Woman and People with High Level of Education are More Concerend About Global Climate Change*

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Abstract

Climate change and global warming are predominant problems nowadays, in the north pole, polar ice caps are melting at a rate of almost 14% per decade. On top of that, over the past 30 years, the oldest and thickest ice in the north pole has declined by almost 95%. The majority of the Science Community believes that global warming is caused by the excessive emission of greenhouse gases such as Carbon Dioxide and Methane. Luckily, people are getting more and more aware of the global climate change and are willing to make changes. In this paper, we obtain a survey conducted on Toronto's residents about their perceptions of climate change and their willingness to take action on it. We aim to find out the impact of demographic factors such as personal income on people's perception of climate change. After careful investigation, we found out that woman and highly educated people are most concerned about climate change. Our findings can help the government to design better strategies to fight against global warming.

Keywords: Climate Change, Demographic Factor, Gender, Income, Education, Age, Concern, Model

1 Introduction

Ever since Industrial Revolution, people's life has become more and more convenient, for example, the invention of the steam engine made transportation much more easier. However, this convenience comes with great drawbacks, over the entire industrial revolution, scientist estimated that a total of 2.3 trillion tonnes of Carbon Dioxide have been released into the atmosphere, what is even worse is that those Carbon Dioxide has a life span of 300 - 1000 years, this means that those climate change can happen on the time scale of many generations' lives. The reason those green house gases cause global warming is because they will reflect the heat radiated from Earths' surface back, thus making the Earth warmer. Figure 1 shows the average land temperature on Earth in the past 100 years, Figure 2 shows the average Ocean temperature on Earth in the past 100 years, the data are obtained from Berkeley Earth Data Portal ("Data Overview," n.d.).

From the above two figures, it is very clear that the Earth's temperature is increasing rapidly after the Industrial Revolution. Based on research, Earth's ocean temperature has risen by 0.08 Celsius per decade since 1880, and the rate of warming over the past 40 years is more than twice of that, 0.18 Celsius per decade. People might develop the illusion that because this looks like a very small increase, it will have little or no impact on Earth's environment. However, this is wrong, the total volume of the Ocean on Earth is around 1.335 billion cubic kilometers, therefore, a tremendous amount of energy is required to heat up the ocean (Dahlman and LuAnn, n.d.).

Global warming has been regarded as a high-risk problem globally because it will trigger a chain of events. For instance, the increased temperature will melt polar ice caps, then those ice water will be released into the ocean, causing the global sea level to rise. This could trigger a series of events, for example, the salinity of the ocean will decrease because of this large amount of fresh water, and the decreased salinity is deleterious for certain species such as coral reef, which is a keystone species, meaning its extinction is disastrous to the

*Code and data are available at: https://github.com/cuilantao/Toronto-s-reaction-to-fight-against-global-warming

