

# Canadian Family...\*

My subtitle if needed

Alicia Yang

Jiayi Du

Kaiyuan Yan

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## Abstract

In this paper, we conducted the research on the factors which may have an impact on people's feelings about life based on the General Social Survey(GSS). After screening and comparison, we found that the factors that may affect people's feelings about life in the survey include age, respondent income, sex, average working hours, education level and feelings about life. We mainly analyzed the possible influence by comparison between married people and single people. Finally we found that single people of younger age with less income and less working hours feel happier about life, while married people of older age with less income and less working hours and higher education level feel more satisfied with their life. Moreover, we analyzed the reason for these factors causing effect and discussed the possible bias in the research and the solutions to it.

## 1 Introduction

Different aspects of the Canadian society has entered a relatively stable stage in the past few decades, such as its economy and politics. However, it doesn't mean that the Canadians haven't been experiencing changes that drastically affect their lifestyles. Factors including social policies and technology advancements have greatly shift the Canadians' ideology, values, and one of the most common change is their attitude towards marriage. Surveys have shown that more than half of the Canadians see no reasons in getting legally married (Khoo 2018). They tend to form common low relationships or simply stay single, because from their perspectives, it seemed like marriages are more likely to end up in a mess than happiness.

The General Social Survey(GSS) conducted a survey on the topic of Canadian Families in 2017 (Canada 2020). By utilizing the data collected from the survey, we found that married couples are actually more likely to be happier about their lives than the singles, which contradicts to many people's perception about marriage and family. In order to understand how this controversy is formed, this paper aims to explore the different possible factors that affect the happiness of single and married people, such as age, sex, marital status, family income, average working hours and so on. The survey data is thoroughly discussed in the section of 2. In the sub-section 2.1, we presented an overview of the original survey data, and explained our cleaned dataset that we'll for exploration. The methods used to collect the GSS data as well as the strengths and weaknesses associated with these methods are outlined in the sub-sections 2.2, 2.3, and 2.4. Section 3 presents a series of findings in relation to the different aspects that have impacts on single and married people's feelings about life, including age, sexuality, average hours worked, respondent income, and education level.

In section 4

A supplementary survey is provided in the Appendix in section 5 that incorporate the main focus of this paper and the general social survey. It is designed to obtain more information to enhance the quality of the survey data and to pursue further investigation on this topic.

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\*Code and data are available at: <https://github.com/dujiayi1/Factors-that-affect-happiness>.

## 2 Data

### 2.1 Dataset of interest

The survey we utilized in this paper comes from the General Social Survey(GSS) of Canada in 2017 (Canada 2020). The GSS program, founded in 1985, designed and conducted surveys targeting Canadians and focusing on different aspects of life each year. The purpose of those surveys was to collect enough data to investigate potential social issues faced by Canadians, seek for approaches to address these issues, and improve their life quality and personal wellness. This paper selected the GSS which focused on the topic of evolution of Families. This questionnaire has a total of 20602 samples and 460 variables. Its target respondents are the people who live in Canada who are older than 15 (Canada 2020).

This paper focused on investigating 6 of these variables: age, sex, respondent’s income, average working hours, and feelings about life. R (R Core Team 2021), and R packages “tidyverse” (Wickham et al. 2019), “janitor” (Firke 2021), “knitr” (Xie 2021), “dplyr” (Wickham et al. 2021), and “kableExtra” (Zhu 2021) are utilized to create an extract of the cleaned dataset (Table 1).

Table 1: Extracting the first ten rows from the cleaned GSS Family survey dataset

Feelings about life	Marital status	Age	Sex	Average hours worked	Respondent income	Education
8	Single, never married	45-60	Female	\$25,000 to \$49,999	30.0 to 40.0 hours	High school diploma or a high school equivalency
10	Married	45-60	Male	Less than \$25,000	50.1 hours and more	Trade certificate or diploma
8	Single, never married	60-80	Female	Less than \$25,000	30.0 to 40.0 hours	High school diploma or a high school equivalency
10	Single, never married	15-30	Male	Less than \$25,000	0.1 to 29.9 hours	Less than high school diploma or its equivalent
6	Single, never married	30-45	Female	\$25,000 to \$49,999	50.1 hours and more	University certificate or diploma below the bachel
6	Married	45-60	Female	Less than \$25,000	Don’t know	High school diploma or a high school equivalency
9	Single, never married	30-45	Female	\$25,000 to \$49,999	30.0 to 40.0 hours	Bachelor’s degree (e.g. B.A., B.Sc., LL.B.)
9	Married	60-80	Male	\$125,000 and more	30.0 to 40.0 hours	High school diploma or a high school equivalency
8	Single, never married	30-45	Female	\$75,000 to \$99,999	40.1 to 50.0 hours	Bachelor’s degree (e.g. B.A., B.Sc., LL.B.)
8	Single, never married	15-30	Male	\$25,000 to \$49,999	30.0 to 40.0 hours	College, CEGEP or other non-university certificat

