

Milestone 4 Graphs

Anisha Gondesi

5/4/2022

R Markdown

```
nj <- read_csv("njsurvey.csv")

## Rows: 126 Columns: 36
## -- Column specification -----
## Delimiter: ","
## chr (6): Gender, Employment Status, Race/Ethnicity, Relationship Status, Cu...
## dbl (30): Age, Q1, Q2, Q3, Q4, Q5, Q6, Q8, Q9, Q10, Q11, Q12, Q13, Q14, Q15,...
##
## i Use `spec()` to retrieve the full column specification for this data.
## i Specify the column types or set `show_col_types = FALSE` to quiet this message.

q <- read_csv("questions.csv")

## Rows: 30 Columns: 3
## -- Column specification -----
## Delimiter: ","
## chr (3): Question Code, Full Question, Construct Name
##
## i Use `spec()` to retrieve the full column specification for this data.
## i Specify the column types or set `show_col_types = FALSE` to quiet this message.

nj <- nj %>%
  subset(Gender != "Male")

nj <- subset(nj, select = -Q7) %>%
  rename(employ = "Employment Status")

financial <- nj %>%
  subset(select = -c(Q8:Q30)) %>%
  rename(race = "Race/Ethnicity")
financial <- financial %>% pivot_longer(
  cols = starts_with("Q"),
  names_to = "question",