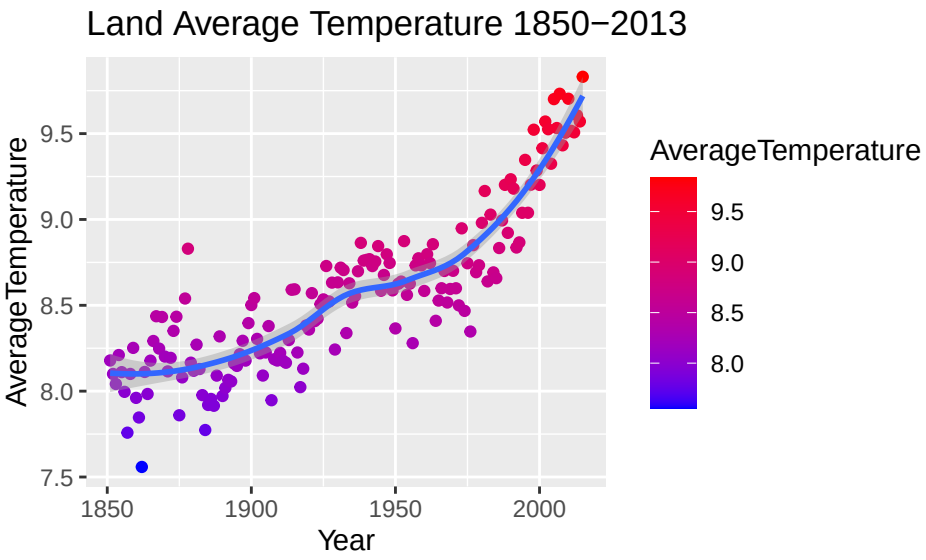

Figure 1: Land Average Temperature

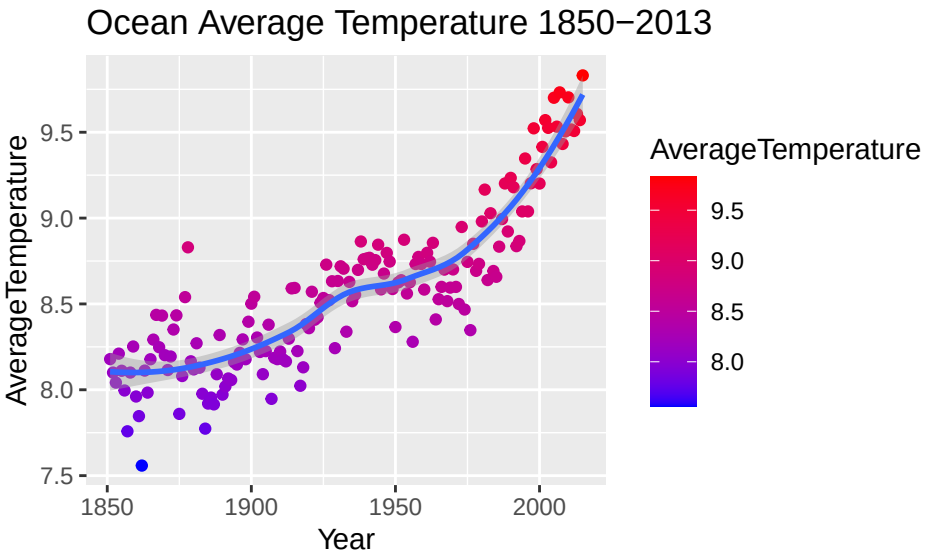

Figure 2: Ocean Average Temperature

entire ecosystem. Moreover, the melting of the polar ice cap will reveal the black soil under it, those black soil will then absorb more energy from the sun, thus exacerbating global warming.

Luckily, hundreds of nations are actively trying to fight Climate Change, some are planting more trees so that the excessive Carbon Dioxide can be absorbed through Photosynthesis, and some are developing more sustainable and environment-free energy sources such as solar power. Toronto, for example, proposed an ambitious plan called TransformTO, its goal is to achieve net-zero greenhouse gas emissions. However, everyone is different, hence it is common for people to hold different opinions about climate change. It is reasonable to believe that a university student majoring in environmental science will be more concerned about global warming than someone with high school education. To find out if there is a relationship between people's perception of climate change and their demographic factors such as income, level of education, and age, we obtained a city-wide climate perception survey dataset from the City of Toronto Data Portal (Gelfand 2020). On top of that, the report written by the City of Toronto was also helpful (n.d.). After running a series of analysis on the survey, we found out that woman and highly educated people are most concerned about the global climate change.

2 Data

We started our data analysis by using R (R Core Team 2020), dplyr(Wickham et al. 2021), tidyverse(Wickham et al. 2019), here(Müller 2020). Graphs are generated using ggplot2(Wickham 2016), kableExtra(Zhu 2021), and gridExtra(Auguie 2017).

2.1 Data Source and Collection

The dataset I will be using is from the City of Toronto Data Portal, it is conducted city-wide to gather people's opinions on climate change (Gelfand 2020), the goal of this survey is to capture their perceptions about climate change and to estimate people's willingness to take actions and help the city government to establish the goal of achieving net-zero carbon dioxide emission. The survey is conducted online and a total of 404 results were received between October 11 to October 18, 2018. All survey respondents are adult residents living in the City of Toronto.

2.2 Data Overview

All respondents are from 4 geological areas: Etobicoke-York, North York, Scarborough, Toronto and East York, Figure 3 is a bar graph showing the number of respondents from each area. Other than coming from different city areas, respondents also have different demographic backgrounds, For instance, some respondents have a household income of more than $150000 while some respondents only have a household income lower than $40000. The respondents also have a big age variety with some people being 65 years old and some only 20 years old. Below are some figures showing the distribution of the respondents based on their demographic factors. Figure 4 shows the distributions of respondents based on their age, Figure 5 shows the distribution of respondents based on their household income. Finally, Figure 6 shows the distribution of respondents based on their level of education.

