Data Brief #1

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Research Topic and Question

The topic that I plan on analyzing is the difference in opinions towards government response and restrictions due to the COVID-19 pandemic among people from rural and urban Alberta. To address this topic, I plan on analyzing the September 2021 Alberta Viewpoint Dataset. The motivation behind choosing this data set is that it marked over a year of COVID-19 restrictions being in place in Alberta and I aim for finding how they have felt so far with the government's response to the pandemic particularly from a rural/urban perspective. Do the opinions of rural residents differ from their counterparts in the urban areas or do they feel similarly? If they have differences, where do these differences mainly come from?

We know from prior research that there has been a rural urban divide present in Alberta (Banack 2021, Epp 2019). This divide has existed due to various factors and has caused rural residents to feel overlooked, looked down upon and treated unfairly (Banack, 2021). Epp (2019) argues that rural sensibility is hard to find in the government caucus, which reflects on Alberta becoming an increasingly urban province compared to a rural one. COVID-19 brought more issues that may have fueled this divide. Among these issues include shining a light on Alberta's rural healthcare system which has already had issues such as the lack of access for osteoarthritis care despite the high prevalence (Liu et al., 2022). It was reported by the Canadian Medical Association in 2013 that 21% of the Canadian population lives in rural areas however only 9.4% of general practitioners and 3% of specialists do (CMA, 2013). COVID-19 causes many infected individuals to be hospitalized which could prove to be a problem for the already understaffed rural healthcare system. Torrie et al. (2021) highlights how there have been vaccine distribution issues in rural Alberta in the past giving an example of the 2009 HINI influenza pandemic.

I anticipate exploring whether did COVID-19 further increase the divide where rural residents felt a difference in the government response compared to the urban residents. How do they find their issues being handled and whom do they feel is doing a better job? Do Albertans feel the federal government is handling the pandemic well or is the provincial government doing a better job? Furthermore, I set out to explore how do rural and urban residents personally feel about policies such as masking or vaccine mandates.

Data

The 2021 Alberta Viewpoint Survey contains data from 1204 respondents. Data was collected through a roughly 15-minute voluntary survey. Consent of respondents was taken before the survey began. Respondents included individuals from various backgrounds, age, demographics and genders. The survey had 8 sections namely:

1. Demographics
2. Electoral Politics
3. Campaign Finances and Local Elections

4. Dialogue and Polarization
5. Federalism
6. The COVID-19 Pandemic
7. Economic Perceptions
8. Identity and Discrimination

There was missing information in the responses and was deleted using listwise deletion in order to have clean data to analyze.

```
d1 <- read.csv("ViewpointAB_Sept2021_Survey_Data.csv",header=TRUE)
d2 <- subset(d1,select=c(Q4,Q60r1,Q60r2,Q61r1,Q61r2,Q67,Q68,Q70,Q71))
d3 <- subset(d2,complete.cases(d2),drop=TRUE)
dim(d1)
```

```
## [1] 1204  343
```

Key Measures

For ease or reading and simplicity I will divide each variable into it's own category and describe it.

Area

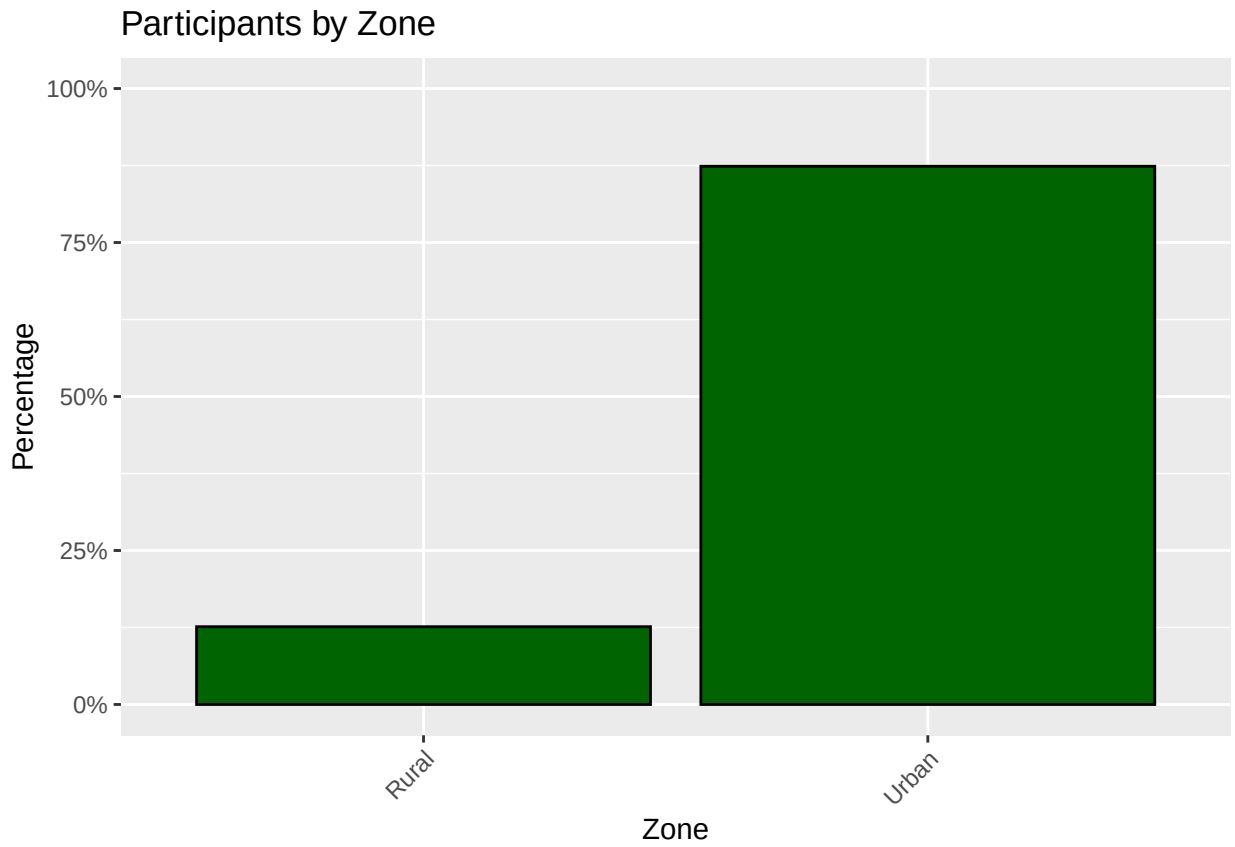
Areas are divided into three categories: urban, suburban and rural. Urban has been coded into '1', Suburban '2' and rural '3'. I have recoded them into their respective names so that the viewer does not have to look back and forth for what each number represents. I also counted suburban residents as urban residents in this project due to their close proximity with urban areas.

```
d3$zone=recode(d3$Q4,`1`="Urban",`2`="Urban",`3`="Rural")

round(prop.table(table(d3$zone)) * 100, 2)
```

```
##
## Rural Urban
## 12.62 87.38
```

```
ggplot(data = d3, aes(x = zone, y = ..count.. / sum(..count..))) + geom_bar(fill = "darkgreen", color =
labs(x = "Zone",
y = "Percentage",
title = "Participants by Zone") +
theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



Data shows that 87.38% of our respondents are from urban areas whereas only 12.62% are from rural areas. Since this is a predictor variable and I base my conclusions on zone area, I will further subset my data into rural and urban residents. This will allow me to separately measure responses from both sides.

```
d4 <- subset(d3, zone=="Urban")
d5 <- subset(d3, zone=="Rural")
```

Trust of Leader (Justin Trudeau the Prime Minister)

This is an outcome variable I will need to predict how much do rural vs urban Albertans trust the Prime Minister handling the pandemic. Values are in numbers and were recoded as: '1' No trust, '2' Little Trust, '3' A lot of Trust, '4' Full Trust, '98' Not Sure.

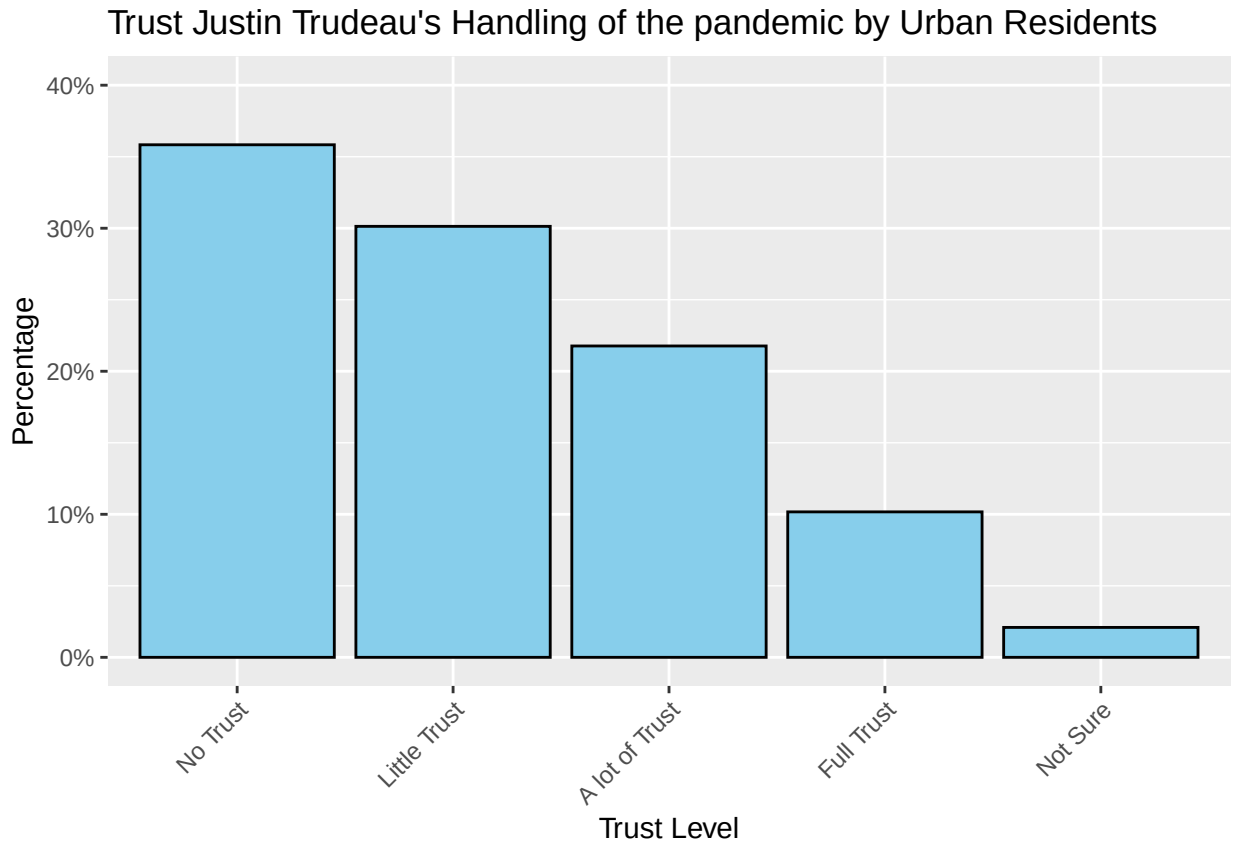
```
d4$trust_jt=recode(d4$Q60r1,`1`="No Trust",`2`="Little Trust",`3`="A lot of Trust",`4`="Full Trust",`98
d4$trust_jt <- factor(d4$trust_jt,c("No Trust","Little Trust","A lot of Trust","Full Trust","Not Sure"))
freq(ordered(d4$trust_jt), plot = FALSE)
```

