LIFE SATISFACTION, VICTIMIZATION, AND DISCRIMINATION AMONG OFF-RESERVE INDIGENOUS PEOPLES IN CANADA

by

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ABSTRACT

This thesis reports on the distribution and responsiveness of various measures of life circumstances to the life satisfaction of off-reserve Indigenous Peoples and compares these findings to non-Indigenous Peoples in Canada. Novel measures are included in this study which are not commonly found in the life satisfaction literature, such as victimization, discrimination and being the legal responsibility of the government as a child. Although there are distributional differences in many variables related to wellbeing between these populations, the responsiveness of these indicators to life satisfaction are mostly similar. Exceptions to this are in the responsiveness of life satisfaction to gender, social support, and confidence in police. There are also significant differences found exclusively in the Indigenous population between females and males in the responsiveness of certain indicators to life satisfaction, such as having been divorced, confidence in police, and living in an overcrowded household.

LIST OF ABBREVIATIONS USED

CIP – Confidence in police

GSS – General Social Survey

LRG – Legal responsibility of the government as a child

RCMP – Royal Canadian Mounted Police

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CHAPTER 1 INTRODUCTION

Gaps in the levels of wellbeing experienced by Indigenous Peoples as compared to non-Indigenous Peoples in Canada have been observed for some time and do not appear to be shrinking. A growing body of literature focuses on both the sources of wellbeing gaps and finding effective ways to shrink them. As a contribution to this literature, this project takes as a research directive the Calls to Action located in the Final Report of the Truth and Reconciliation Commission which concern closing the gaps in health and wellbeing outcomes between Indigenous and non-Indigenous communities (Truth and Reconciliation Commission of Canada 2015, 161).

Life satisfaction measures the subjective wellbeing of a population in a way that allows the individuals within that population to make a cognitive evaluation of their health, emotions, and life circumstances. In terms of determining where to direct policy intervention, life satisfaction is an arguably more effective tool than income or other objective measures for its ability to allow Indigenous individuals to prioritize the areas of their lives where the greatest positive impact may be experienced. This is doubly important in the presence of an ongoing history of colonialist relations, where previous paternalistic interventions of the Canadian state have violently oppressed this population. This leads to the following research questions: Is life satisfaction a useful tool for prioritizing areas for policy intervention to improve the wellbeing of Indigenous Peoples in Canada? What is the impact of victimization and discrimination on the life satisfaction of Indigenous Peoples in Canada?

CHAPTER 2 LITERATURE REVIEW

Life satisfaction is gaining popularity as a measure of population health and wellbeing, especially in cross-country comparisons (Helliwell et al. 2009). Life satisfaction is determined from responses to the following question: “Using a scale of 0 to 10 where 0 means "Very dissatisfied" and 10 means "Very satisfied", how do you feel about your life as a whole right now?” (Statistics Canada 2017). Particularly of relevance to Canada, life satisfaction and other measures of happiness are important tools for assessing the subjective wellbeing of people wherein many are not materially deprived of the means to live a decent life (Helliwell, Layard, and Sachs 2012, 5–6). In other words, in the presence of lower rates of absolute poverty, life satisfaction is perhaps a better measure of wellbeing than other income- or employment-based measures.

What is known about the life satisfaction of Canada’s Indigenous Peoples? As has been noted elsewhere, there are very few published articles (and few data sources) which assess the life satisfaction of Indigenous Peoples in Canada (Barrington-Leigh and Sloman 2016, 3–4). An exception to this pattern is the work of Barrington-Leigh and Sloman (2016), who find that the mean life satisfaction of the Indigenous population is significantly less than the life satisfaction of the entire Canadian population, whether sampling the off- or on-reserve populations of Indigenous Peoples.

While limited studies concerning the life satisfaction of Indigenous Peoples are currently available, a much richer literature exists when it comes to assessing the objective wellbeing of this population. Life satisfaction is closely related to objective wellbeing, with the main difference being that life satisfaction involves an evaluation of objective wellbeing in terms of one’s goals or aspirations. Variables measuring health,

social relationships inside and outside the family, age, gender and income are found to be significantly associated with measures of life satisfaction (Helliwell et al. 2009; Barrington-Leigh and Sloman 2016; Daley, Phipps, and Branscombe 2018). Subjective mental health perhaps exhibits the strongest association with life satisfaction out of all commonly measured factors (Lombardo et al. 2018). As such, studies assessing any of these aspects of wellbeing are related to life satisfaction.

A broad theme of the literature is in measuring the impact of colonialism on the wellbeing of Indigenous Peoples. Colonialism in Canada can be described as historical and contemporary practices of discrimination and assimilation rooted in the imposition of authority by outsiders over Indigenous Peoples. These practices are attempts to erase Indigenous identity and cultural practices. One of the most infamous colonial practices carried out in Canada was residential schooling, and the impact of these policies and practices on various aspects of the lives of Indigenous Peoples has been well-documented. For example, the prevalence of depressive symptoms is greater among individual residential school attendees and their offspring (Bombay, Matheson, and Anisman 2011); residential school attendees are significantly more culturally assimilated, while economic assimilation (job market outcome, income) was only associated with attendees who did not attend highly abusive schools (Feir 2016b); and education outcomes and experiences among children and youth are related to maternal residential school attendance (Feir 2016a).

The experience of colonization has resulted in other gaps in the wellbeing of Indigenous peoples relative to their non-Indigenous counterparts. Perceived discrimination is associated with depressive symptoms among First Nations adults in

Canada (Bombay, Matheson, and Anisman 2010). The 'earnings gap' between Indigenous and non-Indigenous Peoples is associated with a reserve penalty which differentially impacts individuals living on reserves, especially women (Feir 2013). Indigenous Peoples are relatively disadvantaged in terms of determinants of health, and health inequalities among Indigenous Peoples follow a socioeconomic gradient which is exacerbated by increasing inequality (Hajizadeh et al. 2018; Wingert 2010).

The picture painted thus far seems quite dismal, but there are findings emerging from the research into these wellbeing gaps that show resilience and offer promising avenues for closing these gaps. Countering the assimilation aspect of colonization through cultural promotion strategies has been found to offer positive wellbeing outcomes. For example, among British Columbia's Indigenous communities, those who have taken steps to engage in collective cultural healing and preservation experience significantly lower rates of teen suicide (Chandler and Lalonde 1998). Related to cultural continuity is the importance of community and social relationships to Indigenous wellbeing. Social supports are more significantly positively associated with life satisfaction for Indigenous Peoples than non-Indigenous Peoples (Barrington-Leigh and Sloman 2016). Also related to this, having fewer than 5 close friends or living in an isolated region are significant risk factors for psychological distress among the James Bay Cree (Kirmayer et al. 2000).

What role can an analysis of life satisfaction play in offering policy avenues for closing the wellbeing gaps between Indigenous and non-Indigenous Canadians? Life satisfaction in a relatively affluent society offers an apt measurement of an individual's level of choice in society just as much as it reflects their financial wellbeing (Diener,

Inglehart, and Tay 2013, 512). This is especially important for people who live in a society fraught with past and present oppression, such as Indigenous Peoples in Canada. While Indigenous Peoples have less financial wellbeing on average than their non-Indigenous counterparts (Feir 2013), there are much more subtle ways in which colonial oppression can inhibit the ability of an Indigenous person to live a life which they choose to live. Life satisfaction can be a powerful measure in this regard because it inherently allows an individual to make an assessment about the importance of different aspects of their life, based upon personality, preferences and cultural values (Diener, Inglehart, and Tay 2013, 511). While objective-list type measures of wellbeing offer important information about inequality and discrimination, economists tend to shy away from a paternalistic assessment of how all these factors co-contribute to wellbeing and generally believe an individual is the best judge of what makes their life worth living (Dolan and White 2007, 74). This is especially important in the Canadian context, where the paternalism of the state towards Indigenous Peoples has had such a violently oppressive history. As such, utilizing life satisfaction to highlight the differences in wellbeing between Indigenous and non-Indigenous Peoples offers avenues for informed policy decision-making, because it is Indigenous Peoples themselves and their priorities which inform these potential interventions.

It is important to also note the limitations of life satisfaction as a measure of wellbeing. For one, life satisfaction responses can be affected by an individual's involuntary emotional state (Barrington-Leigh and Sloman 2016, 2). This means that although an individual's life circumstances may not have changed, their life satisfaction response can vary due to unobserved factors such as mood. This effect has been observed

to be relatively small, and Deiner, Inglehart, and Tay (2013, 517) report that short term mood impacts life satisfaction in only a small number of circumstances, while long term mood is more strongly associated with life satisfaction but is also strongly correlated to life circumstances. Another aspect of life satisfaction which makes it potentially problematic as an indicator for policy intervention is that life satisfaction can be interpreted as the gap between aspirations and outcomes. With respect to this, one should not make the mistake of seeing a reduction in aspirations as an improvement in wellbeing. This latter issue is important for Indigenous Peoples in Canada, as generations of discrimination may result in significantly depressed aspirations as compared to non-Indigenous Canadians.

In conclusion, this study will assess the wellbeing gaps between Indigenous and non-Indigenous Peoples in Canada through use of the life satisfaction measure. More focus will be given to victimization and discrimination than is common in the life satisfaction literature. This study will contribute to the ongoing project of analyzing and dismantling the colonial aspects of Canadian society by highlighting where Indigenous Peoples continue to be disadvantaged vis-à-vis their non-Indigenous counterparts and explore policy areas which offer the greatest potential returns to Indigenous wellbeing outcomes.

CHAPTER 3 DATA

Data Set

The data set used in this project is the Statistics Canada General Social Survey Cycle 28 (GSS). This survey was administered in 2014 to a representative sample of the Canadian population aged 15 and over living off-reserve. This survey was primarily conducted over telephone, and so the sample is restricted to households with a listed telephone number (~99% of Canadian households). The total number of households within the scope of the survey was 62 674, but only 33 127 usable responses were obtained. This dataset was chosen because it measures the factors commonly associated with life satisfaction, as well as some other factors such as victimization, discrimination and community belonging.

Sample

In order that the specific differences between the Indigenous and non-Indigenous population could be measured without possible contamination from immigrant effects in the non-Indigenous sample, all responses from respondents not born in Canada were dropped from the sample (~31% of the initial sample). The sample was then divided according to Indigenous identity as determined from responses to the following question: "Are you an Aboriginal person, that is, First Nations, Métis or Inuk (Inuit)? First Nations includes Status and Non-Status Indians." (Statistics Canada, 2017). Respondents answering "yes" were recoded into the Indigenous sample, while respondents answering "no" were recoded into the non-Indigenous sample. Non-responses to the Indigenous identity question were dropped from the sample.

After data cleaning, the Indigenous sample has 1 064 observations and the non-Indigenous Sample has 23 070 observations. Responses were weighted using the survey weights provided by Statistics Canada with the dataset, which means that these values can be interpreted as estimates of the wellbeing of these populations. Calculations and data cleaning were carried out using STATA 15 IC. Linear regression models are proposed in the following section, but alternative non-linear models are also attempted due to potential validity and sensitivity issues with an 11-point life satisfaction scale.[1]

Model

The functional form of the regression was chosen to reflect estimated life satisfaction models commonly found in the literature. In addition to the common measured correlates of life satisfaction, mental health and other novel variables of interest are included in the regression estimation.

$$
\begin{aligned}
Lifesatisfaction_i &= \beta_0 + \beta_1 i.female_i + \boldsymbol{\beta}_{2-7} i.age_i + \beta_8 i.married_i + \beta_9 i.divorced_i \\
&+ \beta_{10} health_i + \beta_{11} mentalhealth_i + \beta_{12} householdincome_i \\
&+ \beta_{13} equivalenthouseholdsize_i + \beta_{14} i.familytrust_i \\
&+ \beta_{15} i.socialsupport_i + \beta_{16} i.employed_i + \beta_{17} i.confidencepolice_i \\
&+ \beta_{18} overcrowding + \beta_{19} i.childlrg_i + \beta_{20} i.victim_i \\
&+ \beta_{21} communitybelonging_i + \beta_{22} i.discrimination_i + \varepsilon_i
\end{aligned}
$$

[1] This involved categorizing responses to life satisfaction as either low or high as recommended in Deiner et al. (2013). No major discrepancies were found between the non-linear and linear models, so the linear model was chosen for intuition's sake. Please refer to Appendix C for the alternative models and results.

Dependent Variable

The dependent variable of interest to this study is reported life satisfaction. Since this variable is continuous over the integer range 0-10, this allows for the use of an ordinary least squares regression. It should be noted here that the use of a linear model assumes both the ordinality and the cardinality of life satisfaction responses. While the ordinality assumption, where, for example, 6 is always greater than 5, is not very problematic, I am making a rather strong assumption that cardinality also holds. That is, using a linear model entails the explicit assumption that the difference between the life satisfaction values of 5 and 6 is the same as the difference between values of 8 and 9, for example. This is most likely not true, but a linear model appears to be the best fit for the data, as the findings are compared to the literature. I encourage the reader to check for themselves, as I also estimated what was thought to be the best non-linear models to fit this data, and the results are presented in Appendix 3. All main and alternative models were estimated with robust standard errors.

Non-responses to the life satisfaction question were dropped from the sample.

Explanatory Variables

The following covariates were utilized so as to replicate the model of Barrington-Leigh and Sloman (2016) where possible. Additional variables were added to gain a novel understanding of how victimization, discrimination and being a ward of the state as a child are related to the life satisfaction of Indigenous Peoples in Canada. Unless otherwise stated, non-responses to any of the following survey questions/variables were dropped from all samples.

Gender

A female dummy variable is included because a positive correlation between being female and life satisfaction has been found elsewhere (Helliwell et al. 2009). In addition, separate regression estimates were calculated for both a females and male sample, in Appendix 2 Tables 4 and 5. In the Indigenous and non-Indigenous samples, the female dummy variable is interacted with all other variables to test for differences in response to life satisfaction based on gender.

Age

Age is included in the model because life satisfaction has been found to vary with age in other studies (Barrington-Leigh and Sloman 2016; Helliwell et al. 2009). These studies have found life satisfaction to decrease with age until around age 40, and then increase into retirement age. In this study, age categories are utilized to measure the impact of age on life satisfaction, where the base case for the age dummy variables are respondents aged 45-54 (average age for the pooled sample).

Marital Status

Being married has been found to be positively correlated with life satisfaction as compared to unattached or divorced/widowed/separated individuals (Barrington-Leigh and Sloman 2016; Helliwell et al. 2009). This possibly has to do with the wellbeing benefit of marriage, or assortative mating. Dummy variables are included in this model to indicate married or divorced/widowed/separated status as compared to unattached individuals.

Health

Life satisfaction is expected to be significantly correlated with health and indeed, this expectation is supported in the literature (Dolan and White 2007; Barrington-Leigh and Sloman 2016; Helliwell et al. 2009). Self-reported general health is the health variable used in this model. Respondents rated their health on a 5-point scale ranging from poor, fair, good, very good, to excellent health. This variable was recoded in the interests of scaling so that the health responses occur on equal intervals between 0-1 (0-poor, 0.25-fair, …, 1-excellent).

