

Supplementary Material for “Vigilantism, Institutions, and Honor Culture: Understanding Attitudes toward Lynching in Brazil”

Danilo Freire* David Skarbek†

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*School of Social and Political Sciences, University of Lincoln, daniлоfreire@gmail.com, <http://daniлоfreire.github.io>.

†The Department of Political Science and the Political Theory Project, Brown University, davidskarbek@brown.edu, <http://davidskarbek.com>.

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1 Introduction

This appendix contains the R code required to replicate the results we present in “*Vigilantism, Institutions, and Honor Culture: Understanding Attitudes towards Lynching in Brazil*”. This file also includes the descriptive statistics of our sample, the average marginal component effects (AMCEs) for our conjoint experiment, and additional subgroup analyses for all three experiments.

The code below loads the required datasets and the R packages we use in our statistical analyses. It also translates the names of the factor variables from Portuguese into English.

```
# Install and load required packages

packages <- c("bartCause", "cjoint", "cregg", "estimatr", "kableExtra",
             "janitor", "quanteda", "seededlda", "stargazer", "tidyverse")

installed_packages <- packages %in% rownames(installed.packages())

if (any(installed_packages == FALSE)) {
  install.packages(packages[!installed_packages])
}

invisible(lapply(packages, library, character.only = TRUE))

# Load the dataset, remove unused rows and columns,
# and convert variable names to snake case

df <- read_csv("../data/data.csv") %>%
  clean_names() %>%
  mutate(response_id      = as.character(response_id),
         consent          = as.factor(q1),
         progress          = as.numeric(progress),
         finished          = as.factor(finished),
         age              = as.numeric(q2),
         gender            = as.factor(q3),
         race              = as.factor(q4),
         education         = as.factor(q5),
         region            = as.factor(q6),
         household_income  = as.factor(q7),
         ideology          = as.factor(q8),
         death_penalty     = as.factor(q9),
         previous_victim   = as.character(q10),
         previous_victim_text = as.character(q10_text),
         views_police      = as.factor(q11),
```

```

views_justice      = as.factor(q12),
exp01_control      = as.numeric(q18),
exp01_police       = as.numeric(q19),
exp01_slow_justice = as.numeric(q20),
exp01_small_punishment = as.numeric(q21),
exp03_control      = as.numeric(q22),
exp03_constitution = as.numeric(q23),
exp03_rights       = as.numeric(q24),
exp03_vendetta     = as.numeric(q25)) %>%

slice(-1L) %>%

select(-c(q1:q12, q18:q25)) %>%

relocate(response_id, consent, progress, finished,
          location_latitude, location_longitude) %>%

mutate(across(where(is.character), tolower)) %>%

mutate(across(where(is.factor), tolower))

# Translate factor values from Portuguese to English
df <- df %>%

mutate(consent = recode(consent,
                        concordo      = "Agree",
                        `não concordo` = "Disagree"),

gender = recode(gender,
                "feminino"      = "Female",
                "masculino"     = "Male",
                "outro"         = "Other",
                "prefiro não responder" = "Rather Not Say"),

race = recode(race,
              "amarela"      = "Asian",
              "branca"       = "White",
              "indígena"     = "Indigenous",
              "outra"        = "Other",
              "parda"        = "Mixed Race",
              "prefiro não responder" = "Rather Not Say",
              "preta"        = "Black"),

race = fct_relevel(race, "Other", "Rather Not Say", after = Inf),

education = recode(education,
                  "da 1ª à 4ª série do ensino fundamental (antigo primário)" = "Primary School",

```

```

    "da 5ª à 8ª série do ensino fundamental (antigo ginásio)" = "Secondary School",
    "ensino médio (antigo 2º grau)"                        = "High School",
    "ensino superior"                                     = "College",
    "mestrado ou doutorado"                               = "Graduate School",
    "não sei"                                              = "Don't Know"),

education = fct_relevel(education, "Primary School", "Secondary School", "High School",
                                "College", "Graduate School", "Don't Know"),

region = recode(region,
    "centro-oeste" = "Center-West",
    "nordeste"     = "Northeast",
    "norte"        = "North",
    "sudeste"      = "Southeast",
    "sul"          = "South"),

household_income = recode(household_income,
    "acima de r$ 20.000" = "Above R$20,000",
    "até r$ 1.000"      = "Up to R$1,000",
    "de r$ 1.001 a r$ 2.000" = "From R$1,001 to R$2,000",
    "de r$ 10.000 a r$ 20.000" = "From R$10,001 to R$20,000",
    "de r$ 2.001 a r$ 3.000" = "From R$2,001 to R$3,000",
    "de r$ 3.001 a r$ 5.000" = "From R$3,001 to R$5,000",
    "de r$ 5.001 a r$ 10.000" = "From R$5,001 to R$10,000"),

household_income = fct_relevel(household_income, "Up to R$1,000",
                                "From R$1,001 to R$2,000", "From R$2,001 to R$3,000",
                                "From R$3,001 to R$5,000", "From R$5,001 to R$10,000",
                                "From R$10,001 to R$20,000", "Above R$20,000"),

ideology = recode(ideology,
    "centro"          = "Center",
    "centro-direita"  = "Center-Right",
    "centro-esquerda" = "Center-Left",
    "direita"         = "Right",
    "esquerda"        = "Left",
    "não sei"         = "Don't Know",
    "prefiro não responder" = "Rather Not Say"),

ideology = fct_relevel(ideology, "Left", "Center-Left", "Center",
                                "Center-Right", "Right", "Don't Know",
                                "Rather Not Say"),

death_penalty = recode(death_penalty,

```

```

      "não" = "No",
      "não sei" = "Don't Know",
      "prefiro não responder" = "Rather Not Say",
      "sim" = "Yes"),
death_penalty = fct_relevel(death_penalty, "Don't Know",
                             "Rather Not Say", after = Inf),
views_police = recode(views_police,
      "boa" = "Good",
      "muito boa" = "Very Good",
      "muito ruim" = "Very Bad",
      "não sei" = "Don't Know",
      "prefiro não responder" = "Rather Not Say",
      "regular" = "Regular",
      "ruim" = "Bad"),
views_police = fct_relevel(views_police, "Very Good", "Good", "Regular",
                             "Bad", "Very Bad", "Don't Know", "Rather Not Say"),
views_justice = recode(views_justice,
      "boa" = "Good",
      "muito boa" = "Very Good",
      "muito ruim" = "Very Bad",
      "não sei" = "Don't Know",
      "prefiro não responder" = "Rather Not Say",
      "regular" = "Regular",
      "ruim" = "Bad"),
views_justice = fct_relevel(views_justice, "Very Good", "Good", "Regular",
                             "Bad", "Very Bad", "Don't Know", "Rather Not Say"),
previous_victim_dummy = recode(previous_victim,
      "nenhum" = "No",
      .missing = NA_character_,
      .default = "Yes")) %>%
relocate(response_id:previous_victim, previous_victim_dummy,
          previous_victim_text:f_5_2_8)

# Check for duplicated values
count(get_dupes(df))

## # A tibble: 1 x 1

```

```
##      n
##    <int>
## 1      0
```

2 Descriptive Statistics

We ran our survey experiments from October 30 to December 14 via Qualtrics. Our sample includes 2406 Brazilians older than 18 years of age from the five regions of the country (Center-West, North, Northeast, South, and Southeast). We used quotas for gender and region to ensure that our sample was similar to the Brazilian population in those characteristics. We also collected information about whether the subjects had been victimized in the previous 12 months, as well as their opinion of the Brazilian judicial system and the police forces. They follow in the graphs and tables below.

2.1 Informed Consent

About 98% of the interviewees agreed to participate in the survey experiment. We excluded the remaining 2% from our analyses.

```
df %>%
  group_by(consent) %>%
  summarise(N = n()) %>%
  mutate(Frequency = round(N / sum(N), 2)) %>%
  rename(Consent = consent) %>%
  kbl(., booktabs = TRUE, caption = "Informed Consent") %>%
  row_spec(0, bold = TRUE) %>%
  kable_styling(latex_options = "hold_position")
```

Table 1: Informed Consent

Consent	N	Frequency
Agree	2406	0.98
Disagree	54	0.02

```
# Remove subjects who did not agree with consent form
df1 <- df %>% filter(consent == "Agree")
```


2.2 Gender

The gender distribution of our sample is described below. It closely matches the official data from the [Brazilian Census Bureau](#), which states that women are 51.8% of the population and men comprise 48.2%.

```
df1 %>%
  group_by(gender) %>%
  filter(!is.na(gender)) %>%
  summarise(N = n()) %>%
  mutate(Frequency = round(N / sum(N), 3)) %>%
  rename(Gender = gender) %>%
  kbl(., booktabs = TRUE, caption = "Gender") %>%
  row_spec(0, bold = TRUE) %>%
  kable_styling(latex_options = "hold_position")
```

Table 2: Gender

Gender	N	Frequency
Female	1215	0.510
Male	1156	0.485
Other	3	0.001
Rather Not Say	9	0.004

2.3 Age

The age distribution of our sample is shown below. The median age of the survey respondents is 41 years old, which indicates that our sample is older than the Brazilian population (median age = 33.4 years old) (CIA [2020](#)).

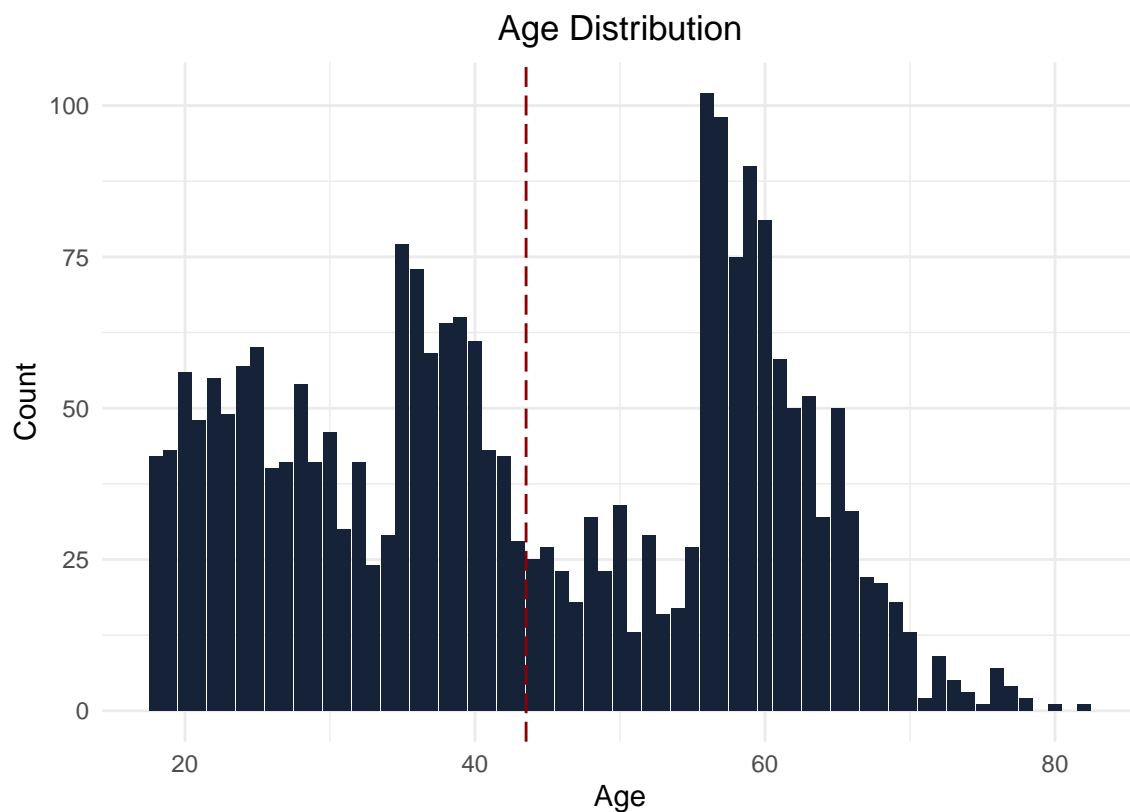
```
tibble(`` = "Age",
  Median = round(median(df1$age, na.rm = TRUE), 2),
  Mean   = round(mean(df1$age, na.rm = TRUE), 2),
  SD     = round(sd(df1$age, na.rm = TRUE), 2),
  Min    = min(df1$age, na.rm = TRUE),
  Max    = max(df1$age, na.rm = TRUE),
  `NA`   = sum(is.na(df1$age))) %>%
kbl(., booktabs = TRUE, caption = "Age") %>%
```

```
row_spec(0, bold = TRUE) %>%
kable_styling(latex_options = "hold_position")
```

Table 3: Age

	Median	Mean	SD	Min	Max	NA
Age	41	43.52	15.55	18	82	24

```
ggplot(subset(df1, !is.na(age)), aes(age)) +
  geom_bar(fill = "#152238") +
  labs(title = "Age Distribution", x = "Age", y = "Count") +
  geom_vline(aes(xintercept = mean(age, na.rm = TRUE)),
    color = "darkred", linetype = 5, size = 0.5) +
  theme_minimal() +
  theme(plot.title = element_text(hjust = 0.5))
```



2.4 Race

The next demographic variable we show here is race. According to the [Brazilian Census Bureau](#), 42.7% of the Brazilian population identify as White, 46.8% as Mixed Race, 9.4% as Blacks, and 1.1% as Asians or Indigenous. As we see below, our sample includes more Whites and fewer individuals who identify as Mixed Race. The number of Blacks roughly coincide with the population statistics.

```
df1 %>%
  rename(Race = race) %>%
  mutate(Race = fct_relevel(Race, "White", "Other", "Rather Not Say", after = Inf)) %>%
  group_by(Race) %>%
  filter(!is.na(Race)) %>%
  summarise(N = n()) %>%
  mutate(Frequency = round(N / sum(N), 3)) %>%
  kbl(., booktabs = TRUE, linesep = "", caption = "Race") %>%
  row_spec(0, bold = TRUE) %>%
  kable_styling(latex_options = "hold_position")
```

Table 4: Race

Race	N	Frequency
Asian	60	0.025
Black	231	0.097
Indigenous	8	0.003
Mixed Race	652	0.274
White	1407	0.590
Other	8	0.003
Rather Not Say	17	0.007

2.5 Education

As expected, our sample is also more educated than [the Brazilian population](#). About 51.2% of the respondents have a college degree, and 35.5% have graduate school education.

```
df1 %>%
  rename(Education = education) %>%
  mutate(Education = fct_relevel(Education, "Primary School", "Secondary School",
                                "High School", "College", "Graduate School")) %>%
  group_by(Education) %>%
  filter(!is.na(Education)) %>%
  summarise(N = n()) %>%
  mutate(Frequency = round(N / sum(N), 3)) %>%
  kbl(., booktabs = TRUE, linesep = "", caption = "Education") %>%
  row_spec(0, bold = TRUE) %>%
  kable_styling(latex_options = "hold_position")
```

Table 5: Education

Education	N	Frequency
Primary School	21	0.009
Secondary School	74	0.031
High School	846	0.355
College	1219	0.512
Graduate School	209	0.088
Don't Know	14	0.006

2.6 Household Income

In terms of household income, 26.5% of the respondents earn from R\$5,0001 to R\$10,000 per month (US\$915 to US\$1830 as of January 2021), which comprise the largest group in our sample. However, the sample also contains 13% of participants whose household income ranges between R\$1,001 and R\$2,000 (US\$ 184 to US\$368) and 6.2% with household incomes up to R\$1,000, which is roughly equivalent to Brazil's monthly minimum wage. In this respect, we have reached participants from all social classes.

```
df1 %>%
  rename(`Household Income` = household_income) %>%
  mutate(`Household Income` = fct_relevel(`Household Income`, "Up to R$1,000",
                                          "From R$1,001 to R$2,000", "From R$2,001 to R$3,000",
                                          "From R$3,001 to R$5,000", "From R$5,001 to R$10,000",
                                          "From R$10,001 to R$20,000", "Above R$20,000")) %>%
  group_by(`Household Income`) %>%
  filter(!is.na(`Household Income`)) %>%
  summarise(N = n()) %>%
  mutate(Frequency = round(N / sum(N), 3)) %>%
  kbl(., booktabs = TRUE, linesep = "", caption = "Household Income") %>%
  row_spec(0, bold = TRUE) %>%
  kable_styling(latex_options = "hold_position")
```

2.7 Political Ideology

We have also collected information regarding the subjects' political ideology. Most respondents identify themselves as right-wingers (22.6%), followed by left-wingers (17.8%), and centrists (14.2%).

Table 6: Household Income

Household Income	N	Frequency
Up to R\$1,000	148	0.062
From R\$1,001 to R\$2,000	309	0.130
From R\$2,001 to R\$3,000	376	0.159
From R\$3,001 to R\$5,000	539	0.227
From R\$5,001 to R\$10,000	628	0.265
From R\$10,001 to R\$20,000	267	0.113
Above R\$20,000	103	0.043

Subjects who do not know their ideology or prefer not to tell their political beliefs are also large in number (13.4% and 13.9%, respectively).

```
df1 %>%
  rename(Ideology = ideology) %>%
  mutate(Ideology = fct_relevel(Ideology, "Left", "Center-Left", "Center",
                                "Center-Right", "Right")) %>%
  group_by(Ideology) %>%
  filter(!is.na(Ideology)) %>%
  summarise(N = n()) %>%
  mutate(Frequency = round(N / sum(N), 3)) %>%
  kbl(., booktabs = TRUE, linesep = "", caption = "Political Ideology") %>%
  row_spec(0, bold = TRUE) %>%
  kable_styling(latex_options = "hold_position")
```

Table 7: Political Ideology

Ideology	N	Frequency
Left	423	0.178
Center-Left	217	0.092
Center	337	0.142
Center-Right	209	0.088
Right	536	0.226
Don't Know	318	0.134
Rather Not Say	330	0.139

2.8 Support for Death Penalty

Below you may find how many respondents support the death penalty.

```
df1 %>%
  rename(`Support for Death Penalty` = death_penalty) %>%
  mutate(`Support for Death Penalty` = fct_relevel(`Support for Death Penalty`, "Yes", "No")) %>%
  group_by(`Support for Death Penalty`) %>%
  filter(!is.na(`Support for Death Penalty`)) %>%
  summarise(N = n()) %>%
  mutate(Frequency = round(N / sum(N), 3)) %>%
  kbl(., booktabs = TRUE, linesep = "", caption = "Support for Death Penalty") %>%
  row_spec(0, bold = TRUE) %>%
  kable_styling(latex_options = "hold_position")
```

Table 8: Support for Death Penalty

Support for Death Penalty	N	Frequency
Yes	971	0.410
No	1100	0.464
Don't Know	167	0.070
Rather Not Say	132	0.056

2.9 Previous Victimization

We asked subjects whether they had been victimized in the previous 12 months, as crime victims may be more likely to support lynchings. The responses follow below.

```
df1 %>%
  rename(Victimization = previous_victim_dummy) %>%
  mutate(Victimization = fct_relevel(Victimization, "Yes", "No")) %>%
  group_by(Victimization) %>%
  filter(!is.na(Victimization)) %>%
  summarise(N = n()) %>%
  mutate(Frequency = round(N / sum(N), 3)) %>%
  kbl(., booktabs = TRUE, linesep = "", caption = "Previous Victimization (12 Months)") %>%
  row_spec(0, bold = TRUE) %>%
  kable_styling(latex_options = "hold_position")
```

Table 9: Previous Victimization (12 Months)

Victimization	N	Frequency
Yes	934	0.401
No	1397	0.599

2.10 Opinion on the Police

Here we show the results for our question on how respondents see the police forces.

```
df1 %>%
  rename(`Opinion on the Police` = views_police) %>%
  mutate(`Opinion on the Police` = fct_relevel(`Opinion on the Police`, "Very Good", "Good",
                                              "Regular", "Bad", "Very Bad")) %>%
  group_by(`Opinion on the Police`) %>%
  filter(!is.na(`Opinion on the Police`)) %>%
  summarise(N = n()) %>%
  mutate(Frequency = round(N / sum(N), 3)) %>%
  kbl(., booktabs = TRUE, linesep = "", caption = "Opinion on the Police") %>%
  row_spec(0, bold = TRUE) %>%
  kable_styling(latex_options = "hold_position")
```

Table 10: Opinion on the Police

Opinion on the Police	N	Frequency
Very Good	132	0.056
Good	472	0.200
Regular	914	0.387
Bad	468	0.198
Very Bad	335	0.142
Don't Know	25	0.011
Rather Not Say	15	0.006

2.11 Opinion on the Judicial System

Lastly, we asked how respondents evaluate their local judiciary. As in the previous question, subjects could choose among five options, as well as affirm that they do not have an opinion or decline to answer the question.

```
df1 %>%
  rename(`Opinion on the Justice System` = views_justice) %>%
  mutate(`Opinion on the Justice System` = fct_relevel(`Opinion on the Justice System`, "Very Good",
                                                        "Good", "Regular", "Bad", "Very Bad")) %>%
  group_by(`Opinion on the Justice System`) %>%
  filter(!is.na(`Opinion on the Justice System`)) %>%
  summarise(N = n()) %>%
  mutate(Frequency = round(N / sum(N), 3)) %>%
  kbl(., booktabs = TRUE, linesep = "", caption = "Opinion on the Justice System") %>%
  row_spec(0, bold = TRUE) %>%
  kable_styling(latex_options = "hold_position")
```

Table 11: Opinion on the Justice System

Opinion on the Justice System	N	Frequency
Very Good	45	0.019
Good	323	0.137
Regular	812	0.344
Bad	605	0.256
Very Bad	508	0.215
Don't Know	48	0.020
Rather Not Say	20	0.008

3 Experiment 01

3.1 Description

In our first experiment, we analyze how respondents justify their preferences towards extralegal violence. We assess the impact of three factors that have been cited as major drivers of lynchings: 1) police ineffectiveness; 2) slow criminal justice; 3) demand for harsher punishment for criminals. Below, we discuss them in further detail.

Research shows that police ineffectiveness frequently appears as a strong predictor of vigilantism (Cruz and Kloppe-Santamaría 2019; García-Ponce et al. 2019). The direct result of the weakness of police institutions is that citizens decide to take criminal matters “into their own hands”, thus persecuting and punishing the criminals by themselves. A recent statistic indicates that the police solves only 10% of the homicides in Brazil, which lends support to the link between weak law enforcement and lynchings (Pearson and Magalhaes 2018).

Another possible determinant of lynching support is lack of trust in the justice system (Godoy 2004; Smith 2019). This is often due to long criminal proceedings, which cause significant anxiety for the victims. In Brazil, the penal code allows the accused to appeal each decision several times, so it can take decades before a criminal case is closed (Sousa 2005). In this respect, citizens do not believe that, even if the criminal is put to trial, he/she will be punished in a timely matter. Note that although the police is technically part of the criminal justice system, we analyze the two institutions separately in our experiment.

Lastly, we evaluate whether respondents think that the legal punishment assigned to criminals is not proportional to the severity of their crimes. In particular, we intend to gauge the demand for iron-fisted criminal justice in Brazil. Although this treatment arm is related to the previous ones, it addresses not the efficiency of the institutions, but their legitimacy (Nivette 2016). In fact, Brazilians are often vocal about their preference for repressive legal punishment. In a recent article in *The Wall Street Journal*, a bar owner justified the lynching of the local thug who killed his son by saying that “even if he had been put behind bars for 100 years it wouldn’t have been enough to pay for all his crimes” (Pearson and Magalhaes 2018). We hypothesize that many Brazilians also share this view.

The experiment consists of three treatment conditions and one control group. Respondents read an excerpt of a news article describing a real lynching case. We have slightly edited the original text so that respondents have no prior knowledge of the crime.¹ The vignette for the control group includes no information about the reasons behind the lynching. We ask respondents to show their level of lynching support using a 0-100 slider, where 0 means no support and 100 means full support. Respondents in each of the three treatment arms read the same piece, but with one additional sentence explaining the motivations behind the lynching. The vignettes are as follows:

- *Control group*: A man was lynched last Friday in Jundiaí, São Paulo. According to the neighbours,

¹The original article is available at the following address: <https://jr.jor.br/2020/05/01/homem-e-lynchado-na-vila-progresso>. Access: August 2020.

he tried to break into a house but was immobilised and beaten by members of the community.²

- *Treatment 01 - Police ineffectiveness:* A man was lynched last Friday in Jundiaí, São Paulo. According to the neighbours, he tried to break into a house but was immobilised and beaten by members of the community. **One of the residents who took part in the lynching said they had beaten the suspect because “the police never patrols the area”.**³
- *Treatment 02 - Criminal justice ineffectiveness:* A man was lynched last Friday in Jundiaí, São Paulo. According to the neighbours, he tried to break into a house but was immobilised and beaten by members of the community. **One of the residents who took part in the lynching said they had beaten the suspect because “the judicial system is too slow and the perpetrator is on the street until the case is heard”.**⁴
- *Treatment 03 - Demand for harsher legal punishment:* A man was lynched last Friday in Jundiaí, São Paulo. According to the neighbours, he tried to break into a house but was immobilised and beaten by members of the community. **One of the residents who took part in the lynching said they had beaten the suspect because “the judicial punishment is not harsh enough”.**⁵

Before each vignette, respondents read the following text:

- You will be shown a news article. Please read it carefully. After you read the article, we will ask you one question about it.⁶

After the vignette, respondents were presented with this question:

²In Portuguese: Um homem foi linchado na última sexta-feira em Jundiaí, São Paulo. De acordo com vizinhos, ele tentou invadir uma residência mas foi imobilizado e agredido por membros da comunidade.