```
## ordered(d4$trust_jt)
##                Frequency Percent Cum Percent
## No Trust             377  35.837       35.84
## Little Trust         317  30.133       65.97
## A lot of Trust       229  21.768       87.74
## Full Trust           107  10.171       97.91
## Not Sure              22   2.091      100.00
## Total               1052 100.000
```

```
Mode <- function(x){
  a=table(x)
  return(a[which.max(a)])
}
Mode(d4$trust_jt)
```

```
## No Trust
##      377
```

```
ggplot(data = d4, aes(x = trust_jt, y = ..count.. / sum(..count..))) + geom_bar(fill = "skyblue", color
labs(x = "Trust Level",
y = "Percentage",
title = "Trust Justin Trudeau's Handling of the pandemic by Urban Residents") +
theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



35.84% of Urban residents had to trust on Justin Trudeau's handling of this pandemic followed by 30.13% having little trust, 21.77% A lot of trust, 10.17% Full trust and 2.09% not sure.

No trust was the most common response with 377 votes.

```
d5$trust_jt=recode(d5$Q60r1,`1`="No Trust",`2`="Little Trust",`3`="A lot of Trust",`4`="Full Trust",`98
d5$trust_jt <- factor(d5$trust_jt,c("No Trust","Little Trust","A lot of Trust","Full Trust","Not Sure"))
freq(ordered(d5$trust_jt), plot = FALSE)
```

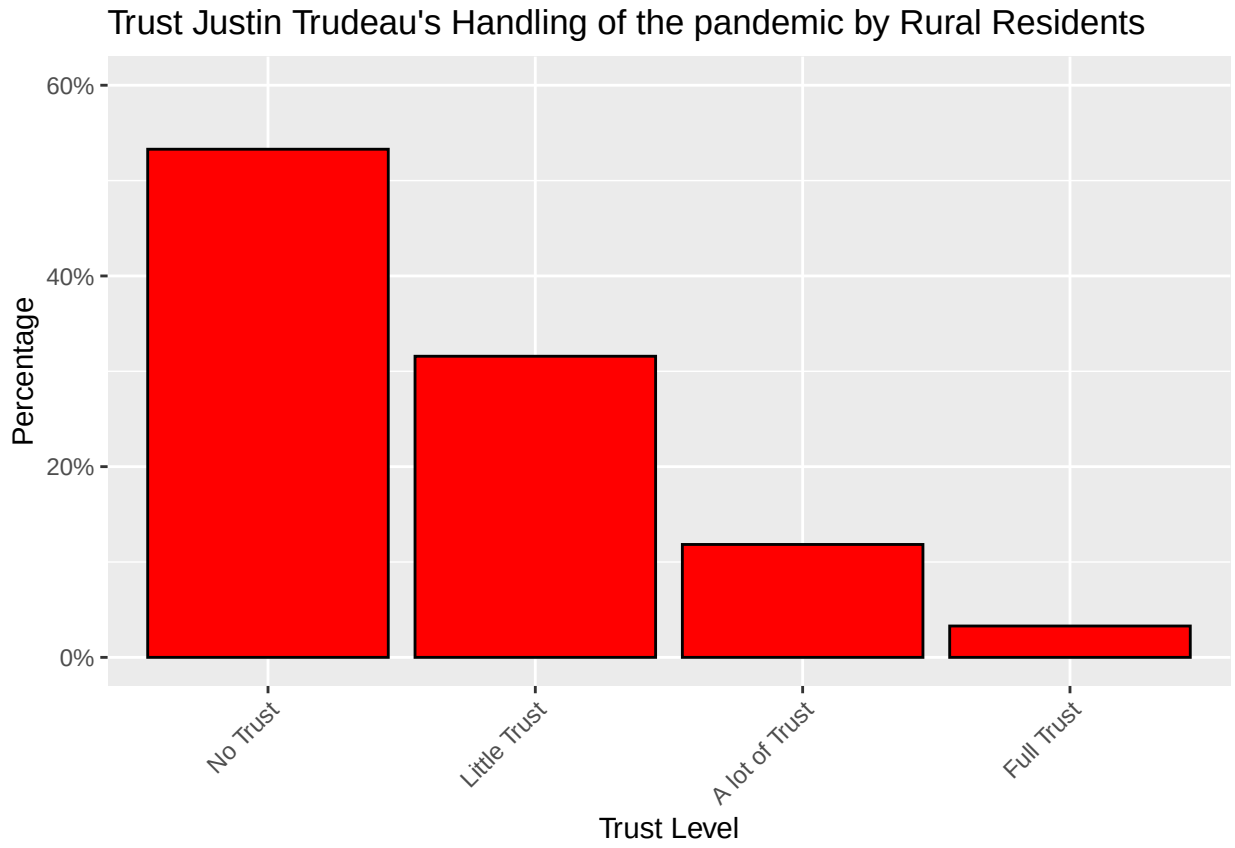
```
## ordered(d5$trust_jt)
```

```
##                Frequency Percent Cum Percent
## No Trust              81  53.289       53.29
## Little Trust          48  31.579       84.87
## A lot of Trust        18  11.842       96.71
## Full Trust             5   3.289      100.00
## Total                152 100.000
```

```
Mode <- function(x){
  a=table(x)
  return(a[which.max(a)])
}
Mode(d5$trust_jt)
```

```
## No Trust
##       81
```

```
ggplot(data = d5, aes(x = trust_jt, y = ..count.. / sum(..count..))) + geom_bar(fill = "red", color = "
labs(x = "Trust Level",
y = "Percentage",
title = "Trust Justin Trudeau's Handling of the pandemic by Rural Residents") +
theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



53.29% of Rural residents had to trust on Justin Trudeau's handling of this pandemic followed by 31.58% having little trust, 11.84% A lot of trust, 3.29% Full trust. None of the respondents choose "Not sure".

No trust was the most common response with 81 votes.

Trust of Leader (Jason Kenny then Premier of Alberta)

This is an outcome variable I will need to predict how much do rural vs urban Albertans trust the Premier handling the pandemic. Values are in numbers and were recoded as: '1' No trust, '2' Little Trust, '3' A lot of Trust, '4' Full Trust, '98' Not Sure.

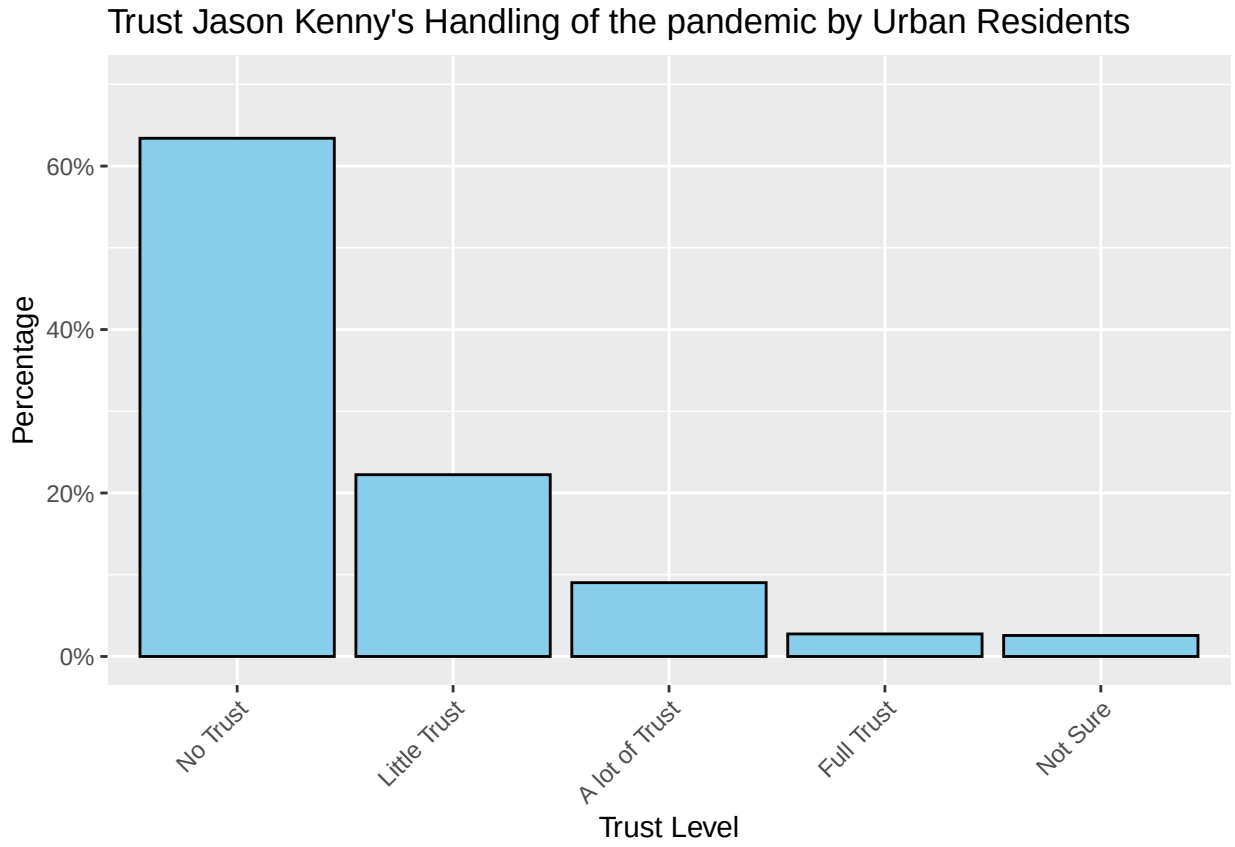
```
d4$trust_jk=recode(d4$Q60r2,`1`="No Trust",`2`="Little Trust",`3`="A lot of Trust",`4`="Full Trust",`98
d4$trust_jk <- factor(d4$trust_jk,c("No Trust","Little Trust","A lot of Trust","Full Trust","Not Sure"))
freq(ordered(d4$trust_jk), plot = FALSE)
```

```
## ordered(d4$trust_jk)
##                Frequency Percent Cum Percent
## No Trust             667  63.403       63.40
## Little Trust         234  22.243       85.65
## A lot of Trust        95   9.030       94.68
## Full Trust            29   2.757       97.43
## Not Sure              27   2.567      100.00
## Total               1052 100.000
```

```
Mode <- function(x){
  a=table(x)
  return(a[which.max(a)])
}
Mode(d4$trust_jk)
```

```
## No Trust
##      667
```

```
ggplot(data = d4, aes(x = trust_jk, y = ..count.. / sum(..count..))) + geom_bar(fill = "skyblue", color
labs(x = "Trust Level",
y = "Percentage",
title = "Trust Jason Kenny's Handling of the pandemic by Urban Residents") +
theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



63.40% of Urban residents had to trust on Jason Kenny's handling of this pandemic followed by 22.24% having little trust, 9.03% A lot of trust, 2.76% Full trust and 2.57% not sure.