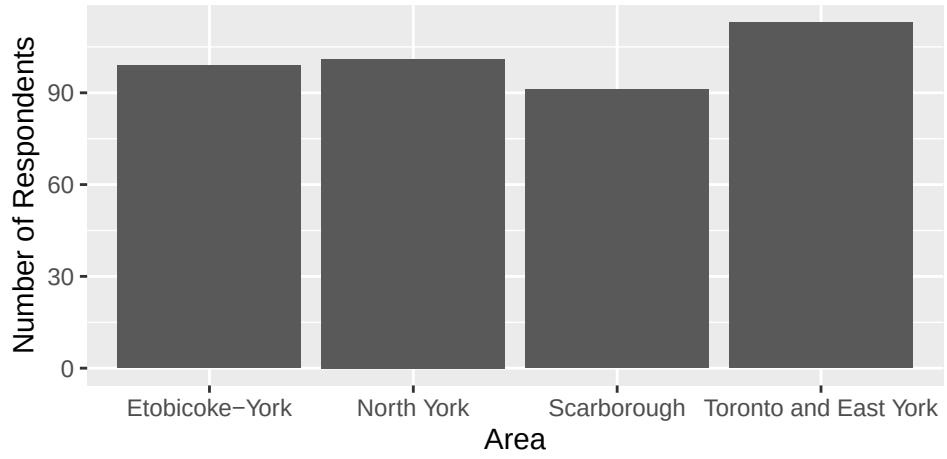

Figure 3: Number of Respondents from Each Area

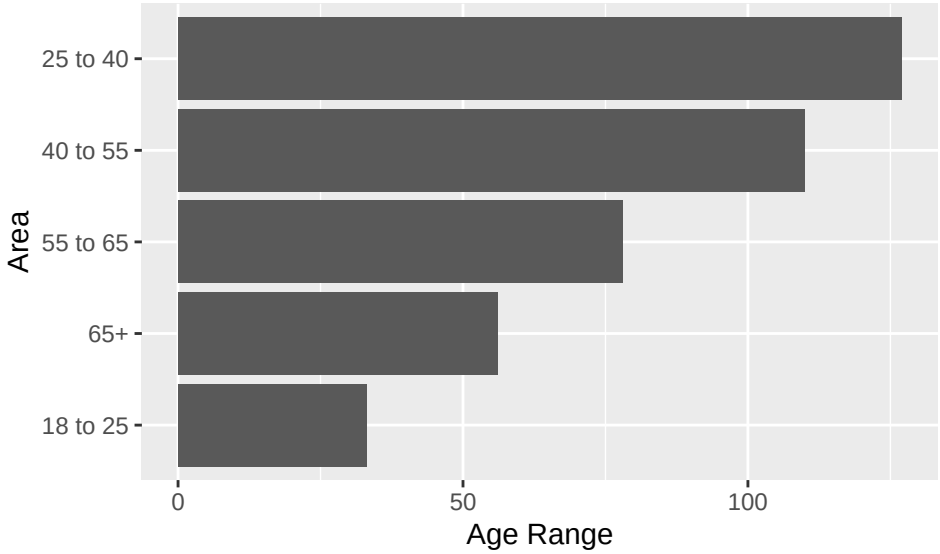

Figure 4: Number of Respondents Based on Age

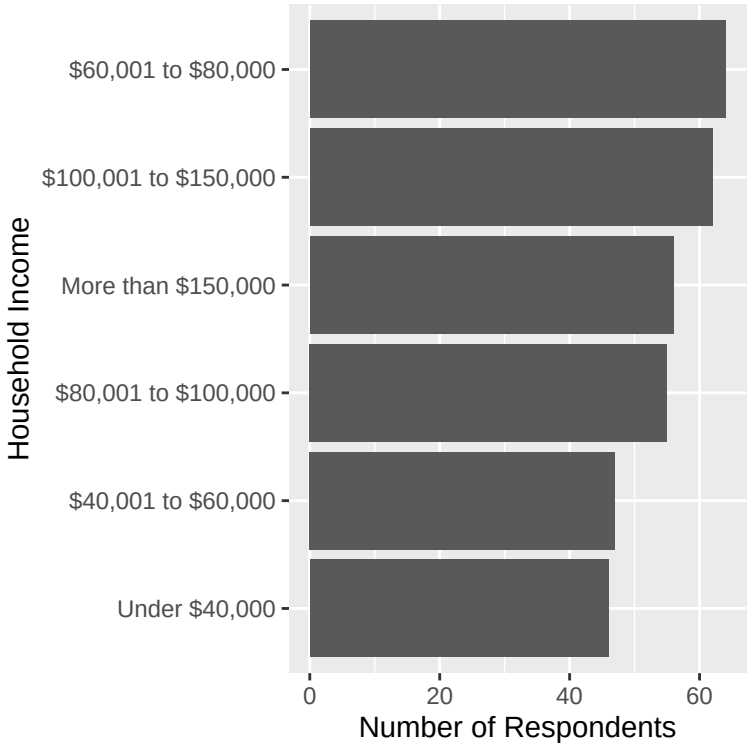

Figure 5: Number of Respondents Based on Household Income

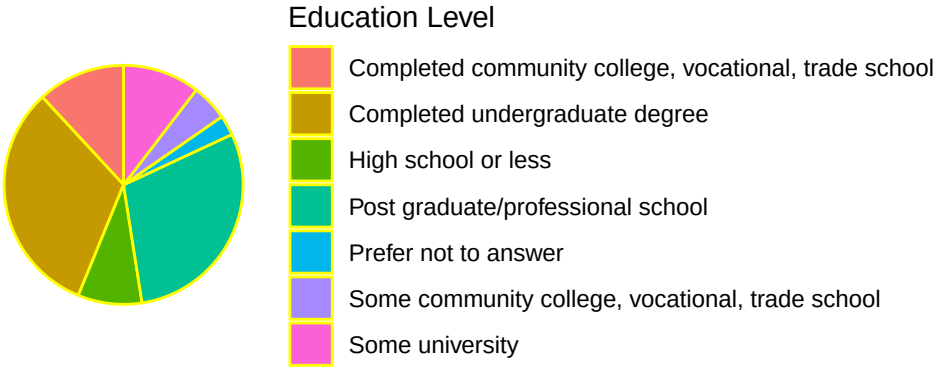

Figure 6: Number of Respondents Based on level of education

3 Models

Since our goal is to find out the impacts of demographic factors such as age, gender, income and education on one's awareness of global climate change. We will build a statistical model which takes that demographic factor as input and output a binary variable indicating if this person will be concerned about climate change. The model will behave like the following where α_i denotes the i^{th} demographic factor.

$$f(\alpha_0, \alpha_1, \alpha_2, \alpha_3...) = 0 \text{ or } 1$$

3.1 Logistic Regresssion

Logistic regression is used when the dependent variable (target variable) is categorical, this fits perfectly here because our target variable is either *Concerned about Climate Change* or *Not Concerned about Climate Change*. Logistic regression is very similar to the traditional linear regression but it uses the regression formula inside the logistic function of $\frac{e^x}{(1+e^x)}$, so it has the following form.

$$P = \frac{e^{(\beta_0+\beta_1 X_1)}}{1 + e^{(\beta_0+\beta_1 X_1)}}$$

However, in our case, since we have several independent variables, we can instead use Multiple Logistic Regression, it has the following form

$$P = \frac{e^{(\beta_0+\beta_1 X_1+\beta_2 X_2+\beta_3 X_3+...+\beta_i X_i)}}{1 + e^{(\beta_0+\beta_1 X_1+\beta_2 X_2+\beta_3 X_3+...+\beta_i X_i)}}$$

3.2 Independent Variables

For our statistical model, we will try to predict whether a person will be concerned with climate change using 4 demographic factors: Age, Gender, Income, and Level of Education.

3.2.1 Age

We will investigate on whether a person's age has any effects on shaping his/her view on the global climate change.