Self-reported mental health is also included in this model to capture emotional wellbeing and the impact of mental health disorders. Mental health is rated using the same scheme as general health and this variable was also rescaled between 0-1.

Household Income and Conditions

Household income is predicted to have a significantly positive association with life satisfaction as has been established in the literature (Helliwell et al. 2009; Barrington-Leigh and Sloman 2016). Household income is measured in the dataset using categorical variables. These categories were preserved, and household income can take the values of 0-20 000, 20 000 – 40 000, etc. to the highest measured value of greater than 140 000. The modal household income of the pooled sample, 20 000 - 40 000 is taken as the base case in the estimations.

Due to the significant non-response rate to the household income question(~30% in the Indigenous sample, ~20% in the non-Indigenous sample), non-responses were recoded to the sample mean conditional on Indigenous/non-Indigenous identity, which is

the procedure utilized by Barrington-Leigh and Sloman (2016)[2]. Missing responses in the Indigenous sample were recoded to the 40 000 – 60 000 category, while missing responses in the non-Indigenous sample were recoded to the 60 000 – 80 000 category.

In order to scale household income for equivalent persons while preserving the categorical form of the income responses, an equivalent household size variable was introduced. this variable takes the form of the inverse of the square root of household size in order to capture the returns to scale present in multiple member households.

An additional variable is also included to measure the relationship of overcrowding with life satisfaction. The dummy variable takes the value 1 if a respondent reports 6 or more individuals living in their household and 0 otherwise. While a more precise indicator for overcrowding would be more informative, the dataset only offers a variable where the greatest household-size-response is 6 or more. It is expected that overcrowding would relate negatively to life satisfaction.

Social Support

Social support is found to be positively and significantly correlated with life satisfaction (Helliwell et al. 2009). Building on this finding, Barrington-Leigh and Sloman (2016) decompose social support into family and friend dimensions. The best proxies for these measures available in the 2014 GSS are family trust and number of close friends. Family trust measures responses to the question: "How much do you trust

[2] As an additional robustness check, regression estimates were calculated where respondents with missing household income values were dropped from both samples. These results are presented in Appendix 3 but do not differ significantly from the samples where these observations were preserved. As income is not a particular focus of this study, I felt it was important to preserve the socialization/discrimination data from the respondents with unreported income.

each of the following groups of people: people in your family?" on a 5-point scale ranging from "cannot be trusted at all" to "can be trusted a lot" (Statistics Canada 2017). These responses were rescaled to a dummy variable which takes the value 1 if the respondent reports that their family members can be trusted a lot, and 0 otherwise. Intuitively, one would expect that families which offer greater social support are more trustworthy, which should be positively related to life satisfaction.

The support of friends is measured in the GSS 2014 via responses to the question: "How many relatives and friends do you have who you feel close to, that is, who you feel at ease with, can talk to about what is on your mind, or call on for help? Do not include those who live with you" (Statistics Canada 2017). Responses range from 0-200. It should be noted here that it is not possible to isolate the specific correlation of the support of close friends on life satisfaction from relatives. This variable is recoded into a dummy variable in this model, where social support takes the value of 1 if a person reports 5 or more close contacts, and 0 otherwise. This cut-off point was chosen based on the findings of Kirmayer et al. (2000), who found that having fewer than 5 close friends or relatives was a risk factor associated with psychological distress for the James Bay Cree.

Labour Force Status

Labour force status is included in this model because of the significant correlations expected and found between employment and life satisfaction, mainly that unemployment is negatively correlated with life satisfaction beyond the effect of lost income (Barrington-Leigh and Sloman 2016). The GSS 2014 does not offer an ideal labour force status indicator, however. The best measurement available is whether a respondent worked in the last week. In this model, employed takes a value of 1 if

respondent worked in the last week, and 0 otherwise. The effect of this variable is predicted to be somewhat ambiguous in the full age-range of the sample, as the life satisfaction of employed people are compared against students, the unemployed, retirees and others out of the labour force. While unemployment is expected to relate negatively with life satisfaction as compared to being employed, student status, retirement, and being out of the labour force are predicted to improve life satisfaction as compared to being employed. Additionally, employment for women can be related to higher levels of stress and therefore lower life satisfaction as compared to employed men as women tend to be the primary care-provider for children and perform a disproportionate amount of other household duties.

To better estimate the relationship of employment with life satisfaction, an additional regression estimation was performed that restricted the samples of both groups to those of working age (25-64). These results are presented in Appendix 3.

Institutional Confidence

Barrington-Leigh and Sloman (2016) include two measures of institutional trust in their model, concurrent with findings in the literature that there is a negative correlation between life satisfaction and perceived corruption in business and government (Helliwell et al. 2009). Similar measures of institutional trust are not available in the 2014 GSS, but there is a variable which measure a respondent's confidence in police, which is included in this model. I must concede that this measure is not a precise indicator of perceived corruption in government as it is mediated by an individual's relationship with the justice system and local law enforcement.

Confidence in police is measured from responses to the question: “How much confidence do you have in the police? Is it - ?” where possible responses are “no confidence at all”, “not very much confidence”, “some confidence”, and “a great deal of confidence” (Statistics Canada 2017). The responses are rescaled to a dummy variable which takes the value 1 if a respondent answers “a great deal of confidence”, and 0 otherwise. The intuition here is that people who have greater confidence in police should experience greater life satisfaction than those with less trust in the police.

The previous variables follow the general life satisfaction model as established in the literature. Now we will turn to those which are more novel to the subjective wellbeing literature and the focus of this study.

Legal Responsibility of the Government as a Child

An indicator variable, *childlrg,* is included in the model which takes the value 1 if a respondent reports ever being the legal responsibility of the government as a child (LRG), and 0 otherwise. This variable is included because of the ongoing crisis in the overrepresentation of Indigenous youth in foster care. The impact to life satisfaction of having been LRG is predicted to be negative, as this represents a way in which Indigenous children have often been removed from their culture, communities, and families in ways which some have considered strikingly similar to the mandatory attendance of residential schooling (K. Nelson 2018). This issue is also policy relevant, as Bill C-92 is a newly-proposed policy to cede control of the child welfare system to First Nations and Indigenous groups so that they may look after their own vulnerable children in a culturally and community conscious way (Government of Canada 2019; Tasker 2019).

Victimization

Victimization is included as one of the main variables of interest in this study, because of the higher prevalence of crime perpetrated against Indigenous Peoples in Canada (Government of Canada 2010; Brzozowski, Taylor-Butts, and Johnson 2006). Central to this is the issue of missing and murdered Indigenous women where there is a documented unwillingness on behalf of the RCMP to investigate missing or murdered women cases when the victim is Indigenous (Rosner 2016). In this study, the impact of victimization on life satisfaction is measured using a dummy variable which takes the value 1 if a respondent answered one or more to the following question: "Number of victimizations in the past 12 months? Excludes spousal/partner/ex-spousal/ex-partner abuse" (Statistics Canada 2017).

Discrimination and Community Belonging

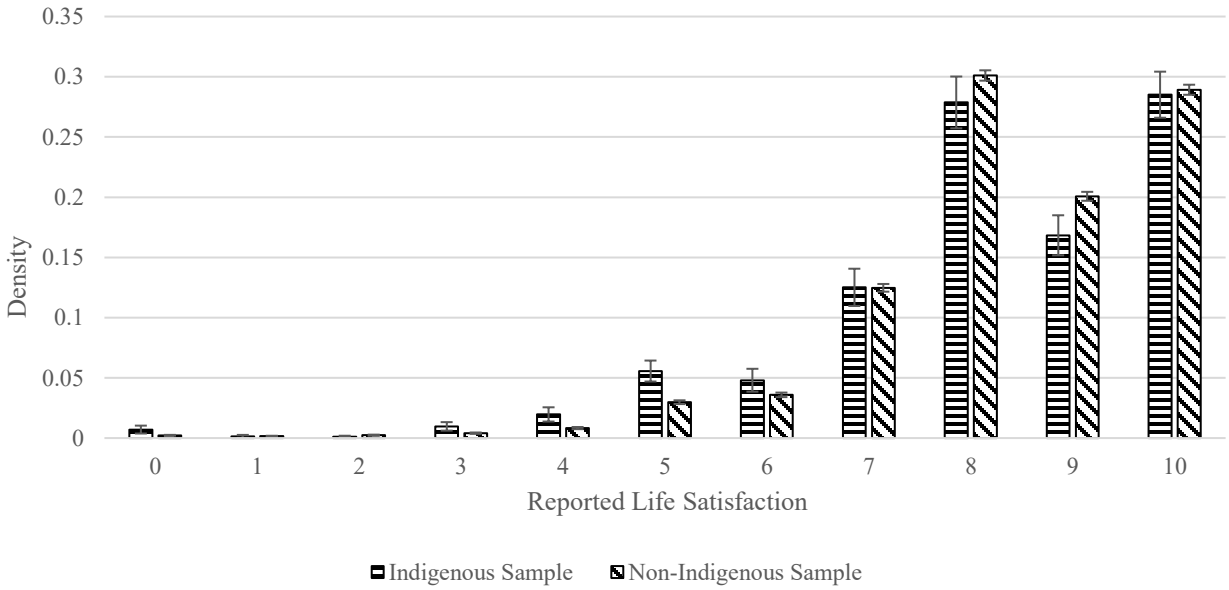
Discrimination is another main variable of interest to this study, because of how it differentially impacts Indigenous Peoples in Canada. As was explained in the literature review discrimination has been central to many colonial practices of Canada towards Indigenous Peoples and has proven negative impacts to their wellbeing. According to Daley et al. (2018), the impact of discrimination is mediated by an individual's sense of belonging to their community. As such, this study includes a dummy variable which indicates if a respondent has been a victim of discrimination in the past 5 years and another dummy variable which indicates if a respondent feels a somewhat or very strong sense of belonging to their local community.

CHAPTER 4 DESCRIPTIVE STATISTICS

The following figures provide a brief overview of the wellbeing gaps between off-reserve Indigenous and non-Indigenous Peoples (born in Canada) as measured in the 2014 General Social Survey (Statistics Canada 2017). Table 9 in Appendix A offers further estimates of the characteristics of the two populations described in the preceding section.

Comparing the density of life satisfaction responses between these two groups (Figure 1) one can see that while these groups follow similar distributions, non-Indigenous respondents appear slightly more likely on average to fall into the 8-9-10 categories, while Indigenous respondents appear slightly more likely on average to fall into the 0 and 3-4-5-6 categories. Given the standard errors, it does not appear that any of these differences are statistically significant, however.

Figure 1 Weighted Histogram of Life Satisfaction: Indigenous and Non-Indigenous Sample



Statistics Canada. 2017. General Social Survey (GSS), 2014, Cycle 28: Victimization (Main File)

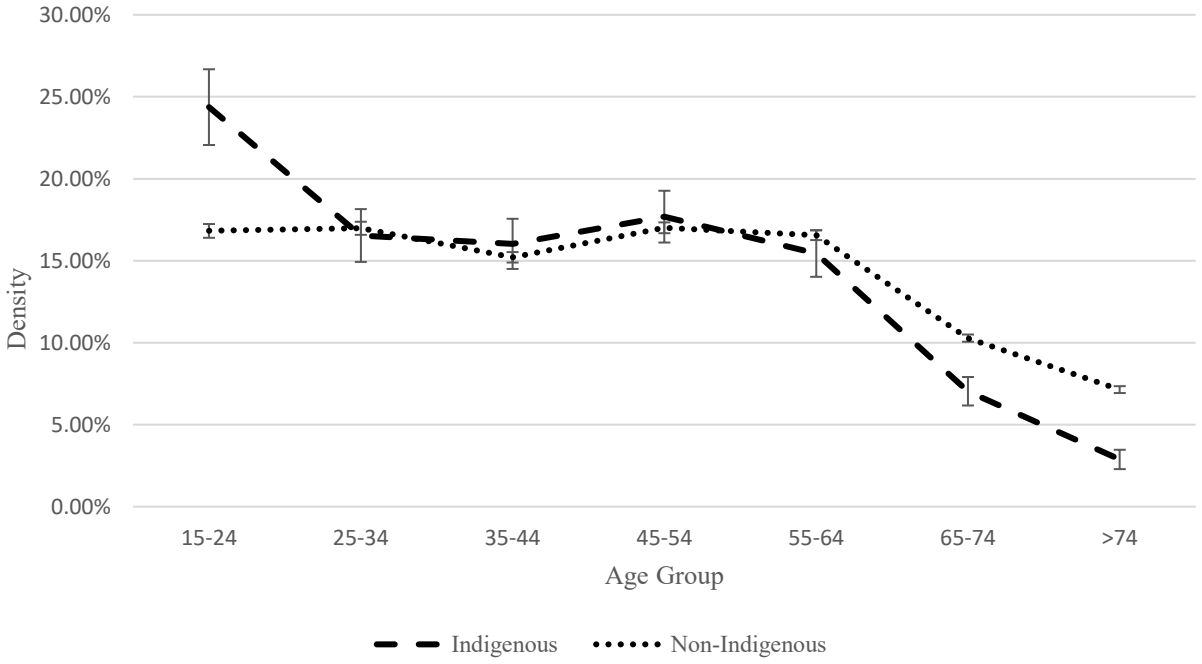
When evaluated at the mean, Indigenous respondents are more likely to report lower life satisfaction than non-Indigenous respondents, even after accounting for standard error. The margin of difference does not appear to be very much, with the Indigenous mean life satisfaction at 7.15 and the corresponding non-Indigenous values at 7.40. One might be led to believe that this difference is negligible, as both values round to the same response category. It is important to emphasize that a difference of this size across more than 24 000 respondents indicates a potential systematic association between Indigenous identity and life satisfaction.

The descriptive statistics portrayed in Appendix A offer a glimpse into the estimated composition of these populations. A comparison of age densities shows a distributional difference between samples. Indigenous Peoples in Canada are much more likely to be younger than their non-Indigenous counterparts, and much less likely to be older. This is evidence of the difference in birth rates and life expectancy between Indigenous and non-Indigenous Peoples in Canada, which can be attributed to inequalities in morbidity, general health and economic wellbeing. Figure 2 presents a visual comparison of estimated age density between Indigenous and non-Indigenous Populations.

The differences in the frequency distribution of age between these two populations are expected to have an ambiguous impact on the relative average life satisfaction of these two populations. One would normally expect that life satisfaction

decreases with age until around age 40 and then increases with age after that point, resulting in a U-shaped relationship between life satisfaction and age. While the Indigenous population has greater density around the lowest ages than the non-Indigenous population, it has lower density around the eldest ages.

Figure 2 Estimated Age Density of Indigenous and Non-Indigenous Populations



Statistics Canada. 2017. General Social Survey (GSS), 2014, Cycle 28: Victimization (Main File)

Indigenous individuals are more likely to report poor health (6.04 % vs 2.49%), fair health (9.20% vs 7.44%), and good health (32.42% vs 26.19%) while non-Indigenous individuals are more likely to report very good health (36.14% vs 28.72%) or excellent health (27.74% vs 23.61%). The frequency distributions of mental health responses are much closer between these samples, where statistically equal proportions of Indigenous and non-Indigenous respondents report poor, good and very good mental health. Indigenous respondents are more likely to report fair mental health on average (8.79% vs

4.35%), while non-Indigenous respondents are more likely to report excellent mental health on average (39.68% vs 34.58%). One would expect from a comparison of these health-response frequency distributions that Indigenous respondents will report lower life satisfaction on average.