No trust was the most common response with 667 votes.

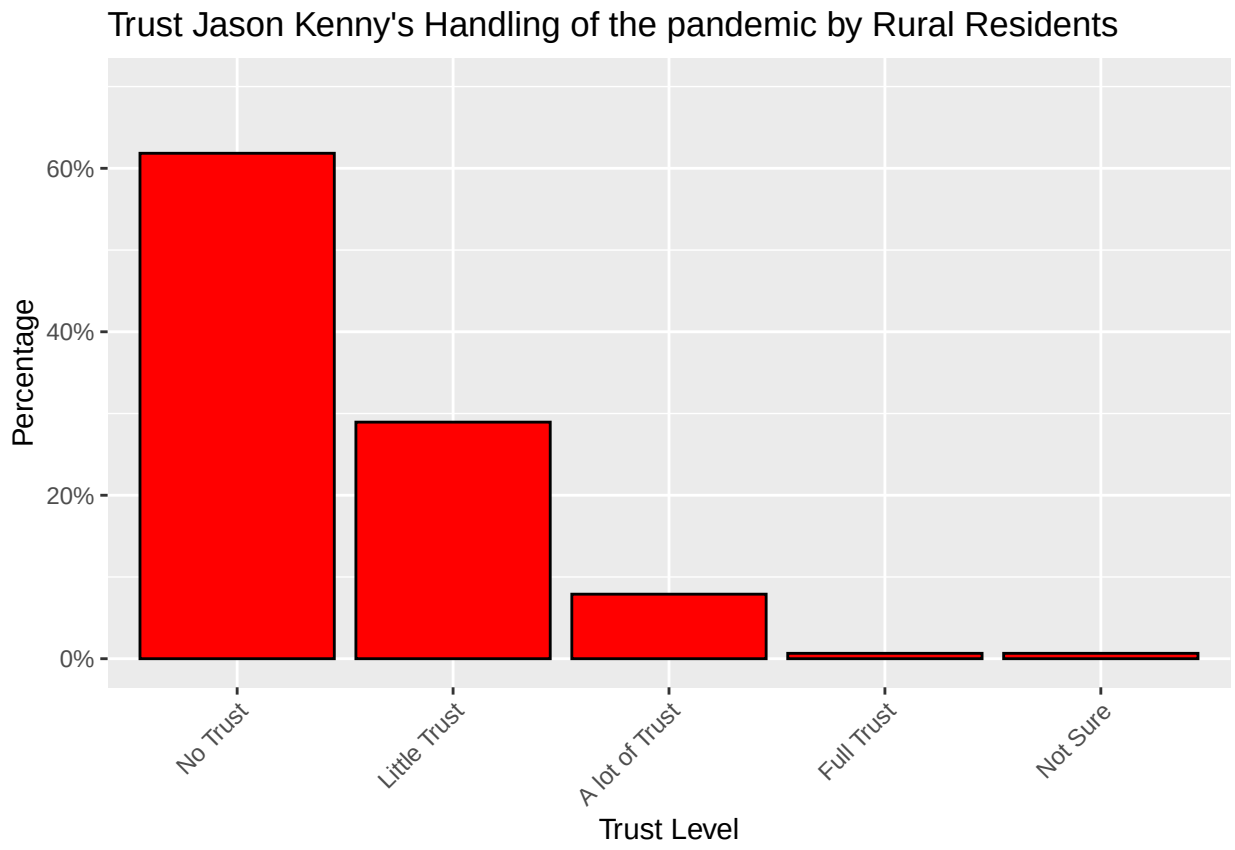
```
d5$trust_jk=recode(d5$Q60r2,`1`="No Trust",`2`="Little Trust",`3`="A lot of Trust",`4`="Full Trust",`98
d5$trust_jk <- factor(d5$trust_jk,c("No Trust","Little Trust","A lot of Trust","Full Trust","Not Sure"))
freq(ordered(d5$trust_jk), plot = FALSE)
```

```
## ordered(d5$trust_jk)
##                Frequency  Percent Cum Percent
## No Trust              94  61.8421       61.84
## Little Trust          44  28.9474       90.79
## A lot of Trust        12   7.8947       98.68
## Full Trust             1   0.6579       99.34
## Not Sure               1   0.6579      100.00
## Total                152 100.0000
```

```
Mode <- function(x){
  a=table(x)
  return(a[which.max(a)])
}
Mode(d5$trust_jk)
```

```
## No Trust
##       94
```

```
ggplot(data = d5, aes(x = trust_jk, y = ..count.. / sum(..count..))) + geom_bar(fill = "red", color = "
labs(x = "Trust Level",
y = "Percentage",
title = "Trust Jason Kenny's Handling of the pandemic by Rural Residents") +
theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



61.84% of Rural residents had to trust on Jason Kenny's handling of this pandemic followed by 28.95% having little trust, 7.89% A lot of trust, 0.65% Full trust and 0.65% not sure.

No trust was the most common response with 94 votes.

Performance of Government (Federal)

This is an outcome variable I will need to predict how well do rural vs urban Albertans think the Federal government handled the pandemic. Values are in numbers and were recoded as: '1' No trust, '2' Little Trust, '3' A lot of Trust, '4' Full Trust, '98' Not Sure.

```
d4$trust_fg=recode(d4$Q61r1,`1`="Very bad",`2`="Bad",`3`="Good",`4`="Very Good")
d4$trust_fg <- factor(d4$trust_fg,c("Very bad","Bad","Good","Very Good"))
freq(ordered(d4$trust_fg), plot = FALSE)
```

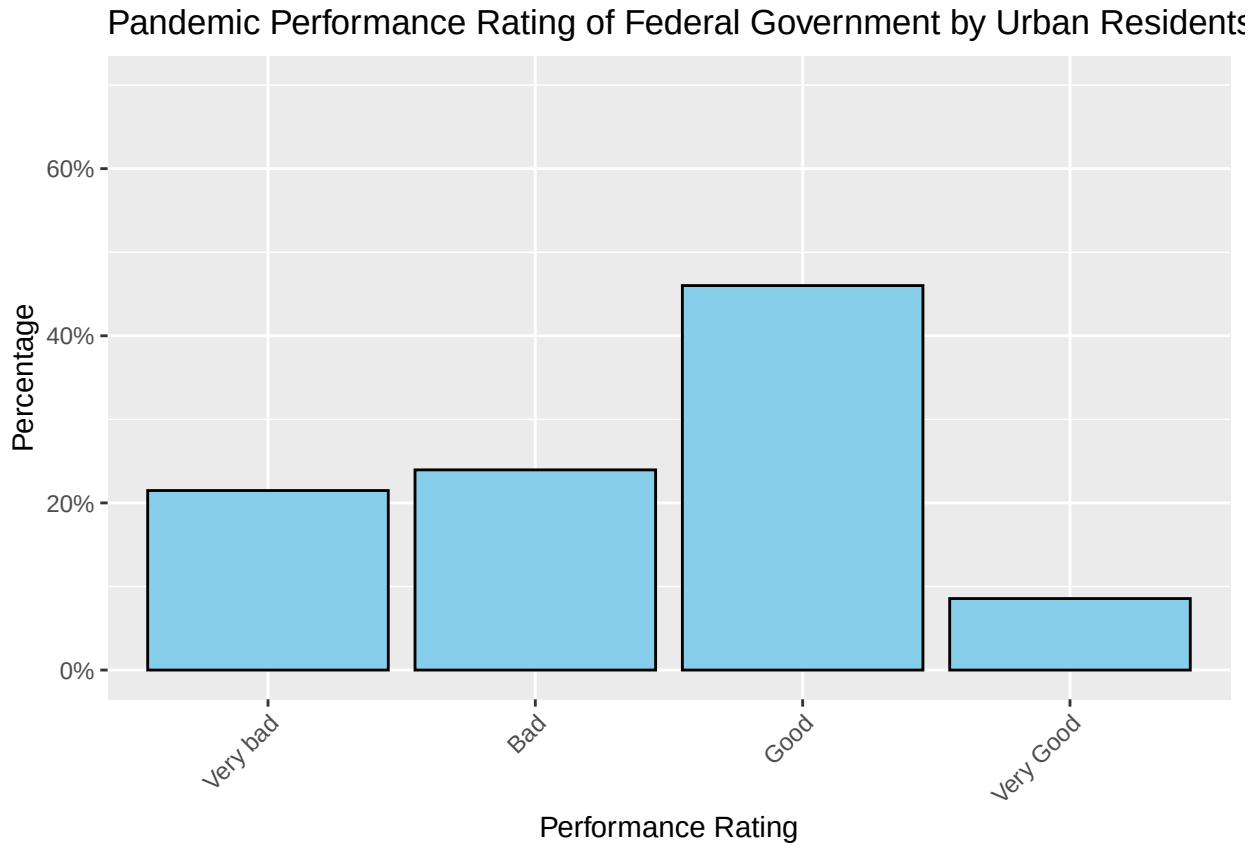
```
## ordered(d4$trust_fg)
##           Frequency Percent Cum Percent
## Very bad        226  21.483       21.48
## Bad             252  23.954       45.44
```

```
## Good            484  46.008       91.44
## Very Good        90   8.555      100.00
## Total          1052 100.000
```

```
Mode <- function(x){
  a=table(x)
  return(a[which.max(a)])
}
Mode(d4$trust_fg)
```

```
## Good
##  484
```

```
ggplot(data = d4, aes(x = trust_fg, y = ..count.. / sum(..count..))) + geom_bar(fill = "skyblue", color
labs(x = "Performance Rating",
y = "Percentage",
title = "Pandemic Performance Rating of Federal Government by Urban Residents") +
theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



21.48% of urban respondents thought the federal government is doing a very bad job handling the pandemic. 23.95% thought it was doing a bad job whereas 46% the federal government was doing a good job making it the most popular answer with 484 votes. 8.56% thought the government was doing a very good job.