3.2.2 Gender

Because the vast majority respondents' gender is male or female. We will neglect other gender in this paper. Because gender is used as an input to the logistic regression model, we will use 1 to represent Male and 2 to represent Female.

3.2.3 Income

The survey divides people's household income into 4 subgroups: *Under $40,000*, *$40,001 to $60,000*, *$60,001 to $80,000*, *$80,001 to $100,000*, *$100,001 to $150,000*, *More than $150,000*. We will use numbers 1 through 6 to represent them respectively.

3.2.4 Level of Education

We will divide people's level of education into 3 groups: *High School or Less*, *Undergraduate Degree*, *Post Graduate Degree/Professional School*. We will use numbers 1 to 3 to represent each one of them respectively.

Above is a summary of the model and all the independent variables we will be using, more details will be presented in the Results section.

4 Results

We will first talk about each independent variable in more detail.

4.1 Relationship between People's Awareness of Climate Change and Various Demographic Factors

Our ultimate goal is to develop a statistical model which takes a person's demographic factor as input and tries to predict whether that person will be concerned about global climate change. To do this, we will take a look at different demographic factors, and determine their impacts on the model.

4.1.1 Age

Although it is a consensus that global climate change is a problem that needs to be addressed, people from different age groups might view it differently. Based on research conducted by the Pew Research Center (Tyson, Kennedy, and Funk 2021), scientists found out that Gen Z (Born after 1996) and Millennials (Born between 1981 and 1996) are usually more concerned about global climate change than the older generations. There are several reasons for this, for example, these generations generally have more access to the internet, which means they are seeing a lot of climate change content online.

