

Investigating the possible aspects affecting Canadian Individuals and Families' feelings about life*

Alicia Yang

Jiayi Du

Kaiyuan Yan

20 March 2022

Abstract

In recent years Canadian society has shown diverse attitude towards the idea of forming a family. To investigate on the reason behind this controversy, this paper conducted the research on the factors which may have an impact on single and married 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, and education level. By observing the result, we found that single people of younger age with less income and more working hours feel happier about life, while married people of older age with less working hours and higher educational 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 does not 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 and forming family. 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, personal 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 how the different aspects we picked have impacts on single and married people's feelings about life. These aspects include age, gender, average hours worked, respondent income, and education level. In section 4, a discussion is made to elaborate on the implications of the findings we've got from the survey data. Furthermore, we talked about the possible reasons that lead to the effect of these factors on single and married people's feelings about life.

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 investigations on this topic.

*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/certificate
10	Married	45-60	Male	Less than \$25,000	50.1 hours and more	Trade certificate/diploma
8	Single, never married	60-80	Female	Less than \$25,000	30.0 to 40.0 hours	High school diploma/certificate
10	Single, never married	15-30	Male	Less than \$25,000	0.1 to 29.9 hours	Less than high school diploma
6	Married	45-60	Female	Less than \$25,000	Don’t know	High school diploma/certificate
9	Single, never married	30-45	Female	\$25,000 to \$49,999	30.0 to 40.0 hours	Bachelor’s degree
9	Married	60-80	Male	\$125,000 and more	30.0 to 40.0 hours	High school diploma/certificate
8	Single, never married	30-45	Female	\$75,000 to \$99,999	40.1 to 50.0 hours	Bachelor’s degree
8	Single, never married	15-30	Male	\$25,000 to \$49,999	30.0 to 40.0 hours	Non-university certificate/diplomas
8	Single, never married	45-60	Male	\$75,000 to \$99,999	30.0 to 40.0 hours	Bachelor’s degree

Table 1 shows the first ten rows of the GSS Family dataset of interest .Variable “Age” indicates the age group of the survey respondents; it is used as a categorical variable in this paper for the purpose of comparing respondents by groups. 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 gender 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 range of weekly working hours of the respondents. Variable “Personal income” indicates the range of personal income of the respondents from all possible sources each year.

By looking at the distribution of survey data in Figure 1 it seems like a much larger proportion(more than 70%) of married respondents have better feelings about life, giving scores between 8 to 10, while for the single respondents, a less percentage of them give high scores between 8 to 10 of how they feel about their life. This finding is contradicting to many Canadians’ attitudes towards marriage and family, which is that it is unnecessary. Therefore, we will look into how different factors that we’ve selected cause the difference in attitude and feelings towards marriage, and what particular characteristics of each individuals make their single/married lives better.