³In Portuguese: Um homem foi linchado na última sexta-feira em Jundiaí, São Paulo. De acordo com vizinhos, ele tentou invadir uma residência mas foi imobilizado e agredido por membros da comunidade. **Um dos moradores envolvidos no linchamento disse que eles agrediram o suspeito porque “a polícia nunca patrulha o local”.**

⁴In Portuguese: Um homem foi linchado na última sexta-feira em Jundiaí, São Paulo. De acordo com vizinhos, ele tentou invadir uma residência mas foi imobilizado e agredido por membros da comunidade. **Um dos moradores envolvidos no linchamento disse que eles agrediram o suspeito porque “a justiça é muito lenta e os criminosos ficam soltos até o julgamento”.**

⁵In Portuguese: Um homem foi linchado na última sexta-feira em Jundiaí, São Paulo. De acordo com vizinhos, ele tentou invadir uma residência mas foi imobilizado e agredido por membros da comunidade. **Um dos moradores envolvidos no linchamento disse que eles agrediram o suspeito porque “a punição da justiça não é dura o suficiente”.**

⁶In Portuguese: Uma notícia será apresentada para você. Por favor, leia a notícia com atenção. Após você ler o artigo, faremos uma pergunta sobre ele.

- Do you think that the lynching was justified? Please use the slider below to indicate your opinion. For disagreement, use 0 to 49; for agreement, use 51 to 100. Please use 50 if you neither agree nor disagree.⁷

3.2 Main Results

Table 12 summarizes our results. As we see, none of the treatment effects are statistically significant at conventional levels. This suggests that institutional factors do not affect lynching support in our sample.

```
df_exp01 <- df1 %>%
  mutate(exp01_outcomes = coalesce(exp01_control, exp01_police,
                                    exp01_slow_justice, exp01_small_punishment),
         exp01_any_treat = case_when(!is.na(exp01_control) ~ "0",
                                     !is.na(exp01_police) ~ "1",
                                     !is.na(exp01_slow_justice) ~ "1",
                                     !is.na(exp01_small_punishment) ~ "1",
                                     TRUE ~ NA_character_),
         exp01_police_treat = case_when(!is.na(exp01_control) ~ "0",
                                       !is.na(exp01_police) ~ "1"),
         exp01_slow_justice_treat = case_when(!is.na(exp01_control) ~ "0",
                                              !is.na(exp01_slow_justice) ~ "1"),
         exp01_small_punishment_treat = case_when(!is.na(exp01_control) ~ "0",
                                                  !is.na(exp01_small_punishment) ~ "1"))

m1 <- lm(exp01_outcomes ~ exp01_police_treat, data = df_exp01)
m2 <- lm(exp01_outcomes ~ exp01_slow_justice_treat, data = df_exp01)
m3 <- lm(exp01_outcomes ~ exp01_small_punishment_treat, data = df_exp01)
m4 <- lm(exp01_outcomes ~ exp01_any_treat, data = df_exp01)

stargazer(m1, m2, m3, m4, se = starprep(m1, m2, m3, m4), p = starprep(m1, m2, m3, m4, stat = "p.value"),
          header = FALSE, align = TRUE, label = "tab:exp01main", title = "Experiment 01 -- Main Results",
          style = "apsr", dep.var.labels = "\\textbf{Lynching Support}\\vspace{.5cm}",
          covariate.labels = c("Police does not patrol area", "Justice too slow",
                              "Punishment not harsh enough", "Combined treatments"),
```

⁷In Portuguese: Você acha que o linchamento foi correto? Por favor, use a barra abaixo para indicar sua opinião. Para discordar, use de 0 a 49; para concordar, use de 51 a 100. Por favor, use 50 para não concordar nem discordar.

```
column.sep.width = "3pt", notes = "Robust standard errors in parentheses.",
keep.stat = "n", no.space = TRUE)
```

Table 12: Experiment 01 – Main Results

	Lynching Support			
	(1)	(2)	(3)	(4)
Police does not patrol area	1.115 (1.861)			
Justice too slow		-0.289 (1.927)		
Punishment not harsh enough			0.438 (1.921)	
Combined treatments				0.443 (1.545)
Constant	36.300*** (1.332)	36.300*** (1.332)	36.300*** (1.332)	36.300*** (1.332)
N	1,161	1,111	1,103	2,215

* p < .1; ** p < .05; *** p < .01

Robust standard errors in parentheses.

3.3 Determinants of Baseline Levels

Here we estimate the effect of gender, race, and political ideology on lynching support. We find that males are more likely to tolerate lynchings, whereas left and center-left voters oppose lynchings more strongly than centrists. In our second model, we find no effect for race, and in the last column we see that white respondents are less supportive of lynchings.

```
df_exp01_group <- df_exp01 %>%
  filter(gender == c("Female", "Male"),
         race %in% c("Asian", "Black", "Mixed Race", "White"),
         ideology %in% c("Center", "Center-Left", "Center-Right", "Left", "Right")) %>%
  mutate(race = fct_relevel(race, "Black"), ideology = fct_relevel(ideology, "Center"))

df_exp01_gender <- df_exp01 %>% filter(gender == c("Female", "Male"))
df_exp01_race <- df_exp01 %>% filter(race %in% c("Asian", "Black", "Mixed Race", "White")) %>%
  mutate(race = fct_relevel(race, "Black"))
df_exp01_ideology <- df_exp01 %>%
  filter(ideology %in% c("Center", "Center-Left", "Center-Right", "Left", "Right")) %>%
```

```

mutate(ideology = fct_relevel(ideology, "Center"))

m1 <- lm(exp01_outcomes ~ gender, data = df_exp01_gender)
m2 <- lm(exp01_outcomes ~ race, data = df_exp01_race)
m3 <- lm(exp01_outcomes ~ ideology, data = df_exp01_ideology)
m4 <- lm(exp01_outcomes ~ gender + race + ideology, data = df_exp01_group)

stargazer(m1, m2, m3, m4, se = starprep(m1, m2, m3, m4), p = starprep(m1, m2, m3, m4, stat = "p.value"),
  header = FALSE, align = TRUE, label = "tab:exp01baseline",
  title = "Experiment 01 -- Determinants of Baseline Levels of
  Lynching Support", style = "apsr", dep.var.labels = "\\textbf{Lynching Support}\\vspace{.5cm}",
  covariate.labels = c("Male", "Asian", "Mixed Race", "White",
    "Left", "Center-Left", "Center-Right", "Right"),
  column.sep.width = "3pt", notes = "Robust standard errors in parentheses.",
  keep.stat = "n", no.space = TRUE)

```

Table 13: Experiment 01 – Determinants of Baseline Levels of Lynching Support

	Lynching Support			
	(1)	(2)	(3)	(4)
Male	5.124*** (1.828)			4.945** (2.165)
Asian		1.119 (4.646)		-6.050 (7.288)
Mixed Race		0.724 (2.467)		-5.256 (4.026)
White		-1.283 (2.288)		-9.877*** (3.672)
Left			-11.895*** (2.388)	-10.108*** (3.199)
Center-Left			-14.707*** (2.673)	-17.484*** (3.575)
Center-Right			-3.019 (2.881)	-5.047 (3.838)
Right			0.610 (2.328)	2.722 (3.235)
Constant	33.105*** (1.251)	37.122*** (2.109)	41.804*** (1.793)	45.738*** (4.160)
N	1,142	2,186	1,632	838

*p < .1; **p < .05; ***p < .01

Robust standard errors in parentheses.

3.4 Heterogeneous Effects

We estimate heterogeneous effects for our experiment using Bayesian Additive Regression Trees (BART) (Chipman et al. 2010; Hill 2011). BART methods allow users to detect non-linear interactions and are insensitive to the choice of tuning parameters, so they are well-suited to analyze observational and experimental data (Green and Kern 2012). More specifically, we employ the `bartCause` package, which is designed to estimate causal inference models.

3.4.1 Treatment 01: Police Ineffectiveness

Our results indicate that the effects for this treatment arm is null in every model specification. We find no evidence of heterogeneous effects.

```
df_exp01_het <- df_exp01 %>%
  filter(gender %in% c("Female", "Male")) %>%
  mutate(race = fct_relevel(race, "White", "Black", "Mixed Race", "Asian",
                           "Indigenous"),
         education = fct_relevel(education, "Primary School", "Secondary School",
                                "High School", "College", "Graduate School"),
         views_police = fct_relevel(views_police, "Regular", "Very Good", "Good",
                                    "Bad", "Very Bad"),
         views_justice = fct_relevel(views_justice, "Regular", "Very Good", "Good",
                                    "Bad", "Very Bad"),
         ideology = fct_relevel(ideology, "Center", "Left", "Center-Left",
                                "Center-Right", "Right", "Don't Know", "Rather Not Say"),
         household_income = fct_relevel(household_income, "Up to R$1,000", "From R$1,001 to R$2,000",
                                       "From R$2,001 to R$3,000", "From R$3,001 to R$5,000",
                                       "From R$5,001 to R$10,000", "From R$10,001 to R$20,000",
                                       "Above R$20,000"),
         previous_victim_dummy = fct_relevel(previous_victim_dummy, "Yes", "No"),
         death_penalty = fct_relevel(death_penalty, "Yes", "No"),
         age2 = case_when(age >= 18 & age <= 34 ~ "18-34", age >= 35 & age <= 54 ~ "35-54",
                           age >= 55 ~ "55 plus", TRUE ~ as.character(age)))

df_exp01_police <- df_exp01_het %>%
  mutate(exp01_police_treat = as.numeric(exp01_police_treat)) %>%
  drop_na(exp01_police_treat)
```

```
# Gender
```

```
summary(bartc(exp01_outcomes, exp01_police_treat, gender,  
              group.by = gender, group.effects = TRUE, data = df_exp01_police,  
              n.chains = 5L, seed = 144))
```

```
## fitting treatment model via method 'bart'
```

```
## fitting response model via method 'bart'
```

```
## Call: bartc(response = exp01_outcomes, treatment = exp01_police_treat,  
##           confounders = gender, data = df_exp01_police, group.by = gender,  
##           group.effects = TRUE, n.chains = 5L, seed = 144)
```

```
##
```

```
## Causal inference model fit by:
```

```
##   model.rsp: bart
```

```
##   model.trt: bart
```

```
##
```

```
## Treatment effect (pate):
```

```
##   estimate    sd ci.lower ci.upper    n  
## 1      1.4086 3.206   -4.875    7.692  574  
## 2      0.5410 3.192   -5.715    6.797  579  
## tot    0.9729 2.293   -3.521    5.467 1153
```

```
## Estimates fit from 1153 total observations
```

```
## 95% credible interval calculated by: normal approximation
```

```
##   population TE approximated by: posterior predictive distribution
```

```
## Result based on 800 posterior samples times 5 chains
```

```
# Age
```

```
summary(bartc(exp01_outcomes, exp01_police_treat, age2,  
              group.by = age2, group.effects = TRUE, data = df_exp01_police,  
              n.chains = 5L, seed = 144))
```

```
## fitting treatment model via method 'bart'
```

```
## fitting response model via method 'bart'
```

```
## Call: bartc(response = exp01_outcomes, treatment = exp01_police_treat,  
##           confounders = age2, data = df_exp01_police, group.by = age2,  
##           group.effects = TRUE, n.chains = 5L, seed = 144)
```

```
##
```

```

## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##   estimate    sd ci.lower ci.upper    n
## 1      -2.052 3.941   -9.777    5.672  358
## 2       3.156 3.797   -4.286   10.599  405
## 3       2.095 3.731   -5.217    9.407  390
## tot      1.180 2.266   -3.261    5.622 1153
## Estimates fit from 1153 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Race
summary(bartc(exp01_outcomes, exp01_police_treat, race,
              group.by = race, group.effects = TRUE, data = df_exp01_police,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp01_outcomes, treatment = exp01_police_treat,
##             confounders = race, data = df_exp01_police, group.by = race,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##   estimate    sd ci.lower ci.upper    n
## 1      1.0819 2.785   -4.376    6.540  672
## 2     -0.4764 5.552  -11.357   10.405  126
## 3      1.4095 3.849   -6.134    8.953  310
## 4      3.4156 9.777  -15.746   22.577   28
## 5      1.1299 22.987 -43.923   46.183    4

```



```

## 6      2.6390 26.417 -49.137  54.415   3
## 7      1.8004 15.027 -27.651  31.252  10
## tot    1.0668  2.261  -3.365   5.499 1153
##  if (n < 10) group-size estimates may be unstable
## Estimates fit from 1153 total observations
## 95% credible interval calculated by: normal approximation
##  population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Education
summary(bartc(exp01_outcomes, exp01_police_treat, education,
              group.by = education, group.effects = TRUE, data = df_exp01_police,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp01_outcomes, treatment = exp01_police_treat,
##             confounders = education, data = df_exp01_police, group.by = education,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
##  model.rsp: bart
##  model.trt: bart
##
## Treatment effect (pate):
##      estimate      sd ci.lower ci.upper    n
## 1      0.55350 19.086  -36.853   37.960    6
## 2      0.14684  8.271  -16.064   16.358   43
## 3      3.25733  3.561   -3.722   10.237  409
## 4     -0.01389  3.002   -5.898    5.871  591
## 5     -0.17549  6.286  -12.495   12.144   98
## 6      0.87232 19.128  -36.618   38.363    6
## tot    1.14633  2.277   -3.316    5.609 1153
##  if (n < 10) group-size estimates may be unstable
## Estimates fit from 1153 total observations
## 95% credible interval calculated by: normal approximation
##  population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

```

```

# Household Income

summary(bartc(exp01_outcomes, exp01_police_treat, household_income,
              group.by = household_income, group.effects = TRUE, data = df_exp01_police,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp01_outcomes, treatment = exp01_police_treat,
##             confounders = household_income, data = df_exp01_police, group.by = household_income,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##      estimate    sd ci.lower ci.upper    n
## 1      0.02387 6.671  -13.050   13.098   69
## 2      1.26379 4.669   -7.888   10.415  164
## 3      1.78825 4.598   -7.224   10.801  177
## 4      1.65421 3.965   -6.117    9.425  267
## 5      0.38773 3.678   -6.822    7.597  315
## 6      1.29658 5.363   -9.214   11.807  117
## 7      1.82558 8.229  -14.304   17.955   44
## tot    1.14593 2.290   -3.343    5.635 1153
## Estimates fit from 1153 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Political Ideology

summary(bartc(exp01_outcomes, exp01_police_treat, ideology,
              group.by = ideology, group.effects = TRUE, data = df_exp01_police,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

```

```

## Call: bartc(response = exp01_outcomes, treatment = exp01_police_treat,
##             confounders = ideology, data = df_exp01_police, group.by = ideology,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##      estimate    sd ci.lower ci.upper    n
## 1      1.8492 4.550   -7.069   10.768  176
## 2      0.9579 4.513   -7.887    9.802  188
## 3      1.9992 5.492   -8.765   12.763  106
## 4      4.1745 5.857   -7.306   15.655  107
## 5     -0.5542 4.119   -8.628    7.520  258
## 6      1.0016 4.765   -8.339   10.342  152
## 7      2.4424 4.827   -7.019   11.903  166
## tot     1.3693 2.225   -2.992    5.731 1153
## Estimates fit from 1153 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Support for Death Penalty
summary(bartc(exp01_outcomes, exp01_police_treat, death_penalty,
              group.by = death_penalty, group.effects = TRUE, data = df_exp01_police,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp01_outcomes, treatment = exp01_police_treat,
##             confounders = death_penalty, data = df_exp01_police, group.by = death_penalty,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart

```

```
##
## Treatment effect (pate):
##      estimate    sd ci.lower ci.upper    n
## 1      0.7992 3.199   -5.471    7.070  488
## 2      0.7491 3.112   -5.351    6.849  508
## 3      3.1747 6.683   -9.924   16.273   89
## 4     -1.2337 7.602  -16.133   13.666   68
## tot    0.8406 2.158   -3.390    5.071 1153
## Estimates fit from 1153 total observations
## 95% credible interval calculated by: normal approximation
## population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Previous Victimization
df_exp01_police2 <- df_exp01_police %>% drop_na(previous_victim_dummy)
summary(bartc(exp01_outcomes, exp01_police_treat, previous_victim_dummy,
              group.by = previous_victim_dummy, group.effects = TRUE, data = df_exp01_police2,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp01_outcomes, treatment = exp01_police_treat,
##             confounders = previous_victim_dummy, data = df_exp01_police2,
##             group.by = previous_victim_dummy, group.effects = TRUE, n.chains = 5L,
##             seed = 144)
##
## Causal inference model fit by:
## model.rsp: bart
## model.trt: bart
##
## Treatment effect (pate):
##      estimate    sd ci.lower ci.upper    n
## 1      0.9469 3.477   -5.867    7.761  464
## 2      0.7704 2.942   -4.995    6.536  672
## tot    0.8425 2.272   -3.611    5.296 1136
## Estimates fit from 1136 total observations
## 95% credible interval calculated by: normal approximation
```

```

## population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Opinion on the Police

summary(bartc(exp01_outcomes, exp01_police_treat, views_police,
              group.by = views_police, group.effects = TRUE, data = df_exp01_police,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp01_outcomes, treatment = exp01_police_treat,
##             confounders = views_police, data = df_exp01_police, group.by = views_police,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
## model.rsp: bart
## model.trt: bart
##
## Treatment effect (pate):
##      estimate      sd ci.lower ci.upper    n
## 1      1.1577  3.225   -5.163    7.479  449
## 2      0.5715  6.839  -12.833   13.976   67
## 3      0.8694  4.209   -7.380    9.119  235
## 4      1.2500  4.354   -7.283    9.783  220
## 5      1.1277  4.772   -8.226   10.481  162
## 6      3.4946 13.539  -23.041   30.030   13
## 7      0.8935 17.647  -33.693   35.480    7
## tot    1.1030  2.272   -3.349    5.555 1153
## if (n < 10) group-size estimates may be unstable
## Estimates fit from 1153 total observations
## 95% credible interval calculated by: normal approximation
## population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Opinion on the Judicial System

summary(bartc(exp01_outcomes, exp01_police_treat, views_justice,
              group.by = views_police, group.effects = TRUE, data = df_exp01_police,
              n.chains = 5L, seed = 144))

```

```

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp01_outcomes, treatment = exp01_police_treat,
##             confounders = views_justice, data = df_exp01_police, group.by = views_police,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##      estimate      sd ci.lower ci.upper    n
## 1      1.5215  2.886   -4.136    7.179  449
## 2      1.4107  5.879  -10.111   12.933   67
## 3      1.6034  3.584   -5.421    8.628  235
## 4      0.8333  3.711   -6.440    8.107  220
## 5      0.3218  4.314   -8.133    8.777  162
## 6      3.1625 13.019  -22.354   28.679   13
## 7      1.9862 16.994  -31.322   35.295    7
## tot    1.2532  2.250   -3.157    5.663 1153
##   if (n < 10) group-size estimates may be unstable
## Estimates fit from 1153 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

```

3.4.2 Treatment 02: Criminal Justice Ineffectiveness

We do not find any evidence of heterogeneous treatment effects in this condition either.

```

# Remove "Indigenous" and "Other" from `race` as they only
# have 1 observation each. The model cannot be estimated otherwise.
df_exp01_slow_justice <- df_exp01_het %>%
  filter(race %in% c("White", "Asian", "Black", "Mixed Race", "Rather Not Say")) %>%
  mutate(exp01_slow_justice_treat = as.numeric(exp01_slow_justice_treat)) %>%
  drop_na(exp01_slow_justice_treat)

```

```

# Gender

summary(bartc(exp01_outcomes, exp01_slow_justice_treat, gender,
              group.by = gender, group.effects = TRUE, data = df_exp01_slow_justice,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp01_outcomes, treatment = exp01_slow_justice_treat,
##             confounders = gender, data = df_exp01_slow_justice, group.by = gender,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##      estimate    sd ci.lower ci.upper    n
## 1  -0.70511 3.244  -7.064    5.654  575
## 2   0.61085 3.369  -5.992    7.213  528
## tot -0.07517 2.372  -4.725    4.574 1103
## Estimates fit from 1103 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Age

summary(bartc(exp01_outcomes, exp01_slow_justice_treat, age2,
              group.by = age2, group.effects = TRUE, data = df_exp01_slow_justice,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp01_outcomes, treatment = exp01_slow_justice_treat,
##             confounders = age2, data = df_exp01_slow_justice, group.by = age2,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:

```

```

## model.rsp: bart
## model.trt: bart
##
## Treatment effect (pate):
##      estimate    sd ci.lower ci.upper    n
## 1    -4.0433 4.060  -12.002    3.915  349
## 2     1.0628 3.859   -6.501    8.627  386
## 3     1.8841 3.897   -5.754    9.522  368
## tot  -0.2788 2.379   -4.942    4.384 1103
## Estimates fit from 1103 total observations
## 95% credible interval calculated by: normal approximation
## population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Race
summary(bartc(exp01_outcomes, exp01_slow_justice_treat, race,
              group.by = race, group.effects = TRUE, data = df_exp01_slow_justice,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp01_outcomes, treatment = exp01_slow_justice_treat,
##             confounders = race, data = df_exp01_slow_justice, group.by = race,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
## model.rsp: bart
## model.trt: bart
##
## Treatment effect (pate):
##      estimate    sd ci.lower ci.upper    n
## 1    -0.4748 2.962   -6.280    5.331  630
## 2    -4.7800 6.533  -17.585    8.024  112
## 3     1.4545 3.971   -6.329    9.238  324
## 4     1.7147 9.829  -17.550   20.980   31
## 5         NaN    NA        NA        NA    0
## 6         NaN    NA        NA        NA    0

```



```

## 7      -0.4321 19.782  -39.205   38.341    6
## tot      NaN    NA      NA      NA 1103
##   if (n < 10) group-size estimates may be unstable
## Estimates fit from 1103 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Education
summary(bartc(exp01_outcomes, exp01_slow_justice_treat, education,
              group.by = education, group.effects = TRUE, data = df_exp01_slow_justice,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp01_outcomes, treatment = exp01_slow_justice_treat,
##             confounders = education, data = df_exp01_slow_justice, group.by = education,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##      estimate      sd ci.lower ci.upper    n
## 1      1.9858 16.202  -29.770   33.741    9
## 2      0.9912 10.740  -20.058   22.041   27
## 3     -1.6216  3.738   -8.948    5.705  377
## 4      1.4392  3.069   -4.575    7.454  588
## 5     -0.3693  6.249  -12.618   11.879   97
## 6     -0.1299 21.124  -41.531   41.272    5
## tot    0.2204  2.347   -4.380    4.821 1103
##   if (n < 10) group-size estimates may be unstable
## Estimates fit from 1103 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

```

```

# Household Income

summary(bartc(exp01_outcomes, exp01_slow_justice_treat, household_income,
              group.by = household_income, group.effects = TRUE, data = df_exp01_slow_justice,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp01_outcomes, treatment = exp01_slow_justice_treat,
##             confounders = household_income, data = df_exp01_slow_justice,
##             group.by = household_income, group.effects = TRUE, n.chains = 5L,
##             seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##      estimate    sd ci.lower ci.upper    n
## 1  -0.11441  6.726  -13.297   13.068   67
## 2   0.76917  5.514  -10.038   11.577  132
## 3   1.22368  4.710   -8.008   10.455  187
## 4  -0.07034  4.070   -8.048    7.907  249
## 5  -0.04866  3.745   -7.389    7.292  308
## 6  -3.92074  6.182  -16.037    8.196  114
## 7   2.70008  8.290  -13.548   18.948   46
## tot -0.02953  2.331   -4.599    4.540 1103
## Estimates fit from 1103 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Political Ideology

summary(bartc(exp01_outcomes, exp01_slow_justice_treat, ideology,
              group.by = ideology, group.effects = TRUE, data = df_exp01_slow_justice,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

