

How Ontarians feel about the Implemented COVID-19 policies

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Executive summary

As junior statisticians at Petit Poll, we were asked by Progressive Conservative Party of Ontario to conduct a survey that helps understanding how citizens of Ontario feel about the implemented COVID-19 policies and to show how effective respondents think that the policies are at combating COVID-19. In this paper, we have the intention of guiding the Conservative Party geared towards improving policies that further improve how the government is handling this pandemic.

Introduction

As the province of Ontario is currently experiencing the COVID-19 pandemic, the Progressive Conservative Party should know how the general public's opinion on the effectiveness and satisfaction of the implemented preventative policies to combat the virus. The survey will not only provide an understanding of voter's satisfaction towards the Conservative Party which is crucial for re-election of leadership, but also help develop better policies that economically help Ontario citizens while keeping the risk of COVID at a minimum.

Using sampled data based on weighted variables that were reflected by numerous other sources such as Statistic Canada and the CES survey data (cited in Reference) in order to randomized simulated responses weighted responses based on past surveys. Details on how we weighted different responses will be explained in Survey Methodology. By using simulated responses, this paper highlights the concerns that citizens of Ontario may have on the implemented COVID-related policies, given a decrease in new COVID cases in July-August following an alarming uprising of new cases in late September/ early October. Although there were many policies implemented by the Conservative Party, the targeted attributes of new policies that we believe to be the most important in terms of financial stability, public safety, social interactions, students, and businesses in others words our economy. By studying the outcomes we will be able to understand which policies should be improved on and how the government can better deal with the pandemic.

From our study, we found that citizens could gain the most satisfaction from having tighter restrictions in terms of prevention of the spread of COVID-19, for example smaller social gatherings or stricter social distancing measures; but also better policies for relieving financial stress since business shutdowns leads to layoffs and other economical problems. For example, we concluded that majority of respondents are experiencing financial hardships and heavy reliability on CERB, especially for young-adults who have little job stability or have various debts, a solution could be to increase funding towards government aid. In this paper we also found that the reopening of schools increased the risk of contracting the virus towards students and further preventative measures to minimize this risk are strongly preferred from parents, who are generally ages between 30 and 60.

The link for this report could be found at: <https://github.com/xuzi9/Opinions-on-Covid-19-Policies/blob/main/Opinions-on-Covid-19-Policies.Rmd>

Survey methodology

Given that our survey is purposed for receiving feedback about how the Ontario government is handling the spread of COVID-19, our main target audience is Ontario residents. We want a wide variety of opinions so we are aiming to collect information from residents regardless of gender and age (over 18) and analyze how different demographics respond to the policies the Conservative administration are considering. Ideally, we want an equal sample among all genders and age groups within our responses in order to have equal sampled variables to analyze in depth. However, our sampling simulation will be based off of data collected by Statistics Canada which has recently collected data on COVID-19 concerns and articles that discuss the opinions of Canadians on how the government is handling the pandemic - this will be discussed more in-depth in Data Development. Since our data will be loosely based off of real opinions, we will be taking random samples simply with adjusted weights based on referenced material. In terms of reaching an audience for a real world situation, we think the most feasible way to collect this type of information would be to crowdsource responses from volunteers same as how Statistics Canada has done. With the survey we have made, our plan would be to share it through online platforms and take responses from willing volunteers within the Ontario region. This method to collect responses presents virtually no cost from our end but limits our respondents to those who have internet access and are willing to take the survey. This sort of approach may leave certain demographics being under represented in our responses such as people without internet and older people who may not be familiar with technology. Our plan to work around this issue would be to conduct the survey through crowdsourcing online first and then identifying certain demographics that are under represented and devise strategies towards targeting those populations later on so we end up with a sample that represents all Ontario residents in the end. In terms of keeping responses private, we have taken careful consideration in ensuring none of our questions force a respondent to answer nor will an answer potentially compromise a respondent's identity.

Data Development

In order to simulate our survey with little bias and deviation, we weight each survey question with different probabilities. From a survey referenced from Statistic Canada titled "Impacts of COVID-19 on Canadians", we see that around 63% of respondents reported to be female, 37% male, and no answers were other - out of 242519 data points. Referencing from the same survey, around 16% of respondents were between 18-29, 29% were between 30-39, 22% were between 40-49, 16% were between 50-59, and another 17% were above the age of 60. Given the proportions from this existing survey, we sampled our weights for gender and age group accordingly. Referenced from an article from Global News written by Kerri Green, since she conducted a survey conducted by Global News, around 75% Canadians approve of another lock down. Therefore our question 3 and 7 in our simulated surveys are weighted greater towards the idea of a new lock down and reduced social gatherings.

Referencing from an article posted by Nicole Bogard on CTV news, many of the people that were interviewed said that CERB was only able to cover daily expenses and many had to dip into savings and even RRSP therefore we concluded that we should weight questions 5 and 6 with higher probabilities of having financial instability and heavy CERB reliability.