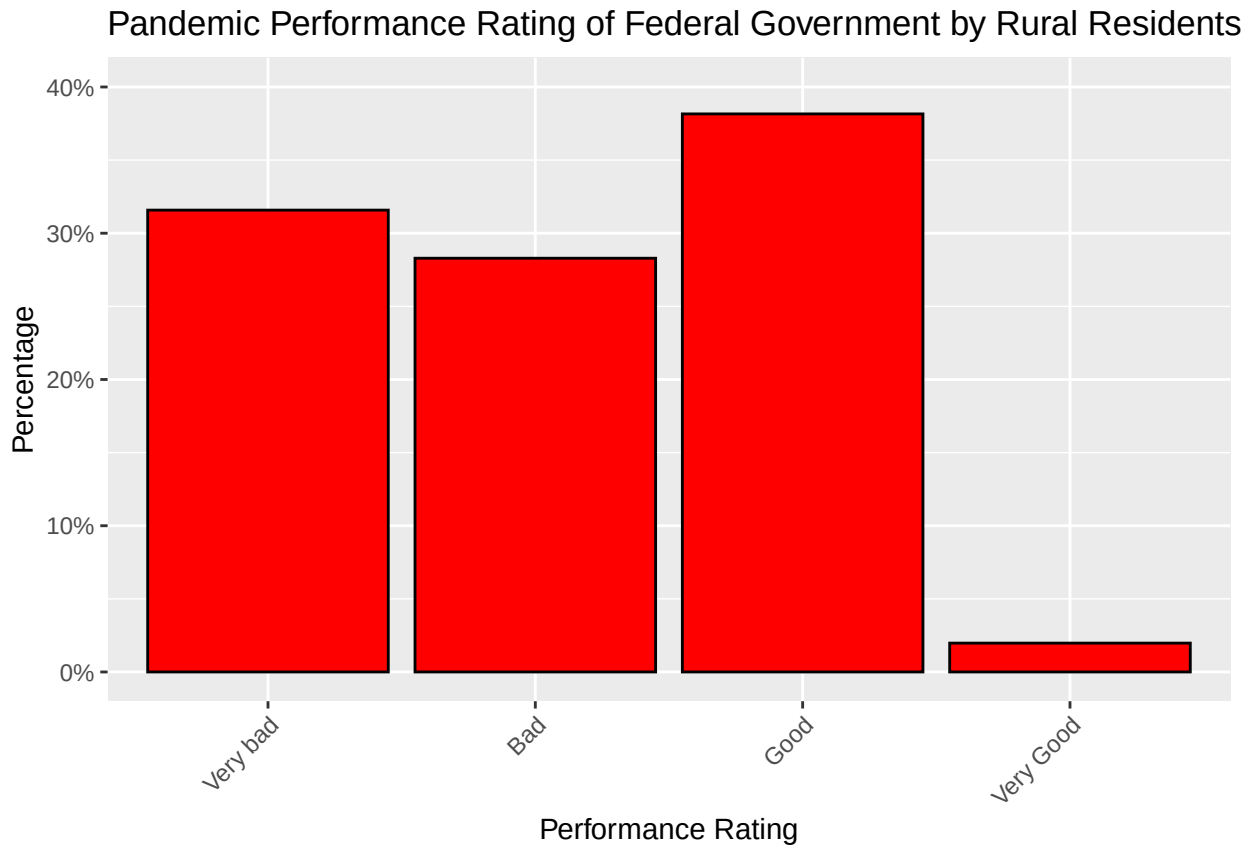
```
d5$trust_fg=recode(d5$Q61r1,`1`="Very bad",`2`="Bad",`3`="Good",`4`="Very Good")
d5$trust_fg <- factor(d5$trust_fg,c("Very bad","Bad","Good","Very Good"))
freq(ordered(d5$trust_fg), plot = FALSE)
```

```
## ordered(d5$trust_fg)
##           Frequency Percent Cum Percent
## Very bad         48  31.579       31.58
## Bad              43  28.289       59.87
## Good             58  38.158       98.03
## Very Good         3   1.974      100.00
## Total           152 100.000
```

```
Mode <- function(x){
  a=table(x)
  return(a[which.max(a)])
}
Mode(d5$trust_fg)
```

```
## Good
##   58
```

```
ggplot(data = d5, aes(x = trust_fg, y = ..count.. / sum(..count..))) + geom_bar(fill = "red", color = "
labs(x = "Performance Rating",
y = "Percentage",
title = "Pandemic Performance Rating of Federal Government by Rural Residents") +
theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



31.58% of rural respondents thought the federal government is doing a very bad job handling the pandemic. 28.28% thought it was doing a bad job whereas 38.2% the federal government was doing a good job making it the most popular answer with 58 votes. 1.97% thought the government was doing a very good job.

Performance of Government (Provincial)

This is an outcome variable I will need to predict how well do rural vs urban Albertans think the provincial government handled the pandemic. Values are in numbers and were recoded as: '1' No trust, '2' Little Trust, '3' A lot of Trust, '4' Full Trust, '98' Not Sure.

```
d4$trust_pg=recode(d4$Q61r2,`1`="Very bad",`2`="Bad",`3`="Good",`4`="Very Good")
d4$trust_pg <- factor(d4$trust_pg,c("Very bad","Bad","Good","Very Good"))
freq(ordered(d4$trust_pg), plot = FALSE)
```

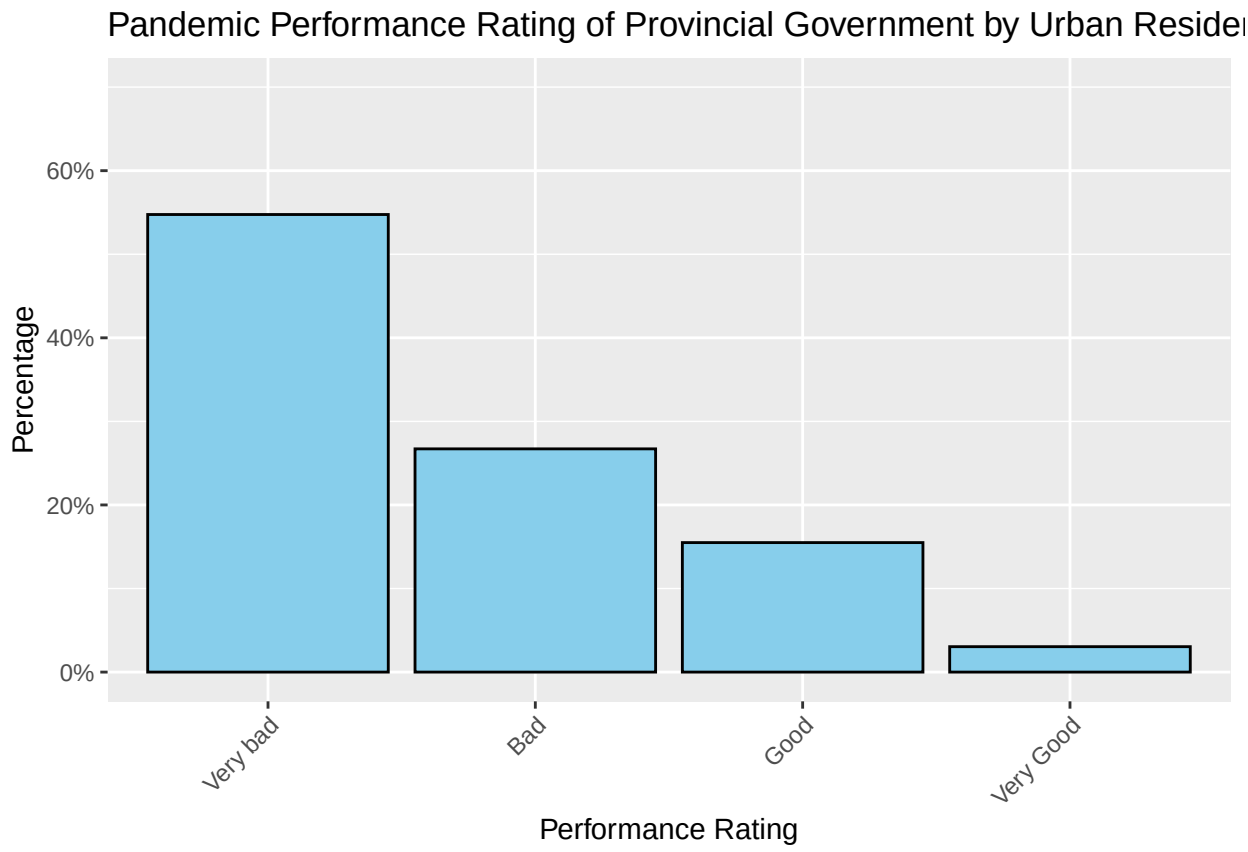
```
## ordered(d4$trust_pg)
##           Frequency Percent Cum Percent
## Very bad        576  54.753       54.75
## Bad             281  26.711       81.46
## Good            163  15.494       96.96
## Very Good        32   3.042      100.00
## Total          1052 100.000
```

```
Mode <- function(x){
  a=table(x)
```

```
  return(a[which.max(a)])
}
Mode(d4$trust_pg)
```

```
## Very bad
##      576
```

```
ggplot(data = d4, aes(x = trust_pg, y = ..count.. / sum(..count..))) + geom_bar(fill = "skyblue", color
labs(x = "Performance Rating",
y = "Percentage",
title = "Pandemic Performance Rating of Provincial Government by Urban Residents") +
theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



54.75% of urban respondents thought the provincial government is doing a very bad job handling the pandemic making it the most popular answer with 576 votes. 26.71% thought it was doing a bad job whereas 15.5% the federal government was doing a good job . 3.0% thought the provincial government was doing a very good job.

```
d5$trust_pg=recode(d5$Q61r2,`1`="Very bad",`2`="Bad",`3`="Good",`4`="Very Good")
d5$trust_pg <- factor(d5$trust_pg,c("Very bad","Bad","Good","Very Good"))
freq(ordered(d5$trust_pg), plot = FALSE)
```

