.0%	16.2%
Very good	37.1%	37.5%	36.7%	39.1%	39.4%	35.4%
Good	19.2%	21.9%	23.3%	20.6%	20.3%	31.5%
Fair	3.3%	5.0%	10.4%	4.2%	5.6%	12.8%
Poor	0.5%	1.7%	3.5%	0.7%	1.6%	4.1%
Smoke cigarettes, currently						
Daily	18.6%	20.1%	23.2%	14.2%	16.6%	23.4%
Occasionally	6.7%	10.2%	11.2%	4.9%	6.3%	12.3%
Not at all	74.7%	69.7%	65.6%	80.8%	77.1%	64.4%

	Heterosexual men	Gay men	Bisexual men	Heterosexual women	Lesbian women	Bisexual women
Smoke cigarettes, daily, ever						
No	83.5%	84.7%	74.6%	85.5%	90.0%	78.1%
Alcohol consumption, frequency						
Less than once a month	11.7%	11.3%	14.3%	22.8%	15.8%	16.9%
Once a month	8.8%	7.6%	8.4%	11.9%	10.9%	10.8%
2 to 3 times a month	13.3%	10.4%	15.0%	16.0%	13.9%	16.8%
Once a week	19.7%	18.7%	22.1%	19.1%	15.8%	18.1%
2 to 3 times a week	28.4%	31.2%	22.5%	20.9%	28.1%	23.3%
4 to 6 times a week	9.3%	10.3%	9.7%	5.1%	7.8%	7.4%
Everyday	8.7%	10.4%	8.1%	4.2%	7.7%	6.6%
Food security, actual						
Never true and sometimes true	78.7%	75.8%	67.6%	78.9%	75.4%	67.0%
Food security, worry						
Often true and sometimes true	5%	6%	10%	6%	12%	13%

Notes: The total sample was 312,425. † shows a statistically significant difference (5% level) using a chi-squared test.

Stress

Sexual minority respondents were generally more likely to report higher levels of work stress compared with their heterosexual counterparts. Albeit not statistically significant, elevated rates of life stress were also noted for bisexual women.

Table 10 Stress, by sexual orientation and sex

	Heterosexual men	Gay men	Bisexual men	Heterosexual women	Lesbian women	Bisexual women
Work stress[†]						
Not at all stressful	8.0%	5.4%	8.3%	6.9%	5.5%	6.3%
Not very stressful	18.8%	15.9%	21.0%	18.6%	18.4%	19.1%
A bit stressful	44.8%	43.3%	43.2%	42.8%	39.5%	40.5%
Quite a bit stressful	23.9%	28.5%	22.3%	26.3%	31.3%	27.6%
Extremely stressful	4.5%	6.9%	5.1%	5.4%	5.3%	6.6%
Life stress						
Not at all stressful	8.3%	5.6%	7.3%	5.3%	6.1%	4.7%
Not very stressful	21.1%	18.2%	22.5%	19.6%	19.2%	14.8%
A bit stressful	45.6%	46.2%	39.3%	46.1%	44.9%	43.9%
Quite a bit stressful	21.6%	26.1%	27.0%	25.2%	26.1%	30.2%
Extremely stressful	3.4%	3.9%	3.8%	3.7%	3.7%	6.3%

Notes: The total sample was 312,425. [†] shows a statistically significant difference (5% level) using a chi-squared test.

Well-being

Finally, sexual minority respondents reported significantly lower rates of life satisfaction, job satisfaction, and lower sense of community belonging, compared with their heterosexual peers. In particular, bisexual men and women consistently reported the lowest rates of life satisfaction and community belonging across all groups. Further, bisexual women reported the lowest rates of job satisfaction.

Table 11 Well-being, by sexual orientation and sex

	Heterosexual men	Gay men	Bisexual men	Heterosexual women	Lesbian women	Bisexual women
Life satisfaction[†]						
Very satisfied	38.0%	30.6%	25.0%	40.1%	38.9%	24.1%
Satisfied	56.5%	62.9%	64.3%	54.3%	56.2%	64.7%
Neither satisfied nor dissatisfied	3.8%	4.4%	5.9%	4.0%	3.5%	7.4%
Dissatisfied	1.5%	1.8%	3.9%	1.4%	1.0%	3.7%
Very dissatisfied	0.2%	0.3%	0.9%	0.2%	0.3%	0.1%
Job satisfaction[†]						
Very satisfied, satisfied and neither satisfied nor dissatisfied	85.6%	83.2%	89.6%	85.4%	82.8%	77.7%
Satisfaction with family						
Very satisfied, satisfied	92.3%	82.9%	80.3%	91.6%	87.2%	80.4%
Satisfaction with friends						
Very satisfied, satisfied	93.2%	89.2%	87.9%	94.2%	94.0%	86.5%
Sense of belonging[†]						
Very strong	14.5%	12.1%	14.4%	14.3%	12.5%	11.9%
Somewhat strong	48.1%	46.1%	42.9%	49.9%	47.8%	43.6%
Somewhat weak	29.0%	31.9%	30.3%	28.1%	30.7%	30.8%
Very weak	8.4%	9.9%	12.5%	7.7%	9.0%	13.8%

Notes: The total sample was 312,425. [†] shows a statistically significant difference (5% level) using a chi-squared test.

DIFFERENCES IN EMPLOYMENT OUTCOMES

This section reports the results of the second stage of analysis, covering multivariate regressions of the relationship between employment outcomes and sexual orientation/sex, controlling for a wide range of covariates. The model specification for earnings and employment outcomes is shown in Appendix C.

Differences in employment status

All sexual minority respondent groups were less likely compared with heterosexual men to be employed and to work full-time, with significant differences remaining in successful models controlling for demographics, family composition, education, and well-being.

Bisexual individuals of both sexes had the lowest odds ($OR=0.4$, $p<0.01$) of being employed compared with heterosexual men. Regarding working full-time, the lowest odds were noted for heterosexual ($OR=0.29$, $p<0.01$) and bisexual women ($OR=0.3$, $p<0.01$) compared with heterosexual men.

Full results for both the employment and full-time employment multivariate models can be found in Tables 12 and 13, below.

Table 12 Odds ratios showing the relationship between being a sexual minority and being employed

Model	Baseline (1)	Include demographics (2)	Include marital status and children (3)	Include health (4)	Include education (5)	Include mental health and life satisfaction (6)
Heterosexual men (Reference category)						
Gay men	0.69*** (0.08)	0.66*** (0.08)	0.67*** (0.08)	0.67*** (0.08)	0.67*** (0.08)	0.56*** (0.07)
Bisexual men	0.38*** (0.05)	0.37*** (0.05)	0.39*** (0.05)	0.39*** (0.05)	0.42*** (0.06)	0.40*** (0.06)
Heterosexual women	0.45*** (0.01)	0.45*** (0.01)	0.45*** (0.01)	0.45*** (0.01)	0.44*** (0.01)	0.41*** (0.01)
Lesbian women	0.78*** (0.09)	0.74*** (0.08)	0.74*** (0.08)	0.74*** (0.08)	0.75*** (0.08)	0.68*** (0.08)
Bisexual women	0.39*** (0.03)	0.35*** (0.03)	0.35*** (0.03)	0.35*** (0.03)	0.40*** (0.03)	0.40*** (0.03)

Notes: Odds ratios of logistic models are shown. Standard errors are in parentheses. Asterisks denote statistical significance: *** p<0.01.

Table 13 Odds ratios showing the relationship between being a sexual minority and working full time

Model	Baseline (1)	Include demographics (2)	Include marital status and children (3)	Include health (4)	Include education (5)	Include mental health and life satisfaction (6)
Heterosexual men (Reference category)						
Gay men	0.56*** (0.06)	0.57*** (0.06)	0.56*** (0.06)	0.56*** (0.06)	0.56*** (0.06)	0.54*** (0.06)
Bisexual men	0.49*** (0.08)	0.63*** (0.11)	0.65*** (0.12)	0.65*** (0.12)	0.66*** (0.12)	0.67*** (0.12)
Heterosexual women	0.32*** (0.01)	0.30*** (0.01)	0.30*** (0.01)	0.30*** (0.01)	0.30*** (0.01)	0.29*** (0.01)
Lesbian women	0.53*** (0.06)	0.52*** (0.06)	0.2*** (0.06)	0.52*** (0.06)	0.52*** (0.06)	0.51*** (0.06)
Bisexual women	0.23*** (0.02)	0.32*** (0.03)	0.31*** (0.03)	0.31*** (0.03)	0.32*** (0.03)	0.32*** (0.03)

Notes: Odds ratios of logistic models are shown. Standard errors are in parentheses. Asterisks denote statistical significance: *** p<0.01.

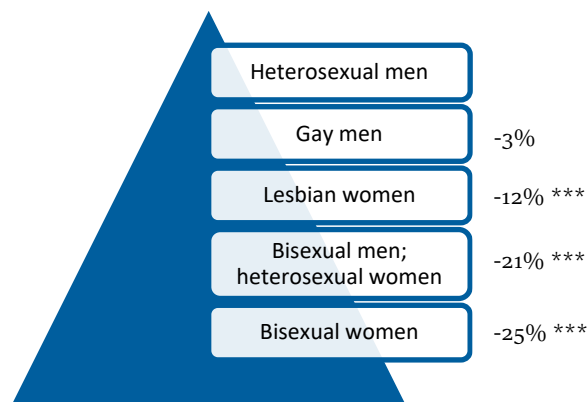
Differences in earnings

In the base model, which examined the log of real employment income by sexual orientation and sex, the earnings gaps were statistically significant for all sexual minority groups, as well as heterosexual women, compared to heterosexual men. This analysis showed that heterosexual men earn the most, followed by gay men, lesbian women, heterosexual women, bisexual men, and bisexual women.