To understand how respondents feel about the reopening of schools, I referenced an article written by Katherine DeClerq stating that as of Monday September 28th, 335 schools in Ontario have reported lab-confirmed cases of the virus and parents are still ambiguous about having their kids in class rooms. Although Premier Doug Ford announced \$35 million in funding for schools in early October, the uprising of COVID-19 cases through schools is alarming and many parents would rather their kids to participate in online classes but at the same time schools should not shutdown completely to not fall behind in curriculum (DeClerq). Therefore for question 9, we weighted more towards online classes and stricter policies within in person classes. For the final question relating to the overall confidence level of respondents on how the Conservative Party is handling the 2nd wave of COVID-19, we referenced the survey conducted by Statistic Canada - "Impacts of COVID-19 on Canadians" - the question regarding the concern level of the impact of COVID-19. This

question had a result that 47.9% of the answers were very concerned, while 2% of the answers were not at all concerned; therefore our simulated probabilities were shifted towards respondents being not confident enough in how the Progressive Conservative Party is handling the pandemic due to a high proportion of very concerned respondents in Statistic Canada's survey.

```
## # A tibble: 10,000 x 10
##   gender age_grp shut_down isolate_ability financial_stabi~ CERB_reliability
##   <chr>  <chr>      <int> <chr>                      <int>          <int>
## 1 Female 18-29         5 yes                        8             10
## 2 Female 18-29         9 yes                        1             10
## 3 Male   30-39         8 yes                        6             10
## 4 Male   18-29        10 yes                        1              9
## 5 Female 60+          3 yes                        3              9
## 6 Male   30-39         9 yes                        5              9
## 7 Female 40-49         5 yes                        1              5
## 8 Female 40-49         5 yes                        4              8
## 9 Male   18-29         8 yes                        7             10
## 10 Male  60+          1 yes                        2             10
## # ... with 9,990 more rows, and 4 more variables: smaller_gathering_size <int>,
## #   business_shutdowns <chr>, schools <chr>, confidence_level <int>
```

Exploratory Data Analysis/Discussion for opinions on financial stability of young people

Are policies that relieve financial stress actually effective considering the negative effects that the pandemic has brought to the economy. When we specifically analyze the demographic of younger adults aged from 18-29, we know that this group of people is mainly comprised of students and working adults early in their career.

This is a demographic of people who are generally less financially stable as we can see through Figures 1 and 4 when we asked respondents to rate their reliability on aid and financial stability from 1-10 and we can see that it is the case for this age group. We see there is a strong reliance on government aid with the left skewed distribution of answers in Figure 1 and right skewed distributions for Figure 4. In terms of business shutdowns and economic stability, these responses are valuable for the Ontario Conservative party to judge how tight lock down policies may negatively affect students' and young adults' financial situations.

It is hard to balance when we factor in more responses about tighter lock downs and one's ability to self-isolate. According to Figure 2 and Figure 3, we see that the young adult demographic is generally in support of tighter lockdown restrictions and are mostly able to self-isolate while continuing with work/school. Taking this response into account, the provincial government is tasked with handling the support for further restrictions while doing it with a method to minimize job loss. While this is a general dilemma any government must deal with during the time of a pandemic, taking the data and analyzing responses from a young adult's perspective provides clearer understanding for developing a COVID-19 procedure that balances where resources are allocated for the entire province due to a general shift in focus of more young adults catching the virus compared to earlier where elderly population were at the highest risk.