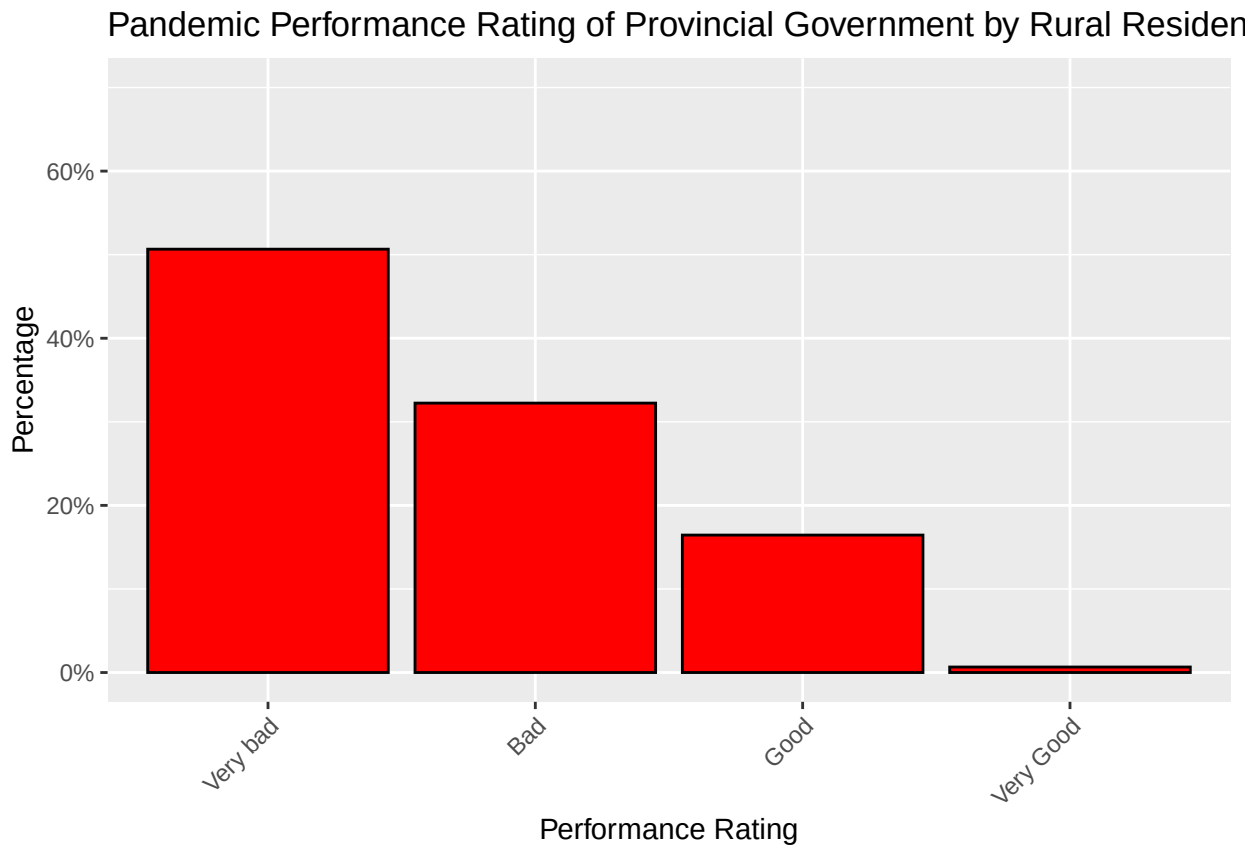
```
## ordered(d5$trust_pg)
##           Frequency  Percent Cum Percent
```

```
## Very bad          77  50.6579       50.66
## Bad               49  32.2368       82.89
## Good              25  16.4474       99.34
## Very Good          1   0.6579      100.00
## Total            152 100.0000
```

```
Mode <- function(x){
  a=table(x)
  return(a[which.max(a)])
}
Mode(d5$trust_pg)
```

```
## Very bad
##       77
```

```
ggplot(data = d5, aes(x = trust_pg, y = ..count.. / sum(..count..))) + geom_bar(fill = "red", color = "
labs(x = "Performance Rating",
y = "Percentage",
title = "Pandemic Performance Rating of Provincial Government by Rural Residents") +
theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



50.66% of urban respondents thought the provincial government is doing a very bad job handling the pandemic making it the most popular answer with 77 votes. 32.23% thought it was doing a bad job whereas 16.45% the federal government was doing a good job . 0.66% thought the provincial government was doing a very good job.

Support of businesses requiring proof of vaccination (Q67)

This is an outcome variable I will need to predict how well do rural vs urban Albertans support the government law allowing businesses to stay open provided they require proof of vaccination of negative COVID-19 test result . Values are in numbers and were recoded as: '1' Strongly support, '2' Somewhat support, '3' Neither support or oppose, '4' Somewhat oppose, '5' Strongly oppose.

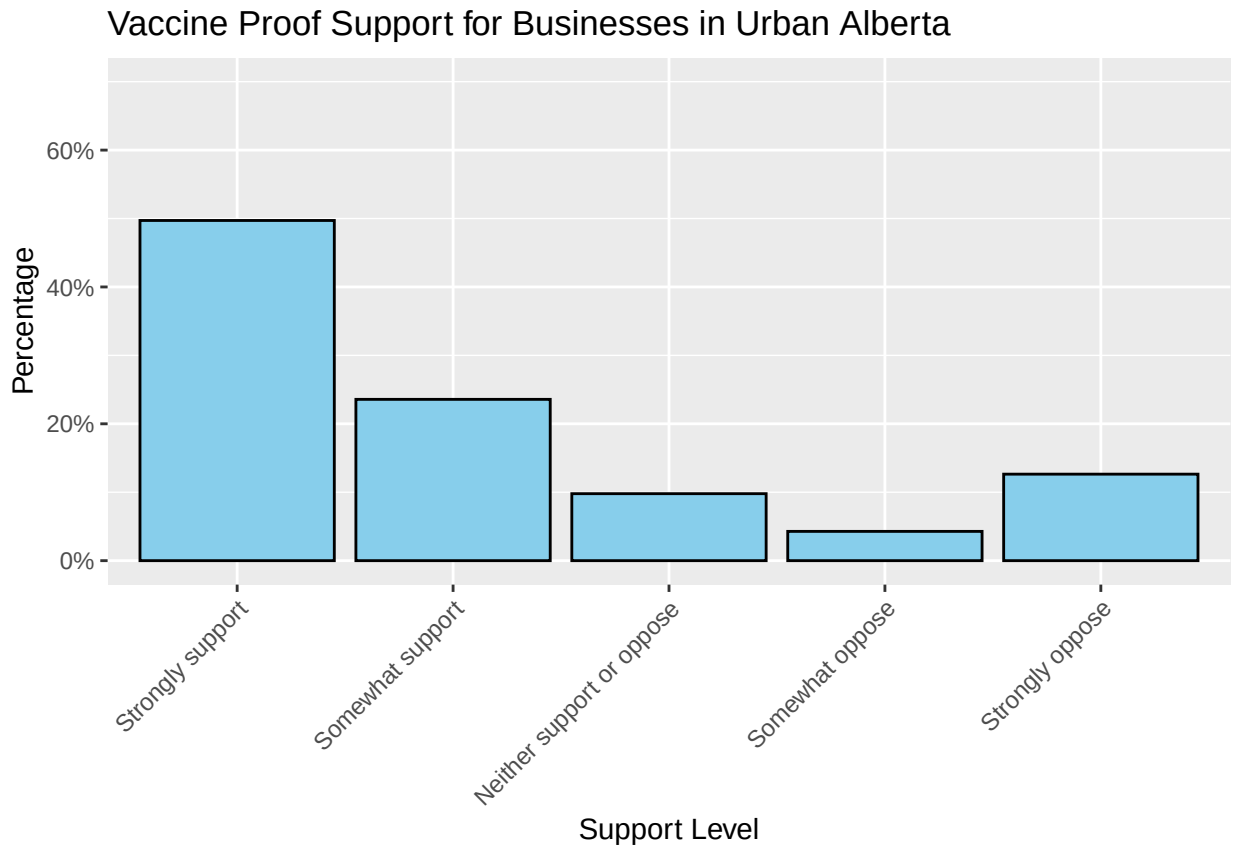
```
d4$business_vac=recode(d4$Q67,`1`="Strongly support",`2`="Somewhat support",`3`="Neither support or oppo
d4$business_vac <- factor(d4$business_vac,c("Strongly support","Somewhat support","Neither support or o
freq(ordered(d4$business_vac), plot = FALSE)
```

```
## ordered(d4$business_vac)
##                            Frequency Percent Cum Percent
## Strongly support                 523  49.715       49.71
## Somewhat support                 248  23.574       73.29
## Neither support or oppose        103   9.791       83.08
## Somewhat oppose                   45   4.278       87.36
## Strongly oppose                  133  12.643      100.00
## Total                           1052 100.000
```

```
Mode <- function(x){
  a=table(x)
  return(a[which.max(a)])
}
Mode(d4$business_vac)
```

```
## Strongly support
##              523
```

```
ggplot(data = d4, aes(x = business_vac, y = ..count.. / sum(..count..))) + geom_bar(fill = "skyblue", co
labs(x = "Support Level",
y = "Percentage",
title = "Vaccine Proof Support for Businesses in Urban Alberta") +
theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



49.72% of urban respondents strongly supported businesses requiring proof of vaccination or negative COVID-19 tests making it the most popular response with 523 votes. 23.57% supported the statement, followed by 9.8% being neutral, 4.28% opposing and 12.64% strongly opposing the statement.