The household income and employment rate of Indigenous individuals appears to be significantly lower, on average, than that of non-Indigenous individuals. Given these relative frequency distributions, one would expect that Indigenous respondents would report lower life satisfaction on average. Indigenous respondents report larger average household sizes (2.60 vs 2.35) and are also more likely to report overcrowding than non-Indigenous respondents, which is 6 or more people in the same household (8.83% and 3.73%, respectively). This is also expected to have a differentially negative relation to the average relative life satisfaction in the Indigenous population.

In terms of social life, Indigenous respondents appear to experience less social support, are less likely to be married and less likely to trust family members “a lot” than non-Indigenous respondents, on average. The difference in theses frequencies between population groups are likely to mean that the average life satisfaction of Indigenous respondents will be lower than non-Indigenous respondents.

Institutional confidence, as measured approximately as confidence in police, highlights another difference between these populations. The proportion of Indigenous respondents who report a great deal of confidence in police is 36.11% while the proportion of non-Indigenous respondents who report the same is 45.10%. As institutional confidence is expected to be positively associated with life satisfaction, this

points towards another potential disparity in average life satisfaction between these populations based upon the distribution of these responses.

Finally, the last category of variables measures experiences that are of novel interest in this study. Having been the legal responsibility of the government as a child is estimated to be nearly four times as prevalent in the Indigenous population (7.82%) than the non-Indigenous population (1.92%). Even if this rate was the same for both populations, one would expect this to have a greater differential impact on Indigenous respondents because of the importance of cultural and familial continuity as a mediator against colonialism and negative wellbeing outcomes. In other words, I would expect the responsiveness of the life satisfaction of Indigenous individuals to having been a ward of the state to be more negative then non-Indigenous individuals. Considering both the expected differences in responsiveness and the distributional differences between populations groups, this is expected to result in relatively lower average life satisfaction for Indigenous Peoples.

There is a significantly larger proportion of Indigenous Peoples who report at least one victimization in the past year than non-Indigenous Peoples, 11.30% and 7.34% respectively. This is expected to have a negative distributional relationship to the average life satisfaction of Indigenous Peoples.

Indigenous respondents are more likely to report 1 or more incidents of discrimination against them in the past 5 years than non-Indigenous respondents, 20.51% and 11.10% respectively. Also, a mediator against the negative effects of discrimination, somewhat or very strong community belonging, is distributed similarly for both populations. As such, the expectation is that Indigenous respondents will have lesser

relative life satisfaction related to the differences in the distributed frequency of discrimination between populations, although it may be the case that the relatively high rate of strong community belonging may mediate the impact of discrimination on life satisfaction for both population groups.

It seems that being a victim of a discriminatory act could be included in both the victimization and discrimination measures. My sense is that the discrimination measure also covers more subtle forms of discrimination which may not necessarily result in an individual reporting the incident as a victimization, given its higher prevalence in both population groups. This is pure conjecture, however, as the distinction between discrimination and victimization in this survey is mostly a subjective one.

These simple statistics highlight that while the life satisfaction of both groups appear to follow similar patterns, mean life satisfaction and wellbeing as measured by other indicators appear to significantly diverge and I would expect from these findings and the literature that Indigenous Peoples ought to experience a lower sense of life satisfaction than their non-Indigenous counterparts.

CHAPTER 5 ESTIMATION RESULTS

The correlates of life satisfaction were estimated in four different ways using OLS with robust standard errors. The first and second models are a replication of the standard life satisfaction model without and with mental health, respectively:

$$
\begin{aligned}
Lifesatisfaction_i &= \beta_0 + \beta_1 i.female_i + \beta_{2-7} i.age_i + \beta_8 i.married_i + \beta_9 i.divorced_i \\
&+ \beta_{10} health_i + \boldsymbol{\beta_{11} mentalhealth_i} \textbf{(Model 2 only)} \\
&+ \beta_{12} householdincome_i + \beta_{13} equivalenthouseholdsize_i \\
&+ \beta_{14} i.familytrust_i + \beta_{15} i.socialsupport_i + \beta_{16} i.employed_i \\
&+ \beta_{17} i.confidencepolice_i + \beta_{18} overcrowding + \varepsilon_i
\end{aligned}
$$

The third and fourth models add novel variables of interest to the standard model, again without and with mental health, respectively:

$$
\begin{aligned}
Lifesatisfaction_i &= \beta_0 + \beta_1 i.female_i + \beta_{2-7} i.age_i + \beta_8 i.married_i + \beta_9 i.divorced_i \\
&+ \beta_{10} health_i + \boldsymbol{\beta_{11} mentalhealth_i} \textbf{(Model 4 only)} \\
&+ \beta_{12} householdincome_i + \beta_{13} equivalenthouseholdsize_i \\
&+ \beta_{14} i.familytrust_i + \beta_{15} i.socialsupport_i + \beta_{16} i.employed_i \\
&+ \beta_{17} i.confidencepolice_i + \beta_{18} overcrowding + \boldsymbol{\beta_{19} i.childlrg_i} \\
&+ \boldsymbol{\beta_{20} i.victim_i} + \boldsymbol{\beta_{21} communitybelonging_i} \\
&+ \boldsymbol{\beta_{22} i.discrimination_i} + \varepsilon_i
\end{aligned}
$$

Multiple models are utilized so that the change in magnitude and significance of the relationships between different co-variates and life satisfaction can be observed as more variables are added to the model. It is common practice in the life satisfaction literature to leave mental health out of the regression calculations, presumably because of its strong association with life satisfaction and potential to crowd out the impact of other wellbeing measures, such as income and social context (Barrington-Leigh and Sloman 2016; Helliwell et al. 2009). As this seems to be an established best practice, models one and three are reported without mental health.

The four models were applied to the pooled sample, the Indigenous sample, the non-Indigenous sample, the female sample, and the male sample separately. The pooled sample is the main sample of interest to this study and includes Indigenous identity interaction terms to test if the difference in coefficients between population groups are statistically significant. The Indigenous/non-Indigenous samples were included with female interaction terms to test the significance of the gendered differences in response to life satisfaction within the population groups. The female/male samples were included with Indigenous identity interaction terms to further test the significance of the differences in responsiveness to life satisfaction between Indigenous and non-Indigenous members of each gender separately.

Appendix B lists tables of results for the 4 models across 5 samples. The rest of this section will follow with a discussion of these results.

Indigenous Identity

In all models, there is no significant association between Indigenous identity and life satisfaction. Barrington-Leigh and Sloman (2016) find that Indigenous respondents report significantly lower average life satisfaction, although I do not find it in my attempted replication of their model, model 1. This indicates that the relationship of being Indigenous with reported life satisfaction is likely channeled through the other variables included in the models.

Gender

The coefficient associated with the Indigenous identity interacted female dummy variable is significantly positive in the pooled sample in models 1 through 3. These coefficients are presented in Table 1. I would expect from the literature that being female would be significantly positive for both Indigenous and non-Indigenous respondents, due to the hypothesis that there is perhaps a smaller gap between life circumstances and aspirations for females than males in Canada.

Table 1 Female Coefficients from Pooled Sample[3]

	Model 1	*Model 2*	*Model 3*	*Model 4*
female	-0.0198	0.0130	-0.0059	0.0224
	(0.0252)	(0.0240)	(0.0249)	(0.0238)
*Indigenous*female*	0.273**	0.215*	0.259**	0.200
	(0.131)	(0.127)	(0.131)	(0.128)

[3] Robust standard errors in parentheses, * indicates p-value < 0.10, ** indicates p-value < 0.05, *** indicates a p-value < 0.01.

When including mental health in the regression equations, the Indigenous*female coefficient is reduced. This provides little evidence for the practice of not including mental health in the life satisfaction models commonly featured in the literature, because including mental health only changes the magnitude of the coefficients by approximately 0.06.

It is interesting that the female coefficient is not significantly different from zero for non-Indigenous respondents, because in the international literature being female is widely associated with a positive life-satisfaction-coefficient (Helliwell et al. 2009; Helliwell, Layard, and Sachs 2012). Perhaps this indicates that based upon the relatively different life circumstances for Indigenous Peoples in Canada (different age distribution, generally lower income, poorer health, greater incidence of victimization/discrimination), the gender coefficient is capturing an altogether different relationship to life satisfaction in the Indigenous population than in the non-Indigenous population.

Age

In the pooled sample, compared to the base group who are 45 – 54 years of age, those who are 15-24 or 55 and older are more likely to report a higher life satisfaction on average, with the 75 and older group reporting the highest life satisfaction across all 4 models. Those who are 25 – 44 report life satisfaction values which are not significantly different from the base group, on average. The magnitude of coefficients associated with ages older than the base category decreases as mental health and having been the legal responsibility of the government, victimization, discrimination and community belonging

are added to the model. The difference in the age-group coefficients between identity groups is not significantly different from zero. This suggests that a similar U-shaped relationship of age with life satisfaction is observed among both population groups, which coincides with the findings of Barrington-Leigh and Sloman (2016).

Another finding related to age is that in Table 12, there are some significant differences in the responsiveness of age to life satisfaction between males and females in the non-Indigenous population. On average, non-Indigenous females who are between 55 and 64 report ~0.2 lower life satisfaction as compared to those aged 45-54 than males across the four models, all other variables held constant.

Marital Status

As was expected from the literature, those who are married report significantly higher life satisfaction on average than unattached individuals, all other variables held constant. There was no significant difference in terms of the coefficient associated with marriage between the Indigenous and non-Indigenous populations. Having been divorced separated or widowed is significant at the 10% level in the models without the novel variables to this study, but the magnitudes are quite small. There is no significant difference between Indigenous and non-Indigenous respondents in terms of the responsiveness of having been divorced/separated/widowed to life satisfaction. These results are displayed in Table 2.

Table 2 Marital Status Coefficients from Pooled Sample[4]

	Model 1	*Model 2*	*Model 3*	*Model 4*
married	0.582***	0.533***	0.561***	0.517***
	(0.0506)	(0.0484)	(0.0497)	(0.0477)
*Indigenous**	0.0018	0.0165	-0.0261	0.0073
married	(0.185)	(0.174)	(0.186)	(0.174)
divorced	0.0954*	0.0935*	0.0777	0.0783
	(0.0529)	(0.0508)	(0.0521)	(0.0501)
*Indigenous**	0.0253	0.117	0.0194	0.111
divorced	(0.279)	(0.251)	(0.276)	(0.248)

When looking at the Indigenous sample (Table 11), divorce, separation or having been widowed as compared to being single is associated with a significantly lower life satisfaction for women than men. This is a surprising finding, but perhaps points to the burden of child rearing duties being disproportionately placed upon women in the case of a divorce or separation, or the loss of access to resources. Another finding related to this observation is in Table 14, the male sample. Indigenous males are associated with a significantly more positive divorce coefficient in the models 2 and 4 than non-Indigenous males.

[4] Robust standard errors in parentheses, * indicates p-value < 0.10, ** indicates p-value < 0.05, *** indicates a p-value < 0.01.

General and Mental Health

General and mental health have, not surprisingly, the strongest associations with life satisfaction. Table 3 lists the coefficients for each of these variables in each of the models. The association of either mental or general health with life satisfaction is not significantly different between the Indigenous and non-Indigenous populations. The coefficients can be interpreted as the difference in life satisfaction between a respondent who reports excellent health and a respondent who reports poor health. For example, on average, respondents who report excellent mental health in Model 4 report a life satisfaction that is 1.88 higher than respondents who report poor mental health. As these variables were scaled as linear variables with categories falling on equal intervals, the differences between respondents who report poor and good health, for example, can also be approximated from these reported coefficients. Using the Model 4 again, 1/2 of the magnitude associated with mental health, around 0.64, is the approximate difference in reported life satisfaction between respondents who report poor and good mental health, on average, all other variables held constant.

Notice that as mental health is added to the model in Model 2 and 4, the coefficient associated with general health is reduced by nearly half for both samples. This makes sense intuitively because of the interdependence of general and mental health. As was predicted in the literature, mental health exhibits the strongest association with life satisfaction out of all covariates.

Table 3 General and Mental Health Status Coefficients from Pooled Sample[5]

	Model 1	*Model 2*	*Model 3*	*Model 4*
General Health	2.077*** (0.0612)	1.172*** (0.0663)	1.980*** (0.0602)	1.127*** (0.0654)
Indigenous G. Health*	-0.113 (0.276)	-0.149 (0.298)	-0.092 (0.273)	-0.121 (0.291)
Mental Health	NA	1.959*** (0.0775)	NA	1.884*** (0.0756)
Indigenous M. Health*	NA	0.203 (0.296)	NA	0.197 (0.293)

It appears that adding mental health to the model significantly reduces the coefficient for general health, while slightly reducing the explanatory power of other variables. As most of the loss in explanatory power for the variables besides health is quite small, there is not a large cost associated with including mental health in the models. It appears to reduce the error term more than anything else, given the relative goodness of fit for models 2 and 4 as compared to models 1 and 3. The addition of mental health was predicted to provide further insight into the impacts of colonialism in Canada on Indigenous Peoples because the traumatic experiences of colonialism, such as

[5] Robust standard errors in parentheses, * indicates p-value < 0.10, ** indicates p-value < 0.05, *** indicates a p-value < 0.01.

residential schooling and the losses of friends, family, and culture, are shared between generations. It is important to repeat that although I expected differently, the coefficients associated with mental health are not significantly different between the population groups.

Some other findings related to health are quite interesting. In the Indigenous sample (Table 11), the coefficient for general health is significantly higher for women than men. In the non-Indigenous sample (Table 12), however, the coefficient for mental health is significantly higher for women than men. General and mental health coefficients are not significantly different between Indigenous and non-Indigenous females (Table 13). The general health coefficient is significantly lower for Indigenous males than non-Indigenous males, while the mental health coefficient is significantly higher for Indigenous males than non-Indigenous males (Table 14). To summarize, the responsiveness of the general health of Indigenous males to life satisfaction is lower than Indigenous women and non-Indigenous males while the responsiveness of the mental health of Indigenous males is higher than non-Indigenous males. Non-Indigenous males therefore report a lower mental health coefficient than Indigenous males and non-Indigenous females. The responsiveness of the health of females in both populations to life satisfaction is statistically similar.

Income

In the pooled sample, the coefficients reflect a pattern of greater life satisfaction associated with higher incomes, with most of the significant coefficients in the greater than 120 000 categories. It appears that the addition of mental health to the models reduces the magnitude of the income coefficients but only by ~0.03. There is no

significant difference between Indigenous and non-Indigenous respondents in terms of income coefficients.

It is important to re-emphasize that these coefficients are potentially biased because a serious proportion of missing responses had to be imputed to the Indigenous/ non-Indigenous sample mean of household income (~30% of observations in the Indigenous sample and ~20% in the non-Indigenous sample). As a precaution, a comparison of the coefficients between samples with the imputed income values and samples where observations with missing income responses were omitted is included in Table 17. There were not any alarming differences in the household income or other coefficients associated with restricting the sample in this way, so I chose to preserve the data given by missing-income-observations in response to other questions.