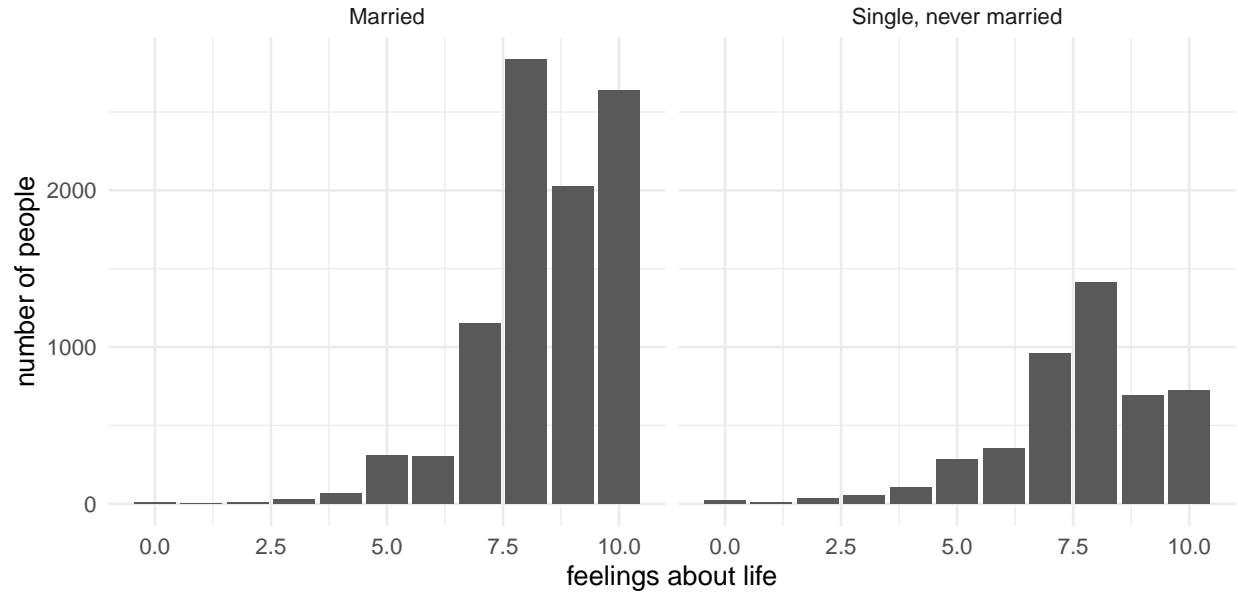


Figure 1: Comparing the rated feelings about life between single and married people

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 (Alexander 2022). 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 vs Feelings about life

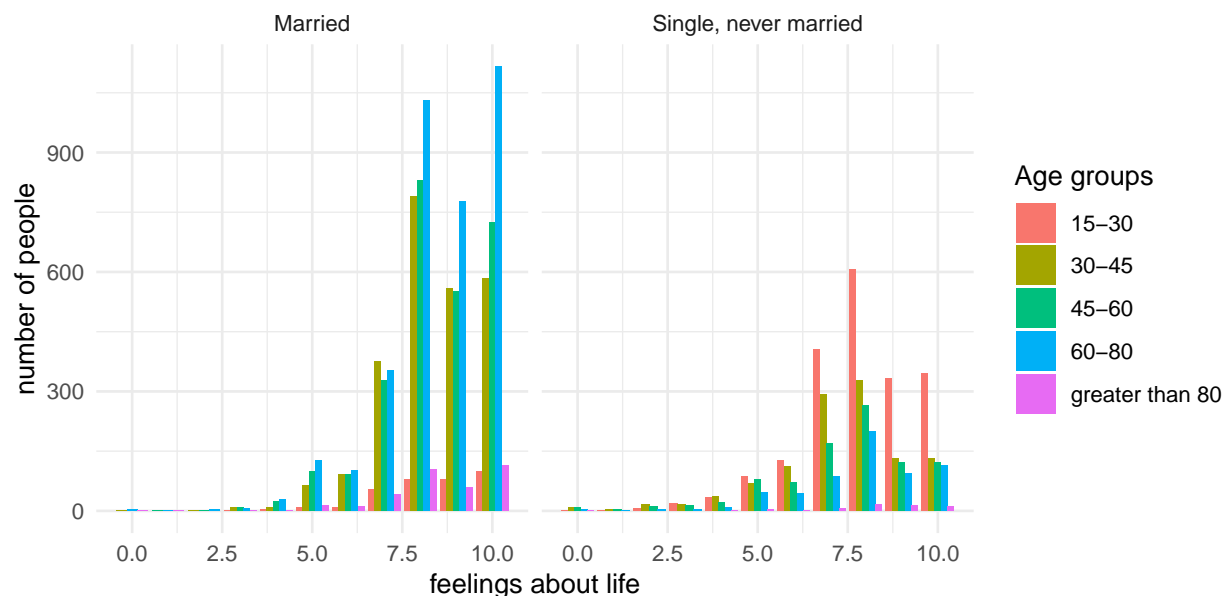


Figure 2: Comparing the rated feelings about life of different age groups between single and married people

Figure 2 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 decrease 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 Gender vs Feelings about life

Figure 3 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 seems like some females tend to give extremely high scores(score of 10) on their feelings about life. This implies that for most of the times, gender 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.