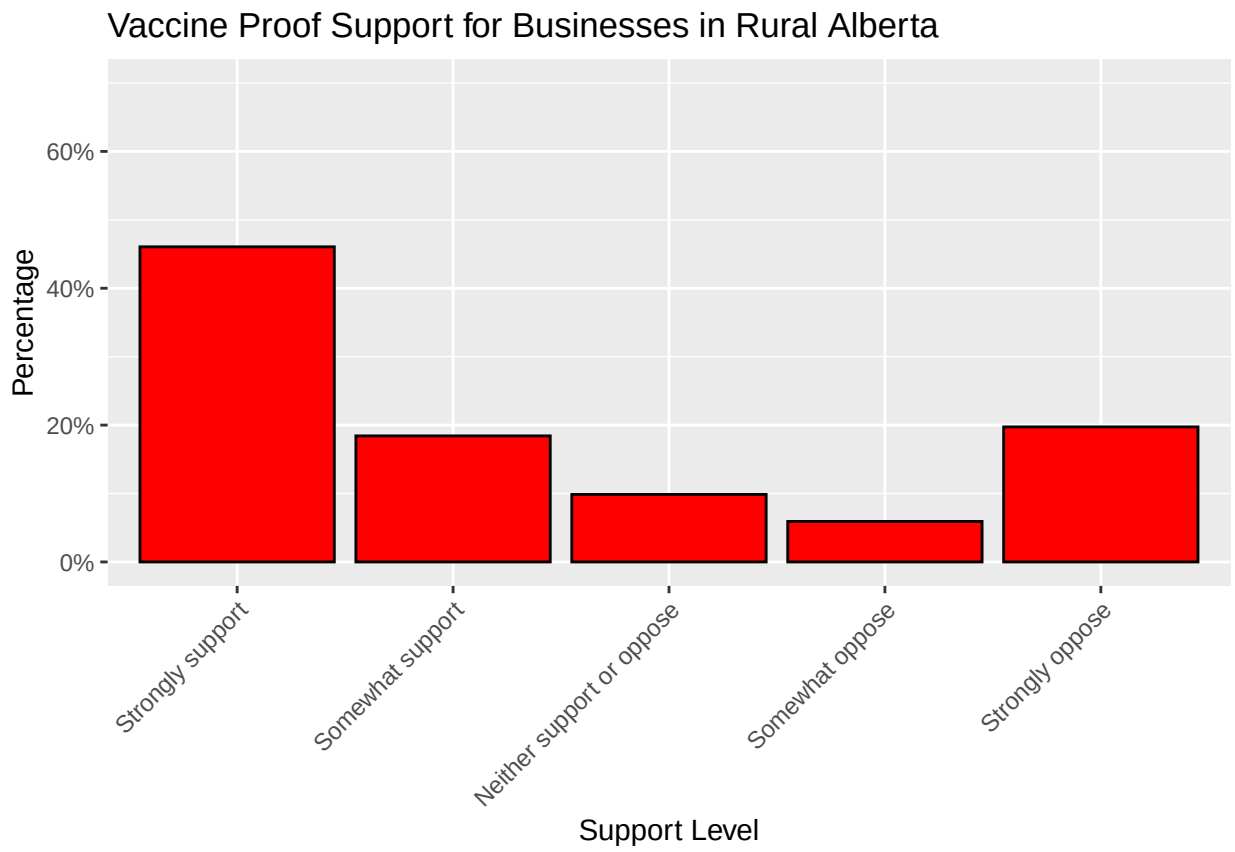
```
d5$business_vac=recode(d5$Q67,`1`="Strongly support",`2`="Somewhat support",`3`="Neither support or oppo
d5$business_vac <- factor(d5$business_vac,c("Strongly support","Somewhat support","Neither support or o
freq(ordered(d5$business_vac), plot = FALSE)
```

```
## ordered(d5$business_vac)
##                           Frequency Percent Cum Percent
## Strongly support                 70  46.053       46.05
## Somewhat support                 28  18.421       64.47
## Neither support or oppose        15   9.868       74.34
## Somewhat oppose                   9   5.921       80.26
## Strongly oppose                  30  19.737      100.00
## Total                           152 100.000
```

```
Mode <- function(x){
  a=table(x)
  return(a[which.max(a)])
}
Mode(d5$business_vac)
```

```
## Strongly support
##               70
```

```
ggplot(data = d5, aes(x = business_vac, y = ..count.. / sum(..count..))) + geom_bar(fill = "red", color
labs(x = "Support Level",
y = "Percentage",
title = "Vaccine Proof Support for Businesses in Rural Alberta") +
theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



46.1% of rural respondents strongly supported businesses requiring proof of vaccination or negative COVID-19 tests making it the most popular response with 70 votes. 18.42% supported the statement, followed by 9.87% being neutral, 5.92% opposing and 19.74% strongly opposing the statement.

Support for vaccine passports (Q68)

This is an outcome variable I will need to predict how well do rural vs urban Albertans support vaccine passports. Values are in numbers and were recoded as: '1' Strongly support, '2' Somewhat support, '3' Neither support or oppose, '4' Somewhat oppose, '5' Strongly oppose.

```
d4$vac_pass=recode(d4$Q68,`1`="Strongly support",`2`="Somewhat support",`3`="Neither support or oppose"
d4$vac_pass <- factor(d4$vac_pass,c("Strongly support","Somewhat support","Neither support or oppose","
freq(ordered(d4$vac_pass), plot = FALSE)
```

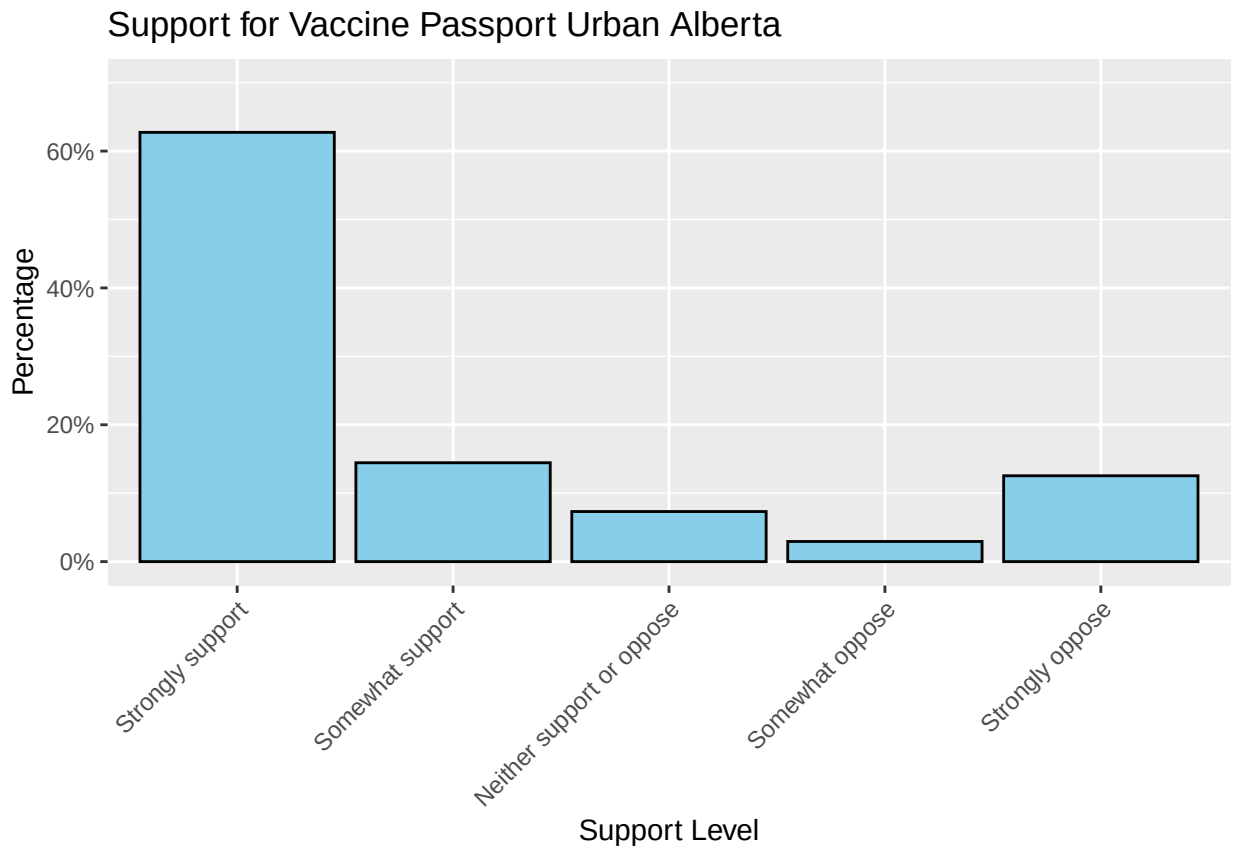
```
## ordered(d4$vac_pass)
##                          Frequency Percent Cum Percent
## Strongly support               660  62.738       62.74
## Somewhat support               152  14.449       77.19
```

```
## Neither support or oppose         77   7.319       84.51
## Somewhat oppose                   31   2.947       87.45
## Strongly oppose                  132  12.548      100.00
## Total                           1052 100.000
```

```
Mode <- function(x){
  a=table(x)
  return(a[which.max(a)])
}
Mode(d4$vac_pass)
```

```
## Strongly support
##              660
```

```
ggplot(data = d4, aes(x = vac_pass, y = ..count.. / sum(..count..))) + geom_bar(fill = "skyblue", color
labs(x = "Support Level",
y = "Percentage",
title = "Support for Vaccine Passport Urban Alberta") +
theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



62.74% of urban residents supported vaccine passports making it the most popular option with 660 votes. This was followed by 14.45% somewhat supporting, 7.32% neutral, 2.95% opposing and 12.55% strongly opposing.