Equivalent Household Size and Overcrowding

In the pooled sample, the coefficient associated with the inverse of equivalent household size was significant in models 3 and 4, where it took the values of 0.177 and 0.155 respectively. The difference in these coefficients between Indigenous and non-Indigenous persons is not significant. These positive coefficients mean that increasing household size is negatively related with life satisfaction. In the female sample (Table 13), the coefficients for this variable are also positively significant in models 3 and 4, meaning there is an inverse relationship between household size and life satisfaction for females. There was no significant difference between Indigenous and non-Indigenous females.

The coefficient associated with overcrowding is not significantly different from zero in the pooled sample. It is, however, significantly positive for males in the Indigenous sample (Table 11) in models 2 and 4, while significantly negative for females in all models in the same sample. For example, in model 4, while being a member of a household of 6 or more is associated with 1.023 lower life satisfaction for Indigenous women on average, it is associated with 0.618 higher life satisfaction for Indigenous men on average, all other variables held constant. While one might expect overcrowding to be negatively associated with the life satisfaction of women due to extra strain and stress related to household work, one wouldn't expect a positive coefficient among the males. It is also interesting that these coefficients are not significant in the non-Indigenous sample. It can also be observed that while the coefficient for overcrowding is insignificant in the female sample (Table 13), interacting it with Indigenous identity produces significantly negative coefficients. Also, in the male sample (Table 14), the interaction term for Indigenous identity and overcrowding is significantly positive in models 2 and 4, while the un-interacted term is not significantly different from zero in all models. Taken together, these findings indicate that the responsiveness of the life satisfaction of Indigenous females to overcrowding is negative and more negative than Indigenous men and non-Indigenous women, while the responsiveness for Indigenous males is positive and more positive than Indigenous women and non-Indigenous men.

Social Supports

The next two variables of interest measure the correlation of within home family trust and out of the home social support with life satisfaction, and the coefficients are

represented in Table 4. The family trust coefficient is significantly positive, and not significantly different between Indigenous and non-Indigenous respondents.

Table 4 Family Trust and Social Support Coefficients from Pooled Sample[6]

	Model 1	*Model 2*	*Model 3*	*Model 4*
Family Trust	0.551***	0.433***	0.488***	0.385***
	(0.0519)	(0.0482)	(0.0505)	(0.0474)
*Indigenous * Family Trust*	-0.176	-0.123	-0.173	-0.107
	(0.206)	(0.207)	(0.215)	(0.217)
Social Support	0.236***	0.184***	0.192***	0.147***
	(0.0359)	(0.0340)	(0.0356)	(0.0340)
*Indigenous * Social Support*	0.314*	0.291*	0.284*	0.276*
	(0.176)	(0.163)	(0.171)	(0.159)

Out of the home social support is also significantly positive in the pooled sample. When out of home social support is interacted with Indigenous identity, however, the result is a positive coefficient across all 4 models at the 10% significance level. On average, Indigenous respondents reporting 5 or more close friendships outside of the home experience ~ 0.30 higher life satisfaction than do similar non-Indigenous

[6] Robust standard errors in parentheses, * indicates p-value < 0.10, ** indicates p-value < 0.05, *** indicates a p-value < 0.01.

respondents, all other variables held constant. Again, this likely speaks to the difference in life circumstances between the Indigenous and non-Indigenous populations, wherein social support has a different underlying relationship with life satisfaction for the Indigenous population than the non-Indigenous population. An observed diminution is exhibited in the coefficients for both social support measures as more variables are added to the model.

Barrington-Leigh and Sloman (2016) also found that the off-reserve Indigenous sample had a significantly more positive coefficient for social support than the general sample, although they also found a similar result for family support which was not found here.

Employment

The coefficients for the employment indicator, due to a lack of a better labour force status question in the 2014 GSS, do not offer much meaningful information. The best that this coefficient can measure is the difference between employment and non-employment, whether the latter is related to unemployment, being out of the labour market, being a student, or retirement. These coefficients are estimated to be slightly positive in the pooled sample, where having been employed in the last week is associated with approximately 0.1 higher life satisfaction in all four models. The difference in the employment coefficient between population groups is not different from zero.

To make the employment variable a bit more meaningful, an additional model was estimated where the sample was restricted to the working age, with results presented in Table 18. Even after doing so, the coefficient associated with employment increased

by a magnitude of only 0.03. I therefore decided to use the largest sample size possible and not restrict to the working age population.

Confidence in Police

The relationship of "a great deal" of confidence in police (CIP) and life satisfaction is positive across the four models. The estimated coefficients for the Indigenous population are nearly double that of the non-Indigenous population, except in model 3 where the coefficient is not significantly different from zero. This again points to the fact that given the differing life circumstances between the Indigenous and non-Indigenous populations, the underlying relationship between confidence in police and life satisfaction is significantly different. Table 5 shows the estimated coefficients for confidence in police.

Table 5 Confidence in Police Coefficients from Pooled Sample[7]

	Model 1	*Model 2*	*Model 3*	*Model 4*
Confidence in Police	0.322***	0.265***	0.269***	0.222***
	(0.0245)	(0.0238)	(0.0246)	(0.0241)
Indigenous CIP*	0.293**	0.270**	0.221	0.224*
	(0.133)	(0.129)	(0.136)	(0.132)

The Indigenous sample (Table 11) gives a further insight into the responsiveness of life satisfaction to CIP. The difference between males and females is significant in the

[7] Robust standard errors in parentheses, * indicates p-value < 0.10, ** indicates p-value < 0.05, *** indicates a p-value < 0.01.

models which include mental health, models 2 and 4, where females report a 0.409 and 0.491 lower coefficient than males, respectively.

Relationship with the police is of non-trivial importance to the life satisfaction of off -reserve Indigenous Peoples in Canada, and this is driven by males in the population. Those who are victims or are close to victims may feel dissatisfied with the level of attention that they perceive the police to give their cases, such as those affected by the high prevalence of missing and murdered Indigenous women in Canada. Another factor at play here may be that Indigenous persons are more likely to be profiled by police than are non-Indigenous persons and may feel discriminated against as a result. These factors can all have an impact on the confidence Indigenous males have in police.

Given the responsiveness of the life satisfaction of Indigenous Peoples to confidence in police and the comparatively low frequency of Indigenous respondents who report a lot of confidence in police, this may be an important channel through which to improve the wellbeing of Indigenous Peoples as compared to non-Indigenous people. Also, the gender disparity in the confidence in police coefficient warrants further research.

Legal Responsibility of the Government as a Child

As was noted in the descriptive statistics section, a much larger proportion of the Indigenous population was the legal responsibility of the government as a child (LRG) than the non-Indigenous population. Given this fact and the recognition that the representation of Indigenous youth in foster care in Canada is at crisis levels, I would expect the correlation of LRG on life satisfaction to be negative and of a greater

magnitude for the Indigenous population. Table 6 shows the LRG coefficients for both samples.

Table 6 Legal Responsibility of the Government as a Child Coefficients from Pooled Sample[8]

	Model 3	*Model 4*
LRG	0.112 (0.0934)	0.103 (0.0908)
*Indigenous*LRG*	0.156 (0.242)	0.171 (0.232)

As one can see, the correlation between LRG and life satisfaction is not significantly different from zero in the pooled sample, and the difference between populations groups is not significantly different from zero. It is likely that the insignificance of LRG is related to the small number of observations of people who reported LRG, as well as the potential for the impact of LRG to be channelled through other variables such as victimization and mental health over the time since leaving the care of the government. This is a surprising finding, as I would have thought that there would be negative effects on wellbeing associated with a troubled childhood. Given that the issue of overrepresentation of Indigenous youth in foster care is receiving public and policy attention, future research should specifically investigate the wellbeing-effects of LRG among greater sample sizes of individuals either currently or recently LRG.

[8] Robust standard errors in parentheses, * indicates p-value < 0.10, ** indicates p-value < 0.05, *** indicates a p-value < 0.01.

Victimization

Victimization is another indicator which was selected as a novel interest to this study and was found to be more frequent among the Indigenous population. While an estimated 11.30% of the Indigenous population reports one or more victimizations in the past year, only 7.34% of the non-Indigenous population reports the same. The coefficients associating victimization with life satisfaction are presented in Table 7.

In the pooled sample, the coefficient for victimization is significantly negative and diminishes slightly once mental health is added to the model. These coefficients are not significantly different between population groups. The data suggests that among the selected co-variates, the impact of victimization on life satisfaction does not vary systematically with Indigenous identity and the differing life circumstances which Indigenous identity entails in Canada. This is a surprising finding and is not what was expected.

Table 7 Victimization Coefficients for Pooled Sample[9]

	Model 3	*Model 4*
Victimization	-0.169***	-0.104*
	(0.0620)	(0.0569)
*Indigenous*Victimization*	-0.0224	-0.0317
	(0.227)	(0.219)

[9] Robust standard errors in parentheses, * indicates p-value < 0.10, ** indicates p-value < 0.05, *** indicates a p-value < 0.01.

One interesting result related to victimization and the non-Indigenous population is that it appears that the coefficient for victimization is not significantly different from zero for males in the population, and significantly more negative for females in the population. This points to the probable effect of victimization on life satisfaction being different for males than females, although the same result is not observed in the Indigenous population.

Discrimination and Community Belonging

The final two variables of interest to this study are discrimination and its mediator, community belonging. Table 8 presents these coefficients for both samples.

Those who report 1 or more incidents of discrimination within the last 5 years form a smaller relative proportion of the non-Indigenous population. On average, a non-Indigenous respondent who reports 1 or more incidents of discrimination against them in the last 5 years reports a 0.35 lower life satisfaction. When mental health is controlled for in the model, a non-Indigenous respondent reports a 0.27 lower life satisfaction. The difference between Indigenous and non-Indigenous respondents in terms of this coefficient is not significantly different from zero. This is again surprising, because it was expected that given the relative difference in life circumstances between population groups alongside the difference in the prevalence of discrimination, the impact would have been significantly more negative for the Indigenous population.

In terms of community belonging, respondents report a positive association between life satisfaction and a somewhat or very strong sense of belonging to the local

community. This coefficient is not significantly different between Indigenous and non-Indigenous respondents.

Table 8 Discrimination and Community Belonging Coefficients from Pooled Sample[10]

	Model 3	*Model 4*
Discrimination	-0.352***	-0.268***
	(0.0488)	(0.0462)
*Indigenous * Discrimination*	0.170	0.201
	(0.207)	(0.192)
Community Belonging	0.386***	0.350***
	(0.0328)	(0.0315)
*Indigenous * Community Belonging*	0.103	0.061
	(0.165)	(0.157)

[10] Robust standard errors in parentheses, * indicates p-value < 0.10, ** indicates p-value < 0.05, *** indicates a p-value < 0.01.

CHAPTER 6 CONCLUSION

This thesis offers an avenue for analyzing the wellbeing gaps between the Indigenous and non-Indigenous populations living in Canada. Life satisfaction was presented as a viable tool for doing so because it is a subjective measure which allows individuals to evaluate their life and emotional state in line with their personal goals and expectations. The subjective element of this evaluation process was highlighted as being especially critical for Indigenous Peoples who in the past have been violently oppressed by the paternalistic decisions of others about what was best for their wellbeing. This type of oppression still happens in the present, but there seems to be a growing recognition by Canadians of the sovereignty and self determination of Indigenous Peoples over their lands and what is best for their wellbeing as distinct peoples.

The regression equations proposed in this thesis built on the standard life satisfaction models of the literature to include indicators for victimizations, discrimination, and being the responsibility of the government as a child. While there are significant distributional differences in these indicators between the Indigenous and non-Indigenous populations, the association of these measures with life satisfaction were found to not be significantly different between the population groups. In other words, one cannot rule out that the relationship to life satisfaction of these novel variables is different between Indigenous and non-Indigenous respondents.

Another novel approach of this project to the standard life satisfaction model was to include mental health as an independent variable. This is commonly not done because of the strong association of mental health with subjective wellbeing measures and its potential to drown out the coefficients of other more economically or socially relevant

variables. This effect was observed, but the cost of including mental health was quite minor. Including mental health caused in general a slight reduction in the magnitude of the significant correlates of life satisfaction. It should be acknowledged that this did cause certain variables such as gender in the Indigenous population to become statistically insignificant, but this was due to them hovering right on the edge of the 10% significance level before the addition of mental health to the model.

Other findings from this project are nothing new to the life satisfaction literature. Being female in the Indigenous population is associated with a significantly more positive life satisfaction. Interestingly, this association was significantly more positive than the association of being female with life satisfaction in the non-Indigenous population. Being married was found in both populations to be positively and significantly associated with life satisfaction by similar magnitudes. Social support is positively associated with life satisfaction for both populations, although out-of-home social support is significantly more positive in the Indigenous population. Income coefficients followed expectations and were not significantly different between population groups. Confidence in police was positively associated with life satisfaction for both population groups, and the coefficient was found to be significantly more positive in the Indigenous population and for Indigenous males in particular.

This study was exploratory, due to the nature of the data and the concept of life satisfaction itself. It would be quite difficult to come up with a causal mechanism for life satisfaction in a dataset such as this one, but examining the distributions and association with life satisfaction of different social and economic indicators gives a snapshot of the relative wellbeing of the Indigenous population as compared to the non-Indigenous

population in Canada. In other words, although distinct policy prescriptions should not be offered based on the evidence presented in this thesis, general observations and areas for further research are presented and proposed.

One thing reflected in this thesis which features in the literature is the importance of social supports and community to building the resilience of Indigenous nations and communities against discriminatory wellbeing-effects. The life satisfaction gap between those with and without 5 or more close friends in the Indigenous population was nearly double the gap in the non-Indigenous population. This speaks perhaps to the different relative life circumstances between populations groups in that those who are less well-off receive more satisfaction from social relationships, but also reflect the findings of others that social connections may be uniquely important to Indigenous individuals as distinct Peoples (Bombay, Matheson, and Anisman 2010; Chandler and Lalonde 1998; Katz, Enns, and Kinew 2017; Kirmayer et al. 2000; S. E. Nelson and Wilson 2017).

Another aspect of living in Canada which was found to be significant in this project and is receiving attention by the federal government and the media is the relationship of Indigenous Peoples with the various police forces in Canada. Indigenous persons who have more confidence in police experience greater life satisfaction than Indigenous respondents who do not have this kind of confidence, all other variables held constant, and the gap between these two types is significantly wider in the Indigenous population than the non-Indigenous population. Relative life circumstances such as differences in income are a probable factor in the observed difference in the underlying relationship of confidence in police to life satisfaction. In Canada, however, we must also pay attention to the potentially discriminatory relationship of the police with Indigenous

Peoples, which has a long history stretching back to colonization. In other words, I am suggesting that a non-Indigenous person with similar life circumstances would still report a difference in the relationship of confidence in police to life satisfaction. This warrants further research, especially considering the missing and murdered Indigenous women crisis in Canada.