We will now take a look at our survey results and determine whether age is a relevant factor. The second question in the survey is "For each of the following, how concerned are you about climate change?", the respondents can choose one from the following: "Extremely concerned, Very concerned, Not very concerned, Not at all concerned, Don't know". For simplicity, we will group *Extremely concerned* and *Very concerned* into a big category called *Concerned*, and we will group *Not very concerned* and *Not at all concerned* into a big category called *Not Concerned*, we will neglect *Don't know* answers. Table 1 is a summary table. However, the table suggests something different, we can see that people who are older than 65 years old are much more concerned about climate change than the younger generations.

Table 1: Concern about Climate Change Based on Age Group

Age Group	Cocern Level	Percentage WRT Age Group
18 to 25	Concerned	0.75
18 to 25	Not Concerned	0.25
25 to 40	Concerned	0.81
25 to 40	Not Concerned	0.19
40 to 55	Concerned	0.75
40 to 55	Not Concerned	0.25
55 to 65	Concerned	0.81
55 to 65	Not Concerned	0.19
65+	Concerned	0.83
65+	Not Concerned	0.17

4.1.2 Household income

We will also take a look at how household income affects people's opinions on global climate change. In this survey, income are separated into 6 different categories: *Under $40,000*, *$40,001 to $60,000*, *$60,001 to $80,000*, *$80,001 to $100,000*, *$100,001 to $150,000*, *More than $150,000*. Because this will be used as an input to the statistical model, we will simplify those ranges by representing them with numbers 1 to 6 respectively. (The Under 50000 and over 150000 are slightly adjusted). Table 2 is a summary table. From the table, residents that are most concerned about climate change are people with household incomes between 80K and 100K.

Table 2: Concern about Climate Change Based on Household income

Household Income	Cocern Level	Percentage WRT Household Income
125000	Concerned	0.82
125000	Not Concerned	0.18
2e+05	Concerned	0.73
2e+05	Not Concerned	0.27
30000	Concerned	0.87
30000	Not Concerned	0.13
50000	Concerned	0.85
50000	Not Concerned	0.15
70000	Concerned	0.76
70000	Not Concerned	0.24
90000	Concerned	0.89
90000	Not Concerned	0.11

4.1.3 Gender

We will now take a look at how people's gender affects their opinion on global climate change. The survey provides 5 options: *Woman*, *Man*, *Transgender*, *Prefer not to say*, *Not listed above*, since the vast majority of respondents indicated their gender to be either *Man* or *Woman*, we will neglect the rest. For simplicity, we will use 1 to represent males and 2 to represent females. Table 3 is a summary table. From the results, we can see that females are usually more concerned about climate change than males.

Table 3: Concern about Climate Change Based on Gender

Gender	Cocern Level	Percentage WRT Gender
1	Concerned	0.72
1	Not Concerned	0.28
2	Concerned	0.87
2	Not Concerned	0.13

4.1.4 Level of Education

Finally, we will look at the effect of education on people's awareness of climate change. There are 6 valid responses, for simplicity, we categorize them into 3 groups: *High School or Less*, *Undergraduate Degree*, *Post Graduate Degree/Professional School*, we will label them from 1-3 respectively. Table 4 is a summary table. From the table, people with a higher level of education are usually more concerned with climate change.

Table 4: Concern about Climate Change Based on Level of Education

Education	Cocern Level	Percentage WRT Education
1	Concerned	0.69
1	Not Concerned	0.31
2	Concerned	0.78
2	Not Concerned	0.22
3	Concerned	0.87
3	Not Concerned	0.13

4.2 Model Results

We will now fit the data, Figure 7 shows the table of model results, it is produced by model summary (Arel-Bundock 2022).

	Model 1
(Intercept)	−1.370
	(0.846)
Age	0.094
	(0.130)
Gender	1.167
	(0.335)
Education	0.734
	(0.276)
Income	−0.161
	(0.098)
Num.Obs.	325

Figure 7: Model Summary

By taking a look at the summary statistic table, the most significant factor is gender, it has a P-value of 0.0004, this means it is very likely that gender is an important factor in determining whether a person will be concerned about global warming. The coefficient for gender is 1.16, since we use 1 to represent *Concern* and 0 to represent *Not Concern*, this implies that woman is usually more concerned about global climate change. Similarly, Education has a P value of 0.007 which also makes it to be a significant factor. Since we use a bigger number to represent a higher level of education, this means that people with a higher level of education are usually more concerned about climate change than people with a lower level of education. Finally, Age and Income have a high P-value, which means there is no sufficient evidence to suggest that they are key factors in determining whether someone will be concerned about climate change.