```

```

## Call: bartc(response = exp01_outcomes, treatment = exp01_slow_justice_treat,
##             confounders = ideology, data = df_exp01_slow_justice, group.by = ideology,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##      estimate    sd ci.lower ci.upper    n
## 1      3.46201 5.353   -7.029   13.953  158
## 2      1.13259 4.549   -7.783   10.048  209
## 3     -1.27098 5.887  -12.810   10.268   96
## 4     -0.18674 5.845  -11.642   11.269   98
## 5     -0.39400 4.038   -8.307    7.519  260
## 6     -1.51478 5.377  -12.054    9.025  125
## 7     -2.89689 5.120  -12.932    7.138  157
## tot -0.09357 2.339   -4.678    4.491 1103
## Estimates fit from 1103 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Support for Death Penalty
summary(bartc(exp01_outcomes, exp01_slow_justice_treat, death_penalty,
              group.by = death_penalty, group.effects = TRUE, data = df_exp01_slow_justice,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp01_outcomes, treatment = exp01_slow_justice_treat,
##             confounders = death_penalty, data = df_exp01_slow_justice,
##             group.by = death_penalty, group.effects = TRUE, n.chains = 5L,
##             seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart

```

```

## model.trt: bart
##
## Treatment effect (pate):
##      estimate    sd ci.lower ci.upper    n
## 1      2.7789 3.349   -3.785    9.343  461
## 2     -1.6507 3.167   -7.858    4.557  512
## 3      1.6431 7.285  -12.635   15.921   77
## 4     -3.2941 8.379  -19.717   13.129   53
## tot    0.3516 2.237   -4.033    4.736 1103
## Estimates fit from 1103 total observations
## 95% credible interval calculated by: normal approximation
## population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Previous Victimization
df_exp01_slow_justice2 <- df_exp01_slow_justice %>% drop_na(previous_victim_dummy)
summary(bartc(exp01_outcomes, exp01_slow_justice_treat, previous_victim_dummy,
              group.by = previous_victim_dummy, group.effects = TRUE, data = df_exp01_slow_justice2,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp01_outcomes, treatment = exp01_slow_justice_treat,
##             confounders = previous_victim_dummy, data = df_exp01_slow_justice2,
##             group.by = previous_victim_dummy, group.effects = TRUE, n.chains = 5L,
##             seed = 144)
##
## Causal inference model fit by:
## model.rsp: bart
## model.trt: bart
##
## Treatment effect (pate):
##      estimate    sd ci.lower ci.upper    n
## 1     -1.02230 3.683   -8.240    6.196  424
## 2      0.02415 2.933   -5.724    5.772  661
## tot  -0.38478 2.307   -4.906    4.137 1085
## Estimates fit from 1085 total observations

```

```

## 95% credible interval calculated by: normal approximation
## population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Opinion on the Police

summary(bartc(exp01_outcomes, exp01_slow_justice_treat, views_police,
              group.by = views_police, group.effects = TRUE, data = df_exp01_slow_justice,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp01_outcomes, treatment = exp01_slow_justice_treat,
##             confounders = views_police, data = df_exp01_slow_justice,
##             group.by = views_police, group.effects = TRUE, n.chains = 5L,
##             seed = 144)
##
## Causal inference model fit by:
## model.rsp: bart
## model.trt: bart
##
## Treatment effect (pate):
##      estimate      sd ci.lower ci.upper    n
## 1    0.49513  3.398  -6.164   7.154  417
## 2    1.28720  7.398 -13.213  15.787   58
## 3    0.74236  4.248  -7.584   9.068  229
## 4   -1.01432  4.458  -9.752   7.723  225
## 5   -1.83092  5.111 -11.849   8.187  155
## 6    1.15489 14.511 -27.286  29.596   11
## 7   -1.41815 16.694 -34.139  31.302    8
## tot -0.05397  2.360  -4.679   4.571 1103
## if (n < 10) group-size estimates may be unstable
## Estimates fit from 1103 total observations
## 95% credible interval calculated by: normal approximation
## population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Opinion on the Judicial System

summary(bartc(exp01_outcomes, exp01_slow_justice_treat, views_justice,

```

```

      group.by = views_police, group.effects = TRUE, data = df_exp01_slow_justice,
      n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp01_outcomes, treatment = exp01_slow_justice_treat,
##             confounders = views_justice, data = df_exp01_slow_justice,
##             group.by = views_police, group.effects = TRUE, n.chains = 5L,
##             seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##      estimate      sd ci.lower ci.upper    n
## 1      0.3888  2.968   -5.428    6.205  417
## 2      0.4882  6.475  -12.203   13.179   58
## 3      0.4889  3.637   -6.639    7.616  229
## 4     -0.5745  3.842   -8.105    6.956  225
## 5     -0.4304  4.367   -8.989    8.128  155
## 6      0.4706 13.956  -26.883   27.825   11
## 7      0.1864 16.086  -31.342   31.715    8
## tot      0.1026  2.303   -4.411    4.616 1103
##   if (n < 10) group-size estimates may be unstable
## Estimates fit from 1103 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

```

3.4.3 Treatment 03: Demand for Harsher Legal Punishment

As in the last two series of models, our results show no evidence of heterogeneous treatment effects.

```

df_exp01_small_punishment <- df_exp01_het %>%
  mutate(exp01_small_punishment_treat = as.numeric(exp01_small_punishment_treat)) %>%
  drop_na(exp01_small_punishment_treat)

```

```

# Gender

summary(bartc(exp01_outcomes, exp01_small_punishment_treat, gender,
              group.by = gender, group.effects = TRUE, data = df_exp01_small_punishment,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp01_outcomes, treatment = exp01_small_punishment_treat,
##             confounders = gender, data = df_exp01_small_punishment, group.by = gender,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##      estimate    sd ci.lower ci.upper    n
## 1      1.7175 3.266  -4.684    8.119  554
## 2     -0.8986 3.255  -7.278    5.481  545
## tot    0.4202 2.331  -4.149    4.990 1099
## Estimates fit from 1099 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Age

df_exp01_small_punishment2 <- df_exp01_small_punishment %>% drop_na(age2)

summary(bartc(exp01_outcomes, exp01_small_punishment_treat, age2,
              group.by = age2, group.effects = TRUE, data = df_exp01_small_punishment2,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp01_outcomes, treatment = exp01_small_punishment_treat,
##             confounders = age2, data = df_exp01_small_punishment2, group.by = age2,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##

```

```

## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##   estimate    sd ci.lower ci.upper    n
## 1    -4.6442 3.983  -12.450    3.162 355
## 2     5.9703 3.970   -1.810   13.751 367
## 3     0.8252 3.852   -6.725    8.376 376
## tot    0.7766 2.316   -3.763    5.317 1098
## Estimates fit from 1098 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Race
summary(bartc(exp01_outcomes, exp01_small_punishment_treat, race,
              group.by = race, group.effects = TRUE, data = df_exp01_small_punishment,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp01_outcomes, treatment = exp01_small_punishment_treat,
##             confounders = race, data = df_exp01_small_punishment, group.by = race,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##   estimate    sd ci.lower ci.upper    n
## 1    -0.1333 2.924   -5.865    5.598 646
## 2     1.4234 5.853  -10.048   12.895 111
## 3     1.7369 4.020   -6.143    9.617 296
## 4     3.8678 9.656  -15.058   22.793  30
## 5     1.6054 23.107 -43.684   46.894   4

```



```

## 6      1.2526 23.140 -44.100  46.606   4
## 7      2.4740 16.726 -30.308  35.256   8
## tot    0.6672  2.367  -3.973   5.307 1099
##  if (n < 10) group-size estimates may be unstable
## Estimates fit from 1099 total observations
## 95% credible interval calculated by: normal approximation
##  population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Education
summary(bartc(exp01_outcomes, exp01_small_punishment_treat, education,
              group.by = education, group.effects = TRUE, data = df_exp01_small_punishment,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp01_outcomes, treatment = exp01_small_punishment_treat,
##             confounders = education, data = df_exp01_small_punishment,
##             group.by = education, group.effects = TRUE, n.chains = 5L,
##             seed = 144)
##
## Causal inference model fit by:
##  model.rsp: bart
##  model.trt: bart
##
## Treatment effect (pate):
##      estimate      sd ci.lower ci.upper    n
## 1      1.25526 17.847  -33.724   36.235    7
## 2     -0.30960  8.913  -17.780   17.160   36
## 3      2.75648  3.681   -4.459    9.972  391
## 4     -0.63335  3.131   -6.769    5.503  553
## 5     -1.63510  6.147  -13.683   10.413  106
## 6      0.04198 19.153  -37.498   37.582    6
## tot    0.50238  2.337   -4.078    5.082 1099
##  if (n < 10) group-size estimates may be unstable
## Estimates fit from 1099 total observations
## 95% credible interval calculated by: normal approximation

```

```

## population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Household Income
summary(bartc(exp01_outcomes, exp01_small_punishment_treat, household_income,
              group.by = household_income, group.effects = TRUE, data = df_exp01_small_punishment,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp01_outcomes, treatment = exp01_small_punishment_treat,
##             confounders = household_income, data = df_exp01_small_punishment,
##             group.by = household_income, group.effects = TRUE, n.chains = 5L,
##             seed = 144)
##
## Causal inference model fit by:
## model.rsp: bart
## model.trt: bart
##
## Treatment effect (pate):
##      estimate    sd ci.lower ci.upper    n
## 1   -0.3970 6.932  -13.984   13.190   63
## 2    6.8680 5.596   -4.101   17.837  155
## 3    2.6524 5.039   -7.224   12.529  170
## 4   -0.3990 4.248   -8.724    7.926  236
## 5   -1.4005 4.033   -9.305    6.504  284
## 6   -1.0526 5.489  -11.811    9.706  130
## 7   -4.1697 7.645  -19.153   10.813   61
## tot    0.5526 2.307   -3.969    5.074 1099
## Estimates fit from 1099 total observations
## 95% credible interval calculated by: normal approximation
## population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Political Ideology
summary(bartc(exp01_outcomes, exp01_small_punishment_treat, ideology,
              group.by = ideology, group.effects = TRUE, data = df_exp01_small_punishment,
              n.chains = 5L, seed = 144))

```

```

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp01_outcomes, treatment = exp01_small_punishment_treat,
##             confounders = ideology, data = df_exp01_small_punishment,
##             group.by = ideology, group.effects = TRUE, n.chains = 5L,
##             seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##      estimate      sd ci.lower ci.upper    n
## 1  -0.51547 4.868  -10.056    9.025  158
## 2  -0.04112 4.659   -9.173    9.091  170
## 3   0.34180 5.707  -10.843   11.527  103
## 4  -0.24262 5.565  -11.151   10.665  104
## 5   0.43671 3.974   -7.352    8.225  252
## 6   2.59135 5.088   -7.380   12.563  156
## 7   1.50644 5.008   -8.309   11.322  156
## tot  0.61041 2.298   -3.894    5.115 1099
## Estimates fit from 1099 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Support for Death Penalty
summary(bartc(exp01_outcomes, exp01_small_punishment_treat, death_penalty,
              group.by = death_penalty, group.effects = TRUE, data = df_exp01_small_punishment,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp01_outcomes, treatment = exp01_small_punishment_treat,
##             confounders = death_penalty, data = df_exp01_small_punishment,
##             group.by = death_penalty, group.effects = TRUE, n.chains = 5L,
##             seed = 144)

```

```
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##      estimate    sd ci.lower ci.upper    n
## 1      1.6220 3.276   -4.799    8.043  467
## 2     -0.3968 3.196   -6.661    5.868  502
## 3      3.0332 7.051  -10.786   16.853   78
## 4     -0.1274 8.161  -16.123   15.869   52
## tot    0.7173 2.238   -3.670    5.104 1099
## Estimates fit from 1099 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Previous Victimization
df_exp01_small_punishment2 <- df_exp01_small_punishment %>% drop_na(previous_victim_dummy)
summary(bartc(exp01_outcomes, exp01_small_punishment_treat, previous_victim_dummy,
              group.by = previous_victim_dummy, group.effects = TRUE, data = df_exp01_small_punishment2,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp01_outcomes, treatment = exp01_small_punishment_treat,
##             confounders = previous_victim_dummy, data = df_exp01_small_punishment2,
##             group.by = previous_victim_dummy, group.effects = TRUE, n.chains = 5L,
##             seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##      estimate    sd ci.lower ci.upper    n
## 1    0.130740 3.565   -6.857    7.118  446
```

```

## 2   -0.106243 3.037   -6.058    5.846   636
## tot -0.008559 2.315   -4.546    4.529  1082
## Estimates fit from 1082 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Opinion on the Police

summary(bartc(exp01_outcomes, exp01_small_punishment_treat, views_police,
              group.by = views_police, group.effects = TRUE, data = df_exp01_small_punishment,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp01_outcomes, treatment = exp01_small_punishment_treat,
##             confounders = views_police, data = df_exp01_small_punishment,
##             group.by = views_police, group.effects = TRUE, n.chains = 5L,
##             seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##      estimate      sd ci.lower ci.upper    n
## 1      3.1029  3.477   -3.711    9.917  432
## 2      2.4512  7.092  -11.449   16.352   68
## 3     -1.2224  4.635  -10.308    7.863  217
## 4     -0.2908  4.609   -9.324    8.743  199
## 5     -5.4147  5.544  -16.280    5.451  166
## 6      2.0834 14.548  -26.430   30.597   11
## 7      1.3230 19.007  -35.930   38.576    6
## tot      0.2875  2.308   -4.235    4.810 1099
##   if (n < 10) group-size estimates may be unstable
## Estimates fit from 1099 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

```

Opinion on the Judicial System

```
summary(bartc(exp01_outcomes, exp01_small_punishment_treat, views_justice,  
             group.by = views_police, group.effects = TRUE, data = df_exp01_small_punishment,  
             n.chains = 5L, seed = 144))
```

```
## fitting treatment model via method 'bart'
```

```
## fitting response model via method 'bart'
```

```
## Call: bartc(response = exp01_outcomes, treatment = exp01_small_punishment_treat,  
##           confounders = views_justice, data = df_exp01_small_punishment,  
##           group.by = views_police, group.effects = TRUE, n.chains = 5L,  
##           seed = 144)
```

```
##
```

```
## Causal inference model fit by:
```

```
##   model.rsp: bart
```

```
##   model.trt: bart
```

```
##
```

```
## Treatment effect (pate):
```

##	estimate	sd	ci.lower	ci.upper	n
## 1	0.8423	2.958	-4.955	6.640	432
## 2	1.2530	5.971	-10.450	12.956	68
## 3	0.4912	4.112	-7.568	8.550	217
## 4	0.5033	3.790	-6.926	7.932	199
## 5	-2.0736	4.564	-11.018	6.871	166
## 6	1.0644	14.055	-26.483	28.612	11
## 7	1.6626	18.319	-34.243	37.568	6
## tot	0.3033	2.272	-4.150	4.757	1099

```
##   if (n < 10) group-size estimates may be unstable
```

```
## Estimates fit from 1099 total observations
```

```
## 95% credible interval calculated by: normal approximation
```

```
##   population TE approximated by: posterior predictive distribution
```

```
## Result based on 800 posterior samples times 5 chains
```

4 Experiment 02

4.1 Description

In our second experiment, we present five pairs of criminal profiles to respondents. Each profile consists of eight attributes: 1) gender of the crime perpetrator; 2) age of the crime perpetrator; 3) race of the crime perpetrator; 4) residency of crime perpetrator; 5) offense; 6) gender of the victim of the motivating crime; 7) age of the victim of the motivating crime; 8) lynching perpetrators. The attributes and levels are displayed in table 14 below.

Table 14: **Attributes and Levels**

Attribute	Levels
Gender of crime perpetrator	Male; female
Age of crime perpetrator	Teenager; adult; elderly
Race of crime perpetrator	Black; White; Native Brazilian; Asian
Residency of crime perpetrator	Resident in the community; outsider
Offense	Picks the pocket; steals the car; molests; rapes; murders
Gender of crime victim	Male; female
Age of crime victim	Child; teenager; adult; elderly
Lynching perpetrators	Bystanders; neighbours; family of the victim; gangs; police

We added three restrictions to the conjoint design to avoid implausible scenarios. First, female rapists were excluded from the model, but we did include female molesters in the conjoint experiment. Second, when the offense was car theft, the victim could not be a child. Lastly, teenagers could not be victims of car theft either. All other combinations were allowed. We randomized the attributes using a .php script, which is available at <https://github.com/danilofreire/lynching-experiment-brazil/blob/master/conjoint/portuguese/lynching-conjoint-pt.php>.

Respondents indicated which profile they preferred for extrajudicial punishment. Prior to the experiments, they had read the following prompt:

- Lynchings are often used as social punishment in Brazil. Lynchings are cases in which three or more people physically attack or execute a suspected criminal in public. We are interested in knowing more about how Brazilians see these episodes. In the next five questions, please read the description of two possible lynching victims in Brazil and indicate in which case you

believe the punishment is more justified. Even if you are not entirely sure, please select one of the cases.⁸

4.2 Marginal Means Estimator

We estimate the conjoint experiment with the `cregg` package (Leeper 2018) for the R statistical language (R Core Team 2018). We follow ? and report marginal means as our main estimates. Marginal means are easy to interpret and they are not sensitive to choice of the reference category in subgroup analyses. The H_0 in all models is that the coefficient is equal to 0.5, that is, that respondents are indifferent to that attribute level. Standard errors are clustered by respondent. The code follows below.

```
conjoint_data <- read.qualtrics("../data/data-conjoint.csv",
                                responses = c("Q13", "Q14", "Q15",
                                              "Q16", "Q17"),
                                covariates = c("ResponseId",
                                              "Q1", "Q2", "Q3", "Q4",
                                              "Q5", "Q6", "Q7",
                                              "Q8", "Q9", "Q10",
                                              "Q11", "Q12"),
                                new.format = FALSE, respondentID = NULL)

## [1] "Old qualtrics format detected."

conjoint_data <- conjoint_data %>%
  rename(response_id      = ResponseId,
         Age              = Q2,
         Gender            = Q3,
         Race              = Q4,
         Education         = Q5,
         Region            = Q6,
         "Household Income" = Q7,
         Ideology           = Q8,
         "Support death penalty" = Q9,
```

⁸Original text in Portuguese: Linchamentos são às vezes usados como punição social no Brasil. Linchamentos são casos nos quais três ou mais pessoas agredem fisicamente ou executam em público um suspeito de um crime. Estamos interessados em saber mais sobre como os brasileiros vêem estes episódios. Nas próximas cinco questões, por favor, leia a descrição de duas possíveis vítimas de linchamento no Brasil e indique em quais delas você acredita que a punição é mais justificada. Mesmo que você não tenha certeza, por favor, escolha um dos casos.


```

"Previous Victimization"      = Q10,
"Offense"                    = Crime,
"Opinion on Policing"        = Q11,
"Opinion on Judiciary"       = Q12,
"Gender of crime victim"     = "Gênero.da.vítima",
"Gender of crime perpetrator" = "Gênero.do(a).criminoso(a)",
"Age of crime victim"        = "Idade.da.vítima",
"Age of crime perpetrator"   = "Idade.do(a).criminoso(a)",
"Lynching perpetrators"     = "Linchadores",
"Race of crime perpetrator"  = "Raça.do(a).criminoso(a)",
"Residency of crime perpetrator" = "Residência.do.criminoso") %>%
mutate(`Gender of crime perpetrator` = fct_recode(`Gender of crime perpetrator`,
          "Male"      = "Masculino",
          "Female"    = "Feminino"),
       `Age of crime perpetrator` = fct_recode(`Age of crime perpetrator`,
          "Teenager" = "Adolescente",
          "Adult"    = "Adulto(a)",
          "Elderly"  = "Idoso(a)"),
       `Race of crime perpetrator` = fct_recode(`Race of crime perpetrator`,
          "Asian"     = "Asiático(a)",
          "White"     = "Branco(a)",
          "Indigenous" = "Indígena",
          "Black"     = "Negro(a)"),
       `Residency of crime perpetrator` = fct_recode(`Residency of crime perpetrator`,
          "Another neighborhood" = "Mora em outro bairro",
          "In the neighborhood"  = "Mora na vizinhança"),
       `Offense` = fct_recode(`Offense`,
          "Murder"          = "Assassinou",
          "Pick-pocketing" = "Bateu a carteira",
          "Rape"            = "Estuprou",
          "Molestation"     = "Molestou",
          "Car theft"       = "Roubou o carro"),
       `Gender of crime victim` = fct_recode(`Gender of crime victim`,
          " Male"      = "Masculino",
          " Female"    = "Feminino"),
       `Age of crime victim` = fct_recode(`Age of crime victim`,
          " Teenager" = "Adolescente",

```

```

      " Child"      = "Criança",
      " Adult"     = "Adulto(a)",
      " Elderly"    = "Idoso(a)"),
  `Lynching perpetrators` = fct_recode(`Lynching perpetrators`,
    "Family of the victim" = "Família da vítima",
    "Gangs"                = "Gangues",
    "Bystanders"           = "Pedestres",
    "Police"               = "Polícia",
    "Neighbors"            = "Vizinhos")) %>%

select(-c(16, 18, 20, 22, 24, 26, 28, 30)) %>%

mutate(response_id = tolower(response_id))

# Model

fm <- selected ~ `Gender of crime perpetrator` +
  `Age of crime perpetrator` + `Race of crime perpetrator` +
  `Residency of crime perpetrator` + `Offense` +
  `Gender of crime victim` + `Age of crime victim` +
  `Lynching perpetrators`

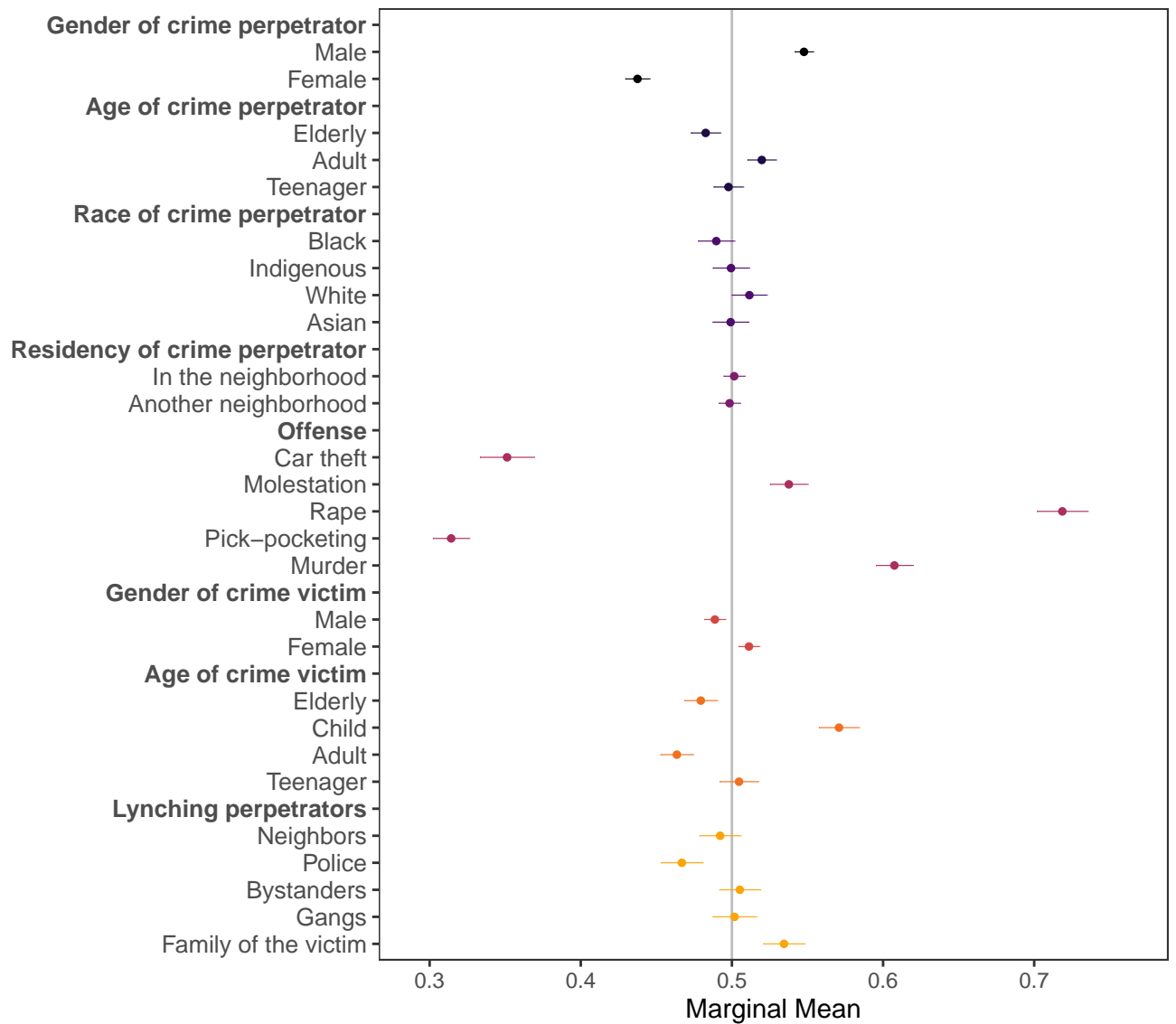
mms <- mm(conjoint_data, fm, id = ~response_id, h0 = 0.5)

# Plot

faces <- c(rep("plain", 5), "bold",
  rep("plain", 4), "bold",
  rep("plain", 2), "bold",
  rep("plain", 5), "bold",
  rep("plain", 2), "bold",
  rep("plain", 4), "bold",
  rep("plain", 3), "bold",
  rep("plain", 2), "bold")

plot(mms, vline = 0.5, header_fmt = "%s") +
  theme(legend.position = "none", axis.text.y = element_text(face = faces, size = 10)) +
  scale_colour_viridis_d(option = "inferno", end = 0.8)