Figure 1. Young Adults' Reliance on Government Aid

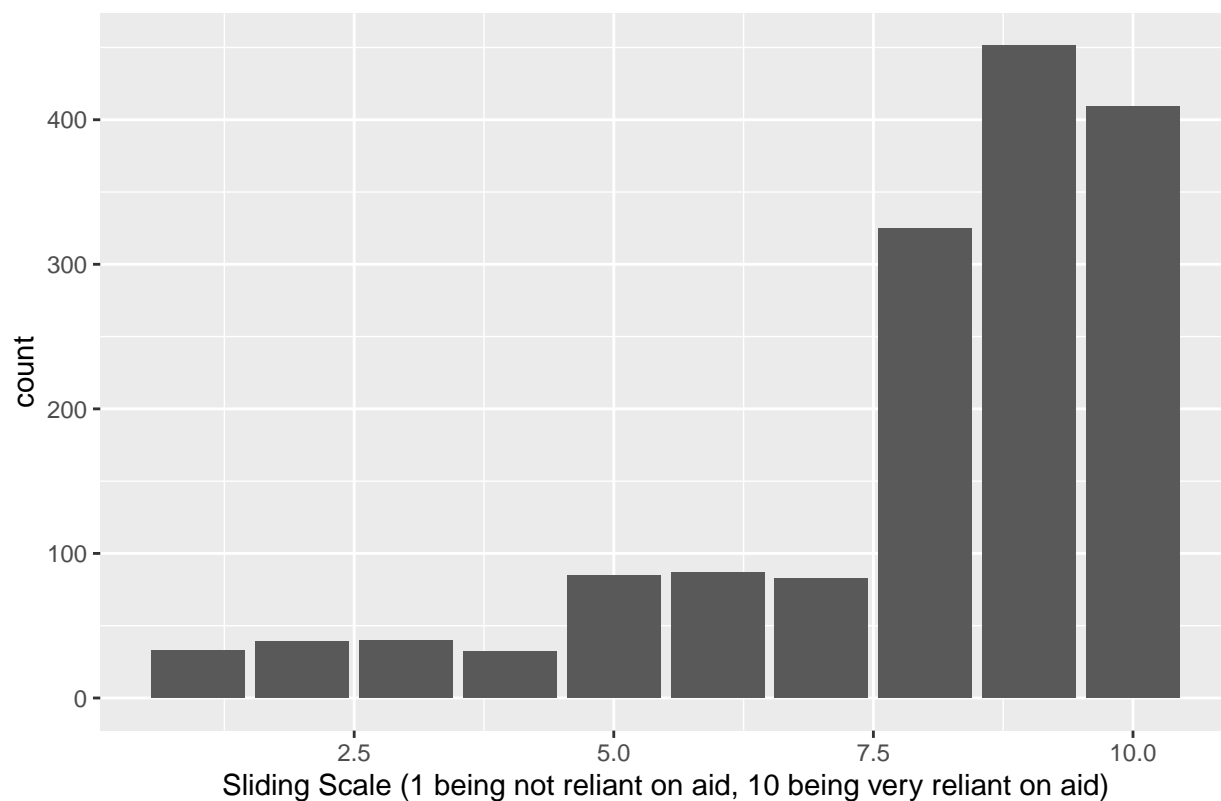


Figure 2. Young Adults' Ability to Self-Isolate

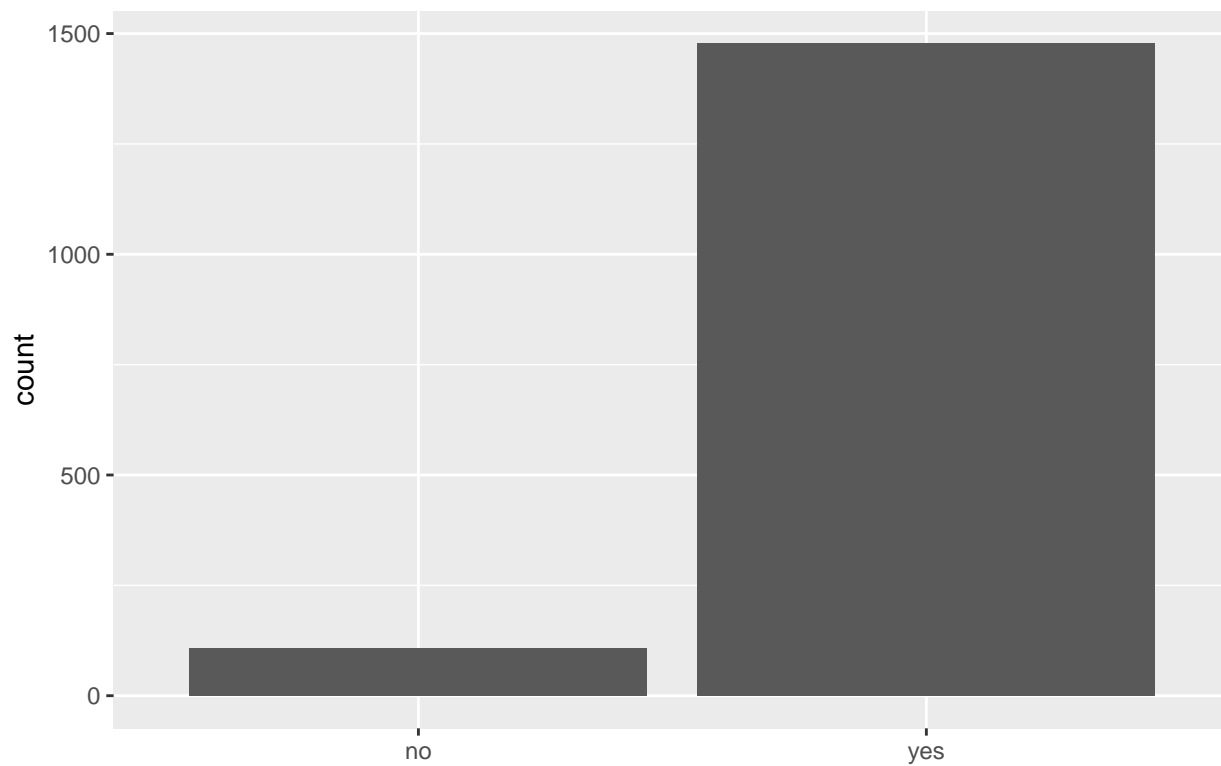
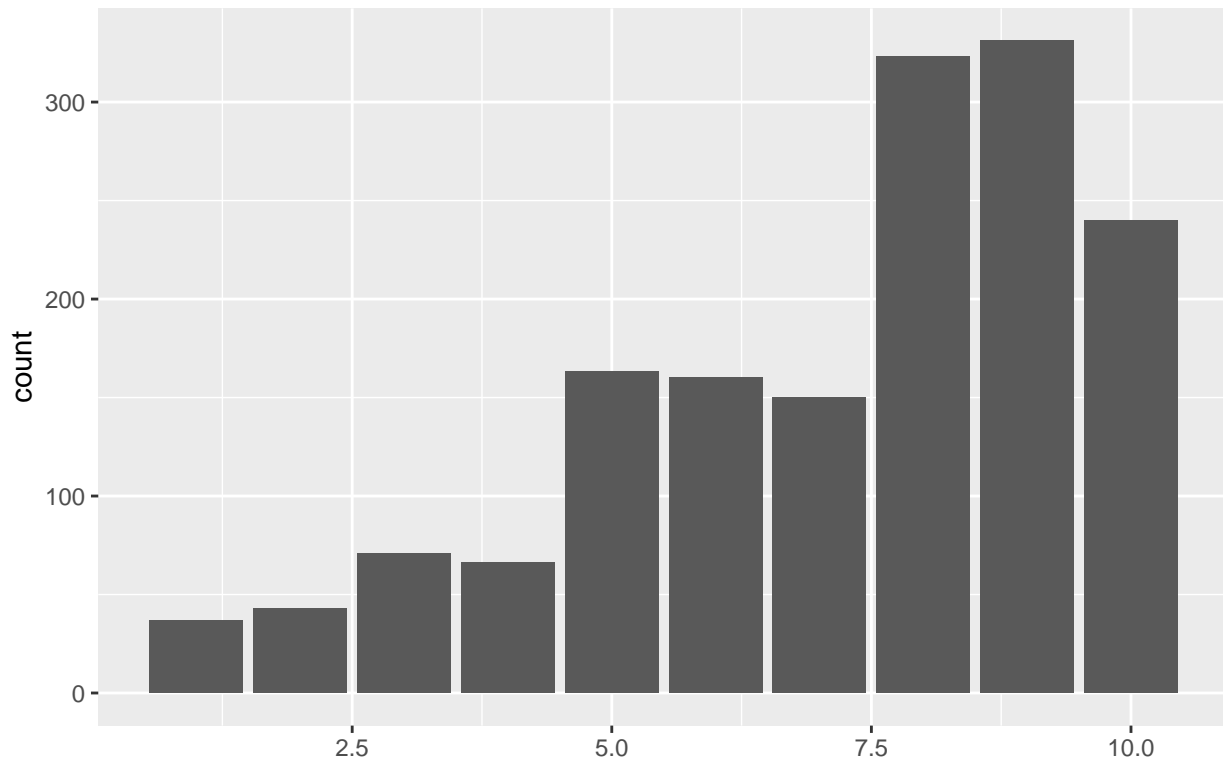
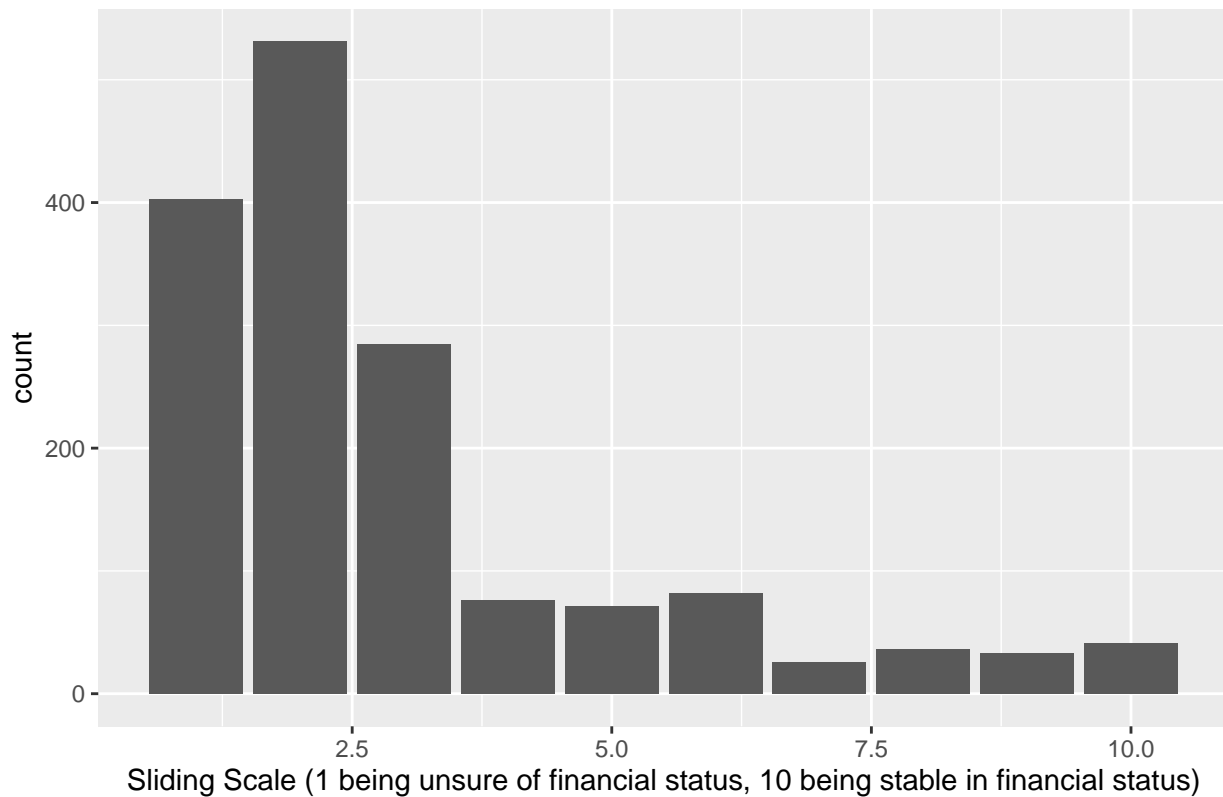