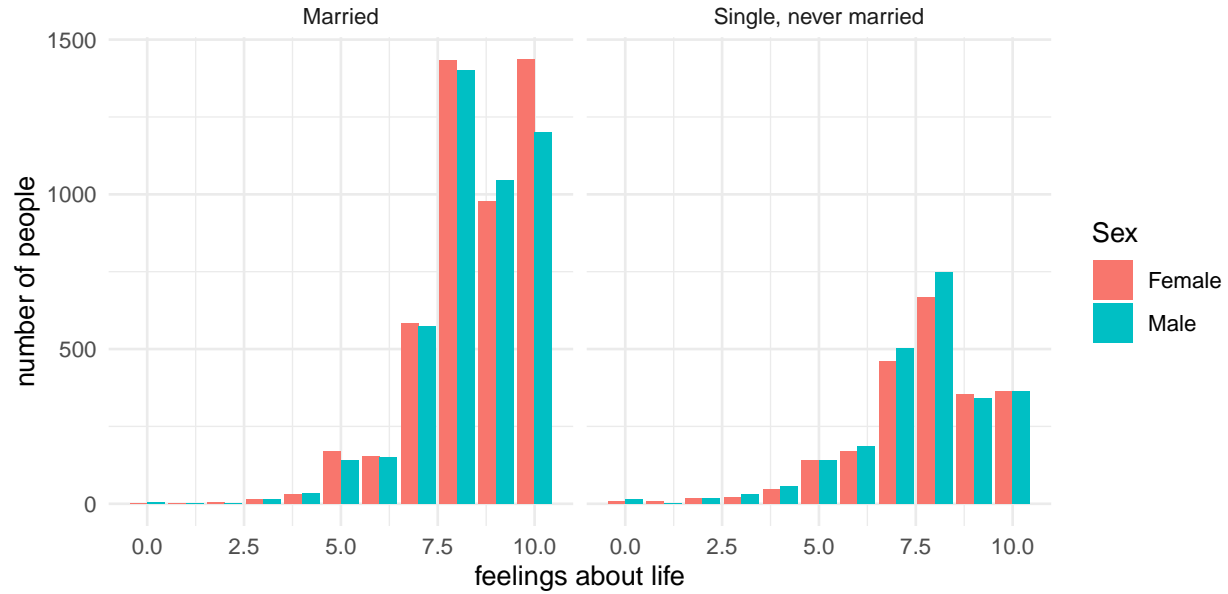


Figure 3: Comparing the feelings about life between male and female for single and married people

3.3 Respondent income vs Feelings about life

Figure 4 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 observe that the group of singles generally has a lower income level than the group of married people. In addition, by comparing within single respondents, it is interesting to find out that people with lower income levels feel better about their lives than people with higher income levels. This implies that personal income actually may have a considerable impact on the single people's happiness. For the married people, it seems like income level has no significant correlation with their feelings about life; a considerable number of respondents who earn less than \$25000 a year rated their feelings at a score of 10, while some respondents that earn over \$100000 a year only rated their feelings at a score of 8.