```



```
# Table
table_mm <- function(mms, capt) {
  dfr <- data.frame(feature = mms[, c(4)],
                    round(mms[, c(5, 6, 8, 9, 10)], digits = 3))
  names(dfr) <- c("Feature", "Estimate", "Std. Error",
                  "P-Value", "Lower", "Upper")
  return(kbl(dfr, "latex", caption = capt, linesep = "",
             booktabs = TRUE) %>%
    kable_styling(font_size = 12, full_width = TRUE,
                  latex_options = "hold_position") %>%
    pack_rows("Gender of crime perpetrator", 1, 2) %>%
    pack_rows("Age of crime perpetrator", 3, 5) %>%
    pack_rows("Race of crime perpetrator", 6, 9) %>%
    pack_rows("Residency of crime perpetrator", 10, 11) %>%
    pack_rows("Offense", 12, 16) %>%
```

```

pack_rows("Gender of crime victim", 17, 18) %>%
pack_rows("Age of crime victim", 19, 22) %>%
pack_rows("Lynching perpetrators", 23, 27) %>%
column_spec(1, width = "6cm"))
}

table_mm(mms, capt = "Marginal Means -- Full Model")

```

Table 15: Marginal Means – Full Model

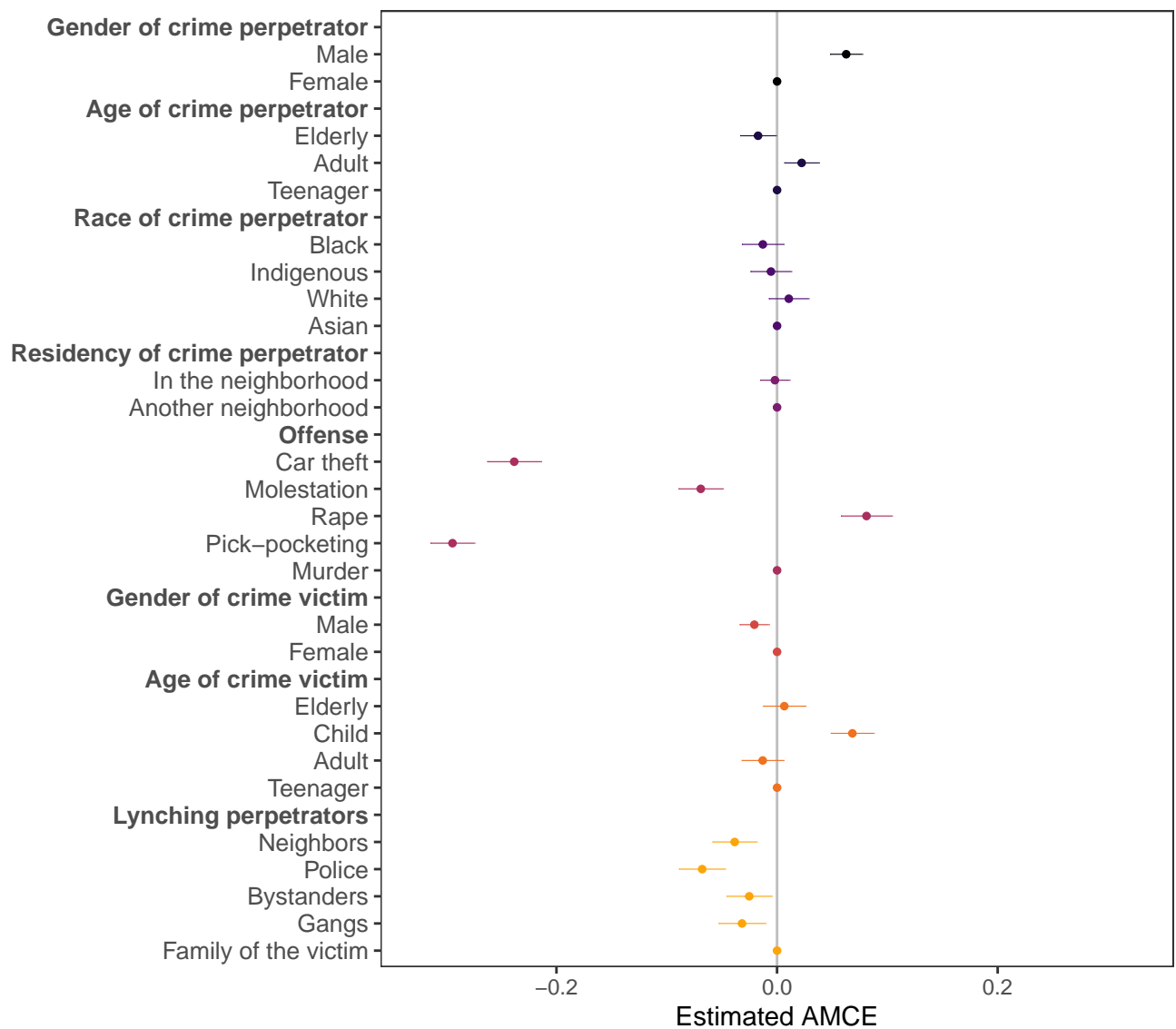
Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.438	0.004	0.000	0.429	0.446
Male	0.548	0.003	0.000	0.541	0.554
Age of crime perpetrator					
Teenager	0.498	0.005	0.650	0.488	0.508
Adult	0.520	0.005	0.000	0.510	0.529
Elderly	0.483	0.005	0.000	0.473	0.492
Race of crime perpetrator					
Asian	0.499	0.006	0.887	0.487	0.511
White	0.512	0.006	0.050	0.500	0.523
Indigenous	0.499	0.006	0.924	0.487	0.511
Black	0.490	0.006	0.092	0.478	0.502
Residency of crime perpetrator					
Another neighborhood	0.498	0.004	0.668	0.491	0.506
In the neighborhood	0.502	0.004	0.668	0.495	0.509
Offense					
Murder	0.608	0.006	0.000	0.595	0.620
Pick-pocketing	0.314	0.006	0.000	0.302	0.326
Rape	0.719	0.009	0.000	0.702	0.735
Molestation	0.538	0.006	0.000	0.525	0.550
Car theft	0.351	0.009	0.000	0.333	0.369
Gender of crime victim					
Female	0.511	0.004	0.002	0.504	0.518
Male	0.489	0.004	0.002	0.482	0.496
Age of crime victim					
Teenager	0.505	0.007	0.474	0.492	0.517
Adult	0.464	0.006	0.000	0.453	0.474
Child	0.571	0.007	0.000	0.558	0.584
Elderly	0.479	0.006	0.000	0.469	0.490
Lynching perpetrators					
Family of the victim	0.534	0.007	0.000	0.521	0.548
Gangs	0.502	0.007	0.815	0.487	0.516
Bystanders	0.505	0.007	0.450	0.492	0.519
Police	0.467	0.007	0.000	0.453	0.481
Neighbors	0.492	0.007	0.262	0.479	0.506

4.3 Average Marginal Component Effect (AMCE) Estimator

We also estimate AMCE coefficients for our conjoint experiment. This method selects one reference category for each attribute and looks at changes from the baseline level. The reference categories are marked as zero in our models.

```
amces <- cj(conjoint_data, fm, id = ~response_id)
```

```
plot(amces, vline = 0.0, header_fmt = "%s") +  
  theme(legend.position = "none",  
        axis.text.y = element_text(face = "bold", size = 10)) +  
  scale_colour_viridis_d(option = "inferno", end = 0.8)
```



```
table_mm(amces, capt = "Average Marginal Component Effects -- Full Model")
```

Table 16: Average Marginal Component Effects – Full Model

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.000	NA	NA	NA	NA
Male	0.063	0.007	0.000	0.048	0.077
Age of crime perpetrator					
Teenager	0.000	NA	NA	NA	NA
Adult	0.022	0.008	0.005	0.007	0.038
Elderly	-0.017	0.008	0.038	-0.033	-0.001
Race of crime perpetrator					
Asian	0.000	NA	NA	NA	NA
White	0.011	0.009	0.248	-0.007	0.029
Indigenous	-0.006	0.009	0.557	-0.024	0.013
Black	-0.013	0.010	0.181	-0.032	0.006
Residency of crime perpetrator					
Another neighborhood	0.000	NA	NA	NA	NA
In the neighborhood	-0.002	0.007	0.776	-0.015	0.011
Offense					
Murder	0.000	NA	NA	NA	NA
Pick-pocketing	-0.294	0.010	0.000	-0.314	-0.274
Rape	0.081	0.012	0.000	0.058	0.104
Molestation	-0.069	0.010	0.000	-0.089	-0.049
Car theft	-0.238	0.012	0.000	-0.263	-0.214
Gender of crime victim					
Female	0.000	NA	NA	NA	NA
Male	-0.021	0.007	0.002	-0.034	-0.007
Age of crime victim					
Teenager	0.000	NA	NA	NA	NA
Adult	-0.013	0.010	0.179	-0.032	0.006
Child	0.068	0.010	0.000	0.049	0.088
Elderly	0.007	0.010	0.504	-0.013	0.026
Lynching perpetrators					
Family of the victim	0.000	NA	NA	NA	NA
Gangs	-0.032	0.011	0.003	-0.053	-0.011
Bystanders	-0.025	0.010	0.015	-0.046	-0.005
Police	-0.068	0.011	0.000	-0.089	-0.047
Neighbors	-0.038	0.010	0.000	-0.058	-0.018

4.4 Subgroup Analyses

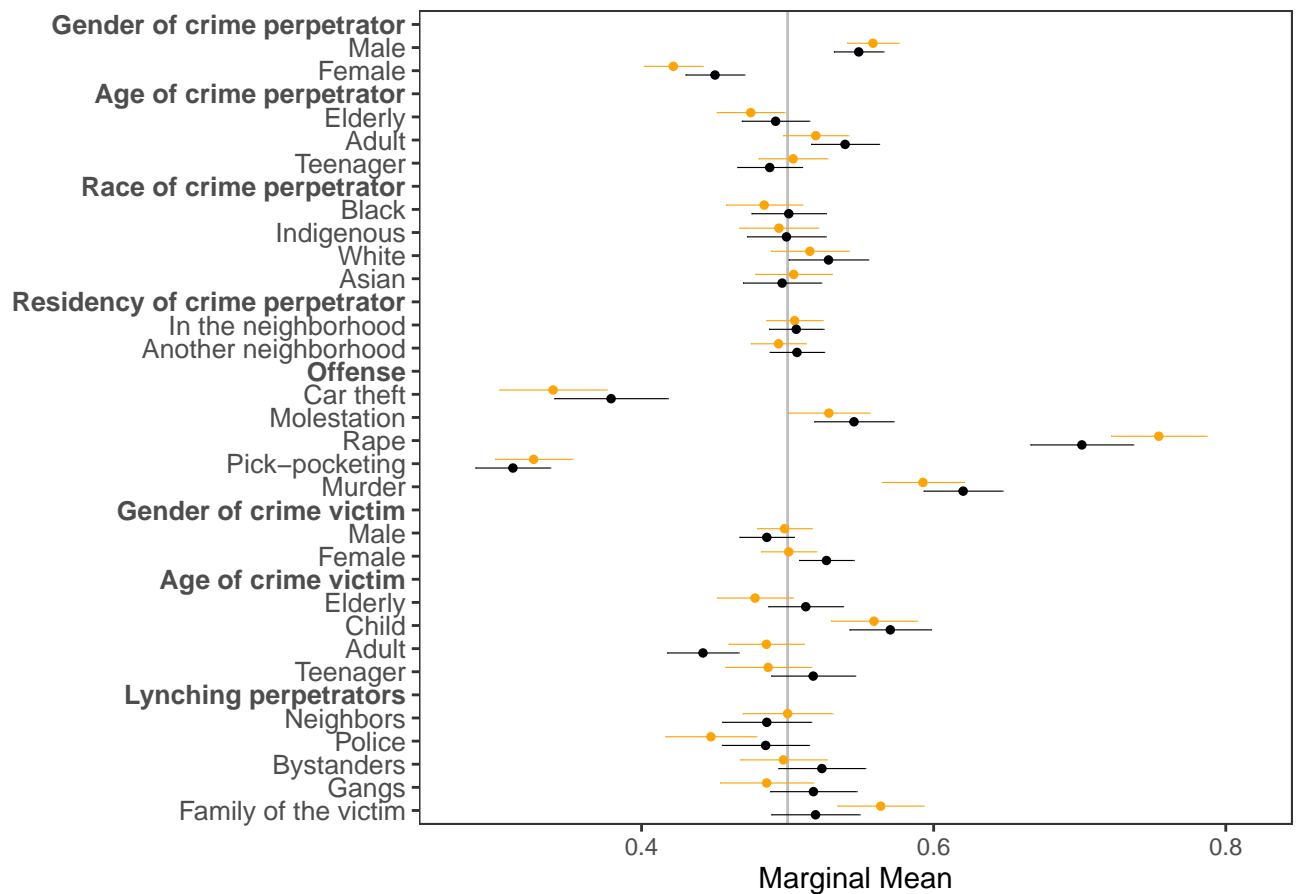
In this subsection, we test whether our results vary according to individual characteristics, such as gender, age, race, income, support for death penalty, and the respondents' opinions on the judicial system and the police forces. All models report marginal means. As we shall see, the results are very robust across all model specifications.

4.4.1 Gender

Results do not seem to vary according to the gender of the respondent. We focus here on the differences between males and females and exclude the 11 observations in which respondents preferred not to say their gender or marked “other” in our questionnaire. Across all conjoint experiment attributes, we see an overlap between the 95% confidence intervals for males and females.

```
# Model
cjdt <- full_join(conjoint_data, df1, by = "response_id") %>%
  drop_na(gender) %>%
  filter(gender == c("Male", "Female"))
cjdt$Gender <- factor(cjdt$gender)
mm_by <- cj(cjdt, fm, id = ~response_id, estimate = "mm", h0 = 0.5, by = ~Gender)

# Plot
plot(mm_by, group = "Gender", vline = 0.5, header_fmt = "%s") +
  theme(legend.position = "bottom", axis.text.y = element_text(face = "serif", size = 10)) +
  scale_colour_viridis_d(option = "inferno", end = 0.8)
```



Gender ● Female ● Male NA

Tables

```
table_mm_by <- function(mm_by, capt) {
  dfr <- data.frame(feature = mm_by[, c(5)],
    round(mm_by[, c(6, 7, 9, 10, 11)], digits = 3))
  names(dfr) <- c("Feature", "Estimate", "Std. Error",
    "P-Value", "Lower", "Upper")
  return(kbl(dfr, "latex", caption = capt, linesep = "",
    booktabs = TRUE) %>%
    kable_styling(font_size = 12, full_width = TRUE,
      latex_options = "hold_position") %>%
    pack_rows("Gender of crime perpetrator", 1, 2) %>%
    pack_rows("Age of crime perpetrator", 3, 5) %>%
    pack_rows("Race of crime perpetrator", 6, 9) %>%
    pack_rows("Residency of crime perpetrator", 10, 11) %>%
    pack_rows("Offense", 12, 16) %>%
    pack_rows("Gender of crime victim", 17, 18) %>%
    pack_rows("Age of crime victim", 19, 22) %>%
    pack_rows("Lynching perpetrators", 23, 27) %>%
```



```
column_spec(1, width = "6cm"))
}
```

```
mm_females <- mm_by %>% filter(BY == "Female")
table_mm_by(mm_females, capt = "Marginal Means -- Females")
```

Table 17: Marginal Means – Females

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.450	0.010	0.000	0.430	0.470
Male	0.549	0.009	0.000	0.532	0.566
Age of crime perpetrator					
Teenager	0.488	0.011	0.278	0.466	0.510
Adult	0.539	0.012	0.001	0.516	0.563
Elderly	0.492	0.012	0.485	0.469	0.515
Race of crime perpetrator					
Asian	0.496	0.014	0.784	0.469	0.523
White	0.528	0.014	0.044	0.501	0.555
Indigenous	0.499	0.014	0.954	0.472	0.526
Black	0.501	0.013	0.951	0.475	0.526
Residency of crime perpetrator					
Another neighborhood	0.506	0.009	0.499	0.488	0.525
In the neighborhood	0.506	0.010	0.535	0.487	0.525
Offense					
Murder	0.620	0.014	0.000	0.593	0.647
Pick-pocketing	0.312	0.013	0.000	0.286	0.338
Rape	0.701	0.018	0.000	0.666	0.737
Molestation	0.545	0.014	0.001	0.518	0.573
Car theft	0.379	0.020	0.000	0.340	0.418
Gender of crime victim					
Female	0.527	0.010	0.005	0.508	0.545
Male	0.486	0.010	0.133	0.467	0.504
Age of crime victim					
Teenager	0.518	0.015	0.232	0.489	0.546
Adult	0.442	0.012	0.000	0.418	0.466
Child	0.570	0.014	0.000	0.542	0.598
Elderly	0.512	0.013	0.341	0.487	0.538
Lynching perpetrators					
Family of the victim	0.519	0.015	0.215	0.489	0.549
Gangs	0.518	0.015	0.242	0.488	0.547
Bystanders	0.523	0.015	0.121	0.494	0.553
Police	0.485	0.015	0.322	0.455	0.515
Neighbors	0.486	0.016	0.358	0.455	0.516

```
mm_males <- mm_by %>% filter(BY == "Male")
table_mm_by(mm_males, capt = "Marginal Means -- Males")
```

Table 18: Marginal Means – Males

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.422	0.010	0.000	0.402	0.442
Male	0.558	0.009	0.000	0.541	0.576
Age of crime perpetrator					
Teenager	0.504	0.012	0.754	0.480	0.527
Adult	0.519	0.011	0.091	0.497	0.542
Elderly	0.475	0.012	0.033	0.452	0.498
Race of crime perpetrator					
Asian	0.504	0.013	0.757	0.478	0.530
White	0.515	0.014	0.263	0.489	0.542
Indigenous	0.494	0.014	0.666	0.467	0.521
Black	0.484	0.013	0.229	0.458	0.510
Residency of crime perpetrator					
Another neighborhood	0.494	0.010	0.519	0.475	0.513
In the neighborhood	0.505	0.010	0.625	0.486	0.524
Offense					
Murder	0.593	0.014	0.000	0.565	0.621
Pick-pocketing	0.326	0.013	0.000	0.300	0.353
Rape	0.754	0.017	0.000	0.721	0.787
Molestation	0.528	0.014	0.048	0.500	0.556
Car theft	0.339	0.019	0.000	0.303	0.376
Gender of crime victim					
Female	0.501	0.010	0.937	0.482	0.520
Male	0.498	0.010	0.823	0.479	0.517
Age of crime victim					
Teenager	0.487	0.015	0.373	0.457	0.516
Adult	0.485	0.013	0.269	0.460	0.511
Child	0.559	0.015	0.000	0.530	0.589
Elderly	0.478	0.013	0.092	0.452	0.504
Lynching perpetrators					
Family of the victim	0.564	0.015	0.000	0.534	0.593
Gangs	0.486	0.016	0.376	0.454	0.517
Bystanders	0.497	0.015	0.851	0.468	0.527
Police	0.447	0.016	0.001	0.416	0.479
Neighbors	0.500	0.016	1.000	0.469	0.531

4.4.2 Age

As our age variable is continuous, we divide the data into three age brackets: 18-34 years old, 35-54 years old, and 55+ years old. The results show that seniors (55+) are more likely to select profiles that include murder as an offense, and less inclined to choose cases involving molestation. The remaining attributes show little variation.

```
# Model

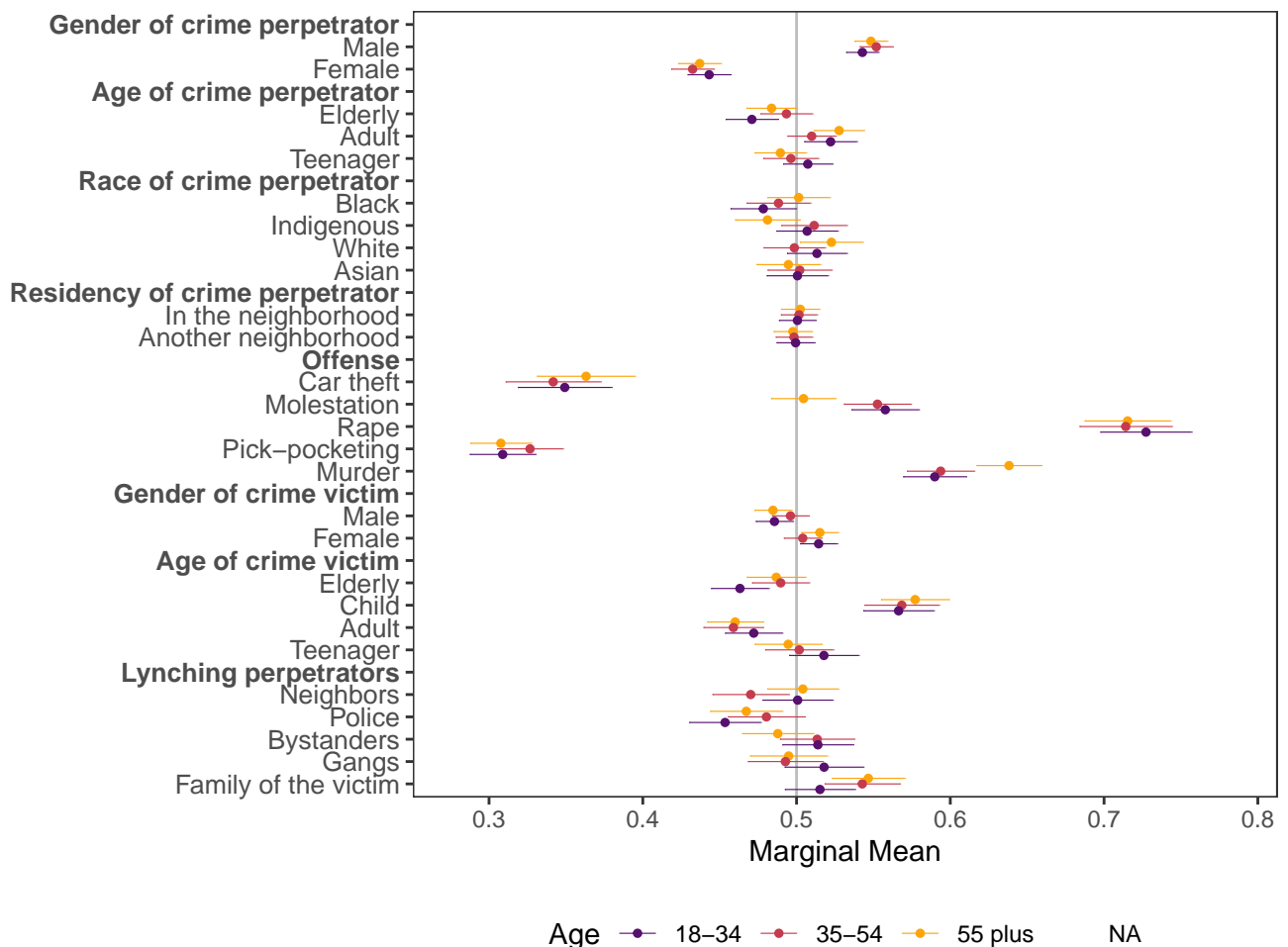
cjdt <- full_join(conjoint_data, df1, by = "response_id") %>%
  drop_na(age) %>%
  mutate(age2 = case_when(age >= 18 & age <= 34 ~ "18-34", age >= 35 & age <= 54 ~ "35-54",
    age >= 55 ~ "55 plus", TRUE ~ as.character(age)))

cjdt$Age <- factor(cjdt$age2)

mm_by <- cj(cjdt, fm, id = ~response_id, estimate = "mm", h0 = 0.5, by = ~Age)
```