5 Discussion

5.1 What is Done in This Paper

After investigating on climate perception survey provided by the City of Toronto, we found out that gender and education are key factors in determining whether a person will be concerned about climate change. First of all, we found that women are usually more concerned about global climate change than men. Women in developed countries are more likely to recycle, purchase organic food and eco-labelled products, and support energy-efficiency policies. According to European research, women are more concerned about climate change and are more willing to make sacrifices to reduce carbon emissions than men. In the United States, women are 5% more likely than men to believe in climate science("Why Women Are Key to Solving the Climate Crisis," n.d.). On top of that, women are also the most impacted group by climate change, it is estimated that 80% of people displaced by climate change are women. In less developed countries, women are usually responsible for gathering water and food, hence it is easier for them to feel the environmental degradation ("Why Women Are Key to Solving the Climate Crisis," n.d.).

Education is another key factor, our research shows that people with a higher level of education are more informed and concerned about climate change. The United Nations also stated that Education is the key to addressing climate change because education can help people change their attitudes and behaviours, as well as make more informed decisions. Young people can be taught about the effects of global warming and how to adapt to it in the classroom. Education can make people be more socially responsible and it can motivate the young people to take action against global warming ("Education Is Key to Addressing Climate Change," n.d.).

5.2 Weakness and How to Improve

The most notable weakness of this investigation is the sample size, the survey received a total of 404 responses, after filtering out invalid responses, we are left with 325 valid responses. Clearly, this sample size is too small, what we can do is sample more population by contacting more potential participants. This can also reduce bias in the result, currently, all of the participants indicated that their gender is either male or female, this means we are not receiving any feedback from sexual minority groups such as homosexual, bisexual and non-heterosexual individuals.

Our statistical model also has potential problems because some independent variables are actually correlated. For example, education and income are two correlated variables because people with a higher level of education are more likely to have a higher income. This can be a significant problem because a change in one independent variable can results in the change of another independent variable, as a result, the model will fluctuate significantly. What we can do to solve this problem is to develop a more sophisticated statistical model.

5.3 What is Left to Learn and How Should We Proceed in the Future

In our paper, we investigated each demographic factor separately without considering them as a whole. What we should explore next is to find out their interrelationship. For example, in this paper, we find out that age is not a key factor in determining one's awareness of climate change. However, it is possible that the combination of age and gender is a significant indicator. Table 5 is a summary table showing the number of people concerned about climate change, grouped by gender and age. Let us take a look at the age group 25-40 and 55-65. In the age group 25-40, 80% of people indicated that they are worried about climate change. Similarly, 80% of the population in the 55-65 age group indicated that they are worried about climate change, suggesting that age alone is not a determining factor. However, among all women with age between 25-40, 7% stated that they are not concerned about climate change, but among all women with age between 55-65, only 2% stated that they are not concerned about climate change, meaning that elder women are more concerned about climate change. This difference suggests that gender and age together might be a determining factor.

Table 5: Concern about Climate Change Based on Gender and Age

Gender	Age Range	Cocern Level	Number
1	(17,25]	Concerned	10
1	(17,25]	Not Concerned	5
1	(25,40]	Concerned	53
1	(25,40]	Not Concerned	16
1	(40,55]	Concerned	41
1	(40,55]	Not Concerned	19
1	(55,65]	Concerned	25
1	(55,65]	Not Concerned	13
1	(65,150]	Concerned	19
1	(65,150]	Not Concerned	4
2	(17,25]	Concerned	14
2	(17,25]	Not Concerned	3
2	(25,40]	Concerned	49
2	(25,40]	Not Concerned	8
2	(40,55]	Concerned	40
2	(40,55]	Not Concerned	8
2	(55,65]	Concerned	38
2	(55,65]	Not Concerned	2
2	(65,150]	Concerned	26
2	(65,150]	Not Concerned	5

6 Appendix

ENVIRONICS RESEARCH

City of Toronto – Energy & Environment Division
City-Wide Climate Perceptions Study
DRAFT Questionnaire

LANGUAGE PREFERENCE

Please select one of the following options to complete this survey in the language of your preference.

1 English
2 Cantonese
3 Mandarin
4 Tagalog

LANDING PAGE – ONLINE SURVEY

Thank you for taking this survey!

Please consider the questions and your answers carefully. On each screen, after selecting your answer, click on the forward button at the bottom of the screen to move forward in the questionnaire.

If you genuinely have no opinion about a question or cannot answer it, please click through to the next question. There are only a few key questions where your answer will be required in order to move forward.

If you leave the survey before completing it, you can return to the survey URL later, and you will be returned to the page where you left off. Your answers up to that point in the survey will be saved.