  values_to = "extent",
  values_drop_na = TRUE
)

society <- nj %>%
  subset(select = -c(Q1:Q6, Q13:Q30)) %>%
  rename(race = "Race/Ethnicity")
society <- society %>% pivot_longer(
```

```

    cols = starts_with("Q"),
    names_to = "question",
    values_to = "extent",
    values_drop_na = TRUE
  )

outinfluences <- nj %>%
  subset(select = -c(Q1:Q12, Q21:Q30)) %>%
  rename(race = "Race/Ethnicity")
outinfluences <- outinfluences %>% pivot_longer(
  cols = starts_with("Q"),
  names_to = "question",
  values_to = "extent",
  values_drop_na = TRUE
)

health <- nj %>%
  subset(select = -c(Q1:Q20)) %>%
  rename(race = "Race/Ethnicity")
health <- health %>% pivot_longer(
  cols = starts_with("Q"),
  names_to = "question",
  values_to = "extent",
  values_drop_na = TRUE
)

race_financial <- financial %>%
  group_by(race) %>%
  summarise(mean(extent))%>%
  rename("Financial Extent" = "mean(extent)")

race_society <- society %>%
  group_by(race) %>%
  summarise(mean(extent)) %>%
  rename("Society Extent" = "mean(extent)")

race_outinfluences <- outinfluences %>%
  group_by(race) %>%
  summarise(mean(extent)) %>%