Plot

```
plot(mm_by, group = "Age", vline = 0.5, header_fmt = "%s") +
  theme(legend.position = "bottom", axis.text.y = element_text(face = "bold", size = 10)) +
  scale_colour_viridis_d(option = "inferno", end = 0.8, begin = 0.25)
```



Tables

```
mm_young <- mm_by %>% filter(BY == "18-34")
```

```
table_mm_by(mm_young, capt = "Marginal Means -- 18-34 Years Old")
```

Table 19: Marginal Means – 18-34 Years Old

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.443	0.007	0.000	0.429	0.457
Male	0.543	0.005	0.000	0.532	0.553
Age of crime perpetrator					
Teenager	0.507	0.008	0.370	0.491	0.523
Adult	0.522	0.009	0.011	0.505	0.539
Elderly	0.471	0.009	0.001	0.454	0.488
Race of crime perpetrator					
Asian	0.501	0.010	0.955	0.481	0.521
White	0.513	0.010	0.182	0.494	0.533
Indigenous	0.507	0.010	0.501	0.487	0.527
Black	0.478	0.011	0.047	0.457	0.500
Residency of crime perpetrator					
Another neighborhood	0.499	0.006	0.926	0.487	0.512
In the neighborhood	0.501	0.006	0.926	0.489	0.513
Offense					
Murder	0.590	0.010	0.000	0.569	0.610
Pick-pocketing	0.309	0.011	0.000	0.288	0.330
Rape	0.727	0.015	0.000	0.698	0.757
Molestation	0.558	0.011	0.000	0.536	0.580
Car theft	0.349	0.016	0.000	0.319	0.380
Gender of crime victim					
Female	0.514	0.006	0.020	0.502	0.526
Male	0.486	0.006	0.020	0.474	0.498
Age of crime victim					
Teenager	0.518	0.012	0.124	0.495	0.540
Adult	0.472	0.009	0.003	0.454	0.491
Child	0.566	0.012	0.000	0.543	0.589
Elderly	0.463	0.010	0.000	0.444	0.482
Lynching perpetrators					
Family of the victim	0.515	0.012	0.191	0.492	0.538
Gangs	0.518	0.013	0.170	0.492	0.544
Bystanders	0.514	0.012	0.237	0.491	0.537
Police	0.454	0.012	0.000	0.430	0.477
Neighbors	0.501	0.012	0.950	0.478	0.524

```
mm_adult <- mm_by %>% filter(BY == "35-54")
```

```
table_mm_by(mm_adult, capt = "Marginal Means -- 35-54 Years Old")
```

Table 20: Marginal Means – 35-54 Years Old

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.432	0.007	0.000	0.418	0.446
Male	0.552	0.006	0.000	0.541	0.563
Age of crime perpetrator					
Teenager	0.496	0.009	0.685	0.478	0.514
Adult	0.510	0.008	0.221	0.494	0.526
Elderly	0.493	0.009	0.445	0.477	0.510
Race of crime perpetrator					
Asian	0.502	0.011	0.845	0.481	0.523
White	0.499	0.010	0.888	0.479	0.519
Indigenous	0.511	0.011	0.292	0.490	0.533
Black	0.488	0.011	0.268	0.467	0.509
Residency of crime perpetrator					
Another neighborhood	0.498	0.006	0.788	0.486	0.510
In the neighborhood	0.502	0.006	0.788	0.490	0.513
Offense					
Murder	0.594	0.011	0.000	0.572	0.616
Pick-pocketing	0.327	0.011	0.000	0.305	0.348
Rape	0.714	0.015	0.000	0.684	0.744
Molestation	0.553	0.011	0.000	0.531	0.574
Car theft	0.342	0.016	0.000	0.311	0.373
Gender of crime victim					
Female	0.504	0.006	0.520	0.492	0.516
Male	0.496	0.006	0.520	0.484	0.508
Age of crime victim					
Teenager	0.502	0.011	0.877	0.480	0.524
Adult	0.459	0.010	0.000	0.440	0.478
Child	0.568	0.012	0.000	0.544	0.593
Elderly	0.490	0.009	0.277	0.471	0.508
Lynching perpetrators					
Family of the victim	0.543	0.013	0.001	0.518	0.567
Gangs	0.493	0.012	0.560	0.468	0.517
Bystanders	0.513	0.012	0.277	0.489	0.538
Police	0.480	0.013	0.125	0.455	0.505
Neighbors	0.470	0.013	0.019	0.445	0.495

```
mm_senior <- mm_by %>% filter(BY == "55 plus")
```

```
table_mm_by(mm_senior, capt = "Marginal Means -- 55+ Years Old")
```

Table 21: Marginal Means – 55+ Years Old

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.437	0.007	0.000	0.423	0.451
Male	0.548	0.005	0.000	0.538	0.559
Age of crime perpetrator					
Teenager	0.489	0.009	0.221	0.473	0.506
Adult	0.528	0.008	0.001	0.511	0.544
Elderly	0.484	0.008	0.052	0.467	0.500
Race of crime perpetrator					
Asian	0.495	0.011	0.618	0.474	0.515
White	0.523	0.010	0.030	0.502	0.543
Indigenous	0.481	0.011	0.079	0.460	0.502
Black	0.501	0.010	0.892	0.481	0.522
Residency of crime perpetrator					
Another neighborhood	0.498	0.006	0.707	0.485	0.510
In the neighborhood	0.502	0.006	0.707	0.490	0.515
Offense					
Murder	0.638	0.011	0.000	0.617	0.659
Pick-pocketing	0.308	0.010	0.000	0.288	0.328
Rape	0.715	0.014	0.000	0.687	0.743
Molestation	0.505	0.011	0.673	0.484	0.526
Car theft	0.363	0.016	0.000	0.331	0.395
Gender of crime victim					
Female	0.515	0.006	0.013	0.503	0.527
Male	0.485	0.006	0.013	0.473	0.497
Age of crime victim					
Teenager	0.495	0.011	0.627	0.473	0.516
Adult	0.460	0.009	0.000	0.442	0.478
Child	0.577	0.011	0.000	0.555	0.599
Elderly	0.487	0.010	0.177	0.468	0.506
Lynching perpetrators					
Family of the victim	0.547	0.012	0.000	0.523	0.570
Gangs	0.495	0.013	0.690	0.470	0.520
Bystanders	0.488	0.012	0.303	0.465	0.511
Police	0.467	0.012	0.006	0.444	0.491
Neighbors	0.504	0.012	0.728	0.481	0.527

4.4.3 Race

Below are our results when we disaggregate the data by race. We find that they are almost identical in all dimensions except for offense. Asian respondents are much less likely to select profiles that contain pickpocketing as a crime.

```
# Model
```

```
cjdt <- full_join(conjoint_data, df1, by = "response_id") %>%
```

```
  drop_na(race) %>%
```

```
  filter(race == c("Asian", "Black", "Mixed Race", "White"))
```

```
cjdt$Race <- factor(cjdt$race)
```

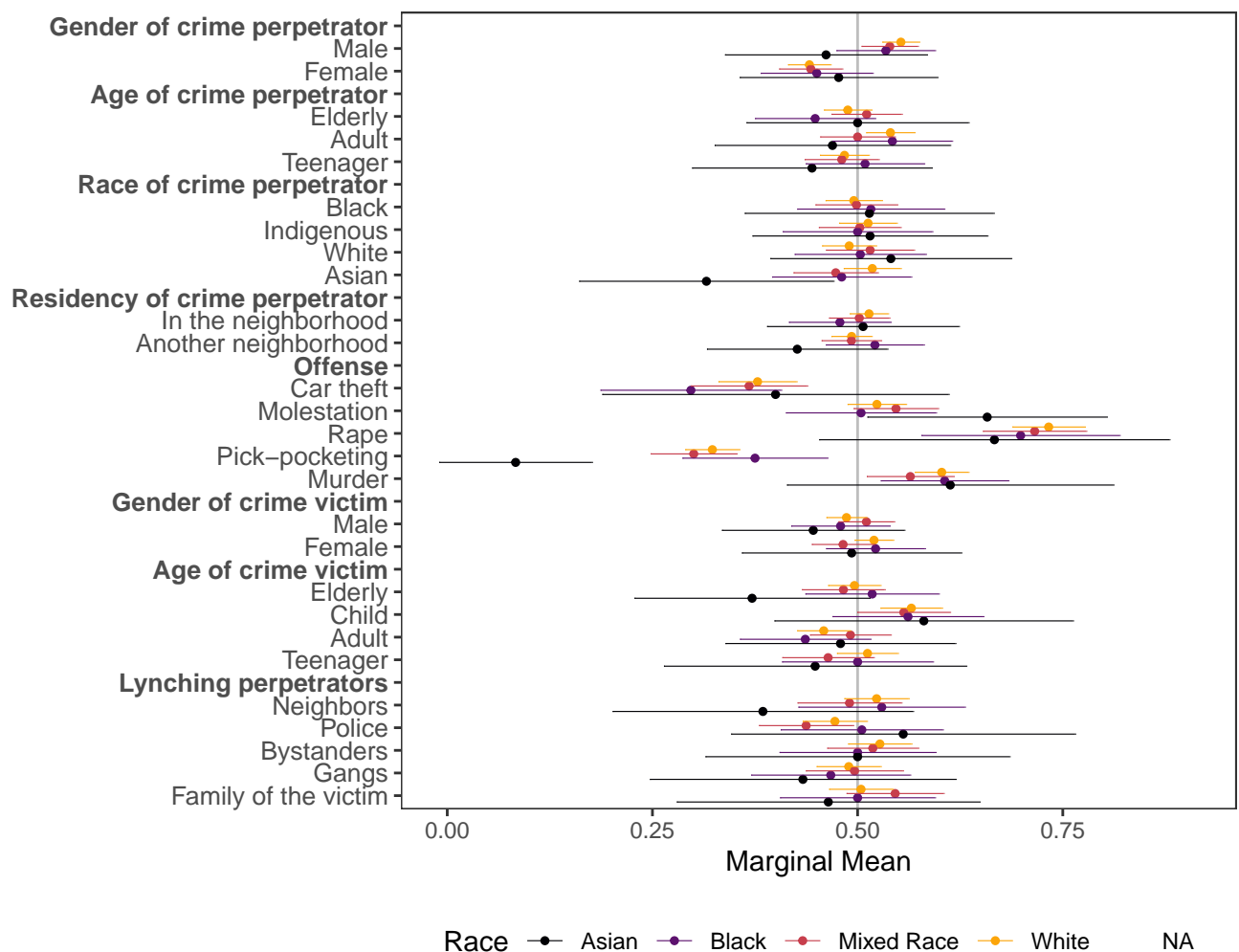
```
mm_by <- cj(cjdt, fm, id = ~response_id, estimate = "mm", h0 = 0.5, by = ~Race)
```

```
# Plot
```

```
plot(mm_by, group = "Race", vline = 0.5, header_fmt = "%s") +
```

```
  theme(legend.position = "bottom", axis.text.y = element_text(face = "bold", size = 10)) +
```

```
  scale_colour_viridis_d(option = "inferno", end = 0.8)
```



```
# Tables
```

```
mm_asian <- mm_by %>% filter(BY == "Asian")
table_mm_by(mm_asian, capt = "Marginal Means -- Asian")
```

Table 22: Marginal Means – Asian

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.477	0.061	0.707	0.356	0.597
Male	0.462	0.063	0.540	0.338	0.585
Age of crime perpetrator					
Teenager	0.444	0.075	0.456	0.298	0.591
Adult	0.469	0.073	0.676	0.326	0.613
Elderly	0.500	0.069	1.000	0.365	0.635
Race of crime perpetrator					
Asian	0.316	0.079	0.020	0.161	0.471
White	0.541	0.075	0.588	0.394	0.687
Indigenous	0.515	0.073	0.836	0.372	0.658
Black	0.514	0.077	0.854	0.363	0.666
Residency of crime perpetrator					
Another neighborhood	0.426	0.056	0.190	0.316	0.536
In the neighborhood	0.507	0.060	0.911	0.390	0.624
Offense					
Murder	0.613	0.101	0.266	0.414	0.812
Pick-pocketing	0.083	0.047	0.000	-0.010	0.176
Rape	0.667	0.109	0.126	0.453	0.880
Molestation	0.658	0.074	0.034	0.512	0.804
Car theft	0.400	0.108	0.353	0.189	0.611
Gender of crime victim					
Female	0.493	0.068	0.915	0.359	0.626
Male	0.446	0.057	0.341	0.335	0.557
Age of crime victim					
Teenager	0.448	0.094	0.582	0.264	0.633
Adult	0.479	0.071	0.771	0.339	0.619
Child	0.581	0.093	0.385	0.399	0.763
Elderly	0.371	0.073	0.079	0.228	0.515
Lynching perpetrators					
Family of the victim	0.464	0.094	0.704	0.280	0.649
Gangs	0.433	0.095	0.483	0.247	0.620
Bystanders	0.500	0.095	1.000	0.315	0.685
Police	0.556	0.107	0.603	0.346	0.765
Neighbors	0.385	0.093	0.217	0.202	0.568

```
mm_black <- mm_by %>% filter(BY == "Black")
table_mm_by(mm_black, capt = "Marginal Means -- Black")

mm_mixed <- mm_by %>% filter(BY == "Mixed Race")
table_mm_by(mm_mixed, capt = "Marginal Means -- Mixed Race")
```


Table 23: Marginal Means – Black

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.450	0.035	0.153	0.382	0.519
Male	0.534	0.031	0.261	0.474	0.595
Age of crime perpetrator					
Teenager	0.509	0.037	0.805	0.437	0.581
Adult	0.542	0.037	0.255	0.469	0.615
Elderly	0.448	0.037	0.166	0.375	0.521
Race of crime perpetrator					
Asian	0.481	0.043	0.654	0.396	0.565
White	0.503	0.041	0.935	0.423	0.583
Indigenous	0.500	0.046	1.000	0.409	0.591
Black	0.516	0.046	0.724	0.426	0.606
Residency of crime perpetrator					
Another neighborhood	0.521	0.030	0.489	0.461	0.581
In the neighborhood	0.478	0.032	0.496	0.416	0.540
Offense					
Murder	0.606	0.040	0.008	0.528	0.684
Pick-pocketing	0.375	0.045	0.006	0.287	0.463
Rape	0.699	0.062	0.001	0.578	0.819
Molestation	0.504	0.047	0.928	0.413	0.596
Car theft	0.297	0.056	0.000	0.187	0.407
Gender of crime victim					
Female	0.522	0.031	0.476	0.462	0.582
Male	0.479	0.031	0.498	0.419	0.539
Age of crime victim					
Teenager	0.500	0.047	1.000	0.408	0.592
Adult	0.436	0.041	0.116	0.357	0.516
Child	0.561	0.047	0.190	0.469	0.653
Elderly	0.518	0.041	0.669	0.436	0.599
Lynching perpetrators					
Family of the victim	0.500	0.048	1.000	0.406	0.594
Gangs	0.467	0.049	0.508	0.370	0.564
Bystanders	0.500	0.049	1.000	0.405	0.595
Police	0.505	0.050	0.919	0.406	0.604
Neighbors	0.529	0.052	0.570	0.428	0.631

```
mm_white <- mm_by %>% filter(BY == "White")
```

```
table_mm_by(mm_white, capt = "Marginal Means -- White")
```

Table 24: Marginal Means – Mixed Race

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.443	0.020	0.004	0.404	0.481
Male	0.539	0.018	0.025	0.505	0.574
Age of crime perpetrator					
Teenager	0.481	0.023	0.402	0.436	0.526
Adult	0.500	0.023	1.000	0.454	0.546
Elderly	0.511	0.022	0.613	0.468	0.554
Race of crime perpetrator					
Asian	0.473	0.026	0.310	0.422	0.525
White	0.515	0.027	0.578	0.462	0.569
Indigenous	0.503	0.025	0.916	0.453	0.553
Black	0.499	0.025	0.956	0.449	0.548
Residency of crime perpetrator					
Another neighborhood	0.492	0.019	0.685	0.456	0.529
In the neighborhood	0.502	0.019	0.913	0.465	0.539
Offense					
Murder	0.564	0.027	0.018	0.511	0.617
Pick-pocketing	0.300	0.027	0.000	0.248	0.353
Rape	0.716	0.032	0.000	0.653	0.779
Molestation	0.547	0.026	0.075	0.495	0.598
Car theft	0.368	0.036	0.000	0.297	0.439
Gender of crime victim					
Female	0.482	0.019	0.361	0.444	0.520
Male	0.511	0.017	0.536	0.477	0.545
Age of crime victim					
Teenager	0.464	0.028	0.206	0.408	0.520
Adult	0.491	0.025	0.729	0.442	0.541
Child	0.556	0.029	0.051	0.500	0.613
Elderly	0.483	0.026	0.501	0.432	0.533
Lynching perpetrators					
Family of the victim	0.546	0.030	0.130	0.487	0.605
Gangs	0.496	0.030	0.900	0.437	0.555
Bystanders	0.519	0.028	0.513	0.463	0.574
Police	0.437	0.029	0.032	0.380	0.495
Neighbors	0.490	0.032	0.762	0.427	0.554

Table 25: Marginal Means – White

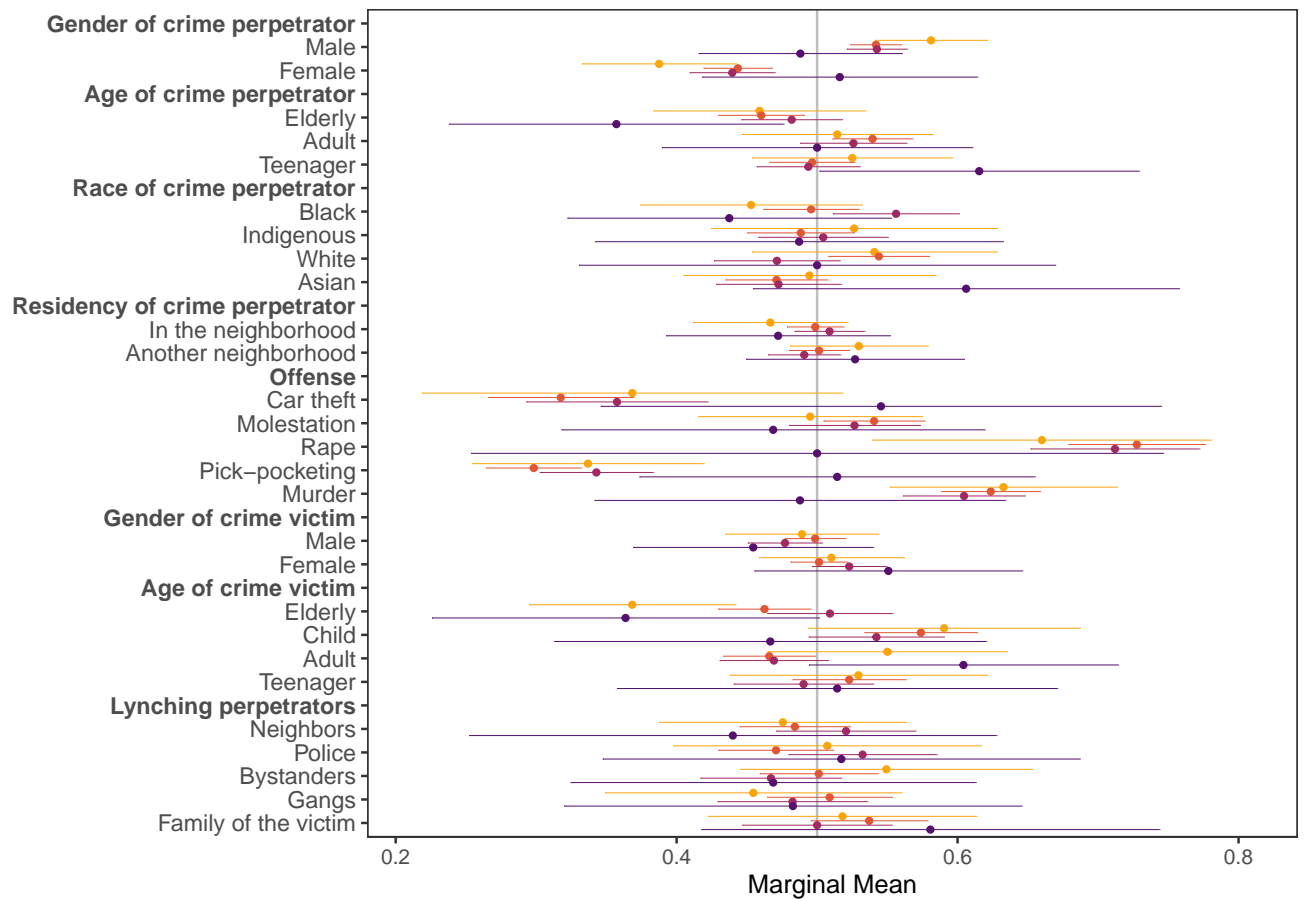
Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.441	0.013	0.000	0.415	0.467
Male	0.553	0.011	0.000	0.530	0.575
Age of crime perpetrator					
Teenager	0.484	0.015	0.292	0.454	0.514
Adult	0.540	0.015	0.008	0.511	0.569
Elderly	0.488	0.015	0.419	0.459	0.517
Race of crime perpetrator					
Asian	0.518	0.018	0.312	0.483	0.553
White	0.490	0.017	0.541	0.457	0.523
Indigenous	0.513	0.018	0.479	0.478	0.548
Black	0.495	0.018	0.793	0.461	0.530
Residency of crime perpetrator					
Another neighborhood	0.493	0.013	0.561	0.468	0.517
In the neighborhood	0.514	0.012	0.242	0.491	0.537
Offense					
Murder	0.602	0.017	0.000	0.570	0.635
Pick-pocketing	0.323	0.017	0.000	0.290	0.356
Rape	0.733	0.023	0.000	0.689	0.777
Molestation	0.523	0.018	0.197	0.488	0.559
Car theft	0.378	0.024	0.000	0.330	0.426
Gender of crime victim					
Female	0.520	0.012	0.097	0.496	0.544
Male	0.486	0.012	0.274	0.462	0.511
Age of crime victim					
Teenager	0.512	0.019	0.525	0.475	0.549
Adult	0.459	0.016	0.012	0.426	0.491
Child	0.565	0.019	0.001	0.528	0.603
Elderly	0.496	0.016	0.812	0.464	0.528
Lynching perpetrators					
Family of the victim	0.504	0.020	0.833	0.465	0.543
Gangs	0.489	0.020	0.589	0.450	0.528
Bystanders	0.527	0.020	0.168	0.489	0.566
Police	0.472	0.020	0.166	0.433	0.512
Neighbors	0.523	0.020	0.248	0.484	0.562

4.4.4 Education

Next, we divide our data according to respondents' level of education. As the number of interviewees with primary or secondary education is low, we merge them into a single category, while the other levels (high school, college, and graduate school) remain the same as in our questionnaire.

```
# Model
cjdt <- full_join(conjoint_data, df1, by = "response_id") %>%
  drop_na(education) %>%
  filter(education == c("College", "Graduate School",
                        "Primary School", "Secondary School",
                        "High School")) %>%
  mutate(education2 = case_when(education == "Primary School" ~ "Primary or Secondary School",
                                education == "Secondary School" ~ "Primary or Secondary School",
                                TRUE ~ as.character(education)),
         education2 = fct_relevel(education2, "Primary or Secondary School",
                                   "High School", "College", "Graduate School"))
cjdt$Education <- factor(cjdt$education2)
mm_by <- cj(cjdt, fm, id = ~response_id, estimate = "mm", h0 = 0.5, by = ~Education)

# Plot
plot(mm_by, group = "Education", vline = 0.5, header_fmt = "%s") +
  theme(legend.position = "bottom", axis.text.y = element_text(face = "bold", size = 10)) +
  scale_colour_viridis_d(option = "inferno", end = 0.8, begin = 0.25)
```



Education — Primary or Secondary School — High School — College — Graduate School

Tables

```
mm_pri_sec <- mm_by %>% filter(BY == "Primary or Secondary School")
table_mm_by(mm_pri_sec, capt = "Marginal Means -- Primary or Secondary School Degree")

mm_high <- mm_by %>% filter(BY == "High School")
table_mm_by(mm_high, capt = "Marginal Means -- High School Degree")

mm_college <- mm_by %>% filter(BY == "College")
table_mm_by(mm_college, capt = "Marginal Means -- College Degree")

mm_grad <- mm_by %>% filter(BY == "Graduate School")
table_mm_by(mm_grad, capt = "Marginal Means -- Graduate School Degree")
```