Related to the findings associated with confidence in police are the significant differences in the responsiveness of life satisfaction to life circumstances between males and females in the Indigenous population which are not reflected in the non-Indigenous population. The life satisfaction of Indigenous men is significantly more correlated with confidence in police. In the models which include mental health, having been divorced, separated or widowed as compared to being single is correlated with significantly higher life satisfaction for Indigenous men than Indigenous women. Another alarming finding is that while Indigenous men in overcrowding situations report higher life satisfaction than Indigenous women on average, the coefficient associated with overcrowding is negative for women and it is significantly more negative as compared to non-Indigenous females in similar situations. I do not want to suggest that changing norms and behaviour around gender roles should be the purview of government and policy, but these findings suggest that there is a potential for gendered wellbeing gaps among Indigenous Peoples which are not observed in the non-Indigenous population.

Something else which should perhaps receive attention from more of a data-centered standpoint is the measurement of income in the Indigenous population. Why are almost 30% of respondents not reporting their income? Barrington-Leigh and Sloman (2016) also report a significant non-response rate in the Indigenous population related to

income. It would be informative to see if this phenomenon is present in other datasets including Indigenous respondents as well and try to ascertain whether this is a result of an uneasiness in reporting income to a government agency or is perhaps related to something else.

This thesis attempted to offer an intuitive way of addressing the wellbeing gaps between Indigenous and non-Indigenous Canadians by looking at a host of indicators, the distributions of these indicators among these populations, and the correlations which these indicators have with the life satisfaction of these populations. To close, I should come back to one of the initial research questions: Is life satisfaction an appropriate tool for determining areas for policy intervention to improve the wellbeing of the off-reserve Indigenous population in Canada? While the subjective elements of the concept ought to be praised, I must admit that there are times when it appears that the interplay of life circumstances and aspirations cannot be separated from one another. I think that as a social scientist and potential policy advisor, the effectiveness of life satisfaction as a tool for policy intervention should not be overinflated, unless a more causal approach to the relationship between life circumstances and aspirations can be researched and utilized. Nevertheless, I believe these findings indicate at least the general areas where differences in the life circumstances of Indigenous Peoples in Canada as compared to non-Indigenous Canadians are having a potential subjective wellbeing effect.

As most projects do, this thesis concludes with a call for further research. Hopefully this serves to shine a light on specific areas where future studies can generate stronger evidence to inform policy decisions which close these wellbeing gaps and aid

our governments and communities in meaningfully engaging with the ongoing project of reconciliation.

APPENDIX A DESCRIPTIVE STATISTICS

Table 9 Weighted Measures of Wellbeing for Indigenous and Non-Indigenous Sample

Variable	***Indigenous Mean/Proportion (SE)***	***Non-Indigenous Mean/Proportion (SE)***
Life Satisfaction	7.15	7.40
	(0.072)	(0.014)
Female	48.47%	50.88%
	(2.23%)	(0.47%)
Age		
15-24	24.37%	16.82%
	(2.31%)	(0.42%)
25-34	16.54%	16.98%
	(1.61%)	(0.40%)
35-44	16.03%	15.21%
	(1.53%)	(0.32%)
45-54	17.69%	17.01%
	(1.58%)	(0.33%)
55-64	15.44%	16.56%
	(1.42%)	(0.30%)
65-74	7.04%	10.28%
	(0.87%)	(0.22%)

>74	2.88% (0.59%)	7.14% (0.21%)
Marital Status		
Married	52.9% (2.25%)	59.63% (0.47%)
Divorced/Sep/Widow	9.41% (1.03%)	11.31% (0.23%)
Health		
Poor	6.04% (0.920%)	2.49% (0.132%)
Fair	9.20% (1.149%)	7.44% (0.231%)
Good	32.42% (2.114%)	26.19% (0.405%)
Very Good	28.72% (1.969%)	36.14% (0.448%)
Excellent	23.61% (2.050%)	27.74% (0.431%)
Mental Health		
Poor	1.07%	1.03%

	(0.28%)	(0.1%)
Fair	8.79%	4.35%
	(1.33%)	(0.19%)
Good	23.08%	21.15%
	(1.83%)	(0.38%)
Very Good	32.49%	33.79%
	(2.10%)	(0.44%)
Excellent	34.58%	39.68%
	(2.15%)	(0.46%)
Annual Household Income		
0 -20 000	4.14%	2.86%
	(0.53%)	(0.10%)
20 000 – 40 000	8.47 %	7.95%
	(0.91%)	(0.19%)
40 000 – 60 000	7.23%	9.91%
	(0.94%)	(0.24%)
60 000 - 80 000	6.07%	10.05%
	(0.86%)	(0.25%)
80 000 – 100 000	6.69%	9.23%
	(1.0%)	(0.25%)

100 000 – 120 000	3.97%	7.75%
	(0.66%)	(0.24%)
120 000 – 140 000	5.82%	6.17%
	(1.05%)	(0.23%)
< 140 000	12.3%	16.81%
	(1.58%)	(0.37%)
Average Household Size	2.60	2.35
	(0.04)	(0.01)
Overcrowding		
Proportion reporting 6 or more people living in same household	8.83%	3.73%
	(1.64%)	(0.26%)
Family Trust		
Proportion reporting that family members can be trusted a lot	86.09%	91.83%
	(1.60%)	(0.24%)
Social Support		
Proportion with 5 or more close friends outside of the household	72.60%	79.54%
	(2.02%)	(0.38%)
Employment Rate[11]	61.90%	64.01%

[11] Calculated as the proportion of each sample that reported working for pay in the last week

	(2.11%)	(0.44%)
Confidence in Police		
Proportion reporting "a great deal of confidence" in police	36.11% (2.13%)	45.10% (0.46%)
Child LRG		
Proportion reporting being the legal responsibility of the government as a child	7.82% (1.28%)	1.92% (0.12%)
Victimizations		
Proportion reporting 1 or more victimizations in the past year	11.30% (1.41%)	7.34% (0.26%)
Community Belonging		
Proportion reporting a somewhat strong or very strong sense of belonging to their local community	74.21% (1.99%)	76.47% (0.40%)
Discrimination		
Proportion reporting 1 or more incidences of discrimination against them in the past 5 years	20.51% (1.81%)	11.10% (0.31%)

Statistics Canada. 2017. General Social Survey (GSS), 2014, Cycle 28: Victimization (Main File)

APPENDIX B OLS RESULTS

Table 10 Pooled Sample Least Squares Estimates[12]

Variable	***Model 1***	***Model 2***	***Model 3***	***Model 4***
Indigenous	0.0639	-0.227	0.0214	-0.290
	(0.460)	(0.455)	(0.472)	(0.461)
female	-0.0198	0.0130	-0.00594	0.0224
	(0.0252)	(0.0240)	(0.0249)	(0.0238)
Indigenous*female	0.273**	0.215*	0.259**	0.200
	(0.131)	(0.127)	(0.131)	(0.128)
age (base: 45-54)				
15-24	0.397***	0.376***	0.442***	0.414***
	(0.0663)	(0.0629)	(0.0652)	(0.0621)
25-34	0.0152	0.0219	0.0808*	0.0782*
	(0.0464)	(0.0441)	(0.0461)	(0.0439)
35-44	-0.0786*	-0.0610	-0.0503	-0.0372
	(0.0410)	(0.0393)	(0.0407)	(0.0390)
55-64	0.196***	0.142***	0.175***	0.127***
	(0.0396)	(0.0383)	(0.0391)	(0.0379)
65-74	0.445***	0.326***	0.403***	0.297***
	(0.0506)	(0.0483)	(0.0498)	(0.0478)
≥ 75	0.670***	0.562***	0.606***	0.516***
	(0.0627)	(0.0600)	(0.0620)	(0.0595)
Indigenous*age				
15-24	-0.122	-0.0530	-0.202	-0.101
	(0.276)	(0.258)	(0.264)	(0.246)
25-34	-0.0697	0.0742	-0.0411	0.0996
	(0.261)	(0.260)	(0.250)	(0.250)
35-44	0.139	0.219	0.124	0.215

[12] Reported values are the coefficients associated with each variable. Robust standard errors are shown in parentheses. * indicates a p-value <0.10. ** indicates a p-value <0.05. *** indicates a p-value <0.01

	(0.208)	(0.187)	(0.197)	(0.178)
55-64	-0.0280	-0.00821	-0.0502	-0.0206
	(0.219)	(0.211)	(0.213)	(0.206)
65-74	-0.379	-0.359	-0.367	-0.342
	(0.323)	(0.300)	(0.319)	(0.297)
75	0.249	0.100	0.181	0.0769
	(0.439)	(0.439)	(0.429)	(0.429)
married	0.582***	0.533***	0.561***	0.517***
	(0.0506)	(0.0484)	(0.0497)	(0.0477)
Indigenous*married	0.00180	0.0165	-0.0261	0.00727
	(0.185)	(0.174)	(0.186)	(0.174)
divorced	0.0954*	0.0935*	0.0777	0.0783
	(0.0529)	(0.0508)	(0.0521)	(0.0502)
Indigenous*divorced	0.0253	0.117	0.0194	0.111
	(0.279)	(0.251)	(0.276)	(0.248)
health	2.077***	1.172***	1.980***	1.127***
	(0.0612)	(0.0664)	(0.0603)	(0.0654)
Indigenous*health	-0.113	-0.149	-0.0922	-0.121
	(0.276)	(0.298)	(0.273)	(0.291)
annual household income (base: 20 000 – 40 000)				
0-20 000	-0.0312	-0.0294	-0.0243	-0.0245
	(0.0731)	(0.0698)	(0.0724)	(0.0692)
40 000 – 60 000	0.0689	0.0564	0.0788	0.0651
	(0.0565)	(0.0536)	(0.0556)	(0.0531)
60 000 – 80 000	0.102*	0.0780	0.118**	0.0936*
	(0.0583)	(0.0559)	(0.0575)	(0.0552)
80 000 – 100 000	0.0270	0.0196	0.0592	0.0464
	(0.0531)	(0.0503)	(0.0523)	(0.0498)
100 000 – 120 000	0.109*	0.0930	0.123**	0.106*
	(0.0630)	(0.0609)	(0.0627)	(0.0608)

120 000 – 140 000	0.136**	0.116*	0.138**	0.120*
	(0.0672)	(0.0646)	(0.0671)	(0.0643)
> 140 000	0.173***	0.142***	0.188***	0.156***
	(0.0578)	(0.0548)	(0.0572)	(0.0544)
Indigenous*household income				
0-20 000	-0.247	-0.347	-0.252	-0.350
	(0.308)	(0.306)	(0.309)	(0.305)
40 000 – 60 000	-0.278	-0.207	-0.237	-0.174
	(0.260)	(0.252)	(0.254)	(0.246)
60 000 – 80 000	-0.396*	-0.289	-0.328	-0.246
	(0.221)	(0.211)	(0.223)	(0.212)
80 000 – 100 000	0.129	0.158	0.183	0.201
	(0.274)	(0.245)	(0.272)	(0.242)
100 000 – 120 000	-0.0252	0.0300	0.0484	0.0871
	(0.287)	(0.272)	(0.288)	(0.271)
120 000 – 140 000	-0.192	-0.152	-0.137	-0.0969
	(0.295)	(0.290)	(0.297)	(0.292)
> 140 000	0.126	0.202	0.172	0.238
	(0.239)	(0.226)	(0.240)	(0.227)
equivalent household size	0.115	0.100	0.177**	0.155**
	(0.0757)	(0.0728)	(0.0746)	(0.0719)
Indigenous*equiv. hhld size	-0.168	-0.0656	-0.187	-0.0900
	(0.358)	(0.330)	(0.347)	(0.324)
family trust	0.551***	0.433***	0.488***	0.385***
	(0.0519)	(0.0482)	(0.0506)	(0.0474)
Indigenous*family trust	-0.176	-0.123	-0.173	-0.107
	(0.206)	(0.207)	(0.215)	(0.217)
social support	0.236***	0.184***	0.192***	0.147***
	(0.0359)	(0.0340)	(0.0357)	(0.0340)
Indigenous*social support	0.314*	0.291*	0.284*	0.276*

	(0.176)	(0.163)	(0.171)	(0.159)
employed	0.129***	0.108***	0.132***	0.111***
	(0.0336)	(0.0314)	(0.0331)	(0.0312)
Indigenous*employed	0.0654	0.0361	0.0263	0.00338
	(0.169)	(0.165)	(0.170)	(0.166)
confidence in police	0.322***	0.265***	0.269***	0.222***
	(0.0245)	(0.0238)	(0.0246)	(0.0241)
Indigenous*confidence in police	0.293**	0.270**	0.221	0.224*
	(0.133)	(0.129)	(0.136)	(0.132)
overcrowding	0.00484	-0.00576	-0.0271	-0.0346
	(0.0968)	(0.0923)	(0.0954)	(0.0918)
Indigenous* overcrowding	-0.188	-0.0601	-0.179	-0.0680
	(0.294)	(0.279)	(0.304)	(0.283)
childlrg			0.112	0.103
			(0.0934)	(0.0908)
Indigenous*childlrg			0.156	0.171
			(0.242)	(0.232)
victimization			-0.169***	-0.104*
			(0.0620)	(0.0569)
Indigenous*victimization			-0.0224	-0.0317
			(0.227)	(0.219)
discrimination			-0.352***	-0.268***
			(0.0488)	(0.0462)
Indigenous*discrimination			0.170	0.201
			(0.207)	(0.192)
community belonging			0.386***	0.350***
			(0.0329)	(0.0315)
Indigenous*comm belonging			0.103	0.0607
			(0.165)	(0.157)
mentalhealth		1.959***		1.884***

		(0.0775)		(0.0757)
Indigenous*mentalhealth		0.203		0.197
		(0.296)		(0.293)
Constant	5.370***	4.751***	5.259***	4.654***
	(0.117)	(0.116)	(0.116)	(0.115)
Observations	24,134	24,134	24,134	24,134
R-squared	0.218	0.283	0.236	0.296

Table 11 Indigenous Sample Least Squares Estimates[13]

Variable	***Model 1***	***Model 2***	***Model 3***	***Model 4***
female	0.595	1.000	0.0542	0.669
	(0.896)	(0.876)	(0.921)	(0.891)
age (base: 45-54)				
15-24	0.560	0.692*	0.521	0.693*
	(0.462)	(0.416)	(0.453)	(0.406)
25-34	-0.161	0.0152	-0.104	0.0752
	(0.459)	(0.469)	(0.441)	(0.449)
35-44	-0.000312	0.0954	-0.0155	0.104
	(0.315)	(0.272)	(0.300)	(0.258)
55-64	0.0451	0.0640	0.0179	0.0567
	(0.347)	(0.340)	(0.335)	(0.332)
65-74	0.0733	-0.0502	0.0389	-0.0700
	(0.503)	(0.459)	(0.503)	(0.456)
75	0.751	0.645	0.679	0.627
	(0.680)	(0.687)	(0.679)	(0.687)
female*age				
15-24	-0.545	-0.680	-0.553	-0.718
	(0.553)	(0.508)	(0.549)	(0.504)
25-34	0.219	0.191	0.286	0.216
	(0.526)	(0.531)	(0.506)	(0.511)
35-44	0.110	0.121	0.162	0.130
	(0.395)	(0.355)	(0.375)	(0.338)
55-64	0.179	0.0968	0.175	0.0855
	(0.427)	(0.415)	(0.416)	(0.406)
65-74	0.0609	0.101	0.0906	0.131
	(0.607)	(0.562)	(0.605)	(0.559)
75	0.391	0.111	0.274	0.0242

[13] Reported values are the coefficients associated with each variable. Robust standard errors are shown in parentheses. * indicates a p-value <0.10. ** indicates a p-value <0.05. *** indicates a p-value <0.01.