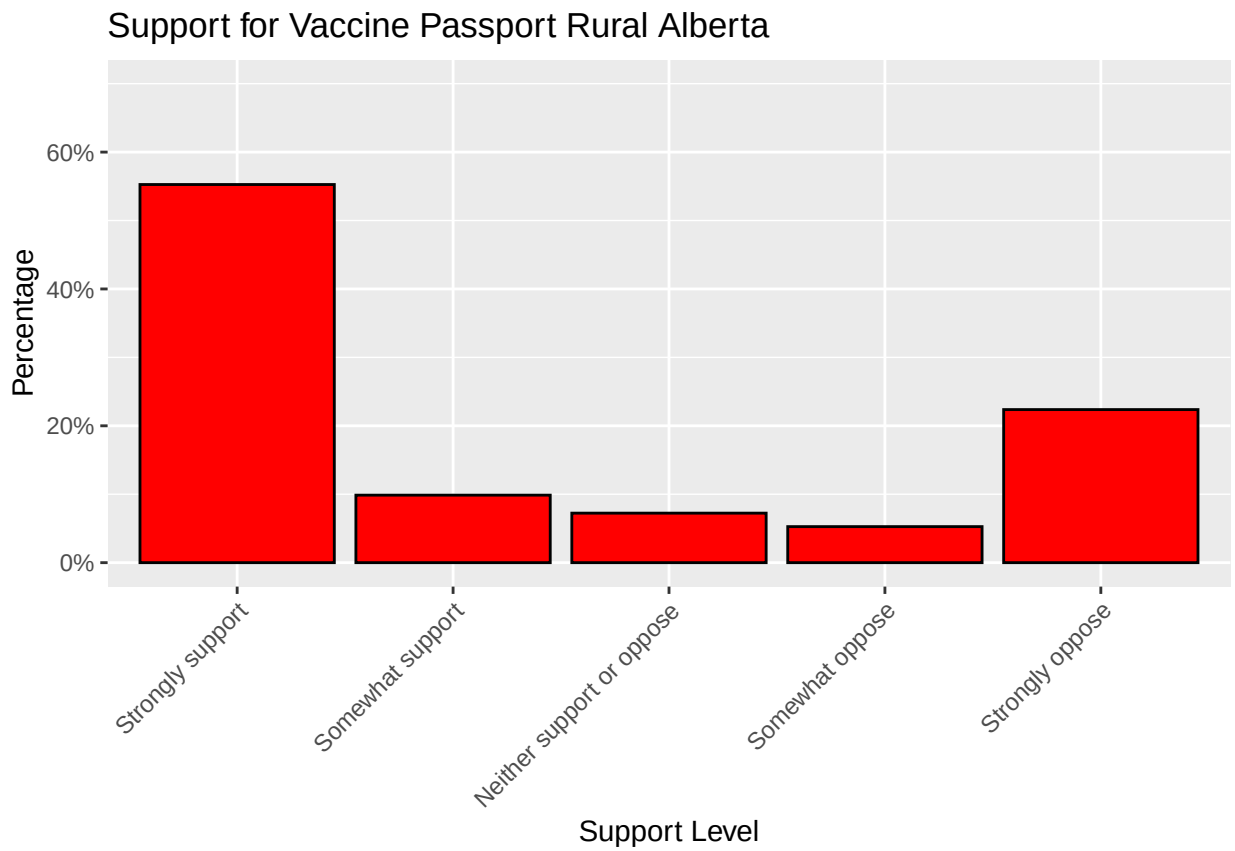
```
d5$vac_pass=recode(d5$Q68,`1`="Strongly support",`2`="Somewhat support",`3`="Neither support or oppose"
d5$vac_pass <- factor(d5$vac_pass,c("Strongly support","Somewhat support","Neither support or oppose","S
freq(ordered(d5$vac_pass), plot = FALSE)
```

```
## ordered(d5$vac_pass)
##                            Frequency Percent Cum Percent
## Strongly support                  84  55.263       55.26
## Somewhat support                  15   9.868       65.13
## Neither support or oppose         11   7.237       72.37
## Somewhat oppose                    8   5.263       77.63
## Strongly oppose                   34  22.368      100.00
## Total                            152 100.000
```

```
Mode <- function(x){
  a=table(x)
  return(a[which.max(a)])
}
Mode(d5$vac_pass)
```

```
## Strongly support
##               84
```

```
ggplot(data = d5, aes(x = vac_pass, y = ..count.. / sum(..count..))) + geom_bar(fill = "red", color = "
labs(x = "Support Level",
y = "Percentage",
title = "Support for Vaccine Passport Rural Alberta") +
theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



55.26% of rural residents supported vaccine passports making it the most popular option with 84 votes. This was followed by 9.87% somewhat supporting, 7.23% neutral, 5.26% opposing and 22.37% strongly opposing.

Feelings on current restrictions (Q70)

This is an outcome variable I will need to predict how well do rural vs urban Albertans feel about current restrictions. Values are in numbers and were recoded as: '1' Too harsh, '2' Too lenient, '3' Just about right.

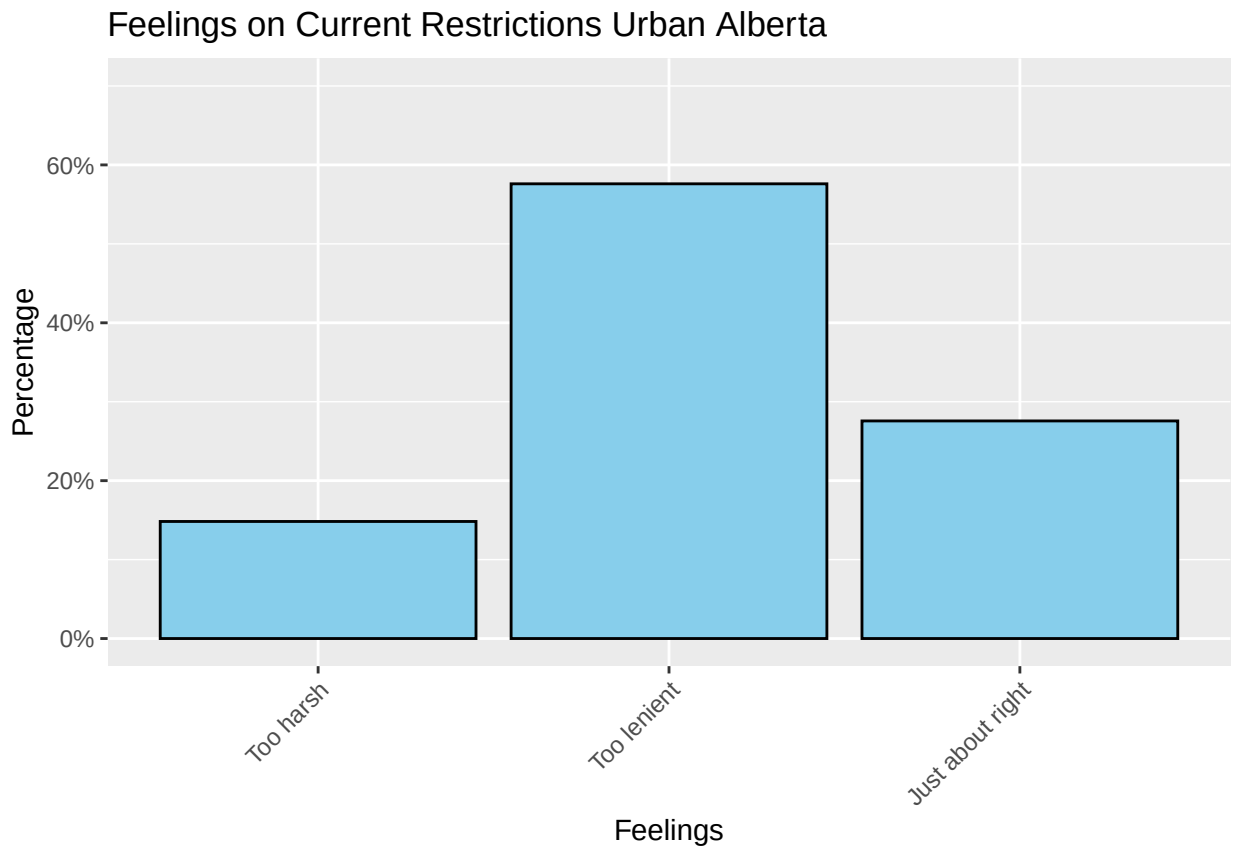
```
d4$feel_cr=recode(d4$Q70,`1`="Too harsh",`2`="Too lenient",`3`="Just about right")
d4$feel_cr <- factor(d4$feel_cr,c("Too harsh","Too lenient","Just about right"))
freq(ordered(d4$feel_cr), plot = FALSE)
```

```
## ordered(d4$feel_cr)
##                   Frequency Percent Cum Percent
## Too harsh               156   14.83       14.83
## Too lenient             606   57.60       72.43
## Just about right        290   27.57      100.00
## Total                  1052  100.00
```

```
Mode <- function(x){
  a=table(x)
  return(a[which.max(a)])
}
Mode(d4$feel_cr)
```

```
## Too lenient
##         606
```

```
ggplot(data = d4, aes(x = feel_cr, y = ..count.. / sum(..count..))) + geom_bar(fill = "skyblue", color =
labs(x = "Feelings",
y = "Percentage",
title = "Feelings on Current Restrictions Urban Alberta") +
theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



14.83% of Urban residents found current restrictions to be too harsh followed by 57.6% saying they are too lenient making it the most common response with 606 votes. 27.57% found them to be just about right.