The survey should take approximately 10 minutes to complete. Thank you for your participation.
Please click on >> to continue.

SCREENING QUESTIONS

S1. Please enter the six digits of your home postal code below. This is to ensure that the survey is representative of respondents from across the city. (Enter postal code below)

__ __ __ __ __ __
[Validate format: A#A #A# format. Postal Code must match the list for quotas/sampling]

S2. Your gender: (Select one option only)

1 Woman
2 Man
3 Transgender
4 Prefer not to say
5 Not listed above

S3. In what year were you born?

[DROP DOWN LIST, RANGE 1900-2000; TERMINATE IF RESPONDENT IS YOUNGER THAN 2000]

AGE CATEGORIES

1 18-34 (C=1984-2000)
2 35-49 (C=1969-1983)
3 50-64 (C=1954-1968)
4 65+ (C=1953 OR EARLIER)

GENDER/AGE CATEGORIES (BASED ON RESPONSES TO B AND C FOR QUOTAS)

1 Male 18-34 (B=01, C=1984-2000)
2 Female 18-34 (B=02, C=1984-2000)
3 Male 35-49 (B=01, C=1969-1983)
4 Female 35-49 (B=02, C=1969-1983)
5 Male 50-64 (B=01, C=1954-1968)
6 Female 50-64 (B=02, C=1954-1968)
7 Male 65+ (B=01, C=1953 OR EARLIER)
8 Female 65+ (B=02, C=1953 OR EARLIER)

[IF S2=03, 04, OR 05, MARK AS NON-QUOTA AND ALLOW TO CONTINUE THE SURVEY]

GENERAL CONCERN FOR THE ENVIRONMENT

Q1. For each of the following, how concerned are you about climate change? (Select one response for each)

COLUMNS
04 – Extremely concerned
03 – Very concerned
02 – Not very concerned
01 – Not at all concerned
99 – Don't know

ROWS - RANDOMIZE
A – As it affects Toronto / the GTA
B – As it affects the rest of the world

Q2. To what extent do you consider yourself to be informed about what causes climate change? (Select one response only)

04 – Extremely informed
03 – Very informed
02 – Not very informed
01 – Not at all informed

Q3. In what ways, if any, have you seen climate change impact the City of Toronto and/or your local community? (Please provide your response in the space below)

[OPEN END]

Q4. Do you think there is a link between extreme weather events (e.g. severe rain storms and flooding, extreme heat, heavy winds, etc.) in Toronto and climate change?

01 – Yes
02 – No
99 – Don't know

AWARENESS

Q5. To the best of your knowledge, what levels of government in Canada have programs, initiatives or strategies to address climate change? (Select all that apply)

1 – Municipal (City)
2 – Provincial
3 – Federal
4 – All of the above [EXCLUSIVE]
5 – None of the above [EXCLUSIVE]

Q6. Do you think the City of Toronto… (Select one response only)

A – Should be doing more than what they are currently doing to address climate change
B – Is currently doing the right amount to address climate change
C – Should be doing less than what they are currently doing to address climate change
D – I don't know enough about what they are currently doing to address climate change

Q7. The City of Toronto has developed a new climate action strategy called TransformTO. This initiative aims to reduce local emissions that contribute to climate change, improve health, grow the economy, and improve social equity, and identifies a set of long-term goals and the strategies to reach them. Toronto's greenhouse gas reduction targets are as follows:

- 30 per cent by 2020
- 65 per cent by 2030
- 80 per cent by 2050

Achieving these targets will require significant changes in how we live, work, commute, and build.

Before today, had you ever heard about the City's TransformTO Climate Action Strategy? (Select one response only)

01 – Yes
02 – No
99 – Don't know

ATTITUDES & BEHAVIOURS TOWARDS CLIMATE ACTION

Q8. When it comes to climate change, to what extent do you agree or disagree with the following statements? (Select one response for each)

COLUMNS
04 – Strongly agree
03 – Somewhat agree
02 – Somewhat disagree
01 – Strongly disagree

ROWS - RANDOMIZE
A – I don't know what I can do to address climate change
B – Everyone needs to reduce their emissions that contribute to climate change, including myself
C – Climate change threatens the personal health and well-being of individuals
D – It's usually more expensive to buy products /services that are environmentally-friendly
E – Climate change can only be addressed if all countries around the world do their part
F – There's nothing I can do that will make a difference for addressing climate change

Q9. To what extent do you feel that each of the following lifestyle choices impact climate change in Toronto? (Select one response for each)

COLUMNS
04 – A significant impact
03 – Somewhat of an impact
02 – Not much of an impact
01 – No impact

ROWS -RANDOMIZE
A – My transportation choices
B – My energy use at work or school
C – My energy use at home
D – The amount of waste (garbage, recycling, organics) I produce
E – How I sort and dispose of my waste
F – The amount of meat I eat
G – Things that I buy (e.g., new vs. used items, goods that have travelled long distances, packaged goods etc.)