Figure 3. Young Adults' Opinion on Tighter Lockdowns



Sliding Scale (1 being strongly against shutdown, 10 being in support for shutdown)
Figure 4. Young Adults' Financial Stability



```

##      gender          age_grp      shut_down      isolate_ability
## Length:1584      Length:1584      Min.   : 1.000      Length:1584
## Class :character  Class :character  1st Qu.: 6.000      Class :character
## Mode  :character  Mode  :character  Median : 8.000      Mode  :character
##                                     Mean  : 7.189
##                                     3rd Qu.: 9.000
##                                     Max.   :10.000
## financial_stability CERB_reliability smaller_gathering_size business_shutdowns
## Min.   : 1.000      Min.   : 1.000      Min.   : 1.000      Length:1584
## 1st Qu.: 1.000      1st Qu.: 7.000      1st Qu.: 6.000      Class :character
## Median : 2.000      Median : 9.000      Median : 8.000      Mode  :character
## Mean   : 2.934      Mean   : 7.977      Mean   : 7.135
## 3rd Qu.: 3.000      3rd Qu.:10.000     3rd Qu.: 9.000
## Max.   :10.000      Max.   :10.000     Max.   :10.000
## schools      confidence_level
## Length:1584      Min.   : 1.000
## Class :character  1st Qu.: 2.000
## Mode  :character  Median : 3.000
##                                     Mean   : 3.381
##                                     3rd Qu.: 4.000
##                                     Max.   :10.000

```

Data Analysis/Discussion for the Opinions of the Older Population

As we discussed the financial instabilities of the younger generation in the previous section, we look into the opinions of older adults in terms of how they feel the about the pandemic was handled by the Conservative Party. Since the older population have savings and insurance benefits in terms of work, financial instability is still an ongoing issue, but compared to younger adults the older population more health concerns than financial worries (Leonhardt, “Millennials, Gen-Z...”). So in this section we look into how the older generation feels about how the pandemic was handled and if the limitations of social distancing is actually effective.