As covariates were added in subsequent models (demographics, family composition, education, hours worked, student status, health and well-being, occupation, and industry), the magnitude of the earnings gap decreased, but the earnings gap remained. The most significant reduction was observed after accounting for hours worked (labour supply) in the model. The observed hierarchy in earnings remained the same as in the model at baseline. However, in the model including all study controls, the earnings gap was eliminated (i.e., not statistically significant) for gay men compared to heterosexual men. Further, the earnings gap for bisexual men and heterosexual women were found to be similar.

Figure 1 below shows the hierarchy of annual employment earnings in the final multivariate regression model comparing sexual minority individuals to heterosexual men. The gap in earnings is indicated in percentage form, ranging from 12 per cent for lesbian women to 25 per cent for bisexual women.^h Table 14 presents the detailed findings from the model.

Figure 1 Hierarchy of earnings



Note: Asterisks denote statistical significance: *** $p < 0.01$.

^h For ease of interpretation of results, the coefficient can be converted into percentage points using $(e^{\beta} - 1) \times 100$ (see Thornton & Innes, 1989).³²

Table 14 Relationship between log of real employment income and sexual orientation/sex

Model	Baseline (1)	Include demographics (2)	Include marital status and children (3)	Include level of education (4)	Include hours worked and current student (5)	Include good health (6)	Include occupation and industry (7)	Include work stress (8)	Include mental health and life satisfaction (9)
Heterosexual men (Reference category)									
Gay men	-0.11** (0.0348)	-0.05 (0.0289)	-0.02 (0.0285)	-0.11*** (0.0267)	-0.06* (0.0253)	-0.06* (0.0252)	-0.03 (0.0242)	-0.03 (0.0240)	-0.03 (0.0239)
Bisexual men	-0.52*** (0.0516)	-0.33*** (0.0434)	-0.30*** (0.0436)	-0.31*** (0.0422)	-0.29*** (0.0410)	-0.29*** (0.0409)	-0.25*** (0.0390)	-0.25*** (0.0386)	-0.23*** (0.0382)
Heterosexual women	-0.35*** (0.0068)	-0.34*** (0.0060)	-0.34*** (0.0060)	-0.38*** (0.0059)	-0.25*** (0.0057)	-0.25*** (0.0057)	-0.23*** (0.0062)	-0.23*** (0.0062)	-0.23*** (0.0062)
Lesbian women	-0.23*** (0.0392)	-0.21*** (0.0310)	-0.20*** (0.0309)	-0.24*** (0.0296)	-0.17*** (0.0275)	-0.17*** (0.0275)	-0.13*** (0.0239)	-0.13*** (0.0239)	-0.13*** (0.0238)
Bisexual women	-0.72*** (0.0330)	-0.48*** (0.0290)	-0.47*** (0.0288)	-0.49*** (0.0273)	-0.36*** (0.0272)	-0.35*** (0.0271)	-0.30*** (0.0249)	-0.31*** (0.0248)	-0.29*** (0.0248)

Notes: In all analyses, variables were added to the baseline model as specified in the table. Variables were always added to the models, moving from column 1 to 9, without excluding any of the earlier used variables. Standard errors are in parentheses. Asterisks denote statistical significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

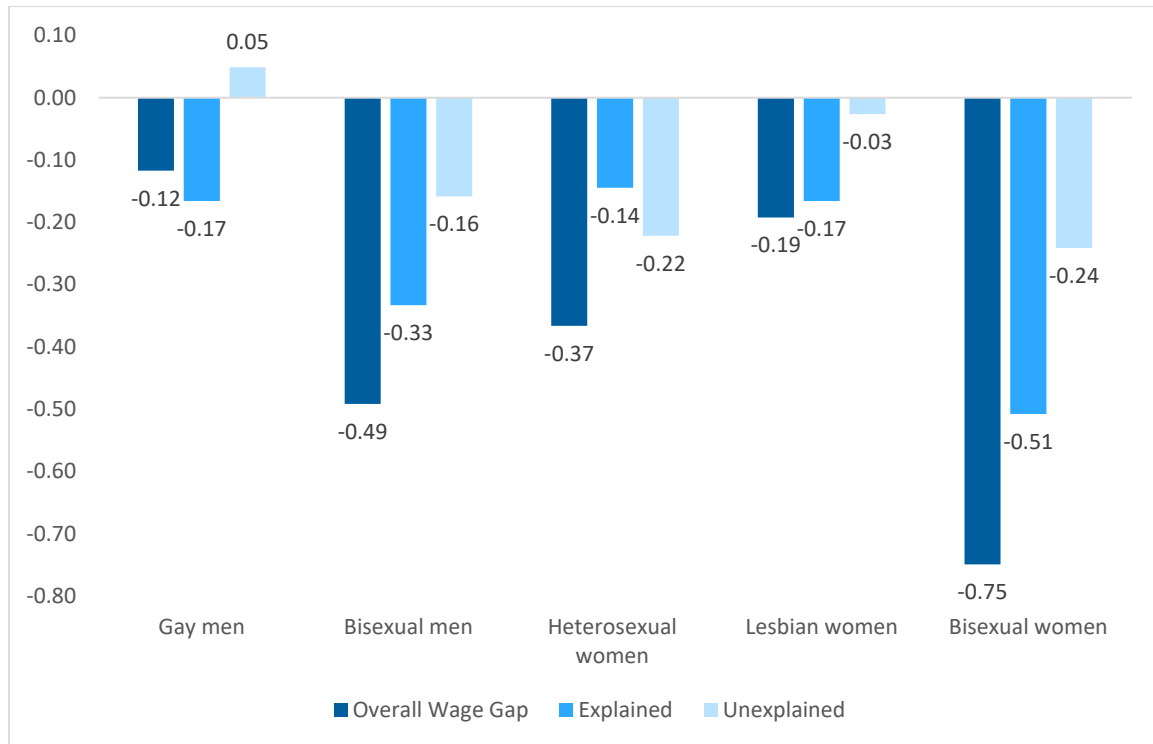
The model was replicated using annual income as the dependent variable in place of annual earnings as a sensitivity analysis to ensure that the analysis was not disregarding other potentially important sources of income (e.g., investments, social assistance). The same pattern in the hierarchy of earnings was observed in the analysis using annual income. The full findings from this sensitivity analysis can be found in Appendix D.

Further analysis was conducted comparing the earnings of lesbian and bisexual women to that of heterosexual women. This analysis found that lesbian women have statistically significantly higher earnings (by 13 percentage points), and bisexual women significantly lower earnings (by 11 percentage points), compared with heterosexual women. The addition of covariates reduced the magnitude of the earnings gaps, but the effects remained (8 percentage points higher for lesbian women and 8 percentage points lower for bisexual women). The full findings from this analysis can also be found in Appendix D.

DRIVERS OF DIFFERENCES IN EARNINGS

The findings presented here are the results of the third stage of analysis, that is, decomposition analyses exploring the degree to which employment characteristics, demographic factors, as well as health and well-being factors influence differential earnings between groups, at both the average and for different earnings quantiles. Figure 2 shows the overall, explained and unexplained, differences in earnings gap with heterosexual men as the reference group, using the Oaxaca decompositions.

Figure 2 Mean decomposition of sexual minority earnings gap compared to heterosexual men



The analysis found that for gay men, compositional differences entirely explained wage differences compared with heterosexual men. The compositional differences were mainly with respect to demographic characteristics, household composition, hours of work, mental health, and industrial sector. Notably, differences were also reduced by gay men's higher educational levels.

For bisexual men, 67 per cent of the earnings gap was explained by differences in demographic characteristics, household composition, hours of work, and well-being. The unexplained part of the earnings gap was attributed to differences in returns to education.

For heterosexual women relative to heterosexual men, 40 per cent of the earnings gap was associated with compositional differences. In addition to the differences in demographic characteristics, factors such as household composition, level of education, hours of work, well-being, industry, and occupation also affected the earnings gap. However, the earnings gap for heterosexual women was mostly generated by differences in returns to demographic characteristics, household composition, hours worked, current student and occupation.

For lesbian women compared with heterosexual men, compositional differences (demographic characteristics, education, hours worked, industry, and mental health) explained approximately 89 per cent of the earnings gap.