Table 1 shows the first ten rows of the GSS Family dataset of interest .Variable “Age” indicates the age group of the survey respondents. Variable “Feelings about life” indicates how the respondents generally feel about their life from a scale of 0 to 10. Variable “Sex” indicates indicates the sexuality of the respondents. Variable “Marital Status” gives information on whether the respondents are single, living common-law, married, separated, divorced, or widowed; in this paper, we are only interested in the respondents who are either single or married. Variable “Average hours worked” shows the weekly working hours of the respondents. Variable “Personal income” indicates the personal income of the respondents from all possible sources.

### 2.2 Methodology

The survey questions were tested by Statistics Canada’s Questionnaire Design Resource Center beforehand. Screened participants from two cities were selected to complete the questionnaire. Base on the feedback of these participants, questions were improved to enhance the effectiveness of the survey. The sampling frame of this survey was created by the Census and Statistics Canada’s dwelling frame, The respondents were accessed by landline and cellular telephone numbers, and only one member from each of the selected households was asked to fill the questionnaire. Stratified sampling was used to select the respondents. The Canadian population was divided into 27 strata based on the provinces and census metropolitan areas. Minimum number of random samples were picked from each of the strata to reduce the bias. Invitation letters were sent to the sampled households prior to the official survey to increase the response rate (Canada 2020).

### 2.3 Strengths

The response rate of GSS in 2017 is approximately 52.4%, which is a pretty high number. To make sure that the samples were representative of the target population, the survey data were applied by a weighing factor so that the outcome of the survey was more accurate. Issues associated with ethics were reduced due to the

confidentiality rules of Statistics Canada and prevented the respondents' personal information to be disclosed without permission (Canada 2020).

## 2.4 Weaknesses

Some questions which appeared to be quite sensitive to many respondents resulted in high non-response rates. For instance, respondents were generally unwilling to provide information about their incomes. As a result, the information about income was acquired by the tax returns filed by the respondents from the previous year, and the variable "income" was set to a categorical variable. However, this made the survey data collected much vaguer and less likely to reflect the true statistics of income. Some bias were associated with the GSS data. For instance, not all target population was covered by the sampling method. The group of households without telephones were not included in the sampled population, which potentially increased the bias of the survey data. Non-response bias was resulted from the group of sampled populations who did not respond to the survey (Canada 2020).

## 3 Results

### 3.1 Age

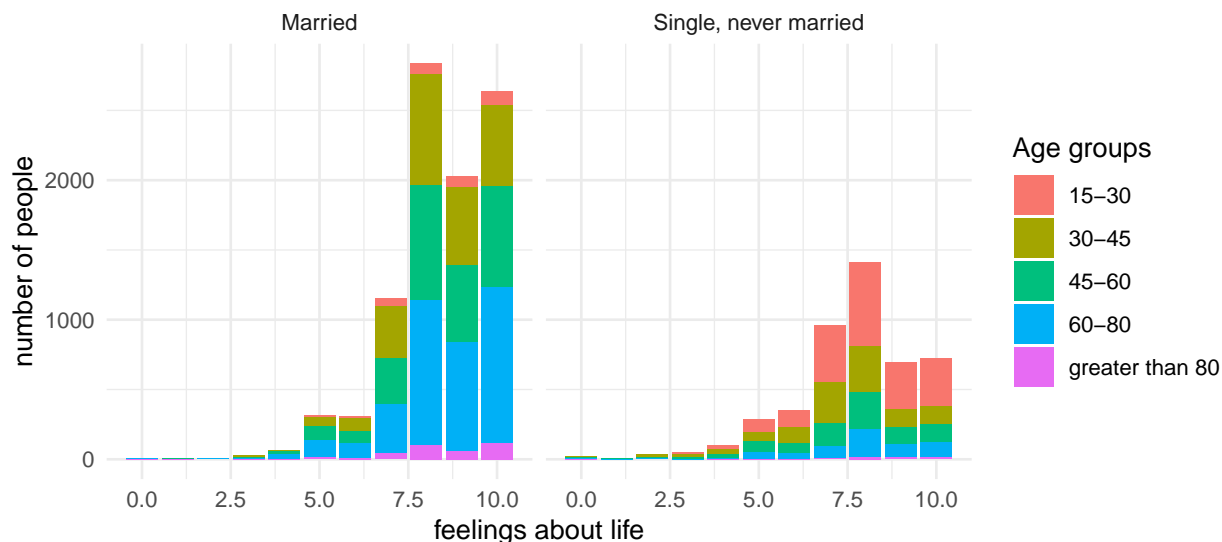


Figure 1: Comparing the rated feelings about life of different age groups between single and married people