Q10. How likely are you to take the following actions to address climate change? (Select one response for each)

COLUMNS
05 – Already doing this or have done this
04 – Very likely
03 – Somewhat likely
02 – Somewhat unlikely
01 – Very unlikely

ROWS - RANDOMIZE
A – Make improvements to my home to make it more energy efficient (e.g., energy-efficient appliances, programmable thermostat, LED lightbulbs, green or cool roof)
B – Reduce the amount of energy and water I use at home, school or work
C – Drive less and use transit, cycle, carpool or telework as part of my regular routine
D – Use electric or hybrid vehicles over gas-powered
E – Eat less meat by incorporating more plant-based foods in my diet

F – Reduce my waste (e.g., purchase/repair/swap/donate used products)
G – Purchase 'green' products (e.g., minimal packaging, eco-friendly, reusable, local, organic)
H – Walk or cycle when travelling shorter distances within the city
I – Sort all my waste into the correct streams/bins

[CREATE LOOP. ASK Q11A-I FOR EACH RESPONSE AT Q10 = 01 OR 02]
Q11. You mentioned that you are **unlikely** to take the following action. Why is that? (Select all that apply)

[INSERT ROW AT Q10A-I = 01 OR 02]

[RANDOMIZE]
A – I don't know much about this/it's confusing
B – I don't think my individual actions for this will make a difference
C – I don't believe this is effective for addressing climate change
D – This is too expensive for me
E – This is not available for me to do
F – This is not convenient for me to do
G – I'm not interested in making this change
H – Other [ANCHOR]

Q12. How motivating are the following supports from the City of Toronto when it comes to encouraging you to take action in addressing climate change?

COLUMNS
04 – Very motivating
03 – Somewhat motivating
02 – Not very motivating
01 – Not at all motivating

ROWS- RANDOMIZE
A – Incentives for home energy efficiency improvements
B – Incentives, infrastructure and support to increase the use of sustainable transportation methods like cycling, public transit or electric vehicles
C – Support for community or individual climate action projects
D – Education and information about climate change and its impacts
E – Education and information about what actions residents can take
F – Other, please specify

COMMUNICATIONS

Q13. The City of Toronto delivers information to residents through a number of channels. What would be your preferred ways to receive information about climate change and climate action from the City of Toronto? (Select all that apply)

[RANDOMIZE]
A – Toronto.ca website
B – City of Toronto events
C – Twitter
D – Facebook
E – Instagram

F – City of Toronto e-newsletters / email
G – Councillor communications
H – Advertising campaigns (e.g., print, radio, online or television ads, transit ads, street signage, etc.)
I – Brochures, pamphlets
J – Other (please specify) [ANCHOR]
K – Not interested in receiving information [ANCHOR]

DEMOGRAPHICS

Thank you. We have a few additional demographic questions before the survey is complete.

D1. Which of the following best describes the home where you currently live? (Select one response only)

01 – Single-family detached house
02 – Semi-detached house / duplex
03 – Townhouse/row house
04 – Multi-unit residence (apartment, condominium building)
05 – Other (please specify)
98 – Don't know
99 – Prefer not to say

D2. Do you, or another member of your household, own or rent your accommodation? (Select one response only)

01 – Own
02 – Rent
99 – Prefer not to say

D3. How many people, including yourself, live in your household? (Select number from list)

__ Number of people
99 – Prefer not to say

[ASK D4 IF D3=2 OR MORE]
D4. How many children under 18 are currently living in your household? (Select number from list)

__ Number of people
99 – Prefer not to say

D5. What is the highest level of education that you have completed? (Select one response only)

01 – High school or less
02 – Some community college, vocational, trade school
03 – Completed community college, vocational, trade school
04 – Some university
05 – Completed undergraduate degree
06 – Post graduate/professional school
99 – Prefer not to answer

D6. For statistical purposes only, we need information about your income. All individual responses will be kept confidential. Please indicate which category applies to your total household income before taxes for 2017. (Select one response only)

01 – Under $40,000
02 – $40,001 to $60,000
03 – $60,001 to $80,000
04 – $80,001 to $100,000
05 – $100,001 to $150,000
06 – More than $150,000
99 – Prefer not to answer

Thank you very much for completing the survey.

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