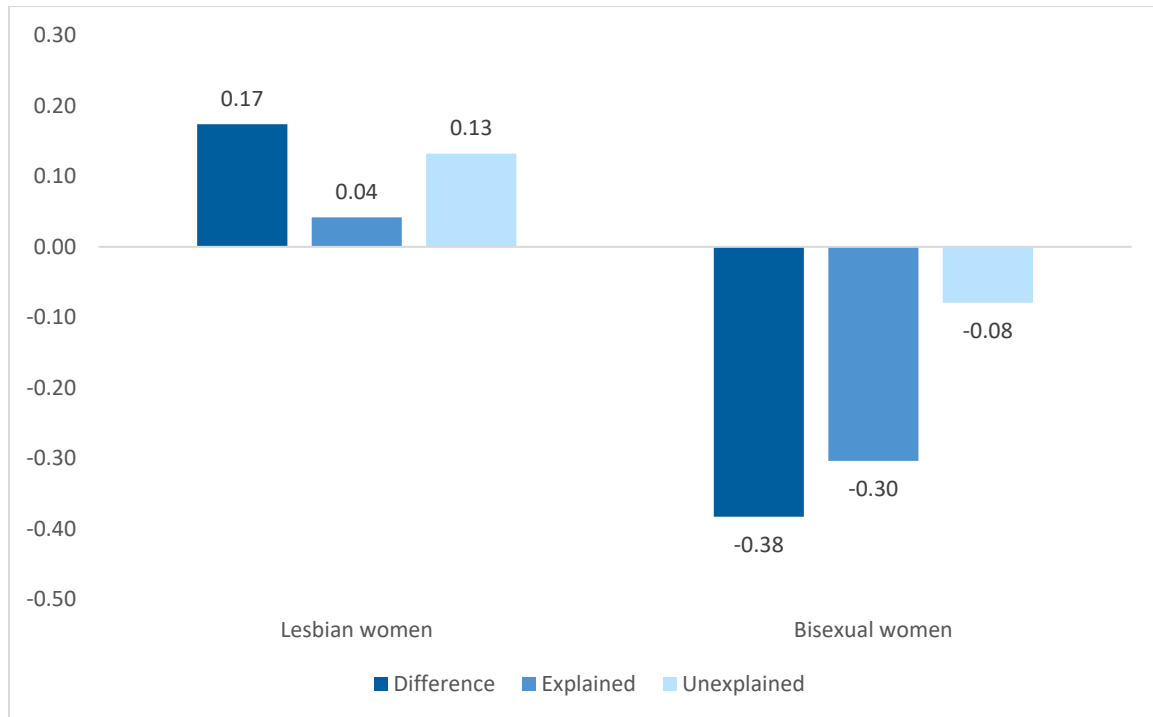
The earnings gap between bisexual women and heterosexual men was mainly driven by differences in characteristics, such as demographics, household composition, hours worked, current student status, industry, and well-being. In addition, for bisexual women, the earnings gap was affected by differences in returns in characteristics (education, hours worked, current student, life satisfaction).

The analysis also found that lesbian women's earnings "advantage" noted earlier in comparison with heterosexual women was driven by differences in characteristics such as demographics, parent status, hours worked, occupation and mental health (see Figure 3). For bisexual women compared with heterosexual women, differences in characteristics and differences in returns to education, being a student and mental health affected the earnings gap.

The results for the quantile decomposition were similar to the Oaxaca decomposition with a few differences summarized as follows:

- For gay men compared with heterosexual men, differences in occupations and the differences in return to occupation played a role at the higher tail of the earnings distribution (0.75 quantile);
- For bisexual men compared with heterosexual men, differences in the level of education explained the earnings gap only at the lower tail of the earnings distribution (0.25 quantile);
- The earnings gap between heterosexual women and heterosexual men was only explained by differences in education at the median and the upper tail of the distribution; and
- For bisexual women compared with heterosexual men, differences in occupation explained the earnings gap at the lower and upper tail of the earnings distribution.

Figure 3 Mean decomposition of lesbian women's and bisexual women's earnings gap compared to heterosexual women



The full detailed results of the Oaxaca decomposition analyses can be found in Appendix E.

DISCUSSION

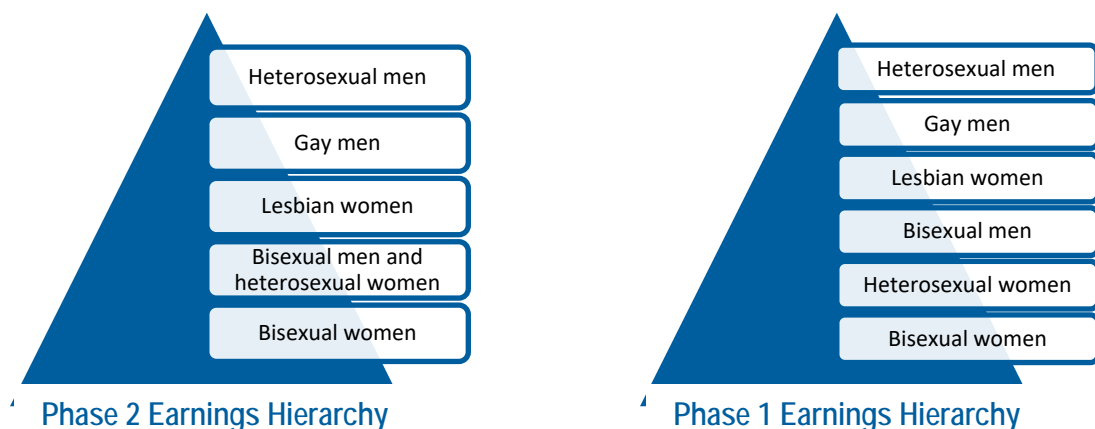
SEXUAL MINORITIES EARN LESS COMPARED WITH HETEROSEXUAL MEN

The findings from this study represent one of the most comprehensive analyses to-date of earnings gaps across sexual orientations, drawing on 14 years of high-quality income data on sexual minorities in Canada. In descriptive analyses of median annual earnings, heterosexual men were found to earn the most (\$55,959), followed by gay men (\$50,822), lesbian women (\$44,740), bisexual men (\$31,776), and bisexual women (\$25,290).

The primary focus of our analyses has related to earnings and, especially earnings gaps. In addition to improving the quality of income data by drawing from linked CCHS and T1FF datasets, this study improved prior estimates by controlling for a range of measures in analyses, including well-being. When controlling for a variety of known covariates, earnings gaps remained for lesbian, gay, and bisexual individuals compared to heterosexual men, with an earnings advantage for lesbian women vis-à-vis heterosexual women. Earnings gaps were most pronounced for bisexual men and women.

Broadly speaking, the noted earnings pattern echoes that described in the literature.^{3,4,12,17,18} However, one distinct finding from this study compared to our Phase 1 findings relates to the placement of bisexual men on the earnings ‘hierarchy.’ While Phase 1 pointed to bisexual men having an earnings advantage over both heterosexual and bisexual women, our current analyses point to bisexual men only having an earnings advantage over bisexual women (see Figure 4).

Figure 4 Hierarchy comparison



Importantly, adding hours worked (labour supply) to multivariate models resulted in the greatest reductions in the magnitude of the gaps observed; bisexual respondents reported working lower hours compared to all other groups, which is consistent with other analyses of CCHS data.⁴ However, despite reductions in the magnitude of differences, the observed earnings gaps remained after controlling for a wide range of covariates. These findings – particularly in the context of some of the best quality income data used – position this study as a contribution to the growing body of work that substantiates the ongoing wage disparities faced by sexual minority individuals in Canada. In particular, the findings for bisexual respondents underscore the distinct earnings disadvantage faced by bisexual men and women compared with heterosexual men.

SEXUAL MINORITIES EXPERIENCE INEQUITIES IN HEALTH AND SOCIOECONOMIC OUTCOMES, WITH DIFFERENCES BETWEEN GROUPS

The findings of our analyses suggest that, as a group, lesbian, gay, and bisexual identified people in Canada continue to face persistent inequitable outcomes across a range of domains compared to their heterosexual counterparts, with bisexual men and women consistently reporting some of the poorest outcomes.

In the realm of health and well-being, and consistent with existing literature (as reported in our Phase 1 report), sexual minority respondents fared worse compared with heterosexuals. Lesbian, gay, and bisexual respondents were significantly more likely to report poorer mental and physical health, greater food insecurity, as well as lower rates of community belonging, and life and job satisfaction, compared with their heterosexual peers. Notably, bisexual men and women consistently reported the poorest outcomes, with particularly stark differences in physical and mental health for these groups. Even in areas where sexual minority individuals appear to have similar (or better) outcomes compared to their heterosexual peers (e.g., gay men and lesbian women have comparatively higher education than heterosexuals), the data suggests that bisexual individuals continue to fare poorly. These findings for bisexual-identified people in Canada are consistent with other recent data: for instance, data from the Pan-Canadian Health Inequalities Data Tool suggest that bisexual Canadians are three times more likely to report being food-insecure compared with those who are heterosexual,³³ and other CCHS analyses found comparable trends in terms of mental health and sexual orientation.³⁴

Similar patterns emerged in our analyses of employment and economic outcomes. Compared with heterosexual men, all sexual minority groups were less likely to be employed and work-full time. This pattern persisted in models controlling for demographics, family composition, education, and well-being. Recent data suggesting that LGBTQ2S+ individuals in Canada may be especially at risk of employment loss³⁵ provide further nuance to these results in the context of

the ongoing COVID-19 pandemic and the vulnerabilities of sexual minorities in the labour market. Finally, our finding that lesbian women's labour supply tends to be greater than that of heterosexual women mirrors existing research.^{3,36,37}

Overall, these findings, while pointing to group-level disparities experienced by sexual minority individuals in Canada, help tell a more detailed and nuanced story. The experiences of gay, lesbian, and bisexual individuals – whether related to food security and access, mental health, or income and earnings – are not uniform. Rather, there are substantial differences in outcomes on the basis of both sexual orientation and sex. While gay men and lesbian women continue to experience poorer outcomes across domains, bisexual men and women consistently report the poorest outcomes. This supports the notion that bisexual individuals face distinct barriers when it comes to attaining positive economic, health, and social outcomes compared to their monosexual counterparts, a finding that was also echoed in Phase 1 of our project.^{3,8,13,38-40}

Ultimately, these differences underscore how important it is not to treat the LGB – or, more broadly, the LGBTQ2S+ – community as a single entity. The findings presented here support the need to continue to develop a better understanding of the unique experiences of specific sexual and gender minority groups in order to appropriately and adequately address the existing inequities. These in-group differences also suggest that solutions to inequities are unlikely to have uniform effects on LGB individuals, in line with other research pointing to the need for more targeted and tailored interventions that consider the multiple, intersecting social positions shaping the health and socioeconomic outcomes of sexual minorities.⁴¹ Taken together, these findings suggest that policy and program interventions that address specific mechanisms driving inequities and that are informed by the nuanced experiences of diverse sexual minority individuals may be more effective – a point which we return to subsequently in this report.