Figure 1 demonstrates how different age groups of Canadians rate their lives and draws a comparison about this statistics between those who are married and those who're single and never married. Considering the fact that the number of singled respondents decreased by age, it is unreasonable to simply compare between the two plots. By looking at the samples who are single, we can observe that a higher proportion of younger age groups rated their feelings about life high(between 7 and 10), while on the contrary, a higher proportion of older people rated their feelings about life low(between 3 and 6). For the samples of married people, it's quite obvious that a much higher proportion of older people rated their feelings about life with high scores between 8 and 10.

### 3.2 Sexuality

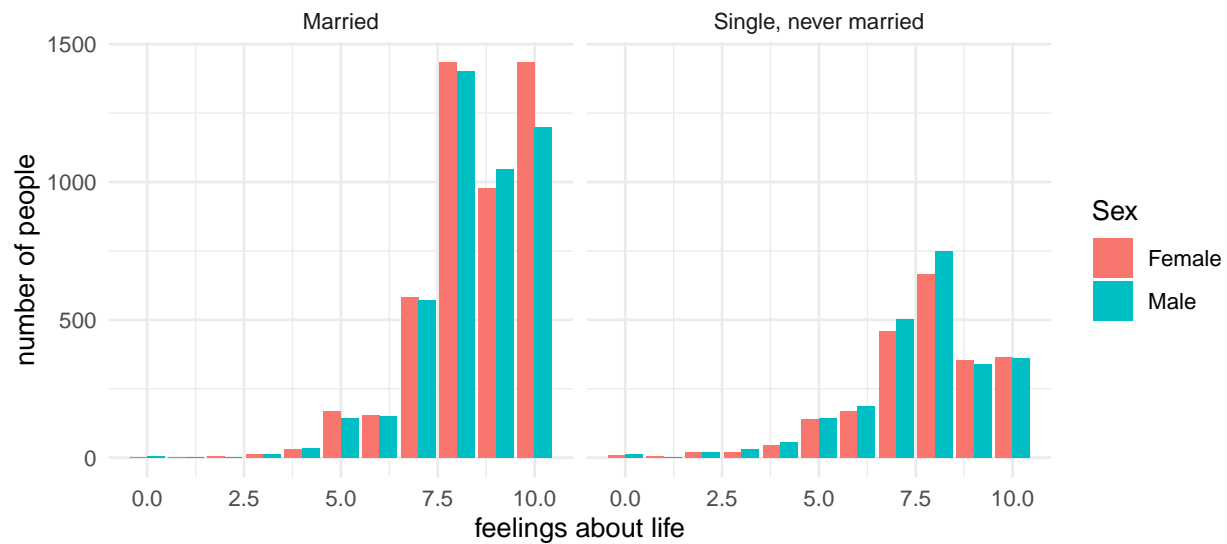


Figure 2: Comparing the feelings about life between male and female for single and married people

Figure 2 compares the feelings about life between female and male when they are married or single and never married. For the group of singles, sexuality does not have a distinct influence on how they rate their feelings about life. Slightly more males than females rated their feelings for life between 7 and 8, but the number break even again between 9 and 10. However, when it comes to married couples, it seemed like some females tend to give extreme high scores(score of 10) on their feelings about life. This implies that for most of the times, sexuality is not a big contributor to one's satisfaction about his/her life when they are either single or married, yet it greatly increases some married females' happiness.