Table 26: Marginal Means – Primary or Secondary School Degree

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.516	0.050	0.747	0.418	0.614
Male	0.488	0.037	0.747	0.416	0.560
Age of crime perpetrator					
Teenager	0.615	0.058	0.047	0.502	0.729
Adult	0.500	0.056	1.000	0.390	0.610
Elderly	0.357	0.061	0.019	0.238	0.476
Race of crime perpetrator					
Asian	0.606	0.077	0.170	0.454	0.758
White	0.500	0.086	1.000	0.331	0.669
Indigenous	0.487	0.074	0.862	0.342	0.632
Black	0.437	0.059	0.288	0.322	0.553
Residency of crime perpetrator					
Another neighborhood	0.527	0.040	0.494	0.450	0.605
In the neighborhood	0.472	0.041	0.494	0.393	0.552
Offense					
Murder	0.488	0.075	0.870	0.342	0.634
Pick-pocketing	0.514	0.072	0.842	0.374	0.655
Rape	0.500	0.126	1.000	0.254	0.746
Molestation	0.469	0.077	0.684	0.318	0.619
Car theft	0.545	0.102	0.655	0.346	0.745
Gender of crime victim					
Female	0.551	0.049	0.297	0.455	0.646
Male	0.455	0.044	0.297	0.369	0.540
Age of crime victim					
Teenager	0.514	0.080	0.858	0.358	0.671
Adult	0.604	0.056	0.063	0.494	0.714
Child	0.467	0.078	0.671	0.313	0.620
Elderly	0.364	0.070	0.052	0.226	0.501
Lynching perpetrators					
Family of the victim	0.581	0.083	0.332	0.418	0.744
Gangs	0.483	0.083	0.836	0.320	0.646
Bystanders	0.469	0.074	0.671	0.325	0.613
Police	0.517	0.087	0.842	0.347	0.687
Neighbors	0.440	0.096	0.531	0.252	0.628

Table 27: Marginal Means – High School Degree

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.440	0.015	0.000	0.409	0.470
Male	0.543	0.011	0.000	0.521	0.564
Age of crime perpetrator					
Teenager	0.494	0.019	0.738	0.457	0.530
Adult	0.526	0.019	0.181	0.488	0.564
Elderly	0.482	0.018	0.322	0.446	0.518
Race of crime perpetrator					
Asian	0.473	0.023	0.225	0.428	0.517
White	0.471	0.023	0.210	0.427	0.516
Indigenous	0.504	0.023	0.854	0.458	0.550
Black	0.556	0.023	0.014	0.511	0.601
Residency of crime perpetrator					
Another neighborhood	0.491	0.013	0.484	0.465	0.517
In the neighborhood	0.509	0.013	0.484	0.484	0.534
Offense					
Murder	0.605	0.022	0.000	0.561	0.648
Pick-pocketing	0.343	0.021	0.000	0.303	0.383
Rape	0.712	0.031	0.000	0.652	0.772
Molestation	0.527	0.024	0.262	0.480	0.573
Car theft	0.358	0.033	0.000	0.293	0.422
Gender of crime victim					
Female	0.523	0.013	0.090	0.496	0.549
Male	0.477	0.013	0.090	0.451	0.504
Age of crime victim					
Teenager	0.490	0.025	0.704	0.441	0.540
Adult	0.469	0.020	0.118	0.431	0.508
Child	0.542	0.025	0.086	0.494	0.590
Elderly	0.509	0.023	0.688	0.465	0.554
Lynching perpetrators					
Family of the victim	0.500	0.027	1.000	0.447	0.553
Gangs	0.483	0.027	0.520	0.429	0.536
Bystanders	0.467	0.026	0.198	0.417	0.517
Police	0.532	0.027	0.228	0.480	0.585
Neighbors	0.521	0.025	0.416	0.471	0.570

Table 28: Marginal Means – College Degree

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.444	0.012	0.000	0.419	0.468
Male	0.542	0.009	0.000	0.524	0.560
Age of crime perpetrator					
Teenager	0.496	0.015	0.819	0.466	0.527
Adult	0.539	0.014	0.006	0.511	0.568
Elderly	0.460	0.016	0.010	0.430	0.491
Race of crime perpetrator					
Asian	0.471	0.019	0.119	0.435	0.507
White	0.544	0.018	0.016	0.508	0.580
Indigenous	0.488	0.019	0.549	0.450	0.526
Black	0.496	0.017	0.805	0.462	0.530
Residency of crime perpetrator					
Another neighborhood	0.501	0.011	0.897	0.480	0.523
In the neighborhood	0.499	0.010	0.897	0.479	0.519
Offense					
Murder	0.624	0.018	0.000	0.588	0.659
Pick-pocketing	0.298	0.017	0.000	0.264	0.332
Rape	0.728	0.025	0.000	0.679	0.776
Molestation	0.541	0.018	0.027	0.505	0.576
Car theft	0.318	0.026	0.000	0.266	0.369
Gender of crime victim					
Female	0.501	0.010	0.897	0.481	0.521
Male	0.499	0.011	0.897	0.477	0.520
Age of crime victim					
Teenager	0.523	0.021	0.265	0.483	0.563
Adult	0.466	0.017	0.041	0.433	0.499
Child	0.574	0.020	0.000	0.534	0.614
Elderly	0.463	0.017	0.026	0.430	0.495
Lynching perpetrators					
Family of the victim	0.537	0.021	0.080	0.496	0.579
Gangs	0.509	0.023	0.694	0.464	0.553
Bystanders	0.501	0.021	0.957	0.459	0.543
Police	0.471	0.021	0.160	0.430	0.512
Neighbors	0.484	0.020	0.427	0.445	0.523

Table 29: Marginal Means – Graduate School Degree

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.387	0.028	0.000	0.333	0.442
Male	0.581	0.020	0.000	0.541	0.621
Age of crime perpetrator					
Teenager	0.525	0.036	0.492	0.454	0.596
Adult	0.514	0.035	0.681	0.446	0.582
Elderly	0.459	0.038	0.286	0.384	0.534
Race of crime perpetrator					
Asian	0.495	0.046	0.904	0.405	0.584
White	0.541	0.044	0.358	0.454	0.628
Indigenous	0.526	0.052	0.612	0.425	0.628
Black	0.453	0.040	0.243	0.374	0.532
Residency of crime perpetrator					
Another neighborhood	0.530	0.025	0.235	0.481	0.579
In the neighborhood	0.467	0.028	0.235	0.412	0.522
Offense					
Murder	0.633	0.041	0.001	0.552	0.714
Pick-pocketing	0.337	0.042	0.000	0.254	0.419
Rape	0.660	0.062	0.009	0.539	0.781
Molestation	0.495	0.041	0.903	0.415	0.575
Car theft	0.368	0.076	0.085	0.219	0.518
Gender of crime victim					
Female	0.510	0.026	0.698	0.459	0.562
Male	0.489	0.028	0.698	0.435	0.544
Age of crime victim					
Teenager	0.529	0.047	0.529	0.438	0.621
Adult	0.550	0.043	0.250	0.465	0.635
Child	0.590	0.049	0.067	0.494	0.687
Elderly	0.368	0.037	0.000	0.295	0.442
Lynching perpetrators					
Family of the victim	0.518	0.049	0.710	0.423	0.613
Gangs	0.455	0.054	0.399	0.349	0.560
Bystanders	0.549	0.053	0.353	0.445	0.653
Police	0.507	0.056	0.897	0.398	0.617
Neighbors	0.476	0.045	0.587	0.388	0.564

4.4.5 Household Income

We also disaggregate the results by monthly household income. As some categories have few respondents, we group them into three categories: (i) up to R\$3,000 (US\$550); (ii) from R\$3,001 to R\$5,000 (US\$550-915); and (iii) above R\$5,000 (US\$915+). The levels roughly represent low, middle, and high-income households. We find no considerable differences among them.

```
# Model

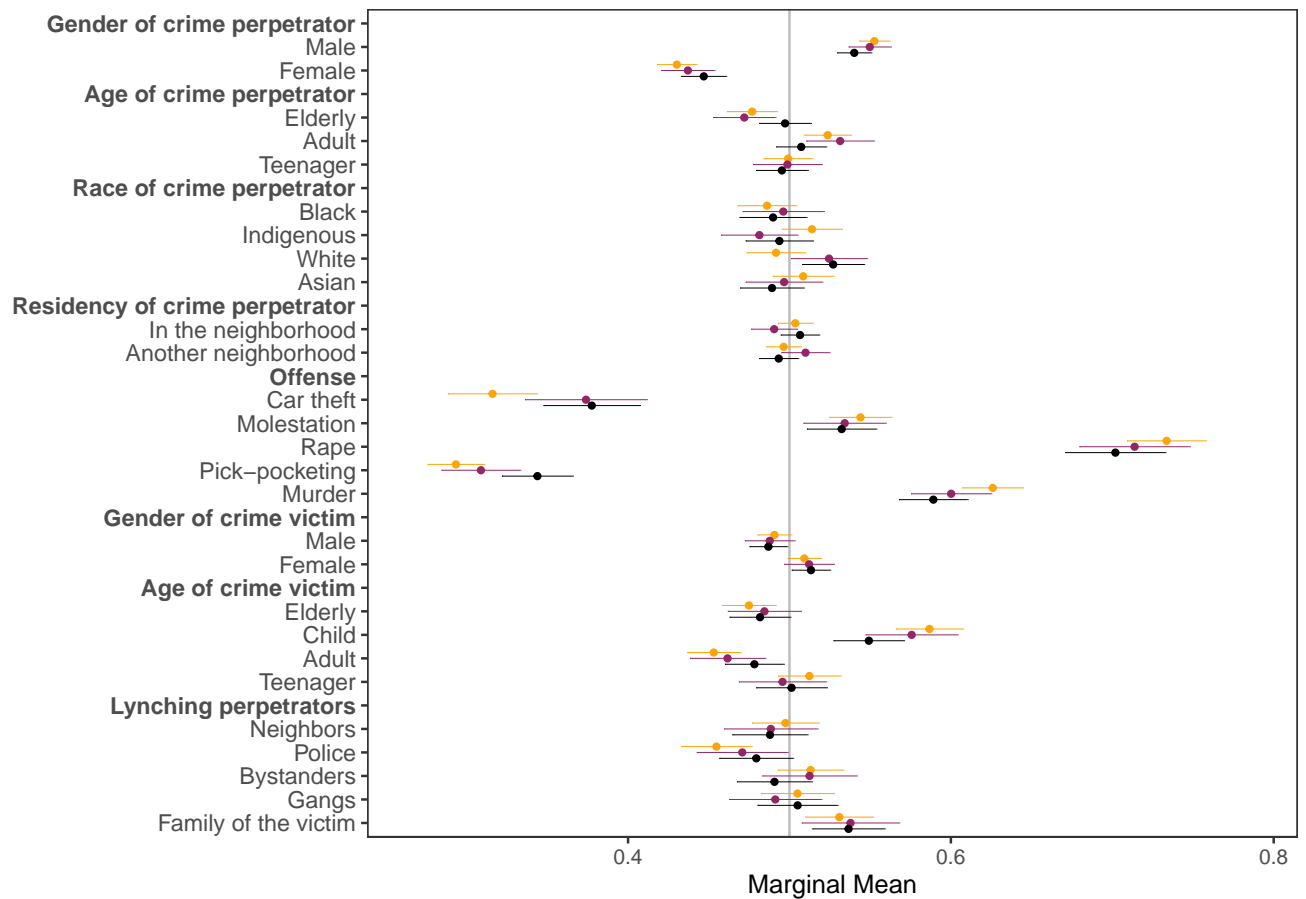
cjdt <- full_join(conjoint_data, df1, by = "response_id") %>%
  drop_na(household_income) %>%
  mutate(household_income2 = case_when(household_income == "Up to R$1,000" ~ "Up to R$3,000",
                                       household_income == "From R$1,001 to R$2,000" ~ "Up to R$3,000",
                                       household_income == "From R$2,001 to R$3,000" ~ "Up to R$3,000",
                                       household_income == "From R$3,001 to R$5,000" ~ "From R$3,001 to R$5,000",
                                       household_income == "From R$5,001 to R$10,000" ~ "Above R$5,000",
                                       household_income == "From R$10,001 to R$20,000" ~ "Above R$5,000",
                                       household_income == "Above R$20,000" ~ "Above R$5,000",
                                       TRUE ~ NA_character_),
         household_income2 = fct_relevel(household_income2, "Up to R$3,000", "From R$3,001 to R$5,000",
                                       "Above R$5,000"))

cjdt$Income <- factor(cjdt$household_income2)

mm_by <- cj(cjdt, fm, id = ~response_id, estimate = "mm", h0 = 0.5, by = ~Income)

# Plot

plot(mm_by, group = "Income", vline = 0.5, header_fmt = "%S") +
  theme(legend.position = "bottom", axis.text.y = element_text(face = "bold", size = 10)) +
  scale_colour_viridis_d(option = "inferno", end = 0.8)
```



Income —●— Up to R\$3,000 —●— From R\$3,001 to R\$5,000 —●— Above R\$5,000 NA

Tables

```
mm_3k <- mm_by %>% filter(BY == "Up to R$3,000")
```

```
table_mm_by(mm_3k, capt = "Marginal Means -- Up to 3,000 BRL")
```

```
mm_5k <- mm_by %>% filter(BY == "From R$3,001 to R$5,000")
```

```
table_mm_by(mm_5k, capt = "Marginal Means -- From 3,001 to 5,000 BRL")
```

```
mm_abv5k <- mm_by %>% filter(BY == "Above R$5,000")
```

```
table_mm_by(mm_abv5k, capt = "Marginal Means -- Above 5,000 BRL")
```

Table 30: Marginal Means – Up to 3,000 BRL

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.447	0.007	0.000	0.433	0.461
Male	0.540	0.005	0.000	0.530	0.551
Age of crime perpetrator					
Teenager	0.495	0.008	0.567	0.479	0.511
Adult	0.507	0.008	0.356	0.492	0.523
Elderly	0.497	0.008	0.738	0.481	0.513
Race of crime perpetrator					
Asian	0.489	0.010	0.282	0.469	0.509
White	0.527	0.010	0.006	0.508	0.546
Indigenous	0.494	0.011	0.558	0.473	0.515
Black	0.490	0.011	0.337	0.469	0.511
Residency of crime perpetrator					
Another neighborhood	0.493	0.006	0.281	0.481	0.505
In the neighborhood	0.507	0.006	0.282	0.495	0.518
Offense					
Murder	0.589	0.011	0.000	0.568	0.610
Pick-pocketing	0.344	0.011	0.000	0.322	0.366
Rape	0.702	0.016	0.000	0.671	0.733
Molestation	0.532	0.011	0.003	0.511	0.554
Car theft	0.378	0.015	0.000	0.348	0.407
Gender of crime victim					
Female	0.513	0.006	0.028	0.501	0.525
Male	0.487	0.006	0.029	0.475	0.499
Age of crime victim					
Teenager	0.501	0.011	0.907	0.479	0.523
Adult	0.478	0.009	0.019	0.460	0.496
Child	0.549	0.011	0.000	0.527	0.571
Elderly	0.482	0.010	0.057	0.463	0.501
Lynching perpetrators					
Family of the victim	0.537	0.011	0.001	0.514	0.559
Gangs	0.505	0.013	0.689	0.480	0.530
Bystanders	0.491	0.012	0.432	0.468	0.514
Police	0.479	0.012	0.078	0.457	0.502
Neighbors	0.488	0.012	0.309	0.465	0.511

Table 31: Marginal Means – From 3,001 to 5,000 BRL

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.437	0.008	0.000	0.421	0.454
Male	0.550	0.007	0.000	0.537	0.563
Age of crime perpetrator					
Teenager	0.499	0.011	0.907	0.477	0.520
Adult	0.531	0.011	0.003	0.511	0.552
Elderly	0.472	0.010	0.004	0.453	0.491
Race of crime perpetrator					
Asian	0.497	0.012	0.783	0.473	0.520
White	0.525	0.012	0.041	0.501	0.548
Indigenous	0.481	0.012	0.123	0.458	0.505
Black	0.496	0.013	0.764	0.471	0.521
Residency of crime perpetrator					
Another neighborhood	0.510	0.008	0.191	0.495	0.525
In the neighborhood	0.491	0.007	0.191	0.476	0.505
Offense					
Murder	0.600	0.013	0.000	0.575	0.625
Pick-pocketing	0.309	0.012	0.000	0.284	0.333
Rape	0.714	0.017	0.000	0.680	0.748
Molestation	0.534	0.013	0.008	0.509	0.560
Car theft	0.374	0.019	0.000	0.336	0.412
Gender of crime victim					
Female	0.512	0.008	0.121	0.497	0.528
Male	0.488	0.008	0.121	0.472	0.503
Age of crime victim					
Teenager	0.496	0.014	0.756	0.469	0.523
Adult	0.462	0.012	0.001	0.438	0.485
Child	0.576	0.015	0.000	0.547	0.604
Elderly	0.484	0.012	0.179	0.462	0.507
Lynching perpetrators					
Family of the victim	0.538	0.015	0.014	0.508	0.568
Gangs	0.491	0.015	0.547	0.463	0.520
Bystanders	0.512	0.015	0.404	0.483	0.542
Police	0.471	0.014	0.042	0.443	0.499
Neighbors	0.488	0.015	0.435	0.460	0.517

Table 32: Marginal Means – Above 5,000 BRL

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.430	0.006	0.000	0.418	0.442
Male	0.553	0.005	0.000	0.543	0.562
Age of crime perpetrator					
Teenager	0.499	0.008	0.912	0.484	0.514
Adult	0.524	0.007	0.001	0.509	0.538
Elderly	0.477	0.008	0.004	0.461	0.492
Race of crime perpetrator					
Asian	0.509	0.010	0.377	0.490	0.527
White	0.492	0.009	0.369	0.473	0.510
Indigenous	0.514	0.009	0.142	0.495	0.533
Black	0.486	0.009	0.134	0.468	0.504
Residency of crime perpetrator					
Another neighborhood	0.496	0.005	0.512	0.486	0.507
In the neighborhood	0.504	0.006	0.512	0.493	0.514
Offense					
Murder	0.626	0.010	0.000	0.607	0.645
Pick-pocketing	0.293	0.009	0.000	0.276	0.311
Rape	0.734	0.013	0.000	0.709	0.758
Molestation	0.544	0.010	0.000	0.525	0.563
Car theft	0.316	0.014	0.000	0.288	0.344
Gender of crime victim					
Female	0.509	0.005	0.081	0.499	0.520
Male	0.491	0.005	0.081	0.480	0.501
Age of crime victim					
Teenager	0.512	0.010	0.213	0.493	0.532
Adult	0.453	0.008	0.000	0.437	0.470
Child	0.587	0.011	0.000	0.566	0.607
Elderly	0.475	0.008	0.003	0.458	0.491
Lynching perpetrators					
Family of the victim	0.531	0.011	0.004	0.510	0.552
Gangs	0.505	0.012	0.667	0.482	0.528
Bystanders	0.513	0.010	0.205	0.493	0.533
Police	0.455	0.011	0.000	0.433	0.477
Neighbors	0.498	0.011	0.813	0.477	0.518

4.4.6 Political Ideology

Here we disaggregate the results according to political ideology. We see that political views do not change the overall responses.

```
# Model

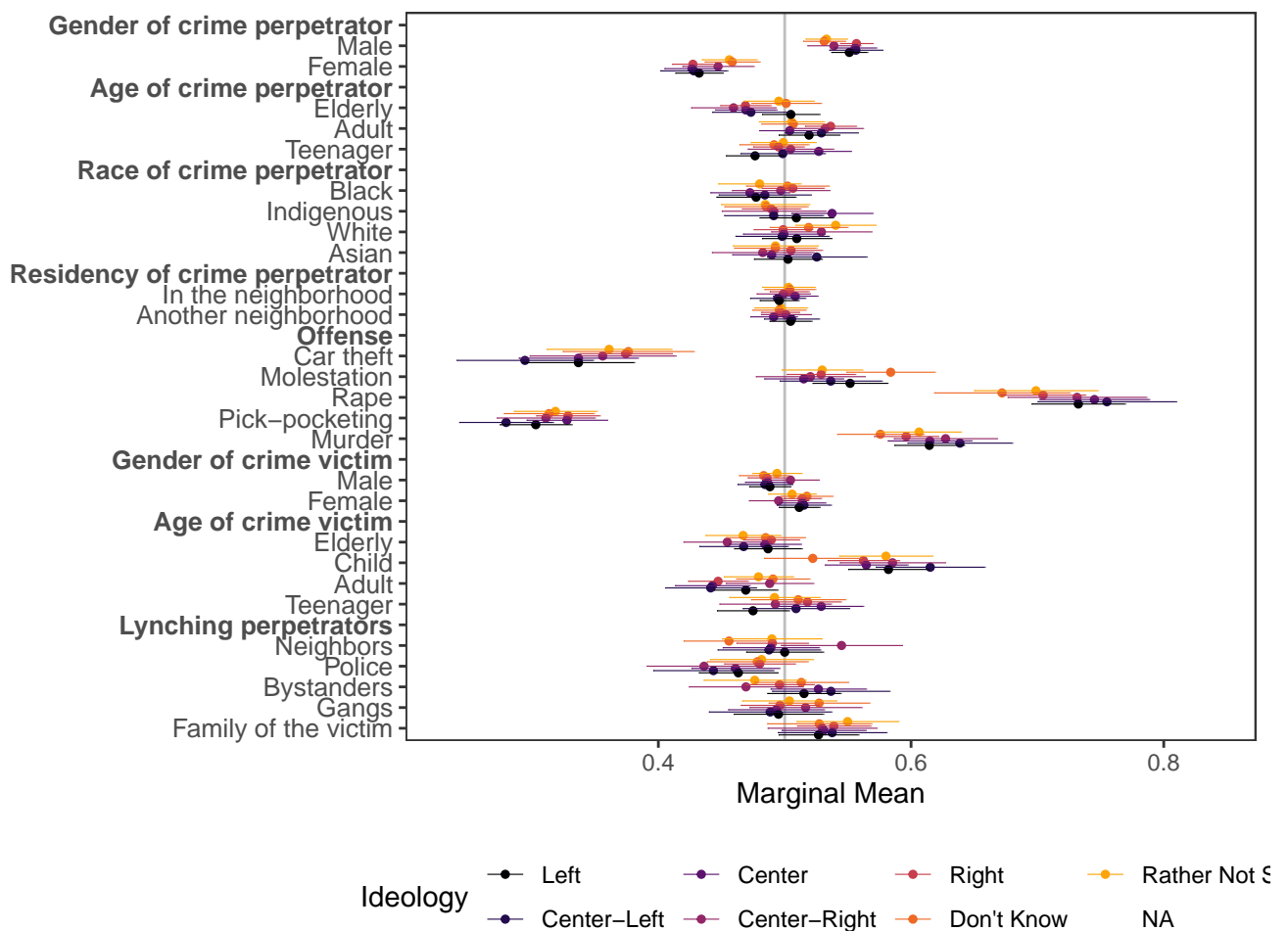
cjdt <- full_join(conjoint_data, df1, by = "response_id") %>%
  drop_na(ideology)

cjdt$Ideology <- factor(cjdt$ideology)

mm_by <- cj(cjdt, fm, id = ~response_id, estimate = "mm", h0 = 0.5, by =
  ~Ideology)
```

```
# Plot

plot(mm_by, group = "Ideology", vline = 0.5, header_fmt = "%s") +
  theme(legend.position = "bottom", axis.text.y = element_text(face = "bold", size = 10)) +
  scale_colour_viridis_d(option = "inferno", end = 0.8)
```



```
# Tables

mm_left <- mm_by %>% filter(BY == "Left")

table_mm_by(mm_left, capt = "Marginal Means -- Left")
```