DRIVERS OF EARNINGS DISPARITIES ARE DIVERSE, AND INTERCONNECTED WITH MENTAL HEALTH, BUT SOME OF THE GAP REMAINS UNEXPLAINED

The decomposition analysis conducted as part of this study has provided a more detailed understanding of the drivers of earnings gaps between sexual minority groups and heterosexual men. In particular, it has identified industry, mental health, and labour supply as key drivers of earnings differences, with demographics (e.g., age, immigration status, race, province of residence) also playing a role.

Phase 1 findings identified industry as a key driver of sexual orientation earnings gaps, attributable in part to the relative underrepresentation of sexual minorities in primary and secondary industries, and overrepresentation in retail trades.^{2,4,17} Indeed, our present findings show an underrepresentation of sexual minorities in high-paying occupations, such as

management as well as trades and transportation. What the quantitative data are unable to tell us, however, is what drives these differences for sexual minority individuals. The literature points to a number of factors that can be characterized as both internal and external in nature. As for internal factors, sexual minorities may engage in industry ‘sorting,’ choosing to seek or not to seek out employment in specific industries on the basis of real or anticipated safety and/or inclusion. In terms of external factors, greater incidences of discrimination or harassment within certain industries combined with community or geographic influences may result in higher-paid industries concentrating in geographic regions where (for a multitude of reasons) sexual minorities are less likely to reside. Notably, other drivers such as perceptions of safety, welcoming workplace environments, and industry and occupational culture, might further influence individual sorting.^{17,42,43} While this cannot be fully explored quantitatively within the available data, our findings point to the importance of industry and occupation in driving sexual orientation earnings gaps, a relationship to be explored further in Phase 3 of this project.

The role played by labour supply (hours worked) is also consistent with the existing literature, which suggests that gay men and lesbian women work less and more hours, respectively, compared with their heterosexual counterparts, with bisexual individuals having the lowest average hours worked.^{3,4,18} While our findings point to potential drivers of labour supply differences (e.g., lesbian women’s reduced likelihood of having children, bisexual men and women’s increased likelihood of being a student), further research in this area may be beneficial.

The identification of mental health as a primary driver of earnings gaps in the decomposition analysis is among this study’s more novel findings. While Phase 1 identified patterns of mental health outcomes – with sexual minorities, and especially bisexual individuals, faring worse compared to heterosexuals – the notion that this ‘hierarchy’ of well-being may have implications for earnings and economic outcomes deserves further attention.⁸ This finding draws an explicit connection between two varying domains (health, economic), challenging the typical assumptions underlying policy that they are mutually discrete. If mental health drives earnings gaps for sexual minority individuals, then policy responses that focus on employment and economic outcomes, without regard for an underlying role for health and well-being, are unlikely to be effective. This finding was foreshadowed by key informants we spoke with in Phase 1, who emphasized the mutually reinforcing nature of poor health and poor economic outcomes, the existence of bi-directional relationships, and the role played by the accumulation of disadvantage across multiple domains. There is some published research shedding light on these relationships including a recent UK-based study suggesting an annual earnings gap of approximately CAD \$14,000 driven by poor mental health. However, our findings are novel both in the Canadian context and their specificity to sexual minority individuals.⁴⁴

The decomposition analysis pointed to a number of factors that played a role in driving earnings gaps for some, but not all, sexual minority groups. These include education, stress, life satisfaction, occupation, and general health. Again, this finding reflects the interconnected

nature of health, social, and economic drivers and outcomes for LGB individuals in Canada, and the importance of holistic approaches to addressing inequities. Further, this finding underscores that outcomes vary between sexual minority individuals, and that the drivers of these outcomes vary as well, with different factors found to be more or less relevant for different groups. These differences highlight the importance of not treating the LGB community as a single entity. Instead, policy should acknowledge and account for differences in experiences on the basis of a diversity of social locations. The findings also point to potentially-distinct drivers of economic and other disadvantages for bisexual individuals, who were found to consistently have among the poorest outcomes across domains. While this study was unable to examine these comprehensively due to data and variable limitations, the literature points to unique and specific mechanisms for bisexual people, including biphobia, bi-erasure, bi-invisibility, and bi-specific micro aggressions.^{5,15-17,45,46}

Finally, the decomposition analysis found “unexplained” differences in earnings gaps for some sexual orientation groups, especially bisexual men and women and, to a lesser extent, lesbian women. Framed as differences in returns to characteristics (for instance, education), residual earnings gaps that remain unexplained may include discrimination on the part of employers, a possibility that is supported by the qualitative literature¹⁷ although not systematically measured in the data used here. Similarly, unexplained variation may be attributable to factors that are not captured in the study data and thus cannot be measured or controlled (see Figure 5 for the project’s conceptual framework, outlining factors not captured in the present data). Ultimately, unexplained differences may be made up of multiple factors that are not currently measured. These may or may not include discrimination, underpinning the need to address the current gaps in data to better understand sexual and gender minority individuals’ outcomes and experiences. We elaborate on this need in the subsequent section.

SUBSTANTIAL DATA GAPS LIMIT OUR UNDERSTANDING OF EXPERIENCES ACROSS THE FULL LGBTQ2S+ COMMUNITY

While this Phase 2 report has offered in-depth findings on a range of outcomes – especially those related to earnings and employment of individuals – persistent data gaps continue to limit our understanding of the socioeconomic and health outcomes of the full LGBTQ2S+ community.

Variables related to both sex and sexual orientation remain limited, effectively prohibiting analysis that includes intersex, pansexual, and asexual individuals, including those whose identities may transcend both sex and sexual orientation (e.g., Two-Spirit, queer). Moreover, we remain unable to measure the experiences of gender minority (e.g., trans binary or non-binary, genderqueer) individuals using the current data. This represents a serious limitation, given the importance of acknowledging diversity in experiences and outcomes within the LGBTQ2S+ community. While existing research has documented particularly poor health and economic

outcomes for gender minority individuals – as well as hypothesized drivers of these outcomes – the analysis conducted here has not been able to validate or expand on these findings.^{15,22,23,47}

This also speaks to a previous point about the diversity of experiences with the LGBTQ2S+ community: given the likelihood of specific drivers of gender minority individuals' outcomes, the importance of data specific to this population to inform relevant and appropriate interventions cannot be overstated.

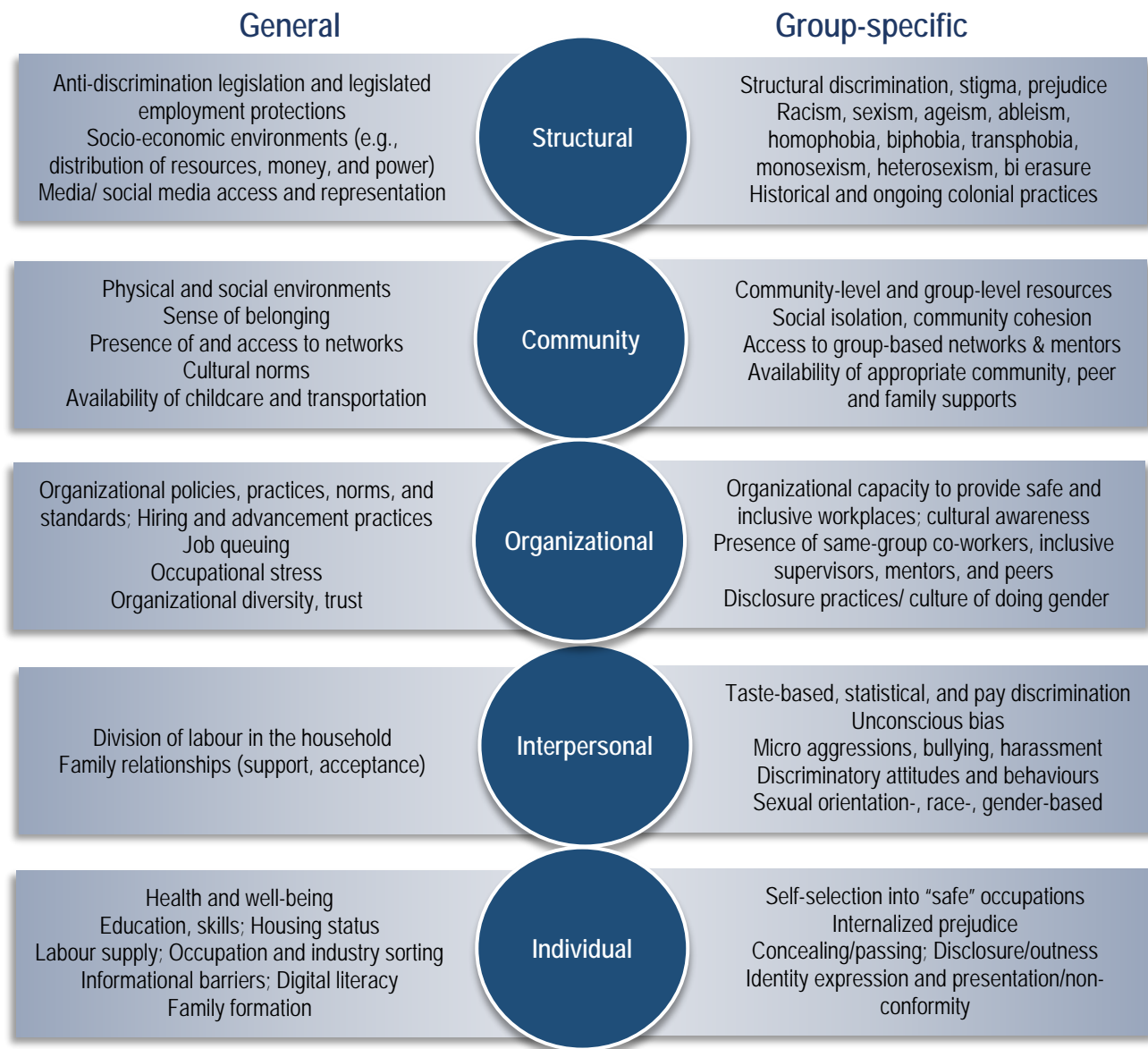
A key constraint that effectively conceals the specific experiences of LGBTQ2S+ individuals that may be particularly relevant within this community is the lack of questions in national-level surveys. Examples would include questions about partnership status, outness and disclosure in different domains (e.g., work, home, etc.), gender expression and presentation, workplace experiences, and perceived and anticipated instances of discrimination.