	(0.881)	(0.885)	(0.876)	(0.880)
married	0.675**	0.664**	0.644*	0.656**
	(0.336)	(0.320)	(0.342)	(0.322)
female*married	-0.0500	-0.0714	-0.0771	-0.100
	(0.389)	(0.371)	(0.393)	(0.369)
divorced	0.696	0.757*	0.652	0.723*
	(0.497)	(0.416)	(0.503)	(0.421)
female*divorced	-1.069*	-1.004**	-0.965	-0.930*
	(0.586)	(0.511)	(0.589)	(0.511)
general health	1.349***	0.341	1.271***	0.311
	(0.416)	(0.402)	(0.427)	(0.400)
female*general health	1.170**	1.227**	1.189**	1.322**
	(0.532)	(0.551)	(0.530)	(0.547)
annual household income (base: 20 000 – 40 000)				
0-20 000	0.114	0.104	0.0877	0.0711
	(0.464)	(0.451)	(0.477)	(0.462)
40 000 – 60 000	0.0457	0.244	0.00975	0.223
	(0.422)	(0.424)	(0.422)	(0.426)
60 000 – 80 000	-0.180	-0.0128	-0.146	0.00102
	(0.364)	(0.349)	(0.374)	(0.357)
80 000 – 100 000	0.466	0.522	0.490	0.547
	(0.414)	(0.364)	(0.418)	(0.368)
100 000 – 120 000	0.302	0.422	0.372	0.485
	(0.440)	(0.392)	(0.454)	(0.407)
120 000- 140 000	-0.0222	0.0294	-0.0236	0.0445
	(0.447)	(0.431)	(0.447)	(0.431)
> 140 000	0.656*	0.796**	0.677*	0.827**
	(0.359)	(0.337)	(0.366)	(0.344)
female*household income				

0-20 000	-0.487	-0.659	-0.364	-0.520
	(0.620)	(0.599)	(0.634)	(0.609)
40 000 – 60 000	-0.542	-0.790	-0.318	-0.604
	(0.541)	(0.534)	(0.535)	(0.529)
60 000 – 80 000	-0.173	-0.286	-0.0540	-0.181
	(0.459)	(0.435)	(0.470)	(0.446)
80 000 – 100 000	-0.730	-0.769	-0.633	-0.697
	(0.535)	(0.488)	(0.541)	(0.489)
100 000 – 120 000	-0.581	-0.689	-0.604	-0.711
	(0.581)	(0.533)	(0.591)	(0.539)
120 000 – 140 000	0.148	0.135	0.288	0.243
	(0.617)	(0.618)	(0.633)	(0.626)
> 140 000	-0.805	-0.971**	-0.778	-0.965**
	(0.491)	(0.463)	(0.491)	(0.464)
equivalent household size	-0.00698	-0.00120	-0.0279	0.00205
	(0.546)	(0.503)	(0.521)	(0.486)
female*equiv. hhld size	-0.0694	0.0927	0.0421	0.144
	(0.688)	(0.632)	(0.663)	(0.615)
family trust	0.385	0.279	0.345	0.246
	(0.312)	(0.311)	(0.327)	(0.332)
female*family trust	-0.0660	-0.00382	-0.00116	0.0673
	(0.398)	(0.400)	(0.412)	(0.419)
social support	0.571**	0.416*	0.519**	0.385*
	(0.242)	(0.220)	(0.231)	(0.211)
female*social support	-0.0702	0.0701	-0.110	0.0269
	(0.309)	(0.285)	(0.298)	(0.279)
employed	0.411	0.424	0.384	0.401
	(0.284)	(0.265)	(0.285)	(0.268)
female*employed	-0.354	-0.494	-0.346	-0.474
	(0.344)	(0.328)	(0.344)	(0.331)
confidence in police	0.756***	0.746***	0.687***	0.703***

	(0.193)	(0.175)	(0.201)	(0.181)
female*confidence in police	-0.307	-0.409*	-0.409	-0.491**
	(0.253)	(0.238)	(0.261)	(0.246)
overcrowding	0.537	0.653**	0.536	0.618**
	(0.343)	(0.285)	(0.353)	(0.314)
female* overcrowding	-1.622***	-1.635***	-1.647***	-1.641***
	(0.520)	(0.467)	(0.520)	(0.481)
childlrg			0.153	0.165
			(0.466)	(0.406)
female*childlrg			0.107	0.0979
			(0.517)	(0.464)
victimization			-0.0223	-0.0485
			(0.349)	(0.327)
female*victimization			-0.104	0.00965
			(0.430)	(0.412)
discrimination			-0.222	-0.0194
			(0.347)	(0.320)
female*discrimination			0.0218	-0.142
			(0.408)	(0.381)
community belonging			0.253	0.212
			(0.237)	(0.215)
female*comm belonging			0.510*	0.436
			(0.304)	(0.289)
mental health		2.488***		2.477***
		(0.346)		(0.342)
female*mental health		-0.544		-0.737
		(0.540)		(0.539)
Constant	5.249***	4.081***	5.276***	4.020***
	(0.706)	(0.682)	(0.704)	(0.656)
Observations	1,064	1,064	1,064	1,064

R-squared	0.276	0.347	0.296	0.360

Table 12 Non-Indigenous Sample Least Squares Estimates[14]

Variable	***Model 1***	***Model 2***	***Model 3***	***Model 4***
female	0.0145	-0.103	0.117	-0.0178
	(0.233)	(0.231)	(0.231)	(0.229)
age (base: 45-54)				
15-24	0.355***	0.335***	0.388***	0.363***
	(0.101)	(0.0966)	(0.0978)	(0.0941)
25-34	0.102	0.0765	0.155**	0.124*
	(0.0678)	(0.0652)	(0.0670)	(0.0646)
35-44	-0.00676	-0.0216	0.0194	0.00210
	(0.0574)	(0.0551)	(0.0570)	(0.0547)
55-64	0.298***	0.244***	0.270***	0.221***
	(0.0558)	(0.0542)	(0.0549)	(0.0534)
65-74	0.497***	0.393***	0.455***	0.360***
	(0.0728)	(0.0704)	(0.0723)	(0.0701)
75	0.686***	0.592***	0.632***	0.548***
	(0.0958)	(0.0920)	(0.0949)	(0.0910)
female*age				
15-24	0.0782	0.0810	0.0994	0.0966
	(0.133)	(0.127)	(0.131)	(0.125)
25-34	-0.173*	-0.101	-0.150	-0.0881
	(0.0932)	(0.0883)	(0.0924)	(0.0877)
35-44	-0.143*	-0.0710	-0.138*	-0.0721
	(0.0821)	(0.0788)	(0.0814)	(0.0781)
55-64	-0.206***	-0.205***	-0.193**	-0.190**
	(0.0790)	(0.0763)	(0.0777)	(0.0754)
65-74	-0.119	-0.145	-0.120	-0.137
	(0.101)	(0.0966)	(0.0997)	(0.0958)
75	-0.0679	-0.0853	-0.0868	-0.0894

[14] Reported values are the coefficients associated with each variable. Robust standard errors are shown in parentheses. * indicates a p-value <0.10. ** indicates a p-value <0.05. *** indicates a p-value <0.01.

	(0.127)	(0.122)	(0.126)	(0.121)
married	0.592*** (0.0738)	0.540*** (0.0721)	0.572*** (0.0720)	0.524*** (0.0706)
female*married	-0.0222 (0.102)	-0.0173 (0.0974)	-0.0340 (0.0994)	-0.0218 (0.0955)
divorced	0.0497 (0.0811)	0.0448 (0.0793)	0.0199 (0.0798)	0.0172 (0.0781)
female*divorced	0.0492 (0.108)	0.0655 (0.104)	0.0656 (0.106)	0.0826 (0.102)
general health	2.121*** (0.0882)	1.297*** (0.101)	2.029*** (0.0859)	1.239*** (0.0988)
female*general health	-0.0751 (0.122)	-0.222* (0.133)	-0.0861 (0.120)	-0.199 (0.131)
annual household income (base: 20 000 – 40 000)				
0-20 000	-0.143 (0.120)	-0.125 (0.114)	-0.141 (0.119)	-0.124 (0.114)
40 000 – 60 000	0.0979 (0.0871)	0.0804 (0.0842)	0.0809 (0.0860)	0.0646 (0.0833)
60 000 – 80 000	0.142 (0.0884)	0.105 (0.0848)	0.150* (0.0870)	0.115 (0.0837)
80 000 – 100 000	0.0612 (0.0809)	0.0475 (0.0780)	0.0742 (0.0794)	0.0580 (0.0768)
100 000 – 120 000	0.154 (0.0965)	0.117 (0.0945)	0.156 (0.0961)	0.121 (0.0945)
120 000- 140 000	0.195* (0.0993)	0.162* (0.0977)	0.197** (0.0979)	0.166* (0.0962)
> 140 000	0.253*** (0.0853)	0.213*** (0.0821)	0.254*** (0.0841)	0.215*** (0.0813)

female*household income				
0-20 000	0.176	0.147	0.185	0.155
	(0.151)	(0.144)	(0.150)	(0.143)
40 000 – 60 000	-0.0423	-0.0358	0.00671	0.00740
	(0.114)	(0.109)	(0.112)	(0.108)
60 000 – 80 000	-0.0633	-0.0389	-0.0508	-0.0293
	(0.118)	(0.113)	(0.116)	(0.112)
80 000 – 100 000	-0.0559	-0.0462	-0.0211	-0.0180
	(0.108)	(0.102)	(0.106)	(0.101)
100 000 – 120 000	-0.0770	-0.0346	-0.0591	-0.0227
	(0.127)	(0.122)	(0.126)	(0.122)
120 000 – 140 000	-0.102	-0.0799	-0.103	-0.0816
	(0.135)	(0.129)	(0.135)	(0.129)
> 140 000	-0.149	-0.134	-0.119	-0.111
	(0.116)	(0.111)	(0.115)	(0.110)
equivalent household size	0.0614	0.0612	0.133	0.127
	(0.112)	(0.109)	(0.110)	(0.107)
female*equiv. hhld size	0.100	0.0744	0.0802	0.0506
	(0.152)	(0.146)	(0.149)	(0.144)
family trust	0.497***	0.415***	0.459***	0.385***
	(0.0696)	(0.0656)	(0.0677)	(0.0643)
female*family trust	0.110	0.0315	0.0539	-0.00495
	(0.104)	(0.0965)	(0.101)	(0.0947)
social support	0.206***	0.155***	0.169***	0.122***
	(0.0462)	(0.0450)	(0.0462)	(0.0451)
female*social support	0.0729	0.0749	0.0589	0.0666
	(0.0719)	(0.0679)	(0.0713)	(0.0677)
employed	0.139***	0.125***	0.141***	0.127***
	(0.0513)	(0.0486)	(0.0504)	(0.0479)
female*employed	-0.0376	-0.0490	-0.0370	-0.0474

	(0.0682)	(0.0640)	(0.0672)	(0.0634)
confidence in police	0.318***	0.273***	0.269***	0.233***
	(0.0353)	(0.0345)	(0.0353)	(0.0347)
female*confidence in police	0.00693	-0.0194	0.00171	-0.0189
	(0.0490)	(0.0477)	(0.0491)	(0.0481)
overcrowding	0.0151	-0.00148	-0.0299	-0.0435
	(0.133)	(0.133)	(0.131)	(0.132)
female* overcrowding	-0.0231	-0.00841	-0.00201	0.0108
	(0.194)	(0.183)	(0.191)	(0.181)
childlrg			0.187	0.159
			(0.150)	(0.147)
female*childlrg			-0.128	-0.0935
			(0.190)	(0.186)
victimization			-0.0120	0.0405
			(0.0798)	(0.0730)
female*victimization			-0.326***	-0.297***
			(0.123)	(0.113)
discrimination			-0.357***	-0.310***
			(0.0735)	(0.0706)
female*discrimination			0.0121	0.0804
			(0.0978)	(0.0930)
community belonging			0.392***	0.363***
			(0.0462)	(0.0441)
female*comm belonging			-0.0167	-0.0305
			(0.0652)	(0.0627)
mental health		1.739***		1.687***
		(0.115)		(0.112)
female*mental health		0.410***		0.367**
		(0.155)		(0.151)
Constant	5.345***	4.808***	5.200***	4.680***
	(0.170)	(0.172)	(0.171)	(0.171)

Observations	23,070	23,070	23,070	23,070
R-squared	0.218	0.283	0.237	0.297

Table 13 Female Sample Least Squares Estimates[15]

Variable	***Model 1***	***Model 2***	***Model 3***	***Model 4***
Indigenous	0.484	0.376	0.0138	0.0278
	(0.564)	(0.561)	(0.600)	(0.608)
age (base: 45-54)				
15-24	0.433***	0.416***	0.487***	0.460***
	(0.0878)	(0.0820)	(0.0872)	(0.0821)
25-34	-0.0709	-0.0246	0.00423	0.0355
	(0.0639)	(0.0596)	(0.0636)	(0.0594)
35-44	-0.150**	-0.0926	-0.119**	-0.0700
	(0.0588)	(0.0563)	(0.0582)	(0.0558)
55-64	0.0921*	0.0394	0.0768	0.0311
	(0.0559)	(0.0537)	(0.0551)	(0.0533)
65-74	0.378***	0.248***	0.335***	0.223***
	(0.0707)	(0.0663)	(0.0688)	(0.0653)
≥ 75	0.619***	0.507***	0.545***	0.459***
	(0.0835)	(0.0803)	(0.0824)	(0.0798)
Indigenous*age				
15-24	-0.418	-0.403	-0.519*	-0.485
	(0.311)	(0.296)	(0.314)	(0.302)
25-34	0.129	0.231	0.177	0.255
	(0.261)	(0.250)	(0.251)	(0.245)
35-44	0.259	0.309	0.265	0.305
	(0.241)	(0.231)	(0.228)	(0.220)
55-64	0.132	0.121	0.117	0.111
	(0.250)	(0.239)	(0.247)	(0.235)
65-74	-0.244	-0.197	-0.205	-0.162
	(0.340)	(0.324)	(0.335)	(0.323)
75				

[15] Reported values are the coefficients associated with each variable. Robust standard errors are shown in parentheses. * indicates a p-value <0.10. ** indicates a p-value <0.05. *** indicates a p-value <0.01.