  rename("Outside Influences Extent" = "mean(extent)")

race_health <- health %>%
  group_by(race) %>%
  summarise(mean(extent)) %>%
  rename("Health Extent" = "mean(extent)")

df_list <- list(race_financial, race_society, race_outinfluences, race_health)

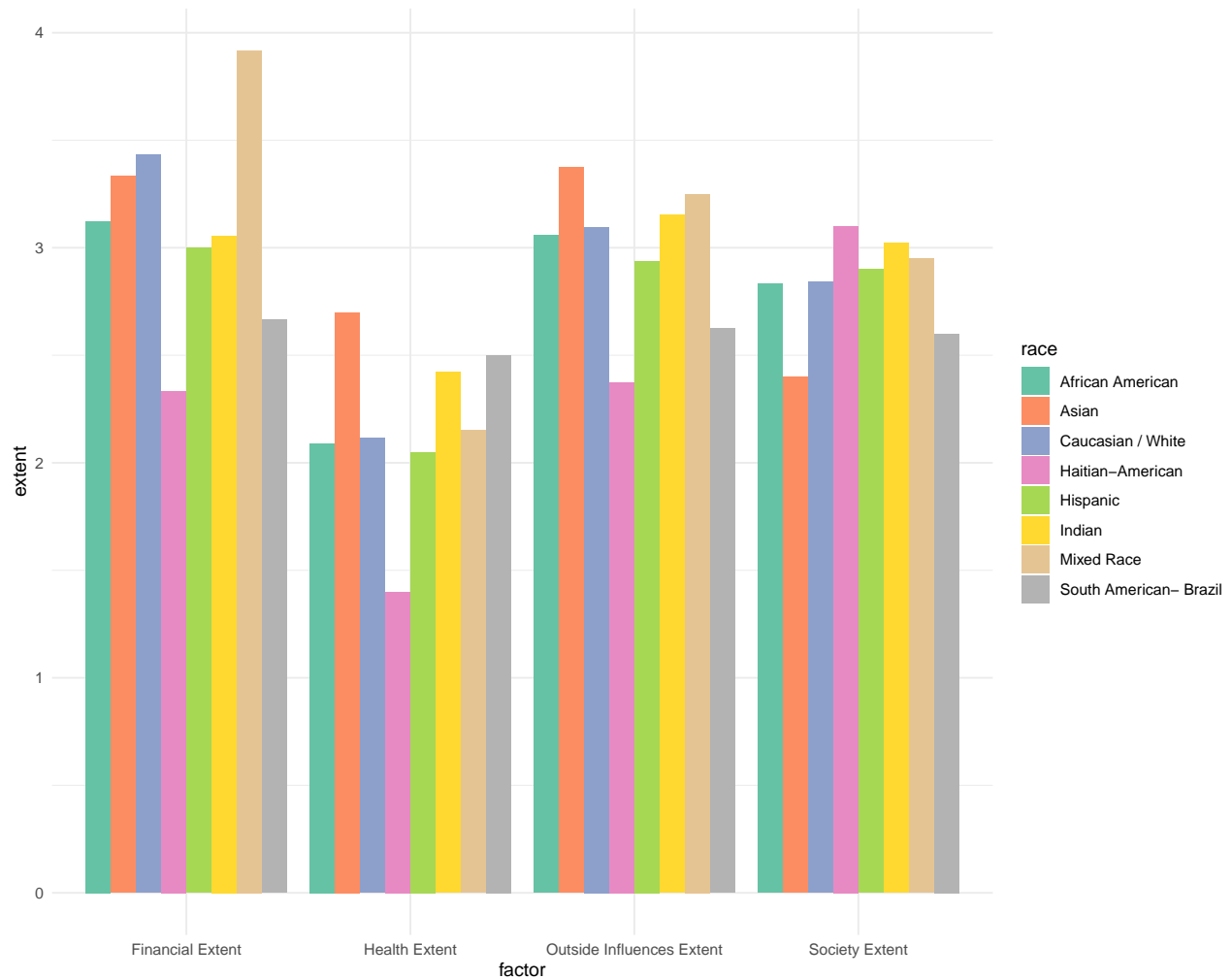
race_factors <- df_list %>% reduce(full_join, by='race')

race_factors <- pivot_longer(race_factors, cols = !race, names_to = "factor", values_to = "extent")

ggplot(race_factors, aes(x= factor, y = extent)) +
  geom_bar(aes(fill = race), stat = "identity", position = "dodge") +

```

```
scale_fill_brewer(palette = "Set2") +  
theme_minimal()
```



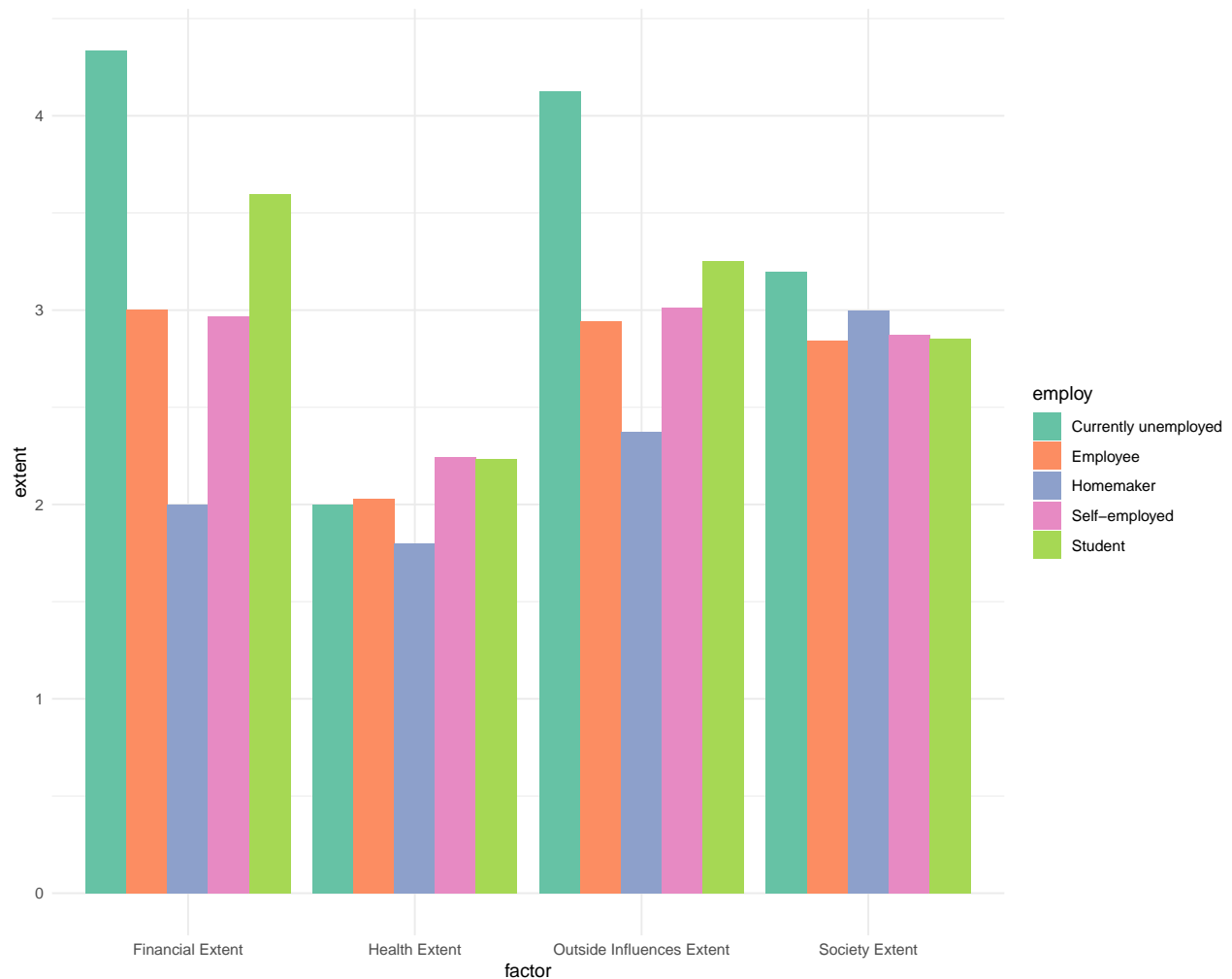
```
employ_financial <- financial %>%  
  group_by(employ) %>%  
  summarise(mean(extent))%>%  
  rename("Financial Extent" = "mean(extent)")  
  
employ_society <- society %>%  
  group_by(employ) %>%  
  summarise(mean(extent)) %>%  
  rename("Society Extent" = "mean(extent)")  
  
employ_outinfluences <- outinfluences %>%  
  group_by(employ) %>%  
  summarise(mean(extent)) %>%  
  rename("Outside Influences Extent" = "mean(extent)")  
  