In figure 5. we see that the graph is left skewed and majority of opinions are favored towards little confidence levels in terms of the policies that were implemented to prevent the spread of COVID-19. This can be due to the alarming increase in COVID-19 cases since the start of September and the new highest single day record of COVID-19 cases being 797 on October 8th, 2020 (CBC News, “Ontario reports...”). Since one of the biggest causes of virus transmission is through social interactions therefore one of the policies was to reduce social gatherings from 10 to 6. Majority of the responses support the proposal of limiting social gatherings but since majority of the respondents are not satisfied with the current government’s handling of the pandemic, other policies that minimize the transmission could be implemented as well such as limiting public spaces especially indoors.

Figure 5. Older Adults' Confidence Level on how the Pandemic was Handle

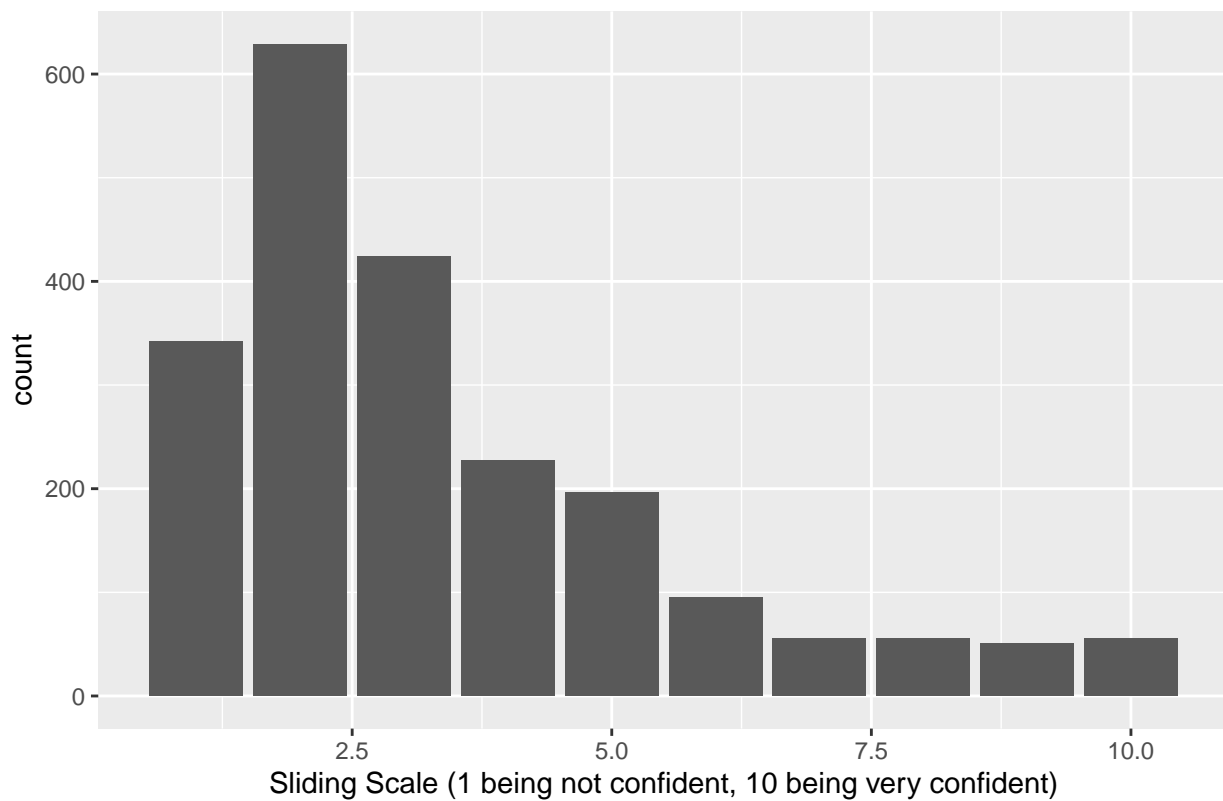
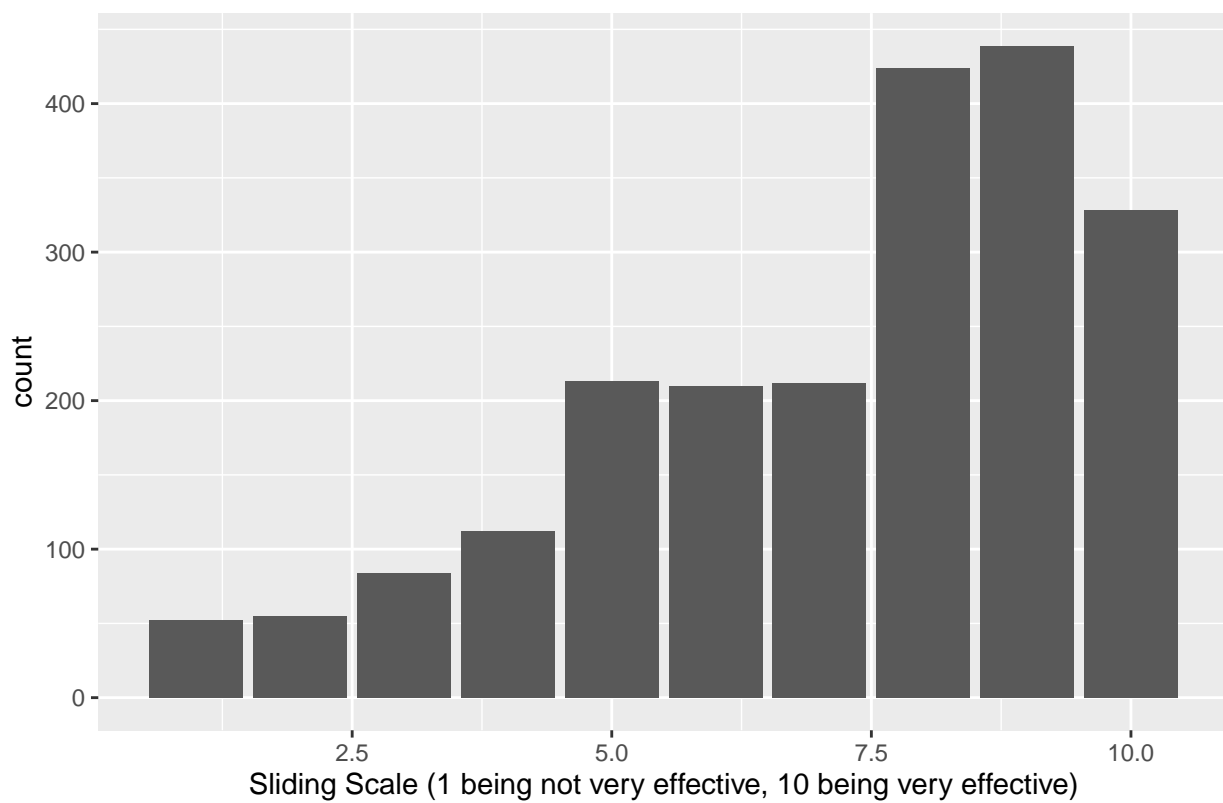