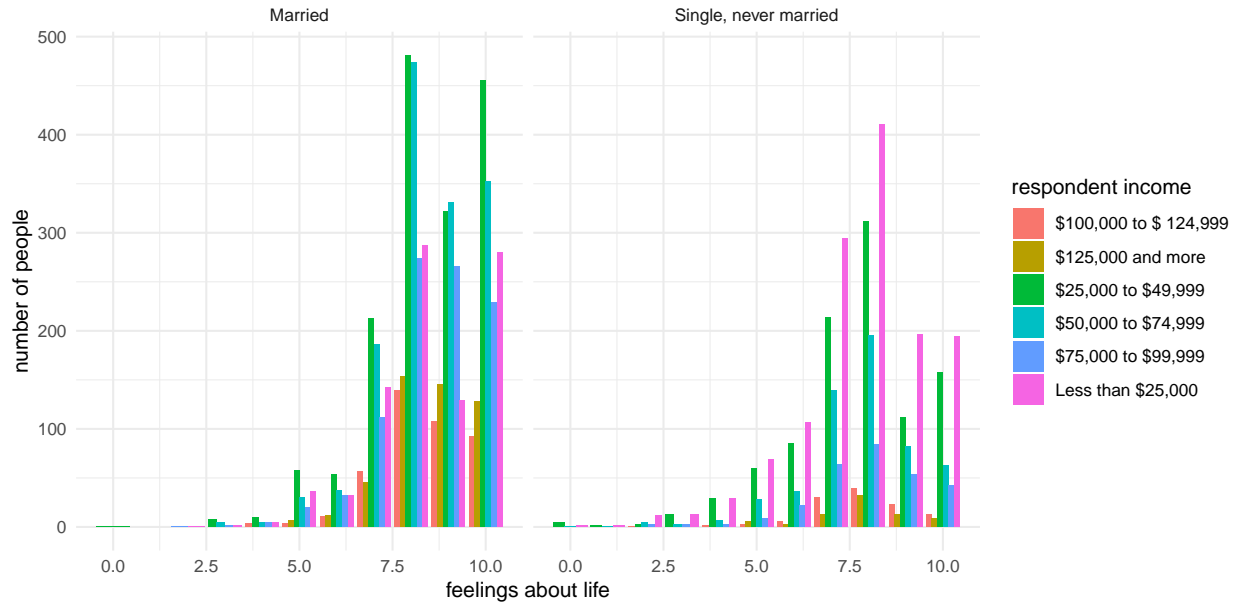


Figure 4: Comparing the feelings about life between different levels of income of respondents for single and married people

3.4 Average weekly working hours vs Feelings about life

Figure 5 demonstrates the relationship between feelings about life and the weekly average working hours of single and married respondents. It's not surprised to find that the single respondents with heavy working hours of 40 hours or more tend to give higher scores on feeling about life. On the other hand, for married people, It seems like people with approximately 30-40 working hours every week feel happier about their lives.

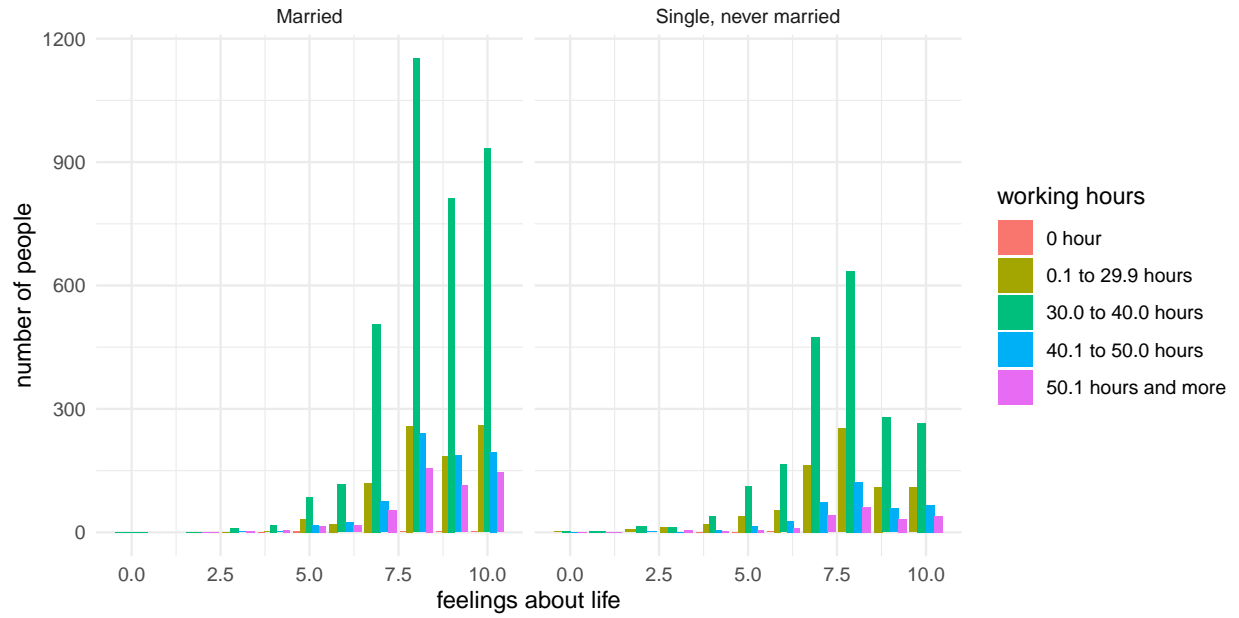


Figure 5: Comparing the feelings about life between different levels of working hours of respondents for single and married people

3.5 Education vs Feelings about life

Figure 6 shows that, education level has some effect on the married respondents' feelings about life while it has little influence on the single respondents. For married people, it seems that higher education level may lead to higher scores of feelings about life. Most of the married respondents with bachelor's degree or college certificate give higher scores of 8 or more on feeling about life, which indicates that married people with a relatively high education level may feel much happier about life.