Finally, this study emphasizes the importance of complementing quantitative with qualitative analysis. The findings presented here, while rich, generate questions that call for qualitative approaches to data collection. Individuals' lives are complex: the findings in this report point to the need to better understand areas such as: industry and occupational sorting; the differences in experiences between specific gender and sexual minority subpopulations; and intersectional factors. Analysis of the last of these was not possible for this report despite the use of population-level surveys. These areas of inquiry are well-suited to a qualitative approach, and will be pursued in Phase 3 of this project.

CONCEPTUAL FRAMEWORK OF KNOWN AND THEORIZED MECHANISMS OF DISADVANTAGE

The project's conceptual framework of known and theorized mechanisms of disadvantage for LGBTQ2S+ individuals serves to visualize both general as well as group-specific (i.e., uniquely applicable to gender and sexual minorities) drivers of inequitable outcomes for LGBTQ2S+ individuals, including how these operate at different levels (e.g., structural, organizational, individual, and so on). It additionally supports the project's aims of drawing connections between social, economic, and health-related outcomes and the factors influencing them. Based on Phase 2 findings, we have updated our conceptual framework as Figure 5.

Figure 5 Conceptual framework of known and theorized mechanisms of disadvantage for LGBTQ2S+ people



The analysis pursued in Phase 2 focused primarily on individual-level factors. Our findings suggest that these do not entirely explain the ongoing earnings gaps experienced by LGB individuals. Therefore, Phase 3 will more deeply explore the other levels of the framework (e.g., interpersonal, organizational, community, and structural factors), with one aim being to provide more context to help understand the decision-making processes that may drive certain individual level factors (e.g., occupational and industry sorting, educational decision-making). More details about Phase 3 of the project are provided in the Conclusion.

STRENGTHS & LIMITATIONS

The primary strength of this study lies in the use of 14 years of data from large national, population-based surveys concerning specific sexual identities. By linking data for the tax reference year of the CCHS survey to the equivalent T1FF files, this project has been able to use some of the highest quality income data available for this population in Canada. Notwithstanding these strengths, the dataset used, and the analysis, have some shortcomings to answer the research questions posed as follows:

- Consent from respondents is needed to link their CCHS responses to their tax records. Not all respondents permitted this data linkage, hence there was a reduction in the total sample from the CCHS. Although survey weights account for the drop in sample size, the non-randomized nature by which consent is provided could potentially bias our estimates.
- The CCHS is a cross-sectional survey. Therefore, the results preclude any inferences of causality or directionality of the effects. Unfortunately, data from longitudinal studies containing sexual orientation measures for the population of Canada were not available. While existing literature points to several mechanisms underlying the health and economic disparities experienced by sexual minorities in Canada, this report employs the term ‘drivers’ to refer to possible mechanisms, without implying causality to our findings.
- The available datasets did not include questions on respondent’s gender, limiting our analysis to sexual orientation. Within sexual orientation, our analysis was limited to individuals who self-identified as gay, lesbian, or bisexual. In the absence of data on gender, we deliberately incorporated analysis by sex to provide additional understanding of the effects of sexual orientation on our dependent variables. This was a compromise to recognize this work’s explicit focus on sexual and gender minorities. Nonetheless, the lack of data on transgender and gender diverse individuals is a major limitation.
- There are noted inconsistencies between self-reported responses in the CCHS and records in the T1FF files. Due to different timelines of the CCHS survey and T1FF files, some individuals who reported that they were not working had some earnings in the T1FF. We prioritized the higher-quality income and employment data in the T1FF over CCHS.
- Our main analytical approach for the analyses uses logistic and OLS regression. This approach, which does not account for unobserved heterogeneity between the comparison groups, can affect the precision of our estimates.

- Limitations for quantitative data analysis remain as a result of small sample sizes. While we aimed to consider a wide range of social locations in our analyses in line with an intersectional approach to quantitative research, further exploration of interacting identity factors beyond sexual orientation and sex was not feasible analytically. This is a key limitation given the known multiplicative nature of barriers to employment based on social location.⁴⁸
- Other limitations arise from the lack of availability of relevant variables, including those related to experiences of discrimination and prejudice events, among others.

CONCLUSION

We end this Phase 2 report with recommendations based on the findings and discussion presented earlier, as well as next steps for Phase 3 of the project. Notably, several of the recommendations echo and build on those produced in the Phase 1 report. To avoid duplication, we are not articulating these in detail here; readers are encouraged to review recommendations presented in Phase 1 alongside those included below.

RECOMMENDATIONS

Many of the recommendations from the Phase 1 report remain relevant at this stage. This is particularly true for those related to data, including the consistent collection of information about gender minority respondents and more expansive response options related to sex, gender, and sexual orientation. That said, we provide some additional and/or expanded recommendations for consideration below.

- **Explore further potential drivers of socioeconomic and health outcomes of LGBTQ2S+ individuals.** Mechanisms for inequity are likely to differ among gender and sexual minority individuals, yet research and policy often target the outcomes rather than the causal factors leading to these outcomes. As the data in Phase 1 have suggested, drivers of inequity for bisexual men and women are poorly known, creating challenges to design policies or interventions to support these groups.
- **Pursue interventions that are multi-sectoral and group-specific in nature.** The Phase 1 findings have reaffirmed the relationship between the health, social, and economic/employment domains in LGBTQ2S+ individuals' lives. They have also demonstrated differing outcomes among LGB individuals, pointing to the value of targeted or tailored interventions. Recommendations related to specific policy interventions (e.g., mental health supports, income or employment assistance, etc.) will be explored and presented more extensively in Phase 3.
- **Support research and data collection on specific subpopulations within the LGBTQ2S+ community.** This recommendation may be particularly relevant for individuals about whom we have the least data or existing research, namely bisexual and gender minority individuals. For instance, the federal government might consider the value of a specific population-level survey for gender minority individuals that can be similarly linked to other datasets, with a view to more effectively understanding their experiences and outcomes.

- **Promote the inclusion of questions about workplace and employment-related experiences in national-level surveys.** These may include questions about social environments and networks at work, experiences of discrimination in hiring and retention, and other variables that might facilitate a more nuanced picture of all respondents' experiences – including those who identify as gender and/or sexual minorities – in the labour market.

NEXT STEPS

Building on these findings, Phase 3 of the project will focus on an in-depth qualitative exploration of the experiences of LGBTQ2S+ individuals across Canada who are currently or recently employed. An application to the University of Western Ontario's Research Ethics Board has been submitted and is awaiting approval at the time of this report's submission. The Ethics submission included more detailed plans for the Phase 3 research design, recruitment materials for participants, and draft protocols for both interviews and focus groups.

Given both the results and limitations of Phase 2, a number of design decisions have been made about the qualitative data collection to occur in Phase 3. The research team aims to oversample bisexual as well as gender minority individuals, with a view to (a) providing a more nuanced understanding of the particularly poor outcomes for the former, and (b) addressing the lack of data for the latter. We will also focus on questions of decision-making (e.g., choices related to industry and occupation) as well as participants' perceived connections between social, health, and economic/employment experiences and outcomes.

Our team will continue to build and refine recommendations for data, research, and policy over the course of the project, with the findings from Phases 1, 2, and 3 to be integrated in the final report. The forthcoming findings will inform the ongoing refinement of the conceptual framework for understanding the mechanisms of labour market disadvantage experienced by individuals identifying as LGBTQ2S+ in Canada.