Figure 6. Older Adults' Opinion on Smaller Gathering Sizes similar to Phase



```

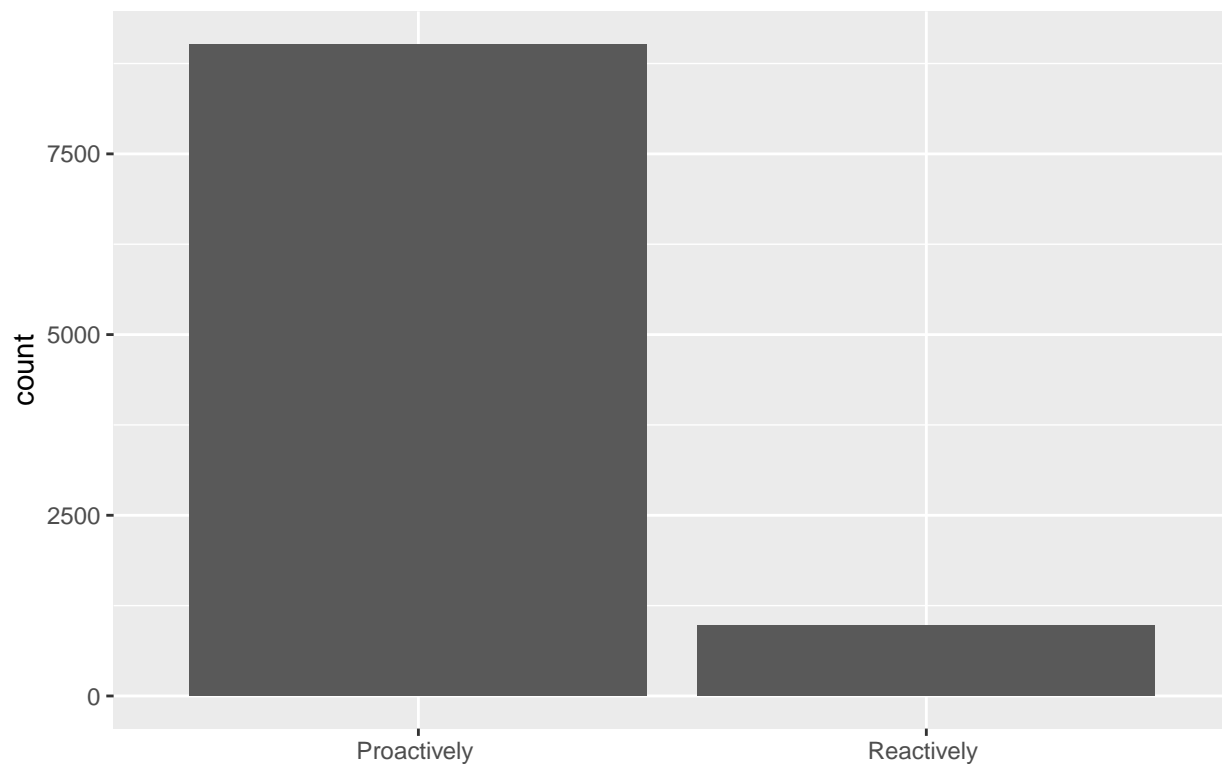
##      gender          age_grp      shut_down      isolate_ability
## Length:2129      Length:2129      Min.   : 1.000      Length:2129
## Class :character  Class :character  1st Qu.: 6.000      Class :character
## Mode  :character  Mode  :character  Median : 8.000      Mode  :character
##                                     Mean  : 7.124
##                                     3rd Qu.: 9.000
##                                     Max.   :10.000
## financial_stability CERB_reliability smaller_gathering_size business_shutdowns
## Min.   : 1.000      Min.   : 1.000      Min.   : 1.000      Length:2129
## 1st Qu.: 2.000      1st Qu.: 8.000      1st Qu.: 6.000      Class :character
## Median : 2.000      Median : 9.000      Median : 8.000      Mode  :character
## Mean   : 3.094      Mean   : 8.001      Mean   : 7.184
## 3rd Qu.: 4.000      3rd Qu.: 9.000      3rd Qu.: 9.000
## Max.   :10.000      Max.   :10.000      Max.   :10.000
## schools             confidence_level
## Length:2129        Min.   : 1.000
## Class :character    1st Qu.: 2.000
## Mode  :character    Median : 3.000
##                     Mean   : 3.365
##                     3rd Qu.: 4.000
##                     Max.   :10.000