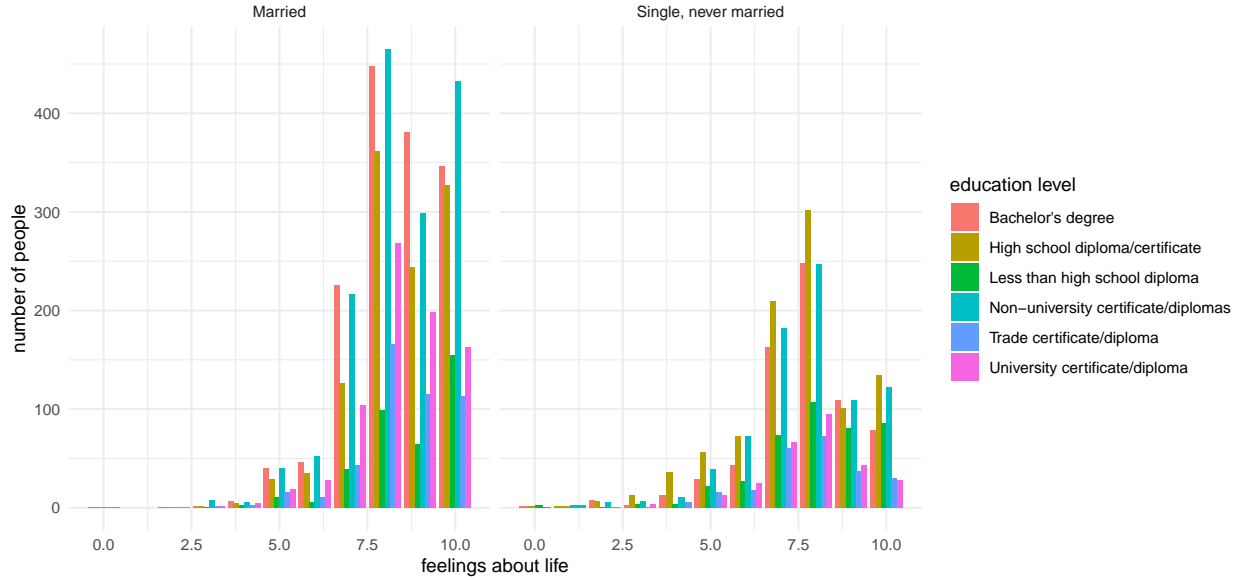


Figure 6: Comparing the feelings about life between different levels of education of respondents for single and married people

4 Discussion

4.1 Age

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 isolation, 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 of different age groups have such diverse attitudes towards family.

4.2 Gender

Gender does not play a big role in terms of affecting the single and married respondents' feelings about life. One possible implication drawn from this result is that the gender roles in the Canadian society is weakened and the gender gap is gradually diminishing, which is a good sign. Men and women were no longer expected perform their traditional responsibilities either as individuals or as family members. Instead, their responsibilities become similar. As a result, we don't see much difference between the happiness of men and women when they are either single or married as presented in section 3.2. Further investigations on the roles of gender in Canadian society in terms of their characters as individuals or family members is needed to support this conclusion.

4.3 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 married respondents with extremely high income tend to be less happy than people who earn less, and similarly, single respondents who earn lower wages also rate their feelings high. After consideration and discussion, the possible reasons are as follows:

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 is not contributing positively to their feelings about life.

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.

4.4 Working hours

It's not hard to understand that long working hours generally 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 negative impact on the married respondents, while many single respondents generally feel less repulsive to work for longer hours. In our opinion, since married people have more burdens and concerns regarding family issues, it's quite normal that they feel more pressured and feel the need to be more relaxed by having less working hours. With less working hours, they may be able to take a break and enjoy their life better. The single respondents, on the other side, are less concerned with this issue and thus generally don't mind working for longer period of times.

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

4.5 Education

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.

One possible bias in relation to this result is that as we seen in Figure 6, education levels higher than Bachelor's degree is not an option in the survey, which means that respondents with higher degrees are not included in the discussion here. We will take account of this potential bias in the supplementary survey provided at the end of the paper.

4.6 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.

Appendix

5 Supplementary Survey

5.1 Preamble

Canada is well known as one of the happiest countries on the planet. But what factor does Canadian think affect their feelings about life most? and how does it work? The purpose of this survey is to further investigate and elaborate on the main topic and discussions covered in this paper. We are interested in how these aspects: age, sex, average worked hours and personal income, affect Canadian's attitude towards family.