75	0.523 (0.555)	0.249 (0.551)	0.408 (0.547)	0.193 (0.543)
married	0.570*** (0.0703)	0.523*** (0.0655)	0.538*** (0.0686)	0.502*** (0.0644)
Indigenous*married	0.0550 (0.205)	0.0701 (0.195)	0.0287 (0.201)	0.0538 (0.189)
divorced	0.0989 (0.0715)	0.110 (0.0674)	0.0855 (0.0702)	0.0998 (0.0664)
Indigenous*divorced	-0.473 (0.313)	-0.357 (0.297)	-0.398 (0.307)	-0.307 (0.290)
health	2.046*** (0.0848)	1.075*** (0.0868)	1.942*** (0.0840)	1.040*** (0.0865)
Indigenous*health	0.473 (0.335)	0.493 (0.379)	0.518 (0.318)	0.593 (0.373)
annual household income (base: 20 000 – 40 000)				
0-20 000	0.0334 (0.0919)	0.0224 (0.0879)	0.0437 (0.0906)	0.0305 (0.0870)
40 000 – 60 000	0.0556 (0.0743)	0.0446 (0.0693)	0.0876 (0.0725)	0.0720 (0.0683)
60 000 – 80 000	0.0784 (0.0780)	0.0665 (0.0750)	0.0996 (0.0768)	0.0852 (0.0738)
80 000 – 100 000	0.00528 (0.0709)	0.00134 (0.0662)	0.0530 (0.0700)	0.0400 (0.0656)
100 000 – 120 000	0.0766 (0.0821)	0.0826 (0.0778)	0.0970 (0.0812)	0.0982 (0.0770)
120 000 – 140 000	0.0929 (0.0918)	0.0821 (0.0851)	0.0938 (0.0929)	0.0843 (0.0861)
> 140 000	0.104 (0.0794)	0.0794 (0.0741)	0.135* (0.0785)	0.105 (0.0736)

Indigenous*household income				
0-20 000	-0.406	-0.577	-0.320	-0.480
	(0.414)	(0.395)	(0.418)	(0.396)
40 000 – 60 000	-0.552	-0.591*	-0.396	-0.453
	(0.340)	(0.324)	(0.328)	(0.313)
60 000 – 80 000	-0.431	-0.365	-0.300	-0.265
	(0.285)	(0.265)	(0.289)	(0.271)
80 000 – 100 000	-0.268	-0.248	-0.196	-0.190
	(0.339)	(0.325)	(0.342)	(0.320)
100 000 – 120 000	-0.356	-0.349	-0.330	-0.324
	(0.380)	(0.363)	(0.377)	(0.353)
120 000 – 140 000	0.0328	0.0820	0.170	0.203
	(0.427)	(0.442)	(0.448)	(0.451)
> 140 000	-0.252	-0.254	-0.236	-0.243
	(0.338)	(0.320)	(0.330)	(0.313)
equivalent household size	0.162	0.136	0.213**	0.178*
	(0.102)	(0.0973)	(0.101)	(0.0966)
Indigenous*equiv. hhld size	-0.238	-0.0440	-0.199	-0.0313
	(0.423)	(0.387)	(0.413)	(0.379)
family trust	0.606***	0.447***	0.513***	0.380***
	(0.0775)	(0.0708)	(0.0753)	(0.0696)
Indigenous*family trust	-0.287	-0.171	-0.169	-0.0669
	(0.254)	(0.256)	(0.256)	(0.259)
social support	0.279***	0.230***	0.228***	0.188***
	(0.0552)	(0.0509)	(0.0543)	(0.0505)
Indigenous*social support	0.221	0.257	0.181	0.223
	(0.197)	(0.184)	(0.193)	(0.185)
employed	0.101**	0.0764*	0.103**	0.0794*
	(0.0451)	(0.0417)	(0.0444)	(0.0415)
Indigenous*employed	-0.0447	-0.146	-0.0651	-0.153
	(0.194)	(0.195)	(0.192)	(0.194)

confidence in police	0.325*** (0.0340)	0.254*** (0.0329)	0.271*** (0.0342)	0.214*** (0.0333)
Indigenous*confidence in police	0.123 (0.163)	0.0837 (0.162)	0.00658 (0.167)	-0.00235 (0.166)
overcrowding	-0.00806 (0.142)	-0.00989 (0.125)	-0.0319 (0.139)	-0.0328 (0.125)
Indigenous* overcrowding	-1.077*** (0.408)	-0.972** (0.383)	-1.079*** (0.398)	-0.990*** (0.376)
childlrg			0.0586 (0.117)	0.0656 (0.113)
Indigenous*childlrg			0.202 (0.247)	0.197 (0.246)
victimization			-0.338*** (0.0938)	-0.257*** (0.0867)
Indigenous*victimization			0.212 (0.262)	0.218 (0.259)
discrimination			-0.345*** (0.0646)	-0.229*** (0.0606)
Indigenous*discrimination			0.145 (0.220)	0.0677 (0.210)
community belonging			0.375*** (0.0461)	0.333*** (0.0446)
Indigenous*comm belonging			0.388** (0.191)	0.315 (0.194)
mentalhealth		2.148*** (0.104)		2.054*** (0.102)
Indigenous*mentalhealth		-0.204 (0.419)		-0.314 (0.419)

Constant	5.360*** (0.159)	4.705*** (0.155)	5.317*** (0.155)	4.662*** (0.152)
Observations	13,259	13,259	13,259	13,259
R-squared	0.210	0.286	0.232	0.300

Table 14 Male Sample Least Squares Estimates[16]

Variable	***Model 1***	***Model 2***	***Model 3***	***Model 4***
Indigenous	-0.0960	-0.727	0.0762	-0.660
	(0.712)	(0.690)	(0.709)	(0.663)
age (base: 45-54)				
15-24	0.355***	0.335***	0.388***	0.363***
	(0.101)	(0.0967)	(0.0979)	(0.0943)
25-34	0.102	0.0765	0.155**	0.124*
	(0.0679)	(0.0652)	(0.0671)	(0.0646)
35-44	-0.00676	-0.0216	0.0194	0.00210
	(0.0575)	(0.0552)	(0.0571)	(0.0548)
55-64	0.298***	0.244***	0.270***	0.221***
	(0.0559)	(0.0543)	(0.0550)	(0.0535)
65-74	0.497***	0.393***	0.455***	0.360***
	(0.0728)	(0.0705)	(0.0724)	(0.0702)
≥ 75	0.686***	0.592***	0.632***	0.548***
	(0.0959)	(0.0921)	(0.0950)	(0.0911)
Indigenous*age				
15-24	0.205	0.357	0.133	0.329
	(0.464)	(0.419)	(0.453)	(0.407)
25-34	-0.263	-0.0613	-0.259	-0.0484
	(0.455)	(0.464)	(0.436)	(0.443)
35-44	0.00645	0.117	-0.0348	0.102
	(0.314)	(0.272)	(0.299)	(0.258)
55-64	-0.253	-0.180	-0.252	-0.164
	(0.344)	(0.338)	(0.332)	(0.328)
65-74	-0.423	-0.443	-0.416	-0.430
	(0.499)	(0.455)	(0.497)	(0.451)

[16] Reported values are the coefficients associated with each variable. Robust standard errors are shown in parentheses. * indicates a p-value <0.10. ** indicates a p-value <0.05. *** indicates a p-value <0.01.

75	0.0645 (0.673)	0.0527 (0.679)	0.0470 (0.670)	0.0789 (0.676)
married	0.592*** (0.0739)	0.540*** (0.0722)	0.572*** (0.0721)	0.524*** (0.0707)
Indigenous*married	0.0827 (0.338)	0.124 (0.321)	0.0718 (0.341)	0.132 (0.322)
divorced	0.0497 (0.0812)	0.0448 (0.0793)	0.0199 (0.0799)	0.0172 (0.0782)
Indigenous*divorced	0.646 (0.494)	0.713* (0.416)	0.632 (0.497)	0.706* (0.419)
health	2.121*** (0.0883)	1.297*** (0.101)	2.029*** (0.0860)	1.239*** (0.0989)
Indigenous*health	-0.772* (0.418)	-0.956** (0.406)	-0.757* (0.426)	-0.928** (0.403)
annual household income (base: 20 000 – 40 000)				
0-20 000	-0.143 (0.120)	-0.125 (0.115)	-0.141 (0.120)	-0.124 (0.114)
40 000 – 60 000	0.0979 (0.0872)	0.0804 (0.0843)	0.0809 (0.0861)	0.0646 (0.0834)
60 000 – 80 000	0.142 (0.0885)	0.105 (0.0849)	0.150* (0.0871)	0.115 (0.0838)
80 000 – 100 000	0.0612 (0.0810)	0.0475 (0.0781)	0.0742 (0.0795)	0.0580 (0.0769)
100 000 – 120 000	0.154 (0.0966)	0.117 (0.0946)	0.156 (0.0963)	0.121 (0.0946)
120 000 – 140 000	0.195* (0.0994)	0.162* (0.0978)	0.197** (0.0980)	0.166* (0.0964)
> 140 000	0.253*** (0.0854)	0.213*** (0.0822)	0.254*** (0.0842)	0.215*** (0.0814)

Indigenous*household income				
0-20 000	0.257	0.229	0.229	0.195
	(0.470)	(0.457)	(0.481)	(0.465)
40 000 – 60 000	-0.0522	0.164	-0.0711	0.159
	(0.423)	(0.424)	(0.421)	(0.424)
60 000 – 80 000	-0.321	-0.118	-0.296	-0.114
	(0.367)	(0.352)	(0.375)	(0.358)
80 000 – 100 000	0.405	0.474	0.415	0.489
	(0.414)	(0.365)	(0.416)	(0.367)
100 000 – 120 000	0.148	0.305	0.216	0.364
	(0.442)	(0.395)	(0.454)	(0.409)
120 000 – 140 000	-0.217	-0.133	-0.220	-0.121
	(0.449)	(0.433)	(0.447)	(0.431)
> 140 000	0.403	0.583*	0.423	0.612*
	(0.362)	(0.340)	(0.367)	(0.345)
equivalent household size	0.0614	0.0612	0.133	0.127
	(0.112)	(0.109)	(0.110)	(0.107)
Indigenous*equiv. hhld size	-0.0684	-0.0624	-0.161	-0.125
	(0.547)	(0.505)	(0.521)	(0.487)
family trust	0.497***	0.415***	0.459***	0.385***
	(0.0697)	(0.0656)	(0.0678)	(0.0644)
Indigenous*family trust	-0.111	-0.136	-0.114	-0.139
	(0.313)	(0.312)	(0.326)	(0.330)
social support	0.206***	0.155***	0.169***	0.122***
	(0.0463)	(0.0450)	(0.0462)	(0.0452)
Indigenous*social support	0.364	0.261	0.350	0.263
	(0.242)	(0.220)	(0.230)	(0.211)
employed	0.139***	0.125***	0.141***	0.127***
	(0.0513)	(0.0487)	(0.0505)	(0.0480)
Indigenous*employed	0.272	0.298	0.244	0.274
	(0.283)	(0.264)	(0.283)	(0.266)

confidence in police	0.318*** (0.0353)	0.273*** (0.0345)	0.269*** (0.0354)	0.233*** (0.0348)
Indigenous*confidence in police	0.438** (0.193)	0.473*** (0.175)	0.418** (0.200)	0.470*** (0.180)
overcrowding	0.0151 (0.133)	-0.00148 (0.133)	-0.0299 (0.131)	-0.0435 (0.132)
Indigenous* overcrowding	0.522 (0.362)	0.654** (0.310)	0.566 (0.369)	0.662** (0.334)
childlrg			0.187 (0.150)	0.159 (0.147)
Indigenous*childlrg			-0.0336 (0.480)	0.00556 (0.423)
victimization			-0.0120 (0.0799)	0.0405 (0.0731)
Indigenous*victimization			-0.0102 (0.350)	-0.0890 (0.327)
discrimination			-0.357*** (0.0736)	-0.310*** (0.0707)
Indigenous*discrimination			0.135 (0.347)	0.290 (0.320)
community belonging			0.392*** (0.0463)	0.363*** (0.0442)
Indigenous*comm belonging			-0.139 (0.236)	-0.151 (0.214)
mentalhealth		1.739*** (0.115)		1.687*** (0.112)
Indigenous*mentalhealth		0.750** (0.358)		0.790** (0.352)
Constant	5.345***	4.808***	5.200***	4.680***

	(0.171)	(0.172)	(0.171)	(0.171)
Observations	10,875	10,875	10,875	10,875
R-squared	0.234	0.288	0.251	0.302

APPENDIX C ROBUSTNESS CHECKS INCLUDING NON-LINEAR RESULTS

Table 15 Probit Top Category (Life Satisfaction 8-10) [17]

Variable	***Probit Coefficients***	***Marginal Effects***
Indigenous	0.145	0.0474***
	(0.502)	(0.0170)
female	0.0782**	0.0169**
	(0.0306)	(0.00673)
Indigenous*female	-0.0673	
	(0.141)	
age (base: 45-54)		
15-24	0.346***	0.0768***
	(0.0744)	(0.0150)
25-34	-0.0124	8.28e-05
	(0.0542)	(0.0130)
35-44	-0.0181	-0.00192
	(0.0494)	(0.0118)
55-64	0.128***	0.0312***
	(0.0481)	(0.0110)
65-74	0.286***	0.0628***
	(0.0585)	(0.0124)
≥ 75	0.365***	0.0792***
	(0.0728)	(0.0145)
Indigenous*age		
15-24	0.121	
	(0.310)	

[17] Reported values are the coefficients associated with each variable. Robust standard errors are shown in parentheses. * indicates a p-value <0.10. ** indicates a p-value <0.05. *** indicates a p-value <0.01.