WORKS CITED

1. Kia, H., MacKay, J., Ross, L. E. & Robinson, M. Poverty in Lesbian, Gay, Bisexual, Transgender, Queer, and Two-spirit (LGBTQ2S+) Populations in Canada: An Intersectional Review of the Literature. *J. Poverty Soc. Justice* **28**, 21–54 (2020).
2. Denier, N. & Waite, S. Sexual Orientation Wage Gaps across Local Labour Market Contexts: Evidence from Canada. *Relat. Ind.* **72**, 734 (2017).
3. Waite, S., Pajovic, V. & Denier, N. Lesbian, gay and bisexual earnings in the Canadian labor market: New evidence from the Canadian Community Health Survey. *Res. Soc. Stratif. Mobil.* **67**, 100484 (2020).
4. Waite, S., Ecker, J. & Ross, L. E. A systematic review and thematic synthesis of Canada's LGBTQ2S+ employment, labour market and earnings literature. *PloS One* **14**, 1 (2019).
5. Ross, L. E. *et al.* Prevalence of Depression and Anxiety Among Bisexual People Compared to Gay, Lesbian, and Heterosexual Individuals: A Systematic Review and Meta-Analysis. *J. Sex Res.* **55**, 435–456 (2018).
6. Mulé, N. J. Much to be desired: LGBT health inequalities in Canada. in *Lesbian, gay, bisexual and trans health inequalities: International perspectives in social work* (Policy Press, 2015).
7. Henning-Smith, C. & Gonzales, G. Differences by Sexual Orientation in Perceptions of Neighborhood Cohesion: Implications for Health. *J. Community Health* **43**, 578–585 (2018).
8. Pakula, B., Shoveller, J., Ratner, P. A. & Carpiano, R. Prevalence and Co-Occurrence of Heavy Drinking and Anxiety and Mood Disorders Among Gay, Lesbian, Bisexual, and Heterosexual Canadians. *Am. J. Public Health* **106**, 1042–1048 (2016).
9. Ross, L. E. & Khanna, A. *What are the needs of lesbian, gay, bisexual, trans, and queer (LGBTQ+) people that should be addressed by Canada's Poverty Reduction Strategy (CPRS)?* <http://lgbtqhealth.ca/projects/docs/prsjointsubmission.pdf> (2017).
10. Uhrig, N. *An examination of poverty and sexual orientation in the UK.* <https://www.iser.essex.ac.uk/research/publications/working-papers/iser/2014-02> (2014).
11. Waite, S. & Denier, N. A Research Note on Canada's LGBT Data Landscape: Where We Are and What the Future Holds. *Can. Rev. Sociol. Can. Sociol.* **56**, 93–117 (2019).

12. Denier, N. & Waite, S. Data and Discrimination: A research note on sexual orientation in the Canadian labour market. *Can. Stud. Popul.* **43**, 29–36 (2016).
13. Brennan, K., Hackett, C., Halpenny, C., Pakula, B. & Waite, S. *Building the evidence based about economic, health and social inequities faced by LGBTQ2S+ individuals in Canada: Phase 1 Report*. <https://www.srdc.org/media/553123/wage-phase1-report.pdf> (2021).
14. Bucik, A., Ptolemy, A., Ali-Akow, C. & Devonish, M.-C. *Budgeting for Inclusion: Why Canada Needs to Include LGBTQIsS Communities in the Federal Budget of 2017*. 44 (2017).
15. Bauer, G. R. & Scheim, A. I. *Transgender People in Ontario, Canada: Statistics from the Trans PULSE Project to Inform Human Rights Policy*. <http://transpulseproject.ca/research/statistics-from-trans-pulse-to-inform-human-rights-policy/> (2015).
16. Côté, P.-B. & Blais, M. Between resignation, resistance and recognition: A qualitative analysis of LGBTQ+ youth profiles of homelessness agencies utilization. *Child. Youth Serv. Rev.* **100**, 437–443 (2019).
17. Waite, S. & Denier, N. Gay Pay for Straight Work: Mechanisms Generating Disadvantage. *Gend. Soc.* **29**, 561–588 (2015).
18. Dilmaghani, M. Sexual Orientation, Labour Earnings, and Household Income in Canada. *J. Labor Res.* **39**, 41–55 (2018).
19. Mills, S., Owens, B., Guta, A., Lewis, N. & Oswin, N. *Work, Inclusion and 2SLGBTQ+ people in Sudbury and Windsor*. <https://labourstudies.mcmaster.ca/news/work-inclusion-and-2slgbtq-people-in-sudbury-and-windsor> (2020).
20. Grenier, A. & Hixson-Vulpe, J. *Beyond Diversity: An LGBT Best Practice Guide for Employers*. <https://www.greatplacetowork.ca/en/reports/beyond-diversity-an-lgbt-best-practice-guide-for-employers> (2020).
21. Bauer, G. *et al.* We've Got Work to Do: Workplace Discrimination and Employment Challenges for Trans People in Ontario. *Trans PULSE E-Bull.* **2**, (2011).
22. Ferlatte, O. *et al.* Inequities in depression within a population of sexual and gender minorities. *J. Ment. Health Abingdon Engl.* 1–8 (2019) doi:10.1080/09638237.2019.1581345.
23. Butler, K., Yak, A. & Veltman, A. 'Progress in Medicine Is Slower to Happen': Qualitative Insights Into How Trans and Gender Nonconforming Medical Students Navigate Cisnormative Medical Cultures at Canadian Training Programs. *Acad. Med. J. Assoc. Am. Med. Coll.* **94**, 1757–1765 (2019).

24. Kiran, T. *et al.* Cancer screening rates among transgender adults: Cross-sectional analysis of primary care data. *Can. Fam. Physician Med. Fam. Can.* **65**, e30–e37 (2019).
25. Government of Canada, S. C. Canadian Community Health Survey - Annual Component (CCHS). <https://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=3226> (2019).
26. Statistics Canada. *Technical Reference guide for the Annual Income Estimates for Census Families, Individuals and Seniors: T1 family file, final estimates, 2017*. http://epe.lac-bac.gc.ca/100/201/301/weekly_acquisitions_list-ef/2019/19-28/publications.gc.ca/collections/collection_2019/statcan/72-212-x2019001-eng.pdf (2019).
27. Thomas, S. & Wannell, B. Combining Cycles of the Canadian Community Health Survey. *Health Rep.* **20**, 1–6 (2009).
28. Statistics Canada. *Canadian Community Health Survey - Annual Component (CCHS) - 2021*. https://www23.statcan.gc.ca/imdb/p3Instr.pl?Function=assembleInstr&a=1&&lang=en&Item_Id=1293153#qb1293177 (2021).
29. OECD. Society at a Glance 2019: A spotlight on LGBT people. (2019).
30. Firpo, S., Fortin, N. & Lemieux. Unconditional Quantile Regressions. *Econometrica* **77**, 953–973 (2009).
31. Bauer, G. R. *et al.* Intersectionality in quantitative research: A systematic review of its emergence and applications of theory and methods. *SSM - Popul. Health* **14**, 100798 (2021).
32. Thornton, R. J. & Innes, J. T. Interpreting semilogarithmic regression coefficients in labor research. *J. Labor Res.* **10**, 443–447 (1989).
33. Casey, B. *The Health of LGBTQIA2 Communities in Canada: Report of the Standing Committee on Health*. 70 <https://www.ourcommons.ca/Content/Committee/421/HESA/Reports/RP10574595/hesarp28/hesarp28-e.pdf> (2019).
34. Gilmour, H. Sexual orientation and complete mental health. *Health Rep.* **30**, 3–10 (2019).
35. Prokopenko, E. & Kevins, C. Vulnerabilities related to COVID-19 among LGBTQ2+ Canadians. *Statistics Canada* <https://www150.statcan.gc.ca/n1/pub/45-28-0001/2020001/article/00075-eng.htm> (2020).
36. Carpenter, C. S. Sexual orientation, work, and income in Canada: Sexual orientation, work, and income. *Can. J. Econ.* **41**, 1239–1261 (2008).

37. Lafrance, A., Warman, C. & Woolley, F. Sexual identity and the marriage premium. *Queen Econ. Dep. Work. Pap.* **1219**, 32 (2009).
38. Ross, L. E., Dobinson, C. & Eady, A. Perceived Determinants of Mental Health for Bisexual People: A Qualitative Examination. *Am. J. Public Health* **100**, 7 (2010).
39. Klesse, C. Shady Characters, Untrustworthy Partners, and Promiscuous Sluts: Creating Bisexual Intimacies in the Face of Heteronormativity and Biphobia. *J. Bisexuality* **11**, 227–244 (2011).
40. Bostwick, W. & Hequembourg, A. ‘Just a little hint’: bisexual-specific microaggressions and their connection to epistemic injustices. *Cult. Health Sex.* **16**, 488–503 (2014).
41. Pakula, B. Sexual identity, minority stress, and the mental health of lesbian, gay, bisexual, and heterosexual Canadians. (University of British Columbia, 2017). doi:10.14288/1.0355875.
42. Schmidt, C. K., Miles, J. R. & Welsh, A. C. Perceived Discrimination and Social Support. *J. Career Dev.* **38**, 293–309 (2011).
43. Rocco, T. S. & Gallagher, S. J. Straight privilege and moral/izing: Issues in career development. *New Dir. Adult Contin. Educ.* **112**, (2006).
44. Bond, N. & D’Arcy, C. *Mind the Income Gap: How work and social security shape the incomes of people with mental health problems.* (2020).
45. Abramovich, A., Lam, J. S. H. & Chowdhury, M. A transgender refugee woman experiencing posttraumatic stress disorder symptoms and homelessness. *CMAJ Can. Med. Assoc. J. J. Assoc. Medicale Can.* **192**, E9–E11 (2020).
46. Ecker, J. *LGBTQ Adult Homelessness.*
47. Kiran, T. *et al.* Cancer screening rates among transgender adults: Cross-sectional analysis of primary care data. *Can. Fam. Physician Med. Fam. Can.* **65**, e30–e37 (2019).
48. Pakula, B. & Smith Fowler, H. *Barriers to employment and training for equity-seeking groups: Final Report.* <https://www.srdc.org/publications/Barriers-to-employment-and-training-for-equity-seeking-groups-Final-Report-details.aspx> (2021).