```

Data Analysis/Discussion for business shutdowns

The context behind Figure 7 lies in our question of asking Ontario residents whether they support businesses being closed proactively or reactively in order to preemptively prevent the spread of COVID-19 or to deal with closures on a case by case basis. A significant factor involved with this has to do with how proactive business closures may affect job stability and the economy. Although this wasn't mentioned in the survey to avoid having a leading question, we are assuming this is the main consideration that respondents are concerned with when answerin. We can see that there is a large support for the proactive closure of businesses suggesting that the general Ontario population would rather take a hit on the economy and job stability in hopes of bringing COVID-19 cases down in the long term.

Figure 7. General Opinions on Closing Businesses Proactively or Reactive



Data Analysis/Discussion for the Opinions on Reopening Schools

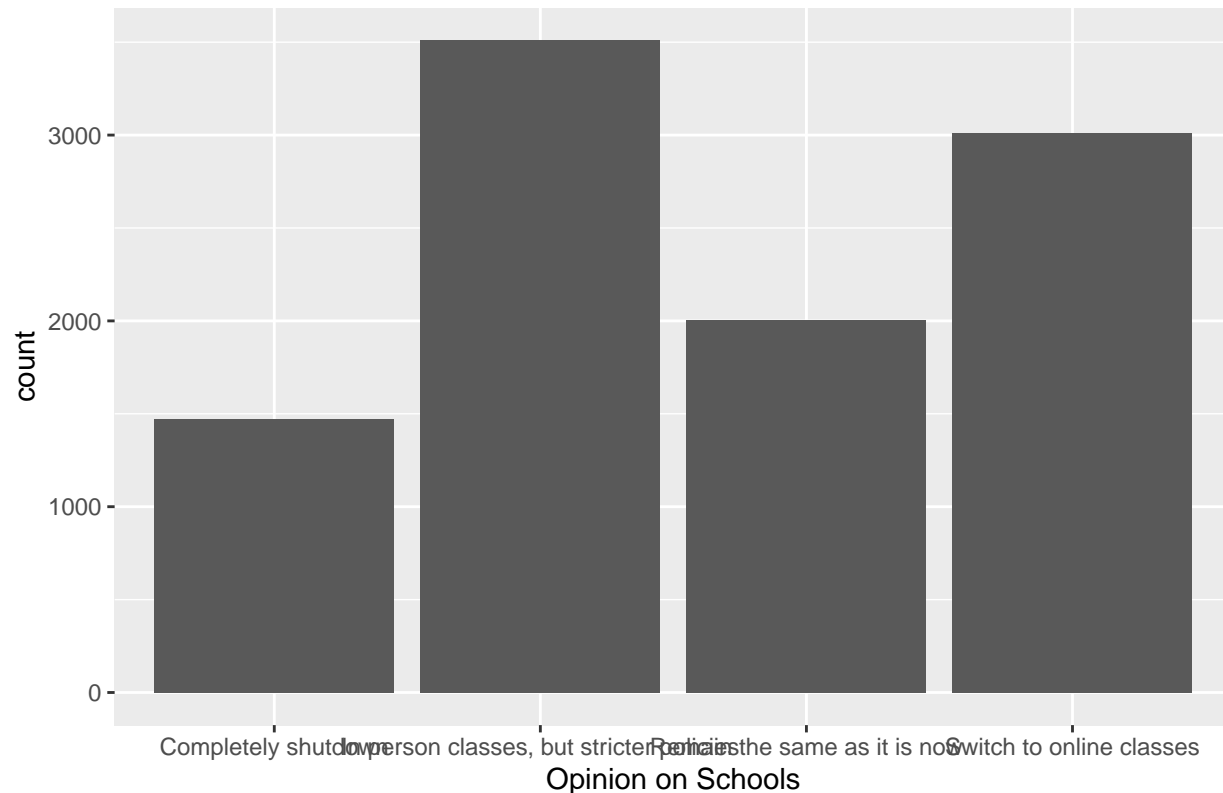
In order to see how parents of kids feel about the reopening of schools, we isolated the age group and opinions of schools columns and filtered the data for respondents between the ages of 30 and 60. This filter was done since parents generally between the ages of 30 and 60 have their kids actively going to school and provide the most significance opinions on how the government is handling the reopening of schools, especially since the rise of COVID-19 cases in schools since schools reopened (DeClerq). From Figure 8, we can see that majority of the responses are either still having in person classes but with stricter social distancing policies, or switching classes to online completely. This allows us to conclude that parents, generally between the ages of 30 and 60, are not happy with the current state of schools and would want the Conservative Party to implement better policies that either reduces risks by better social-distancing, or completely eliminating the risk by switching to virtual classes.

```
## Warning in age_grp == c("30-39", "40-49", "50-59"): longer object length is not
## a multiple of shorter object length

## # A tibble: 2,182 x 2
##   age_grp schools
##   <chr>    <chr>
## 1 40-49    In person classes, but stricter policies
## 2 40-49    Completely shutdown
## 3 40-49    Remain the same as it is now
## 4 50-59    In person classes, but stricter policies
## 5 40-49    In person classes, but stricter policies
## 6 30-39    Switch to online classes
## 7 30-39    Switch to online classes
```

```
## 8 50-59 In person classes, but stricter policies
## 9 50-59 Switch to online classes
## 10 30-39 Switch to online classes
## # ... with 2,172 more rows
```