### 3.3 Respondent income

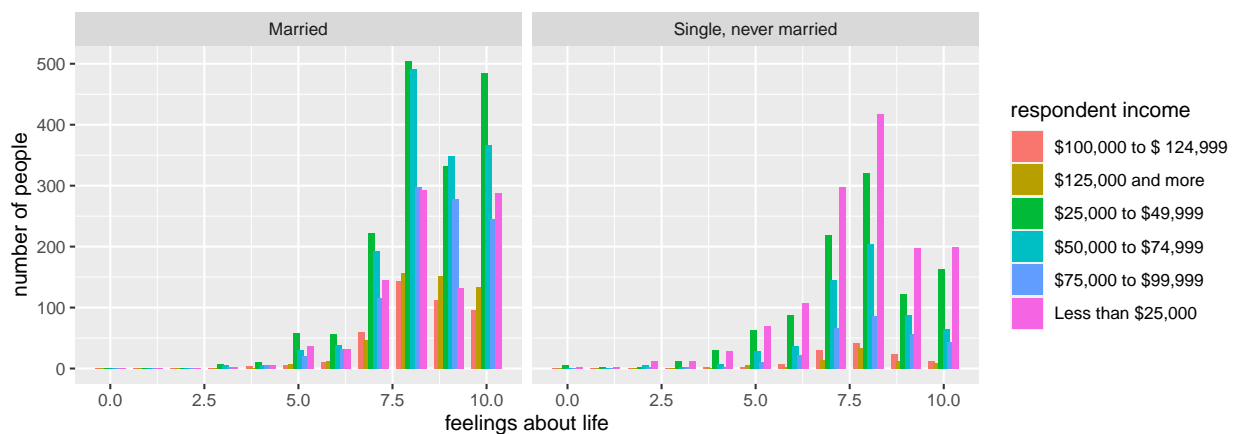


Figure 3: Comparing the feelings about life between different levels of income of respondents for single and married people

Figure 3 indicates the effect on respondents' feelings about life by comparing the different income levels and

it's divided by the marital status respectively. It is not hard to find that no matter they are married or single, their income level is high or low, their feelings about life are still eight points or above. In addition, interestingly, it seems that people with lower income levels are happier with their lives, especially among single and never married people. This implies that personal income actually may have a considerable impact on the people's feeling about life.

### 3.4 Average weekly working hours



Figure 4: Comparing the feelings about life between different levels of working hours of respondents for single and married people

Figure 4 demonstrates the relationship between feelings about life and the weekly average working hours of respondents. It's not surprising to find that people with less working hours tend to have more points of feeling about life, which is much more apparent for married groups. It seems that people with 6-8 working hours every day may be happier about life.

### 3.5 Education

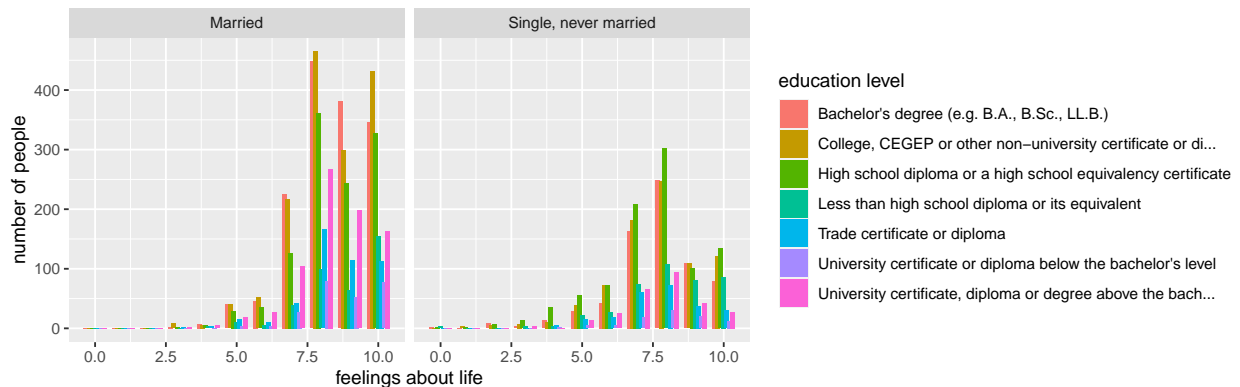


Figure 5 shows that, as for married people, education level has some effect on feelings about life while it has little influence on single people. For married people, it seems that higher education level may lead to more points of feeling about life. Most of the married respondents with bachelor's degree or college certificate have more than 8 points of feeling about life, which indicates that married people with a relatively high education level may feel much happier about life.

## 4 Discussion

### 4.1 Ageing and Family life

In section 3.1, we've discussed that older people with families tend to feel better about their lives compared to younger age groups, and at the same time, younger people that have not yet form families also tend to feel better about their lives when comparing to single elderly people. One possible explanation for this particular result is difference between young and old people in terms of their ideology, health conditions, and social status. Family would be a strong support for the elders who have high risks to experience illnesses, social isolations, and financial crisis. The younger generations, on the other hand, who are more capable of overcoming the crisis faced by the elders, often value the importance of having personal space and feeling controlled of their own lives more. Family has both advantages and drawbacks from looking at these two perspectives, so it's not surprised that Canadians have such diverse attitudes towards family.