employ_health <- health %>%  
  group_by(employ) %>%  
  summarise(mean(extent)) %>%  
  rename("Health Extent" = "mean(extent)")
```

```
df_list <- list(employ_financial, employ_society, employ_outinfluences, employ_health)

employ_factors <- df_list %>% reduce(full_join, by='employ')

employ_factors <- pivot_longer(employ_factors, cols = !employ, names_to = "factor", values_to = "extent")

ggplot(employ_factors, aes(x= factor, y = extent)) +
  geom_bar(aes(fill = employ), stat = "identity", position = "dodge") +
  scale_fill_brewer(palette = "Set2") +
  theme_minimal()
```

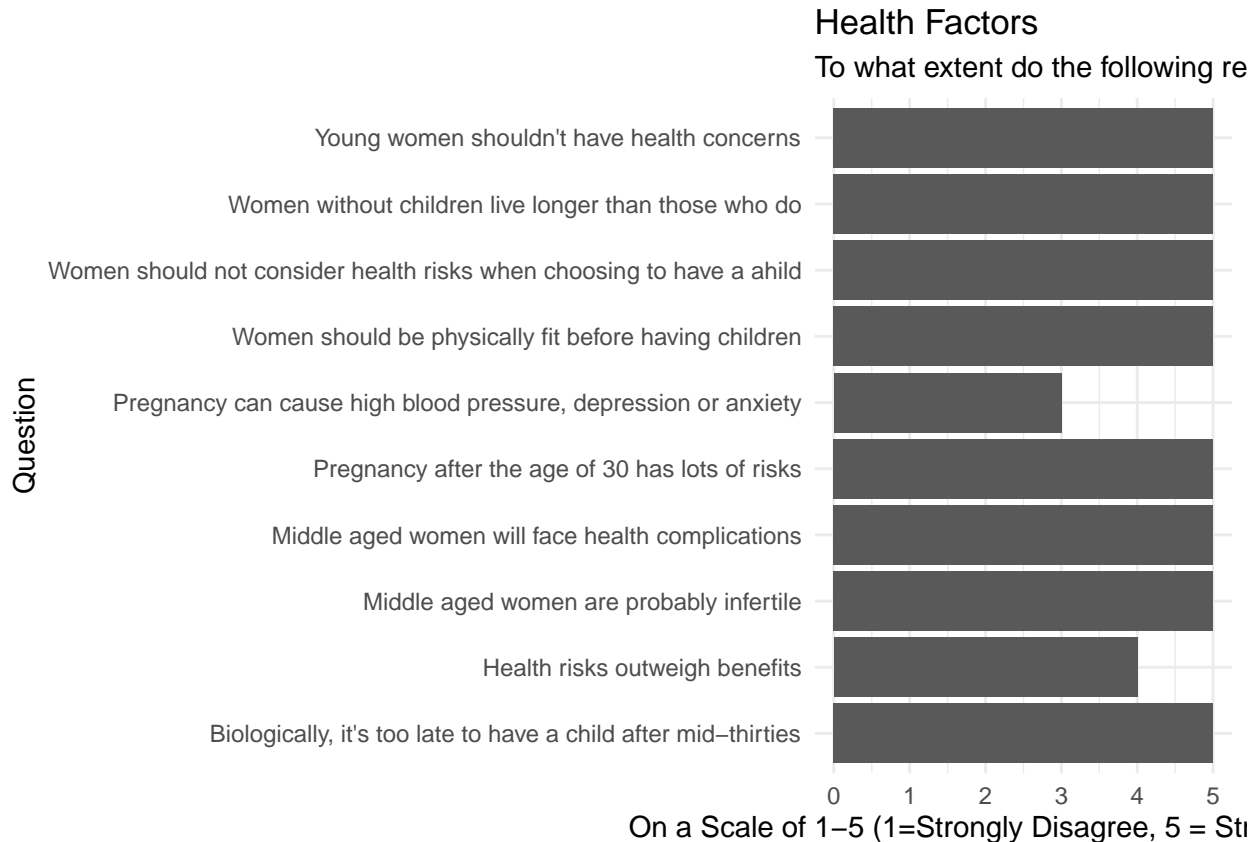


```
question_nums <- unique(health$question)
question_text <- c("Middle aged women are probably infertile", "Middle aged women will face health comp")

health$question_text <- plyr::mapvalues(health$question,
  from = question_nums,
  to = question_text)

ggplot(health, aes(x = extent, y= question_text)) +
  geom_bar(stat = "identity", position = "dodge") +
```

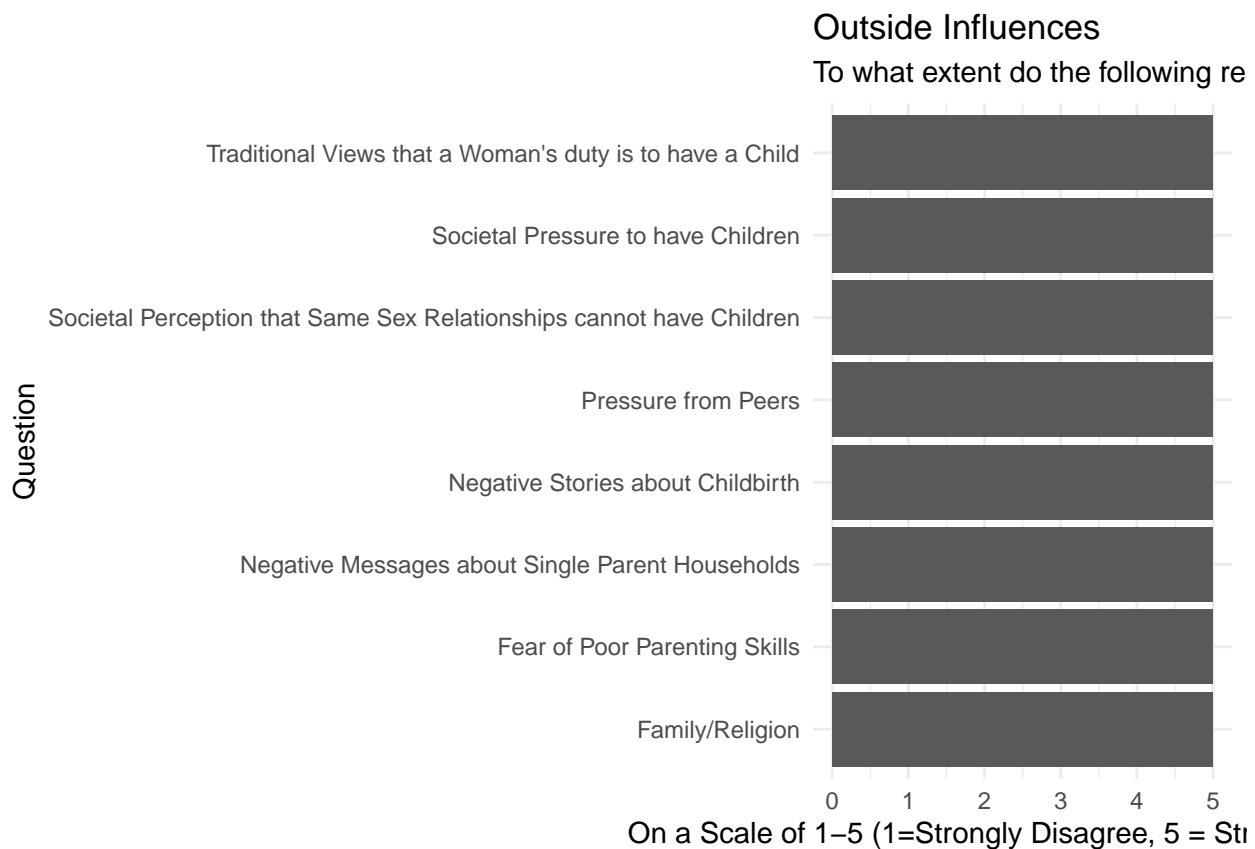
```
labs(title = "Health Factors",