25-34	0.286 (0.262)	
35-44	0.229 (0.220)	
55-64	0.102 (0.216)	
65-74	-0.113 (0.260)	
75	-0.0312 (0.354)	
married	0.470*** (0.0547)	0.110*** (0.0130)
Indigenous*married	-0.0201 (0.193)	
divorced	0.0615 (0.0532)	0.0132 (0.0112)
Indigenous*divorced	-0.0403 (0.228)	
general health	0.992*** (0.0703)	0.221*** (0.0150)
Indigenous*general health	-0.196 (0.302)	
mental health	1.630*** (0.0731)	0.364*** (0.0149)
Indigenous*mental health	-0.165 (0.342)	
annual household income (base: 20 000 – 40 000)		
0-20 000	0.00425 (0.0675)	-0.000199 (0.0157)

40 000 – 60 000	0.0370 (0.0574)	0.0101 (0.0133)
60 000 – 80 000	0.105* (0.0620)	0.0244* (0.0140)
80 000 – 100 000	0.0605 (0.0520)	0.0204* (0.0121)
100 000 – 120 000	0.215*** (0.0731)	0.0523*** (0.0158)
120 000 – 140 000	0.183** (0.0867)	0.0447** (0.0186)
> 140 000	0.201*** (0.0650)	0.0512*** (0.0144)
Indigenous*household income		
0-20 000	-0.100 (0.247)	
40 000 – 60 000	0.112 (0.241)	
60 000 – 80 000	-0.0197 (0.206)	
80 000 – 100 000	0.610** (0.278)	
100 000 – 120 000	0.413 (0.330)	
120 000 – 140 000	0.303 (0.351)	
> 140 000	0.634** (0.274)	
equivalent household size	0.161** (0.0810)	0.0381** (0.0177)

Indigenous*equiv. hhld size	0.178	
	(0.313)	
family trust	0.327***	0.0787***
	(0.0476)	(0.0124)
Indigenous*family trust	-0.172	
	(0.212)	
social support	0.167***	0.0393***
	(0.0360)	(0.00845)
Indigenous*social support	0.0370	
	(0.154)	
employed	0.0702*	0.0158*
	(0.0378)	(0.00840)
Indigenous*employed	-0.0107	
	(0.172)	
confidence in police	0.240***	0.0537***
	(0.0315)	(0.00688)
Indigenous*confidence in police	0.00514	
	(0.156)	
overcrowding	-0.00121	4.30e-05
	(0.127)	(0.0275)
Indigenous* overcrowding	0.0304	
	(0.311)	
childlrg	0.0526	0.0132
	(0.100)	(0.0209)
Indigenous*childlrg	0.161	
	(0.248)	
victimization	-0.125**	-0.0304**
	(0.0570)	(0.0133)
Indigenous*victimization	-0.110	
	(0.228)	
discrimination	-0.229***	-0.0535***
	(0.0462)	(0.0114)

Indigenous*discrimination	0.115	
	(0.176)	
community belonging	0.283***	0.0665***
	(0.0345)	(0.00843)
Indigenous*comm belonging	-0.0778	
	(0.156)	
Constant	-2.349***	
	(0.118)	
Observations	24,134	24,134
Pseudo R-squared	0.2171	

Table 16 Probit Bottom Category (Life Satisfaction 0-6) [18]

Variable	***Probit Coefficients***	***Marginal Effects***
Indigenous	-0.482	-0.00983
	(0.485)	(0.00908)
female	0.00291	-0.00108
	(0.0417)	(0.00467)
Indigenous*female	-0.228	
	(0.150)	
age (base: 45-54)		
15-24	-0.509***	-0.0540***
	(0.0943)	(0.00884)
25-34	-0.107	-0.0143
	(0.0764)	(0.00946)
35-44	-0.00763	-0.00113
	(0.0660)	(0.00870)
55-64	-0.0929	-0.0136*
	(0.0618)	(0.00782)
65-74	-0.206***	-0.0227***
	(0.0745)	(0.00872)
≥ 75	-0.184**	-0.0227**
	(0.0925)	(0.0107)
Indigenous*age		
15-24	0.0338	
	(0.328)	
25-34	-0.0453	
	(0.313)	
35-44	-0.0121	
	(0.257)	

[18] Reported values are the coefficients associated with each variable. Robust standard errors are shown in parentheses. * indicates a p-value <0.10. ** indicates a p-value <0.05. *** indicates a p-value <0.01.

55-64	-0.236 (0.291)	
65-74	0.409 (0.288)	
75	0.0583 (0.402)	
married	-0.513*** (0.0694)	-0.0624*** (0.00882)
Indigenous*married	0.0446 (0.246)	
divorced	-0.0682 (0.0639)	-0.00848 (0.00681)
Indigenous*divorced	-0.134 (0.274)	
general health	-1.158*** (0.0914)	-0.134*** (0.0101)
Indigenous*general health	0.0894 (0.332)	
mental health	-1.478*** (0.0957)	-0.173*** (0.0101)
Indigenous*mental health	-0.183 (0.328)	
annual household income (base: 20 000 – 40 000)		
0-20 000	0.0279 (0.0797)	0.00447 (0.0107)
40 000 – 60 000	-0.102 (0.0699)	-0.0118 (0.00876)
60 000 – 80 000	-0.161** (0.0772)	-0.0177* (0.00926)

80 000 – 100 000	-0.114*	-0.0163**
	(0.0620)	(0.00794)
100 000 – 120 000	-0.301***	-0.0350***
	(0.109)	(0.0114)
120 000 – 140 000	-0.371***	-0.0356***
	(0.135)	(0.0130)
> 140 000	-0.294***	-0.0366***
	(0.0903)	(0.00995)
Indigenous*household income		
0-20 000	0.0992	
	(0.287)	
40 000 – 60 000	0.219	
	(0.269)	
60 000 – 80 000	0.384*	
	(0.217)	
80 000 – 100 000	-0.360	
	(0.311)	
100 000 – 120 000	-0.0246	
	(0.414)	
120 000 – 140 000	0.908**	
	(0.382)	
> 140 000	-0.769*	
	(0.424)	
equivalent household size	-0.335***	-0.0345***
	(0.102)	(0.0117)
Indigenous*equiv. hhld size	0.702*	
	(0.392)	
family trust	-0.294***	-0.0359***
	(0.0591)	(0.00843)
Indigenous*family trust	0.432*	
	(0.221)	

social support	-0.315*** (0.0459)	-0.0416*** (0.00624)
Indigenous*social support	-0.219 (0.174)	
employed	-0.173*** (0.0488)	-0.0222*** (0.00571)
Indigenous*employed	-0.248 (0.185)	
confidence in police	-0.144*** (0.0432)	-0.0166*** (0.00470)
Indigenous*confidence in police	-0.0201 (0.163)	
overcrowding	0.0715 (0.156)	0.0112 (0.0186)
Indigenous* overcrowding	0.374 (0.345)	
childlrg	0.0398 (0.111)	0.00503 (0.0128)
Indigenous*childlrg	0.0494 (0.292)	
victimization	0.166** (0.0743)	0.0222** (0.00967)
Indigenous*victimization	0.210 (0.272)	
discrimination	0.253*** (0.0586)	0.0314*** (0.00801)
Indigenous*discrimination	-0.158 (0.199)	
community belonging	-0.306*** (0.0451)	-0.0376*** (0.00594)

Indigenous*comm belonging	0.137 (0.174)	
Constant	1.857*** (0.146)	
Observations	24,134	24,134
Pseudo R-squared	0.276	

Table 17 Dropping Missing Income Responses Versus Imputing to Sample Mean in OLS[19]

Variable	***Sample with Imputed Income***	***Sample with Dropped Responses***
Indigenous	-0.290	-0.664
	(0.461)	(0.489)
female	0.0224	0.00849
	(0.0238)	(0.0257)
Indigenous*female	0.200	0.344**
	(0.128)	(0.145)
age (base: 45-54)		
15-24	0.414***	0.289***
	(0.0621)	(0.0756)
25-34	0.0782*	0.0421
	(0.0439)	(0.0477)
35-44	-0.0372	-0.0609
	(0.0390)	(0.0422)
55-64	0.127***	0.109***
	(0.0379)	(0.0416)
65-74	0.297***	0.303***
	(0.0478)	(0.0515)
≥ 75	0.516***	0.504***
	(0.0595)	(0.0641)
Indigenous*age		
15-24	-0.101	0.172
	(0.246)	(0.255)
25-34	0.0996	-0.0523
	(0.250)	(0.254)
35-44	0.215	0.259
	(0.178)	(0.193)

[19] Reported values are the coefficients associated with each variable. Robust standard errors are shown in parentheses. * indicates a p-value <0.10. ** indicates a p-value <0.05. *** indicates a p-value <0.01.

55-64	-0.0206 (0.206)	0.163 (0.210)
65-74	-0.342 (0.297)	-0.240 (0.299)
75	0.0769 (0.429)	0.287 (0.490)
married	0.517*** (0.0477)	0.483*** (0.0551)
Indigenous*married	0.00727 (0.174)	0.0419 (0.177)
divorced	0.0783 (0.0502)	0.0913* (0.0534)
Indigenous*divorced	0.111 (0.248)	-0.0862 (0.267)
health	1.127*** (0.0654)	1.082*** (0.0717)
Indigenous*health	-0.121 (0.291)	0.0356 (0.290)
annual household income (base: 20 000 – 40 000)		
0-20 000	-0.0245 (0.0692)	-0.0320 (0.0693)
40 000 – 60 000	0.0651 (0.0531)	0.0783 (0.0535)
60 000 – 80 000	0.0936* (0.0552)	0.119** (0.0560)
80 000 – 100 000	0.0464 (0.0498)	0.0856 (0.0562)
100 000 – 120 000	0.106* (0.0608)	0.141** (0.0617)

120 000 – 140 000	0.120*	0.159**
	(0.0643)	(0.0651)
> 140 000	0.156***	0.199***
	(0.0544)	(0.0561)
Indigenous*household income		
0-20 000	-0.350	-0.187
	(0.305)	(0.296)
40 000 – 60 000	-0.174	-0.228
	(0.246)	(0.234)
60 000 – 80 000	-0.246	-0.607
	(0.212)	(0.371)
80 000 – 100 000	0.201	-0.0420
	(0.242)	(0.230)
100 000 – 120 000	0.0871	-0.0904
	(0.271)	(0.268)
120 000 – 140 000	-0.0969	-0.316
	(0.292)	(0.278)
> 140 000	0.238	-0.0190
	(0.227)	(0.212)
equivalent household size	0.155**	0.118
	(0.0719)	(0.0825)
Indigenous*equiv. hhld size	-0.0900	-0.309
	(0.324)	(0.345)
family trust	0.385***	0.381***
	(0.0474)	(0.0515)
Indigenous*family trust	-0.107	0.188
	(0.217)	(0.236)
social support	0.147***	0.141***
	(0.0340)	(0.0377)
Indigenous*social support	0.276*	0.111
	(0.159)	(0.192)

employed	0.111***	0.0863**
	(0.0312)	(0.0359)
Indigenous*employed	0.00338	0.258
	(0.166)	(0.210)
confidence in police	0.222***	0.202***
	(0.0241)	(0.0260)
Indigenous*confidence in police	0.224*	0.161
	(0.132)	(0.139)
overcrowding	-0.0346	-0.119
	(0.0918)	(0.139)
Indigenous* overcrowding	-0.0680	0.616
	(0.283)	(0.387)
childlrg	0.103	0.000247
	(0.0908)	(0.111)
Indigenous*childlrg	0.171	-0.0901
	(0.232)	(0.331)
victimization	-0.104*	-0.0331
	(0.0569)	(0.0678)
Indigenous*victimization	-0.0317	0.0907
	(0.219)	(0.208)
discrimination	-0.268***	-0.249***
	(0.0462)	(0.0538)
Indigenous*discrimination	0.201	0.264
	(0.192)	(0.207)
community belonging	0.350***	0.326***
	(0.0315)	(0.0346)
Indigenous*comm belonging	0.0607	0.254
	(0.157)	(0.191)
mentalhealth	1.884***	1.819***
	(0.0757)	(0.0836)

Indigenous*mentalhealth	0.197	0.0834
	(0.293)	(0.309)
Constant	4.654***	4.832***
	(0.115)	(0.131)
Observations	24,134	18,817
R-squared	0.296	0.276

Table 18 Restricting to Working Age Population Versus Using All Responses in OLS[20]

Variable	***All Responses***	***Working Age only (25-64)***
Indigenous	-0.290	-0.189
	(0.461)	(0.491)
female	0.0224	-0.0119
	(0.0238)	(0.0292)
Indigenous*female	0.200	0.362**
	(0.128)	(0.144)
age (base: 45-54)		
15-24	0.414***	
	(0.0621)	
25-34	0.0782*	0.0839*
	(0.0439)	(0.0443)
35-44	-0.0372	-0.0383
	(0.0390)	(0.0393)
55-64	0.127***	0.129***
	(0.0379)	(0.0386)
65-74	0.297***	
	(0.0478)	
≥ 75	0.516***	
	(0.0595)	
Indigenous*age		
15-24	-0.101	
	(0.246)	
25-34	0.0996	0.155
	(0.250)	(0.237)
35-44	0.215	0.197
	(0.178)	(0.177)

[20] Reported values are the coefficients associated with each variable. Robust standard errors are shown in parentheses. * indicates a p-value <0.10. ** indicates a p-value <0.05. *** indicates a p-value <0.01.

55-64	-0.0206 (0.206)	-0.0398 (0.202)
65-74	-0.342 (0.297)	
75	0.0769 (0.429)	
married	0.517*** (0.0477)	0.560*** (0.0559)
Indigenous*married	0.00727 (0.174)	0.0394 (0.183)
divorced	0.0783 (0.0502)	0.0649 (0.0608)
Indigenous*divorced	0.111 (0.248)	0.144 (0.301)
health	1.127*** (0.0654)	1.002*** (0.0809)
Indigenous*health	-0.121 (0.291)	-0.427 (0.326)
annual household income (base: 20 000 – 40 000)		
0-20 000	-0.0245 (0.0692)	-0.0605 (0.0955)
40 000 – 60 000	0.0651 (0.0531)	0.146** (0.0730)
60 000 – 80 000	0.0936* (0.0552)	0.144* (0.0744)
80 000 – 100 000	0.0464 (0.0498)	0.0786 (0.0676)
100 000 – 120 000	0.106* (0.0608)	0.145* (0.0796)

120 000 – 140 000	0.120*	0.144*
	(0.0643)	(0.0831)
> 140 000	0.156***	0.179**
	(0.0544)	(0.0718)
Indigenous*household income		
0-20 000	-0.350	-0.636*
	(0.305)	(0.354)
40 000 – 60 000	-0.174	-0.417
	(0.246)	(0.259)
60 000 – 80 000	-0.246	-0.442*
	(0.212)	(0.227)
80 000 – 100 000	0.201	0.129
	(0.242)	(0.253)
100 000 – 120 000	0.0871	-0.198
	(0.271)	(0.284)
120 000 – 140 000	-0.0969	-0.231
	(0.292)	(0.314)
> 140 000	0.238	0.0110
	(0.227)	(0.250)
equivalent household size	0.155**	0.158*
	(0.0719)	(0.0817)
Indigenous*equiv. hhld size	-0.0900	0.0746
	(0.324)	(0.369)
family trust	0.385***	0.249***
	(0.0474)	(0.0546)
Indigenous*family trust	-0.107	-0.0220
	(0.217)	(0.228)
social support	0.147***	0.172***
	(0.0340)	(0.0425)
Indigenous*social support	0.276*	0.290
	(0.159)	(0.185)

employed	0.111***	0.143***
	(0.0312)	(0.0387)
Indigenous*employed	0.00338	0.181
	(0.166)	(0.198)
confidence in police	0.222***	0.209***
	(0.0241)	(0.0293)
Indigenous*confidence in police	0.224*	0.240*
	(0.132)	(0.142)
overcrowding	-0.0346	-0.000752
	(0.0918)	(0.131)
Indigenous* overcrowding	-0.0680	0.130
	(0.283)	(0.299)
childlrg	0.103	0.123
	(0.0908)	(0.114)
Indigenous*childlrg	0.171	0.399
	(0.232)	(0.271)
victimization	-0.104*	-0.114
	(0.0569)	(0.0692)
Indigenous*victimization	-0.0317	-0.173
	(0.219)	(0.247)
discrimination	-0.268***	-0.264***
	(0.0462)	(0.0546)
Indigenous*discrimination	0.201	0.206
	(0.192)	(0.211)
community belonging	0.350***	0.355***
	(0.0315)	(0.0374)
Indigenous*comm belonging	0.0607	0.0592
	(0.157)	(0.177)
mentalhealth	1.884***	2.029***
	(0.0757)	(0.0920)

Indigenous*mentalhealth	0.197	-0.00692
	(0.293)	(0.311)
Constant	4.654***	4.663***
	(0.115)	(0.137)
Observations	24,134	15,765
R-squared	0.296	0.309

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