Table 33: Marginal Means – Left

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.432	0.010	0.000	0.413	0.451
Male	0.551	0.007	0.000	0.537	0.565
Age of crime perpetrator					
Teenager	0.477	0.012	0.045	0.454	0.500
Adult	0.519	0.012	0.116	0.495	0.543
Elderly	0.505	0.012	0.676	0.482	0.528
Race of crime perpetrator					
Asian	0.503	0.014	0.850	0.476	0.529
White	0.510	0.014	0.497	0.482	0.537
Indigenous	0.509	0.015	0.534	0.480	0.538
Black	0.477	0.016	0.156	0.446	0.509
Residency of crime perpetrator					
Another neighborhood	0.505	0.008	0.582	0.488	0.521
In the neighborhood	0.496	0.008	0.582	0.480	0.511
Offense					
Murder	0.614	0.014	0.000	0.587	0.642
Pick-pocketing	0.303	0.014	0.000	0.275	0.331
Rape	0.732	0.019	0.000	0.695	0.769
Molestation	0.552	0.015	0.001	0.522	0.581
Car theft	0.337	0.023	0.000	0.293	0.381
Gender of crime victim					
Female	0.512	0.008	0.160	0.495	0.528
Male	0.488	0.008	0.159	0.472	0.505
Age of crime victim					
Teenager	0.475	0.015	0.085	0.446	0.503
Adult	0.469	0.013	0.016	0.444	0.494
Child	0.582	0.016	0.000	0.550	0.614
Elderly	0.487	0.014	0.333	0.460	0.514
Lynching perpetrators					
Family of the victim	0.527	0.016	0.097	0.495	0.558
Gangs	0.495	0.018	0.786	0.460	0.531
Bystanders	0.515	0.015	0.301	0.486	0.544
Police	0.463	0.016	0.021	0.432	0.494
Neighbors	0.500	0.016	1.000	0.470	0.530

```
mm_center_left <- mm_by %>% filter(BY == "Center-Left")
```

```
table_mm_by(mm_center_left, capt = "Marginal Means -- Center-Left")
```

```
mm_center <- mm_by %>% filter(BY == "Center")
```

```
table_mm_by(mm_center, capt = "Marginal Means -- Center")
```

```
mm_center_right <- mm_by %>% filter(BY == "Center-Right")
```

```
table_mm_by(mm_center_right, capt = "Marginal Means -- Center-Right")
```


Table 34: Marginal Means – Center-Left

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.428	0.014	0.000	0.402	0.455
Male	0.556	0.011	0.000	0.535	0.577
Age of crime perpetrator					
Teenager	0.498	0.017	0.928	0.465	0.532
Adult	0.529	0.015	0.049	0.500	0.558
Elderly	0.473	0.016	0.087	0.443	0.504
Race of crime perpetrator					
Asian	0.525	0.020	0.207	0.486	0.565
White	0.498	0.019	0.916	0.461	0.535
Indigenous	0.491	0.020	0.663	0.452	0.530
Black	0.484	0.019	0.398	0.448	0.521
Residency of crime perpetrator					
Another neighborhood	0.505	0.011	0.623	0.484	0.527
In the neighborhood	0.495	0.011	0.623	0.473	0.516
Offense					
Murder	0.639	0.021	0.000	0.597	0.680
Pick-pocketing	0.280	0.019	0.000	0.242	0.317
Rape	0.755	0.028	0.000	0.700	0.810
Molestation	0.536	0.021	0.077	0.496	0.577
Car theft	0.294	0.028	0.000	0.240	0.348
Gender of crime victim					
Female	0.515	0.011	0.163	0.494	0.537
Male	0.484	0.011	0.159	0.463	0.506
Age of crime victim					
Teenager	0.509	0.021	0.677	0.467	0.551
Adult	0.441	0.018	0.001	0.405	0.477
Child	0.615	0.022	0.000	0.572	0.658
Elderly	0.468	0.018	0.069	0.432	0.503
Lynching perpetrators					
Family of the victim	0.538	0.022	0.088	0.494	0.581
Gangs	0.488	0.025	0.641	0.440	0.537
Bystanders	0.537	0.024	0.123	0.490	0.583
Police	0.444	0.024	0.020	0.396	0.491
Neighbors	0.488	0.021	0.548	0.447	0.528

```
mm_right <- mm_by %>% filter(BY == "Right")
```

```
table_mm_by(mm_right, capt = "Marginal Means -- Right")
```

```
mm_dont_know <- mm_by %>% filter(BY == "Don't Know")
```

```
table_mm_by(mm_dont_know, capt = "Marginal Means -- Don't Know")
```

```
mm_not_say <- mm_by %>% filter(BY == "Rather Not Say")
```

```
table_mm_by(mm_not_say, capt = "Marginal Means -- Rather Not Say")
```

Table 35: Marginal Means – Center

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.427	0.011	0.000	0.405	0.448
Male	0.556	0.009	0.000	0.539	0.573
Age of crime perpetrator					
Teenager	0.527	0.013	0.038	0.501	0.553
Adult	0.504	0.012	0.748	0.480	0.528
Elderly	0.469	0.012	0.013	0.445	0.494
Race of crime perpetrator					
Asian	0.490	0.016	0.518	0.459	0.521
White	0.499	0.016	0.968	0.467	0.532
Indigenous	0.537	0.016	0.022	0.505	0.570
Black	0.472	0.016	0.085	0.441	0.504
Residency of crime perpetrator					
Another neighborhood	0.491	0.009	0.356	0.473	0.510
In the neighborhood	0.508	0.009	0.358	0.491	0.526
Offense					
Murder	0.615	0.017	0.000	0.582	0.648
Pick-pocketing	0.328	0.016	0.000	0.296	0.360
Rape	0.745	0.022	0.000	0.702	0.789
Molestation	0.515	0.016	0.344	0.484	0.546
Car theft	0.337	0.024	0.000	0.290	0.384
Gender of crime victim					
Female	0.514	0.009	0.137	0.496	0.532
Male	0.486	0.009	0.137	0.469	0.504
Age of crime victim					
Teenager	0.529	0.017	0.089	0.496	0.562
Adult	0.443	0.015	0.000	0.413	0.472
Child	0.565	0.017	0.000	0.532	0.597
Elderly	0.484	0.015	0.283	0.456	0.513
Lynching perpetrators					
Family of the victim	0.531	0.017	0.068	0.498	0.564
Gangs	0.493	0.019	0.727	0.455	0.531
Bystanders	0.527	0.019	0.167	0.489	0.564
Police	0.461	0.018	0.028	0.426	0.496
Neighbors	0.489	0.019	0.574	0.451	0.527

Table 36: Marginal Means – Center-Right

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.447	0.014	0.000	0.419	0.476
Male	0.539	0.011	0.000	0.518	0.560
Age of crime perpetrator					
Teenager	0.505	0.017	0.787	0.471	0.538
Adult	0.532	0.015	0.037	0.502	0.562
Elderly	0.460	0.017	0.018	0.426	0.493
Race of crime perpetrator					
Asian	0.483	0.021	0.397	0.442	0.523
White	0.529	0.020	0.152	0.489	0.569
Indigenous	0.491	0.021	0.682	0.450	0.533
Black	0.497	0.020	0.875	0.458	0.535
Residency of crime perpetrator					
Another neighborhood	0.501	0.010	0.920	0.481	0.521
In the neighborhood	0.499	0.011	0.920	0.478	0.520
Offense					
Murder	0.627	0.021	0.000	0.586	0.668
Pick-pocketing	0.311	0.020	0.000	0.272	0.350
Rape	0.731	0.028	0.000	0.676	0.786
Molestation	0.520	0.022	0.355	0.477	0.563
Car theft	0.356	0.029	0.000	0.298	0.414
Gender of crime victim					
Female	0.495	0.012	0.689	0.472	0.519
Male	0.505	0.011	0.689	0.482	0.527
Age of crime victim					
Teenager	0.493	0.023	0.740	0.448	0.537
Adult	0.488	0.018	0.501	0.453	0.523
Child	0.585	0.021	0.000	0.544	0.627
Elderly	0.455	0.018	0.010	0.420	0.489
Lynching perpetrators					
Family of the victim	0.530	0.022	0.178	0.487	0.573
Gangs	0.517	0.023	0.465	0.472	0.561
Bystanders	0.469	0.023	0.183	0.424	0.514
Police	0.436	0.023	0.006	0.391	0.482
Neighbors	0.545	0.024	0.066	0.497	0.593

Table 37: Marginal Means – Right

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.427	0.008	0.000	0.411	0.444
Male	0.557	0.007	0.000	0.544	0.570
Age of crime perpetrator					
Teenager	0.495	0.010	0.635	0.475	0.515
Adult	0.536	0.010	0.000	0.516	0.557
Elderly	0.469	0.010	0.002	0.449	0.489
Race of crime perpetrator					
Asian	0.505	0.013	0.692	0.480	0.530
White	0.499	0.012	0.914	0.476	0.522
Indigenous	0.489	0.012	0.371	0.466	0.513
Black	0.506	0.013	0.607	0.482	0.531
Residency of crime perpetrator					
Another neighborhood	0.497	0.008	0.648	0.482	0.512
In the neighborhood	0.504	0.008	0.648	0.488	0.519
Offense					
Murder	0.596	0.013	0.000	0.571	0.622
Pick-pocketing	0.329	0.013	0.000	0.303	0.354
Rape	0.705	0.017	0.000	0.671	0.738
Molestation	0.529	0.014	0.037	0.502	0.556
Car theft	0.374	0.019	0.000	0.338	0.411
Gender of crime victim					
Female	0.514	0.008	0.068	0.499	0.529
Male	0.486	0.008	0.069	0.471	0.501
Age of crime victim					
Teenager	0.518	0.014	0.182	0.492	0.544
Adult	0.447	0.012	0.000	0.424	0.471
Child	0.562	0.014	0.000	0.534	0.591
Elderly	0.489	0.011	0.349	0.467	0.512
Lynching perpetrators					
Family of the victim	0.539	0.015	0.009	0.510	0.568
Gangs	0.496	0.016	0.809	0.465	0.527
Bystanders	0.496	0.014	0.770	0.469	0.523
Police	0.480	0.014	0.167	0.452	0.508
Neighbors	0.490	0.014	0.498	0.462	0.519

Table 38: Marginal Means – Don't Know

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.458	0.011	0.000	0.437	0.480
Male	0.531	0.008	0.000	0.515	0.548
Age of crime perpetrator					
Teenager	0.492	0.014	0.546	0.464	0.519
Adult	0.507	0.013	0.596	0.482	0.532
Elderly	0.501	0.014	0.935	0.473	0.529
Race of crime perpetrator					
Asian	0.493	0.017	0.656	0.460	0.525
White	0.519	0.016	0.228	0.488	0.550
Indigenous	0.485	0.017	0.382	0.452	0.518
Black	0.502	0.017	0.893	0.469	0.535
Residency of crime perpetrator					
Another neighborhood	0.496	0.011	0.685	0.475	0.517
In the neighborhood	0.504	0.010	0.685	0.484	0.524
Offense					
Murder	0.576	0.017	0.000	0.542	0.610
Pick-pocketing	0.313	0.018	0.000	0.278	0.349
Rape	0.672	0.027	0.000	0.618	0.726
Molestation	0.584	0.018	0.000	0.549	0.619
Car theft	0.376	0.026	0.000	0.324	0.428
Gender of crime victim					
Female	0.518	0.010	0.094	0.497	0.538
Male	0.483	0.010	0.095	0.464	0.503
Age of crime victim					
Teenager	0.511	0.019	0.573	0.473	0.548
Adult	0.491	0.015	0.529	0.462	0.520
Child	0.522	0.020	0.259	0.484	0.561
Elderly	0.485	0.016	0.343	0.454	0.516
Lynching perpetrators					
Family of the victim	0.527	0.021	0.193	0.486	0.569
Gangs	0.527	0.020	0.181	0.487	0.567
Bystanders	0.513	0.019	0.488	0.476	0.550
Police	0.478	0.020	0.288	0.438	0.518
Neighbors	0.456	0.018	0.016	0.420	0.492

Table 39: Marginal Means – Rather Not Say

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.456	0.011	0.000	0.435	0.478
Male	0.533	0.008	0.000	0.517	0.549
Age of crime perpetrator					
Teenager	0.499	0.013	0.933	0.473	0.525
Adult	0.505	0.013	0.678	0.480	0.531
Elderly	0.495	0.014	0.742	0.468	0.523
Race of crime perpetrator					
Asian	0.493	0.017	0.668	0.459	0.526
White	0.540	0.016	0.013	0.509	0.572
Indigenous	0.485	0.018	0.390	0.450	0.520
Black	0.480	0.017	0.233	0.447	0.513
Residency of crime perpetrator					
Another neighborhood	0.497	0.011	0.779	0.476	0.518
In the neighborhood	0.503	0.011	0.779	0.482	0.524
Offense					
Murder	0.606	0.017	0.000	0.573	0.640
Pick-pocketing	0.319	0.017	0.000	0.286	0.351
Rape	0.699	0.025	0.000	0.650	0.748
Molestation	0.530	0.016	0.068	0.498	0.562
Car theft	0.361	0.025	0.000	0.312	0.410
Gender of crime victim					
Female	0.506	0.010	0.542	0.487	0.525
Male	0.494	0.010	0.542	0.474	0.513
Age of crime victim					
Teenager	0.492	0.018	0.660	0.456	0.528
Adult	0.479	0.014	0.139	0.452	0.507
Child	0.580	0.019	0.000	0.543	0.617
Elderly	0.467	0.015	0.030	0.437	0.497
Lynching perpetrators					
Family of the victim	0.550	0.021	0.015	0.510	0.590
Gangs	0.504	0.019	0.846	0.466	0.541
Bystanders	0.476	0.021	0.250	0.436	0.517
Police	0.482	0.021	0.379	0.441	0.522
Neighbors	0.490	0.020	0.615	0.450	0.529

4.4.7 Support for Death Penalty

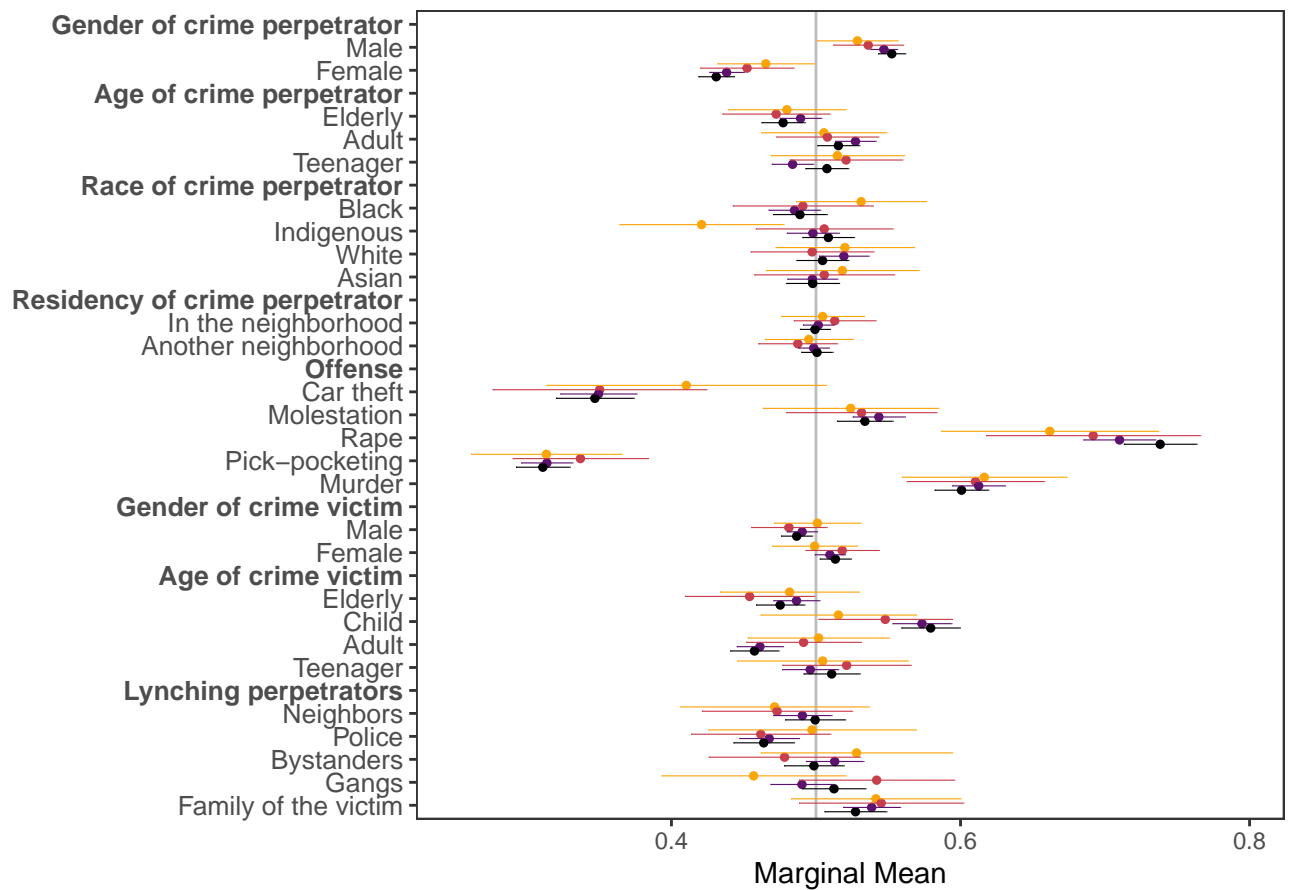
Here we assess whether subjects who support the death penalty have different preferences towards lynching victims. There are fewer respondents who answered “Don’t Know” or “Rather Not Say” to our question, so the confidence intervals from their estimates are larger than for the other two categories. The estimates largely overlap across the four groups, although those who answered “Rather Not Say” are less favorable to lynching Indigenous criminals.

```
# Model
cjdt <- full_join(conjoint_data, df1, by = "response_id") %>%
  drop_na(death_penalty) %>%
  mutate(death_penalty = fct_relevel(death_penalty, "Yes", "No",
                                     "Don't Know", "Rather Not Say"))

cjdt$Death_Penalty <- factor(cjdt$death_penalty)

mm_by <- cj(cjdt, fm, id = ~response_id, estimate = "mm", h0 = 0.5, by = ~Death_Penalty)

# Plot
plot(mm_by, group = "Death_Penalty", vline = 0.5, header_fmt = "%s") +
  theme(legend.position = "bottom", axis.text.y = element_text(face = "bold", size = 10)) +
  scale_colour_viridis_d(option = "inferno", end = 0.8)
```



Death_Penalty —●— Yes —●— No —●— Don't Know —●— Rather Not Say

Tables

```
mm_yes <- mm_by %>% filter(BY == "Yes")
```

```
table_mm_by(mm_yes, capt = "Marginal Means -- Support for Death Penalty: Yes")
```

```
mm_no <- mm_by %>% filter(BY == "No")
```

```
table_mm_by(mm_no, capt = "Marginal Means -- Support for Death Penalty: No")
```

```
mm_dk <- mm_by %>% filter(BY == "Don't Know")
```

```
table_mm_by(mm_dk, capt = "Marginal Means -- Support for Death Penalty: Do Not Know")
```

```
mm_rns <- mm_by %>% filter(BY == "Rather Not Say")
```

```
table_mm_by(mm_rns, capt = "Marginal Means -- Support for Death Penalty: Rather Not Say")
```


Table 40: Marginal Means – Support for Death Penalty: Yes

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.431	0.006	0.000	0.419	0.443
Male	0.552	0.005	0.000	0.543	0.562
Age of crime perpetrator					
Teenager	0.508	0.008	0.317	0.493	0.522
Adult	0.516	0.007	0.036	0.501	0.530
Elderly	0.477	0.008	0.003	0.462	0.492
Race of crime perpetrator					
Asian	0.498	0.009	0.809	0.479	0.516
White	0.505	0.009	0.620	0.487	0.522
Indigenous	0.509	0.009	0.349	0.491	0.526
Black	0.489	0.009	0.242	0.470	0.507
Residency of crime perpetrator					
Another neighborhood	0.501	0.006	0.900	0.490	0.512
In the neighborhood	0.499	0.005	0.900	0.489	0.510
Offense					
Murder	0.601	0.009	0.000	0.582	0.619
Pick-pocketing	0.311	0.009	0.000	0.292	0.330
Rape	0.738	0.013	0.000	0.713	0.763
Molestation	0.534	0.010	0.001	0.515	0.553
Car theft	0.347	0.014	0.000	0.320	0.374
Gender of crime victim					
Female	0.513	0.005	0.015	0.503	0.524
Male	0.487	0.005	0.015	0.476	0.497
Age of crime victim					
Teenager	0.511	0.010	0.273	0.491	0.530
Adult	0.457	0.009	0.000	0.441	0.474
Child	0.579	0.010	0.000	0.559	0.600
Elderly	0.475	0.009	0.004	0.459	0.492
Lynching perpetrators					
Family of the victim	0.527	0.011	0.012	0.506	0.549
Gangs	0.512	0.011	0.261	0.491	0.534
Bystanders	0.499	0.011	0.893	0.478	0.519
Police	0.464	0.011	0.001	0.443	0.485
Neighbors	0.499	0.011	0.957	0.479	0.520

Table 41: Marginal Means – Support for Death Penalty: No

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.438	0.006	0.000	0.426	0.450
Male	0.547	0.005	0.000	0.538	0.556
Age of crime perpetrator					
Teenager	0.484	0.007	0.027	0.469	0.498
Adult	0.527	0.007	0.000	0.513	0.541
Elderly	0.489	0.007	0.146	0.475	0.504
Race of crime perpetrator					
Asian	0.498	0.009	0.780	0.480	0.515
White	0.519	0.009	0.028	0.502	0.536
Indigenous	0.498	0.009	0.816	0.480	0.516
Black	0.485	0.009	0.103	0.467	0.503
Residency of crime perpetrator					
Another neighborhood	0.498	0.005	0.771	0.488	0.509
In the neighborhood	0.502	0.005	0.771	0.491	0.512
Offense					
Murder	0.613	0.009	0.000	0.594	0.631
Pick-pocketing	0.314	0.009	0.000	0.296	0.332
Rape	0.710	0.013	0.000	0.685	0.735
Molestation	0.543	0.009	0.000	0.525	0.562
Car theft	0.350	0.013	0.000	0.323	0.376
Gender of crime victim					
Female	0.510	0.005	0.070	0.499	0.520
Male	0.490	0.005	0.070	0.480	0.501
Age of crime victim					
Teenager	0.496	0.010	0.688	0.477	0.515
Adult	0.461	0.008	0.000	0.445	0.477
Child	0.573	0.010	0.000	0.553	0.594
Elderly	0.487	0.008	0.098	0.471	0.502
Lynching perpetrators					
Family of the victim	0.539	0.010	0.000	0.519	0.558
Gangs	0.490	0.011	0.384	0.469	0.512
Bystanders	0.513	0.010	0.202	0.493	0.533
Police	0.468	0.011	0.002	0.447	0.488
Neighbors	0.491	0.010	0.360	0.470	0.511

Table 42: Marginal Means – Support for Death Penalty: Do Not Know

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.452	0.016	0.004	0.420	0.485
Male	0.536	0.012	0.003	0.512	0.560
Age of crime perpetrator					
Teenager	0.521	0.020	0.294	0.482	0.560
Adult	0.508	0.018	0.660	0.473	0.543
Elderly	0.472	0.019	0.145	0.435	0.510
Race of crime perpetrator					
Asian	0.506	0.025	0.816	0.457	0.554
White	0.497	0.022	0.903	0.455	0.540
Indigenous	0.506	0.024	0.813	0.458	0.553
Black	0.491	0.025	0.715	0.442	0.539
Residency of crime perpetrator					
Another neighborhood	0.487	0.014	0.368	0.460	0.515
In the neighborhood	0.513	0.014	0.369	0.485	0.541
Offense					
Murder	0.610	0.024	0.000	0.563	0.658
Pick-pocketing	0.337	0.024	0.000	0.290	0.384
Rape	0.692	0.038	0.000	0.618	0.766
Molestation	0.532	0.027	0.235	0.479	0.584
Car theft	0.350	0.038	0.000	0.276	0.424
Gender of crime victim					
Female	0.518	0.013	0.161	0.493	0.544
Male	0.481	0.013	0.161	0.455	0.507
Age of crime victim					
Teenager	0.521	0.023	0.349	0.477	0.566
Adult	0.491	0.020	0.671	0.452	0.531
Child	0.548	0.024	0.042	0.502	0.594
Elderly	0.454	0.023	0.044	0.409	0.499
Lynching perpetrators					
Family of the victim	0.545	0.029	0.120	0.488	0.602
Gangs	0.542	0.027	0.126	0.488	0.596
Bystanders	0.478	0.027	0.416	0.426	0.531
Police	0.462	0.025	0.120	0.414	0.510
Neighbors	0.473	0.027	0.310	0.421	0.525