      subtitle = "To what extent do the following reasons influence a woman's decision to not have a child",
      xlab("On a Scale of 1-5 (1=Strongly Disagree, 5 = Strongly Agree)") +
      ylab("Question") +
      theme_minimal())
```



```
question_nums <- unique(outinfluences$question)
question_text <- c("Negative Stories about Childbirth", "Negative Messages about Single Parent Households")

outinfluences$question_text <- plyr::mapvalues(outinfluences$question,
  from = question_nums,
  to = question_text)

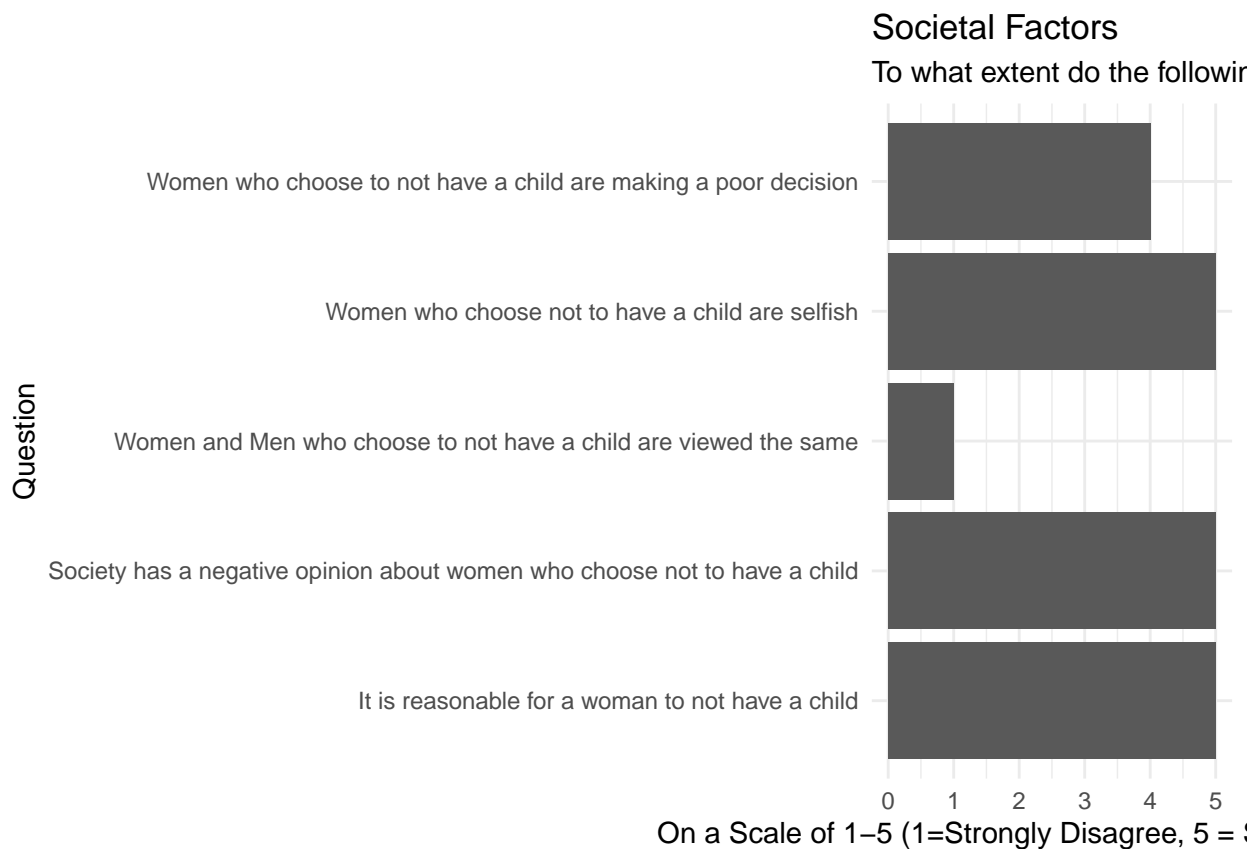
ggplot(outinfluences, aes(x = extent, y = question_text)) +
  geom_bar(stat = "identity", position = "dodge") +
  labs(title = "Outside Influences",
       subtitle = "To what extent do the following reasons influence a woman's decision to not have a child",
       xlab("On a Scale of 1-5 (1=Strongly Disagree, 5 = Strongly Agree)") +
       ylab("Question") +
       theme_minimal())
```



```
question_nums <- unique(society$question)
question_text <- c("It is reasonable for a woman to not have a child", "Society has a negative opinion a

society$question_text <- plyr::mapvalues(society$question,
  from = question_nums,
  to = question_text)

ggplot(society, aes(x = extent, y= question_text)) +
  geom_bar(stat = "identity", position = "dodge") +
  labs(title = "Societal Factors",
    subtitle = "To what extent do the following reasons influence a woman's decision to not have a c
  xlab("On a Scale of 1-5 (1=Strongly Disagree, 5 = Strongly Agree)") +
  ylab("Question") +
  theme_minimal()
```



```
question_nums <- unique(financial$question)
question_text <- c("Financial Instability", "Childcare Costs", "Judgement because of a Decision based on", "Societal Factors", "It is reasonable for a woman to not have a child")

financial$question_text <- plyr::mapvalues(financial$question,
  from = question_nums,
  to = question_text)

ggplot(financial, aes(x = extent, y= question_text)) +
  geom_bar(stat = "identity", position = "dodge") +
  labs(title = "Financial Factors",
    subtitle = "To what extent do the following reasons influence a woman's decision to not have a child",
    xlab("On a Scale of 1-5 (1=Strongly Disagree, 5 = Strongly Agree)") +
  ylab("Question") +
  theme_minimal()
```