By proceeding with this survey you understand that your responses will be used to better explore how these possible factors could affect Canadian individuals and families' feelings about life. Overall outcomes of this survey will be used to discuss our analysis result of the object, but none of your responses will be used to identify you. Your responses will not be misused and will remain private. This survey is voluntary and if you decide to participate, you may skip any question(s) and withdraw at anytime.

5.2 Link to the Survey

Below is the QR Code and the link of the survey.



Figure 7: QR Code of the survey

Survey Link:

https://docs.google.com/forms/d/e/1FAIpQLSfCSQH zb-R61uIOLdmOCcdocRX9Ws-Z2NssHhxpLTRltjDItQ/viewform?usp=pp_url

5.3 Questions

Possible factors affecting Canadian Individuals and Families' feelings about life

Canada is well known as one of the happiest countries on the planet. But what factor does Canadian think affect their feelings about life most? and how does it work? The purpose of this survey is to further investigate those factors we concerned.

By proceeding with this survey you understand that your responses will be used to better explore how these possible factors could affect Canadian individuals and families' feelings about life. Overall outcomes of this survey will be used to discuss our analysis result of the object, but none of your responses will be used to identify you. Your responses will not be misused and will remain private. This survey is voluntary and if you decide to participate, you may skip any question(s) and withdraw at anytime.

What is your age?

- ☐ Under 18
- ☐ 18 to 27
- ☐ 28 to 37
- ☐ 38 to 47
- ☐ 48 to 57
- ☐ 58 to 67
- ☐ 68 to 77
- ☐ 78 to 87
- ☐ Over 88
- ☐ Prefer not to say
- ☐ Other: _____

What is your gender?

- ☐ Female
- ☐ Male
- ☐ Other
- ☐ Prefer not to say

What is your marital status?

- ☐ Single
- ☐ Married
- ☐ Separated
- ☐ Divorced
- ☐ Widowed
- ☐ Living common-law
- ☐ Prefer not to say

What is your average weekly working hours?

- ☐ 0 hour
- ☐ 0.1 to 10 hours
- ☐ 10.1 to 20 hours
- ☐ 20.1 to 30 hours
- ☐ 30.1 to 40 hours
- ☐ 40.1 to 50 hours
- ☐ 50.1 hours and more
- ☐ Don't know
- ☐ Prefre not to say

What is your highest level of education?

- ☐ Under high school certificate/diploma
- ☐ High school certificate/diploma
- ☐ Trade certificate
- ☐ College or other non-university certificate/diploma
- ☐ Bachelor's degree
- ☐ Master's degree
- ☐ Ph. D
- ☐ Other
- ☐ Prefer not to say

What is your attitude towards marriage?

- | | | | | | | |
|------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------|
| | 1 | 2 | 3 | 4 | 5 | |
| Very unnecessary | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Very necessary |

How do you feel about your life right now?

- | | | | | | | |
|------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------|
| | 1 | 2 | 3 | 4 | 5 | |
| Poor | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Excellent |

What factor do you think affect your feelings about life most?

- ☐ Age
- ☐ Gender
- ☐ Work hours
- ☐ Income
- ☐ Education level
- ☐ Other
- ☐ Prefer not to say

At what level do you think age affect your feeling about life?

1

2

3

4

5

Not at all

☐

☐

☐

☐

☐

Very much

At what level do you think your gender affect your feelings about life?

1

2

3

4

5

Not at all

☐

☐

☐

☐

☐

Very much

At what level do you think work hour affect your feeling about life?

1

2

3

4

5

Not at all

☐

☐

☐

☐

☐

Very much

At what level do you think income affect your feelings about life?

1

2

3

4

5

Not at all

☐

☐

☐

☐

☐

Very much

At what level do you think your education level affect your feelings about life?

1

2

3

4

5

Not at all

☐

☐

☐

☐

☐

Very much

5.4 End Page

Thanks you for completing this survey. We really appreciate your time. If you have any questions, please feel free to contact us at aliciam.yang@mail.utoronto.ca, bruce.yan@mail.utoronto.ca, or claire.du@mail.utoronto.ca.

References

- Alexander, Rohan. 2022. *Telling Stories with Data*. <https://www.tellingstorieswithdata.com/index.html>.
- 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.
- 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 Grolemund, 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>.