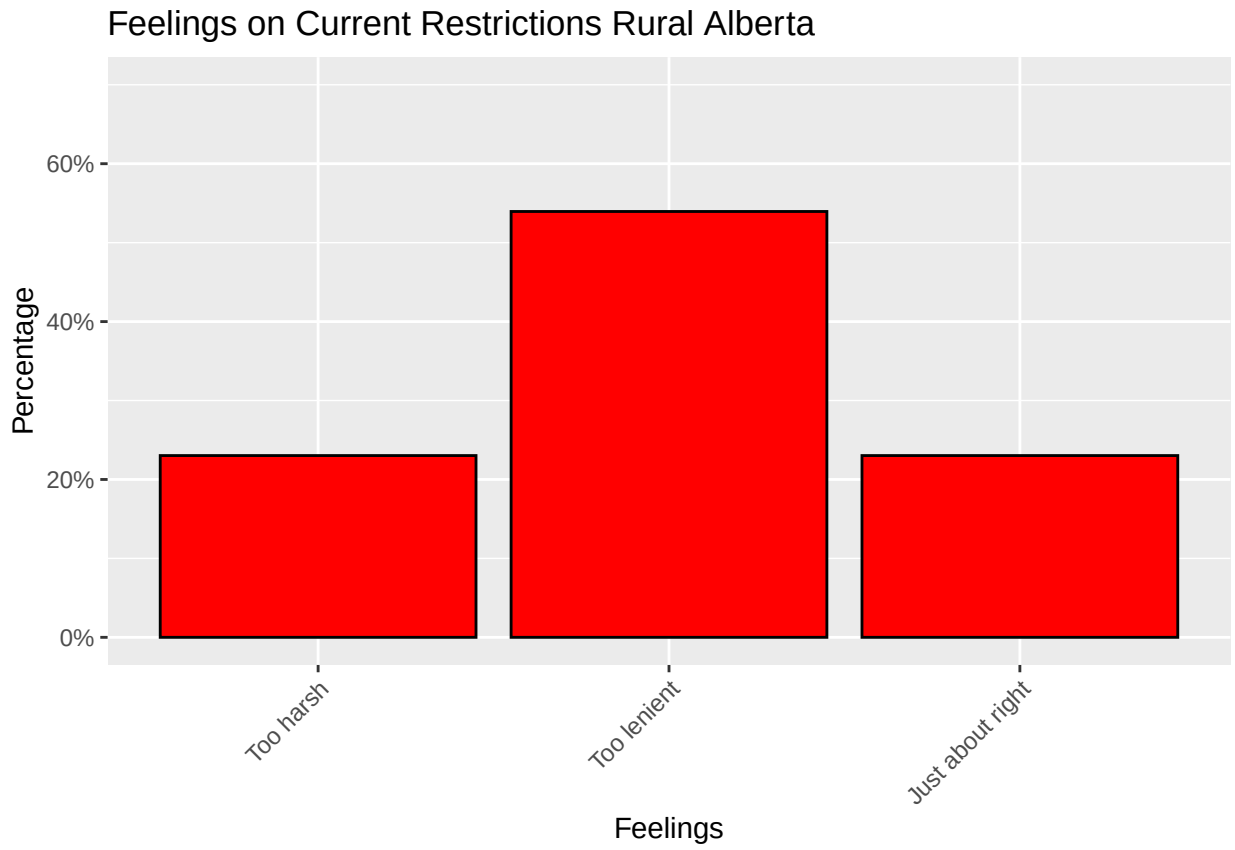
```
d5$feel_cr=recode(d5$Q70,`1`="Too harsh",`2`="Too lenient",`3`="Just about right")
d5$feel_cr <- factor(d5$feel_cr,c("Too harsh","Too lenient","Just about right"))
freq(ordered(d5$feel_cr), plot = FALSE)
```

```
## ordered(d5$feel_cr)
##                   Frequency Percent Cum Percent
## Too harsh                35   23.03       23.03
## Too lenient              82   53.95       76.97
## Just about right         35   23.03      100.00
## Total                   152  100.00
```

```
Mode <- function(x){
  a=table(x)
  return(a[which.max(a)])
}
Mode(d5$feel_cr)
```

```
## Too lenient
##          82
```

```
ggplot(data = d5, aes(x = feel_cr, y = ..count.. / sum(..count..))) + geom_bar(fill = "red", color = "bl
labs(x = "Feelings",
y = "Percentage",
title = "Feelings on Current Restrictions Rural Alberta") +
theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



23.03% of rural residents found current restrictions to be too harsh followed by 53.95% saying they are too lenient making it the most common response with 82 votes. 23.03% found them to be just about right.

Masks: Freedom or public health (Q71)

This is an outcome variable I will need to predict how do rural vs urban Albertans feel about masks. Does freedom come before public health or viceversa? Values are in numbers and were recoded as: '1' Freedom, '2' Public Health.

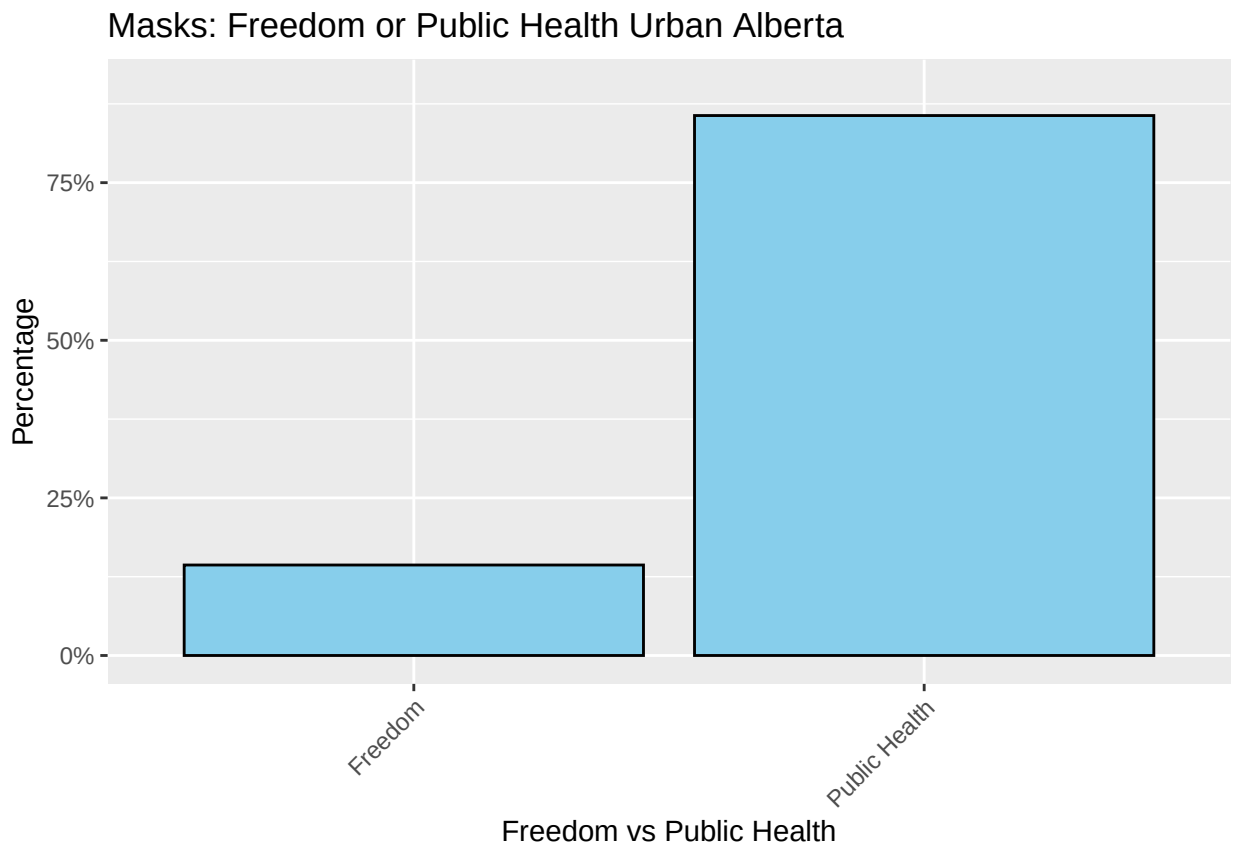
```
d4$masks=recode(d4$Q71,`1`="Freedom",`2`="Public Health")
d4$masks <- factor(d4$masks,c("Freedom","Public Health"))
freq(ordered(d4$masks), plot = FALSE)
```

```
## ordered(d4$masks)
##               Frequency Percent Cum Percent
## Freedom             151   14.35       14.35
## Public Health       901   85.65      100.00
## Total              1052  100.00
```

```
Mode <- function(x){
  a=table(x)
  return(a[which.max(a)])
}
Mode(d4$masks)
```

```
## Public Health
##           901
```

```
ggplot(data = d4, aes(x = masks, y = ..count.. / sum(..count..))) + geom_bar(fill = "skyblue", color =
labs(x = "Freedom vs Public Health",
y = "Percentage",
title = "Masks: Freedom or Public Health Urban Alberta") +
theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



14.35% of Urban residents choose freedom over public health when discussing about face masks while 85.65% choose public health making it the most common response with 901 votes.

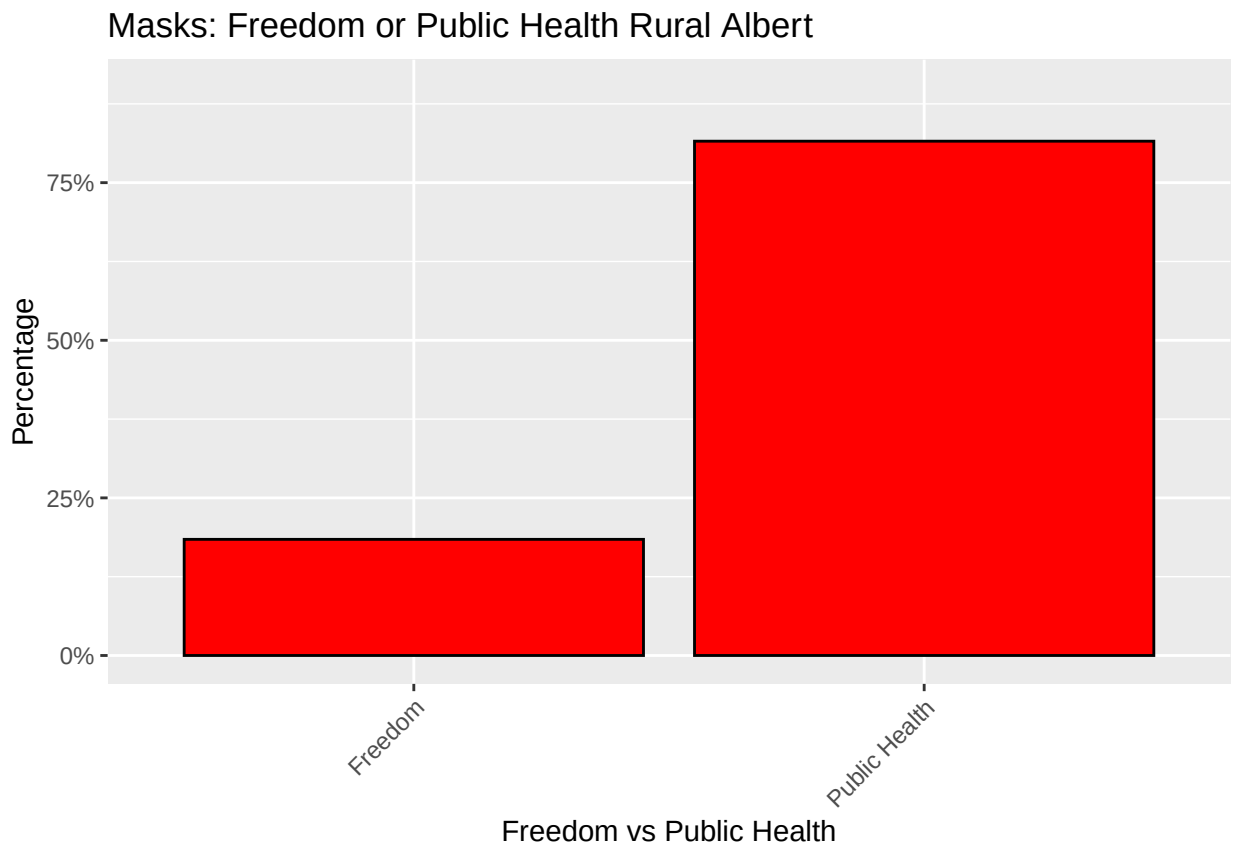
```
d5$masks=recode(d5$Q71,`1`="Freedom",`2`="Public Health")
d5$masks <- factor(d5$masks,c("Freedom","Public Health"))
freq(ordered(d5$masks), plot = FALSE)
```

```
## ordered(d5$masks)
##               Frequency Percent Cum Percent
## Freedom              28   18.42       18.42
## Public Health       124   81.58      100.00
## Total               152  100.00
```

```
Mode <- function(x){
  a=table(x)
  return(a[which.max(a)])
}
Mode(d5$masks)
```

```
## Public Health
##           124
```

```
ggplot(data = d5, aes(x = masks, y = ..count.. / sum(..count..))) + geom_bar(fill = "red", color = "bla
labs(x = "Freedom vs Public Health",
y = "Percentage",
title = "Masks: Freedom or Public Health Rural Albert") +
theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



18.42% of rural residents choose freedom over public health when discussing about face masks while 81.58% choose public health making it the most common response with 124 votes.

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