APPENDIX A: STUDY VARIABLES AND DEFINITIONS

Category	Variable	Source	Composition	Response structure	Analytical transformation
Dependent variables					
Labour market outcomes	Annual earnings	T1FF	Derived	<ul style="list-style-type: none"> Derived 	<ul style="list-style-type: none"> Total earnings from T4 slips Other employment income
	Annual income	T1FF	Derived	<ul style="list-style-type: none"> Derived 	<ul style="list-style-type: none"> Total earnings from T4 slips Indian exempt employment income Other employment income Net business income Net professional income Net commission income Net farming income Net fishing income Indian exempt self-employment income Limited partnership income Dividends Interest and other investment income Rental income, net Alimony or separation allowances Other income Pension and superannuation income RRSP income of individuals aged 65 and over Old age security pension Canada/Quebec Pension Plan Net federal supplements Employment Insurance Goods and services tax credit Provincial refundable tax credits

Category	Variable	Source	Composition	Response structure	Analytical transformation
					<ul style="list-style-type: none"> ▪ Social assistance ▪ Workers' compensation ▪ Child tax benefits ▪ Family benefits ▪ Universal childcare benefit ▪ Register disability savings plan ▪ Working income tax benefit ▪ Children's fitness tax credit
Explanatory variables					
Sexual orientation x Sex	Sexual orientation	CCHS	Do you consider yourself to be...?	<ul style="list-style-type: none"> ▪ Heterosexual (sexual relations with people of the opposite sex) ▪ Homosexual, that is lesbian or gay (sexual relations with people of your own sex) ▪ Bisexual (sexual relations with people of both sexes) 	N.A.
	Sex	CCHS	Is respondent male or female?	<ul style="list-style-type: none"> ▪ Female ▪ Male 	N.A.
	Sexual orientation x Sex	CCHS	Derived	<ul style="list-style-type: none"> ▪ Derived 	Categories of Sexual Orientation and Sex: <ul style="list-style-type: none"> ▪ Heterosexual Male ▪ Heterosexual Female ▪ Gay Male ▪ Lesbian Female ▪ Bisexual Male ▪ Bisexual Female

Category	Variable	Source	Composition	Response structure	Analytical transformation
Independent variables or covariates					
Employment factors	Employment status (Employed/Not employed)	CCHS	Have you worked at a job or business at any time in the past 12 months?	<ul style="list-style-type: none"> Yes No 	N.A.
	Full-time employment status	CCHS	Derived	<ul style="list-style-type: none"> Derived 	Combined into categories based on hours worked: <ul style="list-style-type: none"> Full-time employment Part-time employment
	Self-employed	CCHS	Were you an employee or self-employed?	<ul style="list-style-type: none"> Employee Self-employed Working in a family business without pay 	Combined into categories: <ul style="list-style-type: none"> Self-employed Not self-employed
	Industry	CCHS	What kind of business, industry or service was this?	<ul style="list-style-type: none"> Open 	Combined into categories: <ul style="list-style-type: none"> Primary industries (agriculture, forestry, fishing, mining, oil & gas) Secondary industries (utilities, construction, manufacturing) Wholesale trade, transportation, and warehousing Retail trade Information and cultural industries Finance and insurance and real estate and rental and leasing Professional, scientific and technology services Administrative and support, waste management, etc. Education services Health care and social assistance Arts, entertainment, and recreation Accommodation and food services

Category	Variable	Source	Composition	Response structure	Analytical transformation
					<ul style="list-style-type: none"> Other services (not including public administration) Public administration
	Occupation	CCHS	What was your work or occupation?	<ul style="list-style-type: none"> Open 	<p>Combined into categories:</p> <ul style="list-style-type: none"> Management occupation Business, finance, and administration Natural and applied science and related occupations Health occupation Occupations in education, law, social/community/governmental services Occupations in art, culture, recreation, and sports Sales and services occupation Trades, transport, equipment operators and related occupations Natural resources, agriculture and related occupations and Occupations in manufacturing and utilities
	Hours worked	CCHS	On average, how many hours do you usually work per week?	<ul style="list-style-type: none"> Numeric 	<p>Combined into categories:</p> <ul style="list-style-type: none"> 1 to 14 hours 15-34 hours 35-49 hours 50+ hours
Demographics – Individual	Immigration status	CCHS	<p>In what country were you born?</p> <p>Are you now, or have you ever been a landed immigrant in Canada?</p>	<ul style="list-style-type: none"> Specify country Yes No 	<p>Combined into categories:</p> <ul style="list-style-type: none"> 1: Immigrant/non-permanent resident (born outside of Canada) 0: Non immigrant (Canadian born)

Category	Variable	Source	Composition	Response structure	Analytical transformation
	Aboriginal identity	CCHS	Are you an Aboriginal person, that is, First Nations, Métis or Inuk (Inuit)? First Nations includes Status and Non-Status Indians.	<ul style="list-style-type: none"> Yes No 	N.A.
	Racial/Cultural group	CCHS	You may belong to one or more racial or cultural groups on the following list. Are you...?	<ul style="list-style-type: none"> White South Asian (e.g., East Indian, Pakistani, Sri Lankan) Chinese Black Filipino Latin American Arab Southeast Asian (e.g., Vietnamese, Cambodian, Malaysian, Laotian) West Asian (e.g., Iranian, Afghan) Korean Japanese Other 	N.A.
	Racial/Cultural group, including Aboriginal identity	CCHS	Derived	Derived	<p>Combined Aboriginal identity and Racial/Cultural group responses into categories:</p> <ul style="list-style-type: none"> White (Selected White in Racial/Cultural group) Aboriginal (Selected Yes in Aboriginal identity) Visible minority (Selected anything other than White in Racial/Cultural group)

Category	Variable	Source	Composition	Response structure	Analytical transformation
Demographics – Geography	Language	CCHS	What is the language that you first learned at home in childhood and still understand?	<ul style="list-style-type: none"> Open answer 	Combined into categories: <ul style="list-style-type: none"> English French English and French Neither English nor French
	Age	CCHS	What is your age?	<ul style="list-style-type: none"> Numeric 	N.A.
	Area of residence – Rural/Population centre	CCHS	Derived	<ul style="list-style-type: none"> Populated centre Rural area 	N.A.
	CMA of residence	CCHS	Census metropolitan area	<ul style="list-style-type: none"> All CMA 	<ul style="list-style-type: none"> Toronto Montreal Vancouver Non-CMA Other
	Province of residence	CCHS	Province of residence	<ul style="list-style-type: none"> Ontario Quebec Manitoba Saskatchewan Alberta British Columbia Newfoundland and Labrador Prince Edward Island Nova Scotia New Brunswick 	<ul style="list-style-type: none"> Ontario Quebec Manitoba Saskatchewan Alberta British Columbia Atlantic Canada

Category	Variable	Source	Composition	Response structure	Analytical transformation
Demographics – Family	Marital/Partnership status	CCHS	What is your marital status? Are you... ?	<ul style="list-style-type: none"> Single Married Common-law Separated Widowed Divorced 	Combined into three categories: <ul style="list-style-type: none"> Single Married/Common-law Previously married (separated, widowed, or divorced)
	Have children	CCHS	Household presence of children less than 18 years old	<ul style="list-style-type: none"> Numeric 	Grouped into categories: <ul style="list-style-type: none"> Child in the house No child in the house
Demographics – Education	Highest level of education	CCHS	Derived	<ul style="list-style-type: none"> Grade 8 or lower Grade 9-10 Grade 11-13 Secondary school graduation, no post-secondary Trade certificate or diploma Certificate/diploma-college (non-trades) University certificate or diploma below bachelor's level Bachelor's degree Certificate/diploma/ univ degree above bachelor's level 	<ul style="list-style-type: none"> Less than high school High school certificate Trade certificate or diploma College diploma and university certificate below degree Bachelor's degree University or degree above a bachelor's level
	Current student	CCHS	Are you currently attending school, college, CEGEP or university?	<ul style="list-style-type: none"> Yes No 	N.A.

Category	Variable	Source	Composition	Response structure	Analytical transformation
Health & well-being	Work stress	CCHS	Would you say that most days at work were...?	<ul style="list-style-type: none"> Not at all stressful Not very stressful A bit stressful Quite a bit stressful Extremely stressful 	Grouped into categories: <ul style="list-style-type: none"> 1, Work stress: A bit stressful, Quite a bit stressful, Extremely stressful 0, No work stress: Not at all stressful, Not very stressful
	Life stress	CCHS	Thinking about the amount of stress in your life, would you say that most of your days are...?	<ul style="list-style-type: none"> Not at all stressful Not very stressful A bit stressful Quite a bit stressful Extremely stressful 	N.A.
	General health	CCHS	In general, would you say your health is...?	<ul style="list-style-type: none"> Excellent Very good Good Fair Poor 	Grouped into categories: <ul style="list-style-type: none"> 1, Good health: Excellent, Very good, Good 0, Not good health: Fair, Poor
	Mental health	CCHS	In general, would you say your mental health is...?	<ul style="list-style-type: none"> Excellent Very good Good Fair Poor 	Grouped into categories: <ul style="list-style-type: none"> 1, Good health: Excellent, Very good, Good 0, Not good health: Fair, Poor
	Life satisfaction	CCHS	Derived	<ul style="list-style-type: none"> Very satisfied Satisfied Neither satisfied nor dissatisfied Dissatisfied Very dissatisfied 	Grouped into categories: <ul style="list-style-type: none"> Very satisfied, Satisfied Neither satisfied nor dissatisfied, Dissatisfied, Very dissatisfied

Category	Variable	Source	Composition	Response structure	Analytical transformation
	Job satisfaction	CCHS	How satisfied are you with your job or main activity?	<ul style="list-style-type: none"> Very satisfied Satisfied Neither satisfied nor dissatisfied Dissatisfied Very dissatisfied 	Grouped into categories: <ul style="list-style-type: none"> Very satisfied, Satisfied Neither satisfied nor dissatisfied, Dissatisfied, Very dissatisfied
	Satisfaction with family	CCHS	How satisfied are you with your relationships with family members?	<ul style="list-style-type: none"> Very satisfied Satisfied Neither satisfied nor dissatisfied Dissatisfied Very dissatisfied 	Grouped into categories: <ul style="list-style-type: none"> Very satisfied, Satisfied Neither satisfied nor dissatisfied, Dissatisfied, Very dissatisfied
	Satisfaction with friends	CCHS	How satisfied are you with your relationship with friends?	<ul style="list-style-type: none"> Very satisfied Satisfied Neither satisfied nor dissatisfied Dissatisfied Very dissatisfied 	Grouped into categories: <ul style="list-style-type: none"> Very satisfied, Satisfied, and Neither satisfied nor dissatisfied Dissatisfied, Very dissatisfied
	Sense of belonging	CCHS	How would you describe your sense of belonging to your local community? Would you say it is...?	<ul style="list-style-type: none"> Very strong Somewhat strong Somewhat weak Very weak 	N.A.
	Smoke cigarettes, currently	CCHS	At the present time, do you smoke cigarettes every day, occasionally or not at all?	<ul style="list-style-type: none"> Daily Occasionally Not at all 	N.A.