Figure 8. Parent's Opinions on Reopening of Schools



Summary of Results

As we look into the difference in opinions between the younger and older populations, we conclude that young adults tend to have more worries in terms of financial stability and greater dependence on government aid. Since generally older adults have more savings and employment insurance, the concern of older adults is geared towards health factors and how the government can minimize the transmission of the virus. Especially when the people within the age group of 30 and 60 have kids that are at risk due to in-person classes, the opinions of policies that deal with the reopening of schools are geared towards their kids minimizing contact with other students for example switching to online classes completely. As we take in the results for our simulated responses, we want to ultimately provide some insight into what sort of policies will be best for the Ontario government to implement. When analyzing the responses for COVID-19 policies in public schools, we are taking the results from respondents within age groups that are most likely to be parents and have a child that is affected by it. We see the most popular responses are either having stricter policies within in person classes or switching over to an online format and shutting down schools. These responses make sense as we continue to see a steep rise in cases within the second wave and the safety of staff and students in public schools has become a prevalent issue. Despite the government's best efforts to devise a plan for the 2020 school year, there are changes that need to be made as we are experiencing a sharp increase in COVID cases. This sort of approach also ties in with the closure of businesses similar to how we handled the initial first wave in March. While the effect on the economy may be too much to handle for a shutdown similar to Phase 1, we see that there is a lot of support for non-essential business closures to stop spread. The data we collected from the survey from various topics covering schools and business closures typically point

towards support for tighter lockdown and restrictions and is definitely something we recommend the Ontario Conservative Party to take into account. Overall, majority of the respondents have the ability to self-isolate and would like to have smaller gathering sizes, these opinions help the Conservative Party of Ontario to make better policies to limit the transmission of the virus and end the pandemic as quickly as possible.

Weakness and areas for future

In terms of surveying the different demographics of Ontario residents, one area for improvement would be to figure out a solution to further categorize our respondents to use for stronger analysis. To elaborate, the main categorization we used to discuss our respondents was age group and we made further general assumptions within those age groups. For our analysis of young adults, we briefly mentioned that it included demographics such as students and working adults early in their career. Analysis for students could have been fleshed out further if we were able to exclusively pick out all the students within the sample. Further questions about demographics would have been difficult to include in the initial survey since some of them are too specific when we are surveying the population of Ontario residents to gain a general consensus for COVID-19 policies. With the nature of our survey, we are mainly working with qualitative variables and thus cannot analyze correlation relationships between variables for deeper analysis. Our best effort to include quantitative variables was to ask for opinions on policies and have respondents answer on a scale from 1-10. Ideally, we would want variables that can take on a wider range of continuous values to graph in a scatterplot. We can then perform a linear regression to analyze the type of relationship between the two variables to include in our discussion.

Appendix

Code for this report could be found at: <https://github.com/xuzi9/Opinions-on-Covid-19-Policies>

Survey

Add a link to the survey and screen shots of the questions. https://docs.google.com/forms/d/16e9I-FcPUyoANISYr0YyuJJc4zg_AO3sVfc4AdDo6nQ/edit?ts=5f775830&gxids=7628

COVID-19 Policy Opinions in Ontario

As a statistician at Petit Poll, we partnered with The Progressive Conservative Party of Ontario to conduct a survey about the opinions of Canadian citizens on how satisfied you are on the Conservative Party implemented policies that handles the COVID-19 pandemic.

By entering this survey, respondents' identity will remain confidential and the data will be provided to the Progressive Conservative Party of Ontario. This is a voluntary survey and answers are expected to be answered with full honesty.

1. What is your gender?

- ☐ Male
- ☐ Female
- ☐ Other...

2. What age group are you in?

- ☐ 18-29
- ☐ 30-39
- ☐ 40-49
- ☐ 50-59
- ☐ 60+



3. Given the fact that recent COVID cases have been going up in Ontario, how would you feel about another shutdown similar to Phase 1?

1 2 3 4 5 6 7 8 9 10

I feel very strongly against it ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ I feel very strongly for it

4. Do you have the ability to isolate at home amid the pandemic i.e. working/attending class at home

- ☐ Yes
- ☐ No

5. How might another shutdown affect your financial stability?

1 2 3 4 5 6 7 8 9 10

I will be extremely unsure about my finances ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Another shutdown will not affect me at all

7. Do you think a reduction from 10 people to 6 people max for indoor social gatherings is an effective policy to reduce case numbers?

1 2 3 4 5 6 7 8 9 10

Not very effective ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very effective

8. Do you think businesses should be closed proactively to deter further COVID cases or should be closed reactively in the event a business experiences an outbreak?

☐ Shut down businesses proactively

☐ Shut down businesses reactively

9. Based on the increase of public schools that have affected staff or students, what do you feel like schools should do to minimize the risk of COVID-19

Multiple choice

☐ In person classes, but stricter social distancing policies

☐ Switch to a mix of online delivery methods and in person classes

☐ Remain the same as it is now

☐ Completely shutdown and switch exclusively to an online format

☐ Add option or [add "Other"](#)

Required ☐

10. How confident do you feel about the current provincial administration in Ontario in handling the 2nd wave of COVID-19?

1 2 3 4 5 6 7 8 9 10

Not confident at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very confident

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