### 4.2 Personal income

From our perspective, it might be tempting to assume that people with higher incomes are likely to be happier because they have more purchasing power and higher consumption levels, making it easier for them to buy things than ordinary people who have to take a long time to save up for. However, in this paper, it's quite surprising to find that people who are married with high income tend to be less happy than people who earn less. After consideration and discussion, the possible reasons are as follows:

On one hand, people who have been married have more pressure about their family, not only the family daily expenses, but also a large proportion of possible expenses from raising children. For them, a large part of the high salary earned by hard work every day is for family expenses, and there may even be a feeling of being on the run all the time, which makes them feel less happy with life.

On the other hand, people who are single right now spend most of their salary on themselves, no matter they go out to eat, drink or buy things for themselves. There is less pressure, so they are more likely to feel satisfied and happy about life.

### 4.3 Working hours

It's not hard to understand that long working hours may have negative effect on the people's feeling about life, since working for a long time with high intensity will definitely have a great impact on people both physically and psychologically.

However, it seems more obvious that long working hours have more impact on married people than single people. In our opinion, since married people may have more pressure from their family, it's quite normal for them to feel more relaxed if they have less working hours. They may be able to take a break and enjoy their life better.

Although working hours are often positively correlated with income, as we have previously analyzed, higher income does not necessarily mean increased happiness with life, so working longer hours does not necessarily mean greater satisfaction and happiness with life.

### 4.4 Education

In fact, most of the time, education has a certain relationship with the factor we discussed before, the working hours and personal income. It seems that nowadays, people with higher degrees tend to be able to find higher-paying jobs, but higher-paying jobs often mean longer working hours.

However, from the discussion above, we find that more personal income and working hours don't mean greater happiness. Thus, we consider the other reasons for education level leading to higher level of happiness. The biggest reason we can accept is that for the highly educated married people, they may have wider horizons and richer thoughts. Especially when faced with setbacks in life and feeling depressed, they can quickly deal

with them and have a more positive attitude towards life. Moreover, in the family they are able to understand each other and accommodate with each other. As a result, family life is often more harmonious.

#### **4.5 Weaknesses and limitations**

Our results are more directly reflected by images, and then we make subjective summaries and think about the reasons behind them. We do not specifically point out the influence of factors that affect feelings about life. With more study, we can use more statistical knowledge to conduct modeling and analysis to obtain the specific influence of different factors, so as to exclude the deviation caused by some subjective factors.

Moreover, due to the individual differences among different people, working long hours does not necessarily mean high income, and high income does not necessarily mean working long hours. In addition, highly educated people do not necessarily have a high-paying job. All these may cause bias to our results.

Besides, in fact, everyone's feelings towards life will be affected by many aspects. No matter personal thoughts or mentality, may have much influence on a person's feelings towards life. However, these are not reflected by a simple survey and table, which may produce deviations in our results.

## **5 Appendix**

## References

- Canada, Statistics. 2020. *General Social Survey Cycle 31: Family, 2017*. <https://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&Id=335816>.
- Firke, Sam. 2021. *Janitor: Simple Tools for Examining and Cleaning Dirty Data*. <https://github.com/sfirke/janitor>.
- Khoo, Isabelle. 2018. *More Than Half of Canadians in New Survey Think Marriage Is Unnecessary*. [https://www.huffpost.com/archive/ca/entry/canadians-not-getting-married\\_a\\_23428865](https://www.huffpost.com/archive/ca/entry/canadians-not-getting-married_a_23428865).
- R Core Team. 2021. *R: A Language and Environment for Statistical Computing*. Vienna, Austria: R Foundation for Statistical Computing. <https://www.R-project.org/>.
- Wickham, Hadley, Mara Averick, Jennifer Bryan, Winston Chang, Lucy D'Agostino McGowan, Romain François, Garrett Golemund, et al. 2019. "Welcome to the tidyverse." *Journal of Open Source Software* 4 (43): 1686. <https://doi.org/10.21105/joss.01686>.
- Wickham, Hadley, Romain François, Lionel Henry, and Kirill Müller. 2021. *Dplyr: A Grammar of Data Manipulation*. <https://dplyr.tidyverse.org,%20https://github.com/tidyverse/dplyr>.
- Xie, Yihui. 2021. *Knitr: A General-Purpose Package for Dynamic Report Generation in R*. <https://yihui.org/knitr/>.
- Zhu, Hao. 2021. *KableExtra: Construct Complex Table with 'Kable' and Pipe Syntax*. <http://haozhu233.github.io/kableExtra/,%0Ahttps://github.com/haozhu233/kableExtra>.