Category	Variable	Source	Composition	Response structure	Analytical transformation
	Smoke cigarettes, daily, ever	CCHS	Have you ever smoked cigarettes daily?	<ul style="list-style-type: none"> Yes No 	N.A.
	Alcohol consumption	CCHS	During the past 12 months, how often did you drink alcoholic beverages?	<ul style="list-style-type: none"> Less than once a month Once a month 2 to 3 times a month Once a week 2 to 3 times a week 4 to 6 times a week Every day 	N.A.
	Food security – Worry	CCHS	Were you and your family worried that food would run out before you got money to buy more? Was that often true, sometimes true, or never true in the past 12 months?	<ul style="list-style-type: none"> Often true Sometimes true Never true 	N.A.
	Food security – Actual	CCHS	The food you and other household members bought just didn't last, and there wasn't any money to get more. Was that often true, sometimes true, or never true in the past 12 months?	<ul style="list-style-type: none"> Often true Sometimes true Never true 	N.A.

APPENDIX B: VARIABLES BY ANALYTICAL STAGE

Variable	Analytical stage			Model step
	Descriptive	Regression	Decomposition	
Dependent				
Annual earnings	Yes	Yes		OLS 1 – Base model
Annual income	Yes	Yes		OLS 1 – Base model (alternate)
Explanatory				
Sexual orientation x Sex	Yes	Yes		1 – Base model
Employment factors				
Full-time employment status	Yes	Yes		
Employed or not	Yes	Yes		
Self-employed	Yes			
Industry	Yes	Yes	Yes	OLS 7 – Occupation & industry
Occupation	Yes	Yes	Yes	OLS 7 – Occupation & industry
Hours worked	Yes	Yes	Yes	OLS 5 – Hours worked & current student

Variable	Analytical stage			Model step
	Descriptive	Regression	Decomposition	
Demographics – Individual				
Immigration status	Yes	Yes	Yes	OLS 2 – Demographics
Aboriginal identity	Yes			
Racial/Cultural group, including Aboriginal identity	Yes	Yes	Yes	OLS 2 – Demographics
Language	Yes			
Age	Yes	Yes	Yes	OLS 2 – Demographics
Demographics – Geography				
Area of residence – Rural/Population centre	Yes			
CMA of residence	Yes			
Province of residence	Yes	Yes	Yes	OLS 2 – Demographics
Demographics – Family				
Marital/Partnership status	Yes	Yes	Yes	OLS 3 – Marital status & children
Have children	Yes	Yes	Yes	OLS 3 – Marital status & children
Demographics – Education				
Highest level of education	Yes	Yes	Yes	OLS 4 – Level of education
Current student	Yes	Yes	Yes	OLS 5 – Hours worked & current student

Variable	Analytical stage			Model step
	Descriptive	Regression	Decomposition	
Health & well-being				
Work stress	Yes	Yes	Yes	OLS 8 – Work stress
Life stress	Yes			
General health	Yes	Yes	Yes	OLS 6 – Health
Mental health	Yes	Yes	Yes	OLS 9 – Mental health & life satisfaction
Life satisfaction	Yes	Yes	Yes	OLS 9 – Mental health & life satisfaction
Job satisfaction	Yes			
Satisfaction with family	Yes			
Satisfaction with friends	Yes			
Sense of belonging	Yes			
Smoke cigarettes, currently	Yes			
Smoke cigarettes, daily, ever	Yes			
Alcohol consumption	Yes			
Food security, actual	Yes			
Food security, worry and no money	Yes			

APPENDIX C: MODEL SPECIFICATION FOR EARNINGS AND EMPLOYMENT OUTCOMES

We estimate the following regression specification for continuous outcome Y (such as log of earnings) of individual i:

$$Y_i = X_i\beta + \theta(SI_i * Sex_i) + \varepsilon_i \quad (1)$$

Where X is vector of covariates, SI is a categorical variable for sexual orientation (the reference group will be heterosexuals) ε is the idiosyncratic error term. β and θ are vector of parameters to be estimated. The coefficient of interest θ represents the relationship between sexual orientation and sex and outcome Y. The vector of covariates includes age, education, immigration status, race/cultural background, province of residence, household composition, hours of work, current student status, occupation, industry, general health, work stress, mental health, and life satisfaction.

We estimate a logistic regression for indicator outcomes such as employment status and full-time work status controlling for a vector of covariates (includes age, education, immigration status, race/cultural background, province of residence, household composition, good health, mental health, and life satisfaction).

APPENDIX D: MULTIVARIATE ANALYSES USING INCOME

Relationship between log of real total income and sexual orientation/sex

	Baseline	Include demographic	Include marital status and children	Include level of education	Include hours worked and current student	Include good health	Include occupation and industry	Include work stress	Include mental health and life satisfaction
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Heterosexual men (Reference category)									
Gay men	-0.01** (0.0345)	-0.01 (0.0298)	-0.01 (0.0298)	-0.01*** (0.0283)	-0.01* (0.0269)	-0.01* (0.0269)	-0.02 (0.0258)	-0.03 (0.0257)	-0.03 (0.0256)
Bisexual men	-0.46*** (0.0478)	-0.30*** (0.0404)	-0.26*** (0.0404)	-0.26*** (0.0382)	-0.25*** (0.0369)	-0.25*** (0.0367)	-0.21*** (0.0356)	-0.21*** (0.0351)	-0.20*** (0.0349)
Heterosexual women	-0.29*** (0.006)	-0.28*** (0.006)	-0.28*** (0.006)	-0.32*** (0.005)	-0.20*** (0.005)	-0.20*** (0.005)	-0.18*** (0.00574)	-0.18*** (0.0057)	-0.18*** (0.00569)
Lesbian women	-0.19*** (0.0342)	-0.18*** (0.0271)	-0.15*** (0.0271)	-0.20*** (0.0262)	-0.14*** (0.0251)	-0.14*** (0.0250)	-0.10*** (0.0213)	-0.11*** (0.0210)	-0.13*** (0.0210)
Bisexual women	-0.64*** (0.0298)	-0.42*** (0.0253)	-0.40*** (0.0250)	-0.42*** (0.0236)	-0.30*** (0.0234)	-0.30*** (0.0235)	-0.25*** (0.0219)	-0.25*** (0.0216)	-0.24*** (0.0217)

Notes: In all analysis, variables were added to the baseline model as specified in the table. Variables were always added to the models as you move from column 1 to 9 without excluding any of the earlier used variables. Standard errors are in parentheses. Asterisks denote statistical significance: *** p<0.01, ** p<0.05, * p<0.1.

Relationship between log of real employment income and sexual orientation/sex (Female sex only)

	Baseline	Include demographics	Include marital status and children	Include level of education	Include hours worked and current student	Include good health	Include occupation and industry	Include work stress	Include mental health and life satisfaction
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Heterosexual women (Reference category)									
Lesbian women	0.12*** (0.039)	0.13*** (0.032)	0.11*** (0.032)	0.10*** (0.030)	0.06* (0.028)	0.06* (0.028)	0.09*** (0.024)	0.09*** (0.024)	0.09*** (0.024)
Bisexual women	-0.37*** (0.033)	-0.15*** (0.029)	-0.16*** (0.029)	-0.13*** (0.027)	-0.13*** (0.027)	-0.12*** (0.028)	-0.08*** (0.025)	-0.09*** (0.025)	-0.08*** (0.024)

Notes: In all analysis, variables were added to the baseline model as specified in the table. Variables were always added to the models as you move from column 1 to 9 without excluding any of the earlier used variables. Standard errors are in parentheses. Asterisks denote statistical significance: *** p<0.01, ** p<0.05, *p<0.1.

APPENDIX E: DETAILED DECOMPOSITION RESULTS

Factors	Gay men		Bisexual men		Heterosexual women		Lesbian women		Bisexual women	
	Explained	Unexplained	Explained	Unexplained	Explained	Unexplained	Explained	Unexplained	Explained	Unexplained
Demographic characteristics (Age, immigrant status, race, province)	✓		✓		✓	✓	✓		✓	
Has children			✓		✓	✓		✓	✓	
Marital status	✓		✓			✓			✓	
Education	✓			✓	✓		✓			✓
Hours worked	✓		✓		✓	✓	✓	✓	✓	✓
Current student	✓		✓		✓	✓			✓	✓
Work stress	✓									
Occupation					✓	✓				
Industry	✓		✓		✓		✓		✓	
Good health			✓		✓					
Mental health	✓		✓		✓		✓		✓	
Life satisfaction			✓						✓	✓

Notes: The explained (compositional) difference are mainly difference due to characteristics while unexplained differences are considered discriminatory effects resulting from difference in the returns to characteristics. ✓ means statistically significant at 5 per cent level.

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