Table 43: Marginal Means – Support for Death Penalty: Rather Not Say

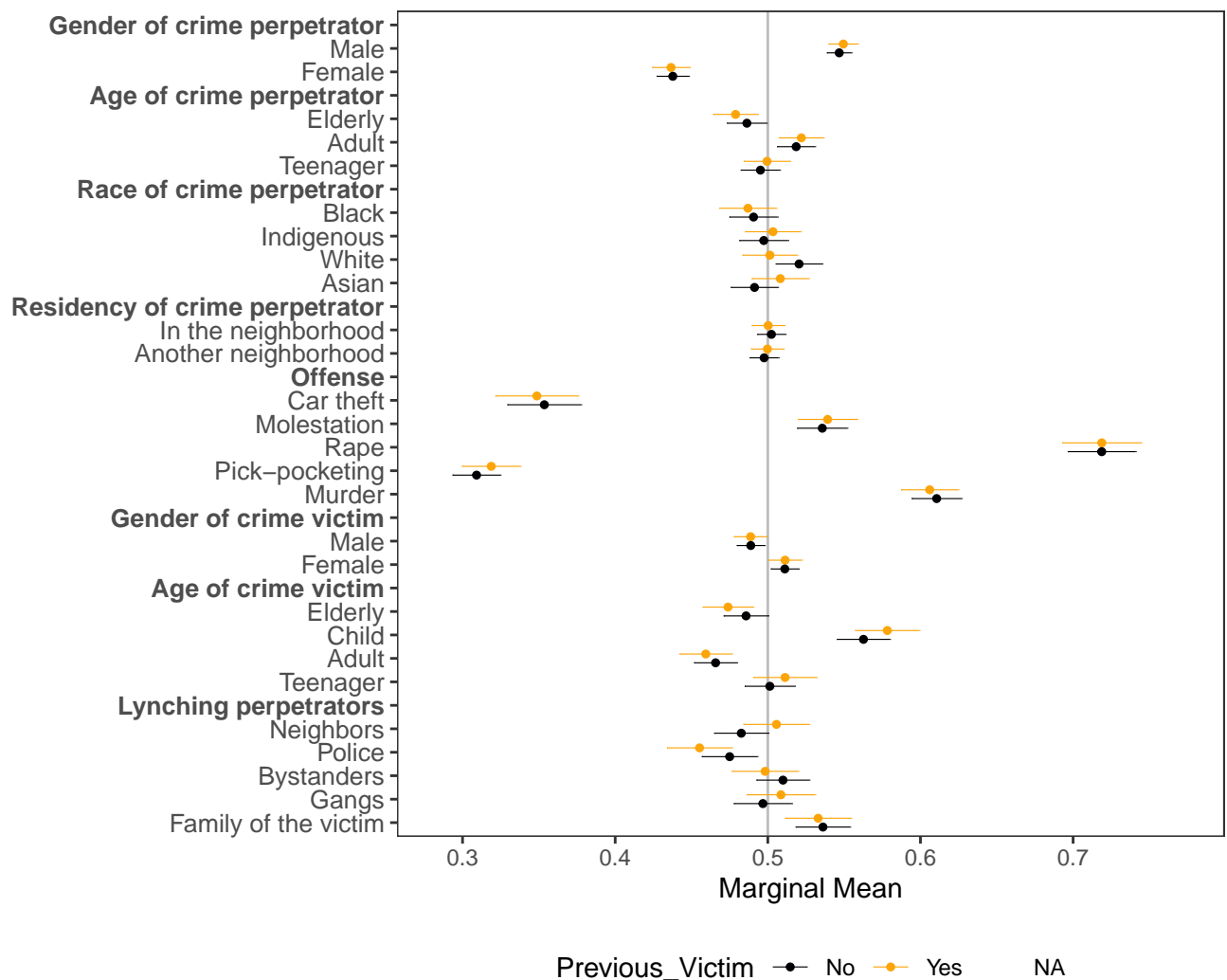
Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.465	0.017	0.042	0.432	0.499
Male	0.529	0.014	0.044	0.501	0.557
Age of crime perpetrator					
Teenager	0.515	0.024	0.529	0.469	0.561
Adult	0.505	0.022	0.804	0.462	0.549
Elderly	0.480	0.021	0.332	0.439	0.521
Race of crime perpetrator					
Asian	0.518	0.027	0.499	0.465	0.571
White	0.520	0.024	0.413	0.472	0.568
Indigenous	0.421	0.029	0.006	0.364	0.478
Black	0.531	0.023	0.174	0.486	0.576
Residency of crime perpetrator					
Another neighborhood	0.495	0.016	0.752	0.465	0.526
In the neighborhood	0.505	0.015	0.752	0.476	0.533
Offense					
Murder	0.616	0.029	0.000	0.559	0.674
Pick-pocketing	0.313	0.027	0.000	0.261	0.366
Rape	0.662	0.038	0.000	0.587	0.737
Molestation	0.524	0.031	0.439	0.463	0.585
Car theft	0.410	0.049	0.069	0.314	0.507
Gender of crime victim					
Female	0.499	0.015	0.950	0.470	0.529
Male	0.501	0.015	0.950	0.471	0.531
Age of crime victim					
Teenager	0.505	0.030	0.878	0.446	0.564
Adult	0.502	0.025	0.942	0.453	0.551
Child	0.516	0.027	0.572	0.462	0.569
Elderly	0.482	0.025	0.457	0.434	0.530
Lynching perpetrators					
Family of the victim	0.541	0.030	0.166	0.483	0.600
Gangs	0.457	0.032	0.183	0.393	0.520
Bystanders	0.528	0.034	0.406	0.462	0.594
Police	0.497	0.037	0.941	0.425	0.569
Neighbors	0.471	0.033	0.389	0.406	0.537

4.4.8 Previous Victimization

Respondents who had been victimized in the past 12 months also do not have different preferences towards lynchings victim profiles. The results are virtually identical for both groups, as one can see below.

```
# Model
cjdt <- full_join(conjoint_data, df1, by = "response_id") %>%
  mutate(previous_victim_dummy, "Yes", "No")
cjdt$Previous_Victim <- factor(cjdt$previous_victim_dummy)
mm_by <- cj(cjdt, fm, id = ~response_id, estimate = "mm", h0 = 0.5, by = ~Previous_Victim)

# Plot
plot(mm_by, group = "Previous_Victim", vline = 0.5, header_fmt = "%s") +
  theme(legend.position = "bottom", axis.text.y = element_text(face = "bold", size = 10)) +
  scale_colour_viridis_d(option = "inferno", end = 0.8)
```



```
# Tables
```

```
mm_yes <- mm_by %>% filter(BY == "Yes")
```

```
table_mm_by(mm_yes, capt = "Marginal Means -- Previous Victimization (12 Months): Yes")
```

Table 44: Marginal Means – Previous Victimization (12 Months): Yes

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.437	0.006	0.000	0.424	0.449
Male	0.549	0.005	0.000	0.540	0.559
Age of crime perpetrator					
Teenager	0.499	0.008	0.944	0.484	0.515
Adult	0.522	0.007	0.003	0.507	0.537
Elderly	0.479	0.008	0.005	0.464	0.494
Race of crime perpetrator					
Asian	0.508	0.010	0.391	0.489	0.527
White	0.501	0.009	0.880	0.483	0.519
Indigenous	0.503	0.009	0.719	0.485	0.522
Black	0.487	0.010	0.173	0.468	0.506
Residency of crime perpetrator					
Another neighborhood	0.500	0.005	0.966	0.489	0.510
In the neighborhood	0.500	0.005	0.966	0.490	0.511
Offense					
Murder	0.606	0.010	0.000	0.587	0.625
Pick-pocketing	0.319	0.010	0.000	0.300	0.338
Rape	0.719	0.013	0.000	0.693	0.745
Molestation	0.539	0.010	0.000	0.520	0.559
Car theft	0.349	0.014	0.000	0.322	0.376
Gender of crime victim					
Female	0.511	0.006	0.044	0.500	0.522
Male	0.489	0.006	0.044	0.478	0.500
Age of crime victim					
Teenager	0.511	0.011	0.283	0.491	0.532
Adult	0.459	0.009	0.000	0.442	0.477
Child	0.578	0.011	0.000	0.557	0.599
Elderly	0.474	0.008	0.002	0.457	0.491
Lynching perpetrators					
Family of the victim	0.533	0.011	0.003	0.511	0.555
Gangs	0.509	0.011	0.455	0.486	0.531
Bystanders	0.498	0.011	0.874	0.476	0.520
Police	0.455	0.011	0.000	0.434	0.477
Neighbors	0.506	0.011	0.607	0.484	0.527

```
mm_no <- mm_by %>% filter(BY == "No")
```

```
table_mm_by(mm_no, capt = "Marginal Means -- Previous Victimization (12 Months): No")
```

Table 45: Marginal Means – Previous Victimization (12 Months): No

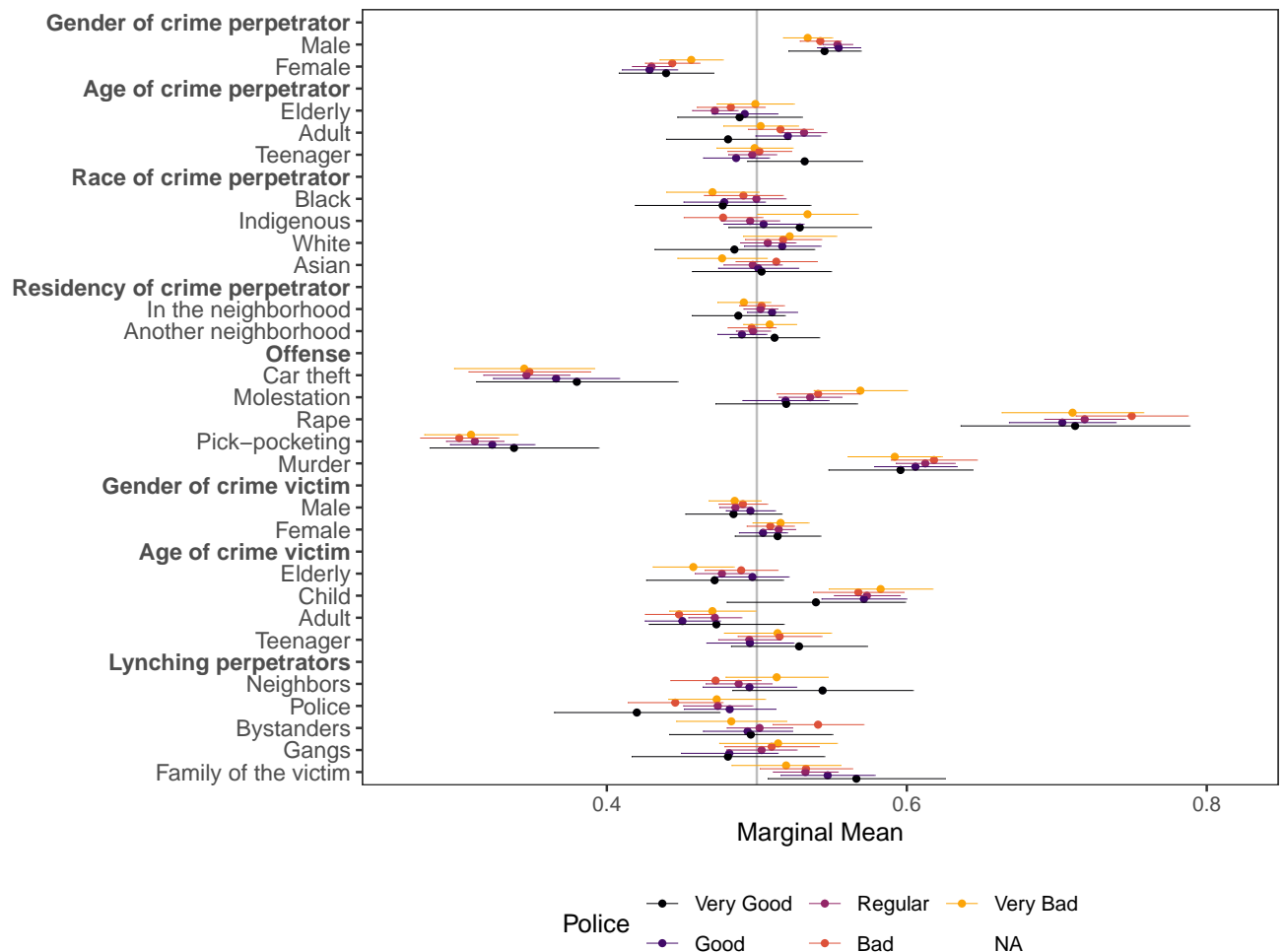
Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.438	0.005	0.000	0.427	0.448
Male	0.547	0.004	0.000	0.539	0.555
Age of crime perpetrator					
Teenager	0.495	0.007	0.461	0.482	0.508
Adult	0.519	0.006	0.004	0.506	0.531
Elderly	0.486	0.007	0.039	0.473	0.499
Race of crime perpetrator					
Asian	0.491	0.008	0.269	0.476	0.507
White	0.520	0.008	0.009	0.505	0.536
Indigenous	0.497	0.008	0.745	0.481	0.513
Black	0.491	0.008	0.247	0.475	0.506
Residency of crime perpetrator					
Another neighborhood	0.498	0.005	0.617	0.488	0.507
In the neighborhood	0.502	0.005	0.617	0.493	0.512
Offense					
Murder	0.611	0.008	0.000	0.594	0.627
Pick-pocketing	0.309	0.008	0.000	0.293	0.325
Rape	0.719	0.011	0.000	0.696	0.741
Molestation	0.536	0.008	0.000	0.519	0.552
Car theft	0.354	0.012	0.000	0.329	0.378
Gender of crime victim					
Female	0.511	0.005	0.017	0.502	0.520
Male	0.489	0.005	0.017	0.480	0.498
Age of crime victim					
Teenager	0.501	0.008	0.874	0.485	0.518
Adult	0.466	0.007	0.000	0.452	0.480
Child	0.563	0.009	0.000	0.545	0.580
Elderly	0.486	0.007	0.056	0.471	0.500
Lynching perpetrators					
Family of the victim	0.536	0.009	0.000	0.518	0.554
Gangs	0.497	0.010	0.741	0.478	0.516
Bystanders	0.510	0.009	0.261	0.493	0.527
Police	0.475	0.009	0.007	0.457	0.493
Neighbors	0.483	0.009	0.055	0.465	0.500

4.4.9 Opinion on the Police

Experimental results do not change when we break down the responses according to how subjects view the police forces.

```
# Model
cjdt <- full_join(conjoint_data, df1, by = "response_id") %>%
  mutate(views_police2 = case_when(views_police == "Rather Not Say" ~ NA_character_,
    views_police == "Don't Know" ~ NA_character_,
    TRUE ~ as.character(views_police)),
    views_police2 = fct_relevel(views_police2, "Very Good", "Good",
    "Regular", "Bad", "Very Bad")) %>%
  drop_na(views_police2)
cjdt$Police <- factor(cjdt$views_police2)
mm_by <- cj(cjdt, fm, id = ~response_id, estimate = "mm", h0 = 0.5, by = ~Police)

# Plot
plot(mm_by, group = "Police", vline = 0.5, header_fmt = "%s") +
  theme(legend.position = "bottom", axis.text.y = element_text(face = "bold", size = 10)) +
  scale_colour_viridis_d(option = "inferno", end = 0.8)
```

Tables

```
mm_vgood <- mm_by %>% filter(BY == "Very Good")
```

```
table_mm_by(mm_vgood, capt = "Marginal Means -- Opinion on the Police: Very Good")
```

```
mm_good <- mm_by %>% filter(BY == "Good")
```

```
table_mm_by(mm_good, capt = "Marginal Means -- Opinion on the Police: Good")
```

```
mm_regular <- mm_by %>% filter(BY == "Regular")
```

```
table_mm_by(mm_regular, capt = "Marginal Means -- Opinion on the Police: Regular")
```

```
mm_bad <- mm_by %>% filter(BY == "Bad")
```

```
table_mm_by(mm_bad, capt = "Marginal Means -- Opinion on the Police: Bad")
```

```
mm_vbad <- mm_by %>% filter(BY == "Very Bad")
```

```
table_mm_by(mm_vbad, capt = "Marginal Means -- Opinion on the Police: Very Bad")
```

Table 46: Marginal Means – Opinion on the Police: Very Good

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.440	0.016	0.000	0.408	0.471
Male	0.545	0.012	0.000	0.521	0.569
Age of crime perpetrator					
Teenager	0.532	0.020	0.103	0.494	0.570
Adult	0.481	0.021	0.363	0.440	0.522
Elderly	0.489	0.021	0.589	0.447	0.530
Race of crime perpetrator					
Asian	0.503	0.024	0.893	0.457	0.549
White	0.485	0.027	0.583	0.432	0.538
Indigenous	0.529	0.024	0.238	0.481	0.576
Black	0.477	0.030	0.446	0.419	0.536
Residency of crime perpetrator					
Another neighborhood	0.512	0.015	0.436	0.482	0.542
In the neighborhood	0.488	0.016	0.436	0.457	0.519
Offense					
Murder	0.596	0.025	0.000	0.548	0.644
Pick-pocketing	0.338	0.029	0.000	0.282	0.394
Rape	0.712	0.039	0.000	0.636	0.789
Molestation	0.520	0.024	0.416	0.472	0.567
Car theft	0.380	0.034	0.000	0.313	0.447
Gender of crime victim					
Female	0.514	0.015	0.340	0.485	0.542
Male	0.484	0.016	0.342	0.452	0.517
Age of crime victim					
Teenager	0.528	0.023	0.223	0.483	0.574
Adult	0.473	0.023	0.239	0.428	0.518
Child	0.539	0.030	0.194	0.480	0.599
Elderly	0.472	0.023	0.227	0.426	0.517
Lynching perpetrators					
Family of the victim	0.566	0.030	0.028	0.507	0.625
Gangs	0.481	0.033	0.557	0.417	0.545
Bystanders	0.496	0.028	0.884	0.442	0.550
Police	0.420	0.028	0.004	0.365	0.475
Neighbors	0.544	0.031	0.153	0.484	0.604

Table 47: Marginal Means – Opinion on the Police: Good

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.428	0.009	0.000	0.410	0.447
Male	0.555	0.007	0.000	0.540	0.569
Age of crime perpetrator					
Teenager	0.486	0.011	0.217	0.464	0.508
Adult	0.521	0.011	0.060	0.499	0.542
Elderly	0.492	0.011	0.469	0.470	0.514
Race of crime perpetrator					
Asian	0.501	0.014	0.943	0.474	0.528
White	0.517	0.013	0.192	0.491	0.542
Indigenous	0.505	0.014	0.740	0.478	0.531
Black	0.478	0.014	0.117	0.451	0.505
Residency of crime perpetrator					
Another neighborhood	0.490	0.008	0.231	0.474	0.506
In the neighborhood	0.510	0.009	0.232	0.493	0.527
Offense					
Murder	0.606	0.014	0.000	0.578	0.633
Pick-pocketing	0.324	0.014	0.000	0.295	0.352
Rape	0.704	0.018	0.000	0.668	0.739
Molestation	0.519	0.015	0.190	0.491	0.548
Car theft	0.366	0.021	0.000	0.324	0.408
Gender of crime victim					
Female	0.504	0.008	0.613	0.488	0.520
Male	0.496	0.008	0.613	0.479	0.512
Age of crime victim					
Teenager	0.495	0.015	0.758	0.466	0.524
Adult	0.450	0.013	0.000	0.425	0.475
Child	0.571	0.014	0.000	0.543	0.600
Elderly	0.497	0.012	0.812	0.473	0.521
Lynching perpetrators					
Family of the victim	0.547	0.016	0.003	0.516	0.579
Gangs	0.482	0.016	0.265	0.449	0.514
Bystanders	0.494	0.015	0.686	0.464	0.524
Police	0.482	0.016	0.246	0.451	0.512
Neighbors	0.495	0.016	0.759	0.464	0.526

Table 48: Marginal Means – Opinion on the Police: Regular

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.430	0.007	0.000	0.417	0.443
Male	0.554	0.005	0.000	0.544	0.564
Age of crime perpetrator					
Teenager	0.497	0.008	0.710	0.481	0.513
Adult	0.531	0.008	0.000	0.517	0.546
Elderly	0.472	0.008	0.000	0.457	0.487
Race of crime perpetrator					
Asian	0.497	0.010	0.783	0.478	0.517
White	0.507	0.009	0.439	0.489	0.526
Indigenous	0.496	0.010	0.654	0.476	0.515
Black	0.500	0.010	0.980	0.480	0.519
Residency of crime perpetrator					
Another neighborhood	0.498	0.006	0.668	0.486	0.509
In the neighborhood	0.502	0.006	0.668	0.491	0.514
Offense					
Murder	0.612	0.010	0.000	0.593	0.632
Pick-pocketing	0.312	0.010	0.000	0.293	0.331
Rape	0.719	0.014	0.000	0.692	0.745
Molestation	0.536	0.011	0.001	0.515	0.556
Car theft	0.346	0.015	0.000	0.318	0.375
Gender of crime victim					
Female	0.515	0.006	0.010	0.504	0.526
Male	0.486	0.006	0.010	0.475	0.497
Age of crime victim					
Teenager	0.495	0.011	0.638	0.474	0.516
Adult	0.472	0.009	0.002	0.454	0.490
Child	0.573	0.011	0.000	0.552	0.595
Elderly	0.477	0.009	0.012	0.459	0.495
Lynching perpetrators					
Family of the victim	0.532	0.011	0.003	0.511	0.554
Gangs	0.503	0.012	0.791	0.480	0.527
Bystanders	0.502	0.011	0.869	0.480	0.524
Police	0.474	0.012	0.027	0.451	0.497
Neighbors	0.488	0.011	0.281	0.466	0.510

Table 49: Marginal Means – Opinion on the Police: Bad

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.444	0.009	0.000	0.426	0.462
Male	0.542	0.007	0.000	0.529	0.556
Age of crime perpetrator					
Teenager	0.502	0.011	0.873	0.481	0.523
Adult	0.516	0.011	0.152	0.494	0.537
Elderly	0.483	0.012	0.133	0.460	0.505
Race of crime perpetrator					
Asian	0.513	0.014	0.346	0.486	0.540
White	0.518	0.013	0.175	0.492	0.543
Indigenous	0.478	0.013	0.093	0.451	0.504
Black	0.491	0.013	0.505	0.465	0.517
Residency of crime perpetrator					
Another neighborhood	0.497	0.008	0.676	0.481	0.513
In the neighborhood	0.503	0.008	0.676	0.488	0.518
Offense					
Murder	0.618	0.015	0.000	0.590	0.647
Pick-pocketing	0.302	0.013	0.000	0.276	0.328
Rape	0.750	0.019	0.000	0.713	0.787
Molestation	0.541	0.014	0.004	0.513	0.568
Car theft	0.348	0.021	0.000	0.308	0.389
Gender of crime victim					
Female	0.509	0.008	0.261	0.493	0.525
Male	0.491	0.008	0.261	0.475	0.507
Age of crime victim					
Teenager	0.515	0.014	0.285	0.487	0.543
Adult	0.448	0.012	0.000	0.425	0.471
Child	0.568	0.015	0.000	0.537	0.598
Elderly	0.490	0.012	0.401	0.465	0.514
Lynching perpetrators					
Family of the victim	0.533	0.016	0.037	0.502	0.564
Gangs	0.510	0.016	0.536	0.478	0.541
Bystanders	0.541	0.015	0.008	0.511	0.571
Police	0.446	0.016	0.001	0.414	0.477
Neighbors	0.473	0.015	0.073	0.442	0.503

Table 50: Marginal Means – Opinion on the Police: Very Bad

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.456	0.011	0.000	0.435	0.477
Male	0.534	0.008	0.000	0.518	0.550
Age of crime perpetrator					
Teenager	0.499	0.013	0.908	0.473	0.524
Adult	0.503	0.013	0.840	0.478	0.527
Elderly	0.499	0.013	0.941	0.473	0.525
Race of crime perpetrator					
Asian	0.477	0.015	0.128	0.447	0.507
White	0.522	0.016	0.167	0.491	0.553
Indigenous	0.534	0.017	0.048	0.500	0.567
Black	0.470	0.016	0.060	0.440	0.501
Residency of crime perpetrator					
Another neighborhood	0.509	0.009	0.337	0.491	0.526
In the neighborhood	0.491	0.009	0.336	0.474	0.509
Offense					
Murder	0.592	0.016	0.000	0.561	0.623
Pick-pocketing	0.309	0.016	0.000	0.278	0.341
Rape	0.711	0.024	0.000	0.663	0.758
Molestation	0.569	0.016	0.000	0.538	0.600
Car theft	0.345	0.024	0.000	0.298	0.392
Gender of crime victim					
Female	0.516	0.010	0.095	0.497	0.535
Male	0.485	0.009	0.095	0.468	0.503
Age of crime victim					
Teenager	0.514	0.018	0.447	0.478	0.550
Adult	0.470	0.015	0.043	0.442	0.499
Child	0.583	0.018	0.000	0.548	0.617
Elderly	0.458	0.014	0.002	0.431	0.485
Lynching perpetrators					
Family of the victim	0.520	0.019	0.292	0.483	0.556
Gangs	0.514	0.020	0.478	0.475	0.553
Bystanders	0.483	0.019	0.363	0.446	0.520
Police	0.473	0.016	0.104	0.441	0.506
Neighbors	0.513	0.017	0.445	0.479	0.547

4.4.10 Opinion on the Judicial System

Lastly, we analyze whether personal beliefs about the judicial system affect the type of lynching victim respondents select.

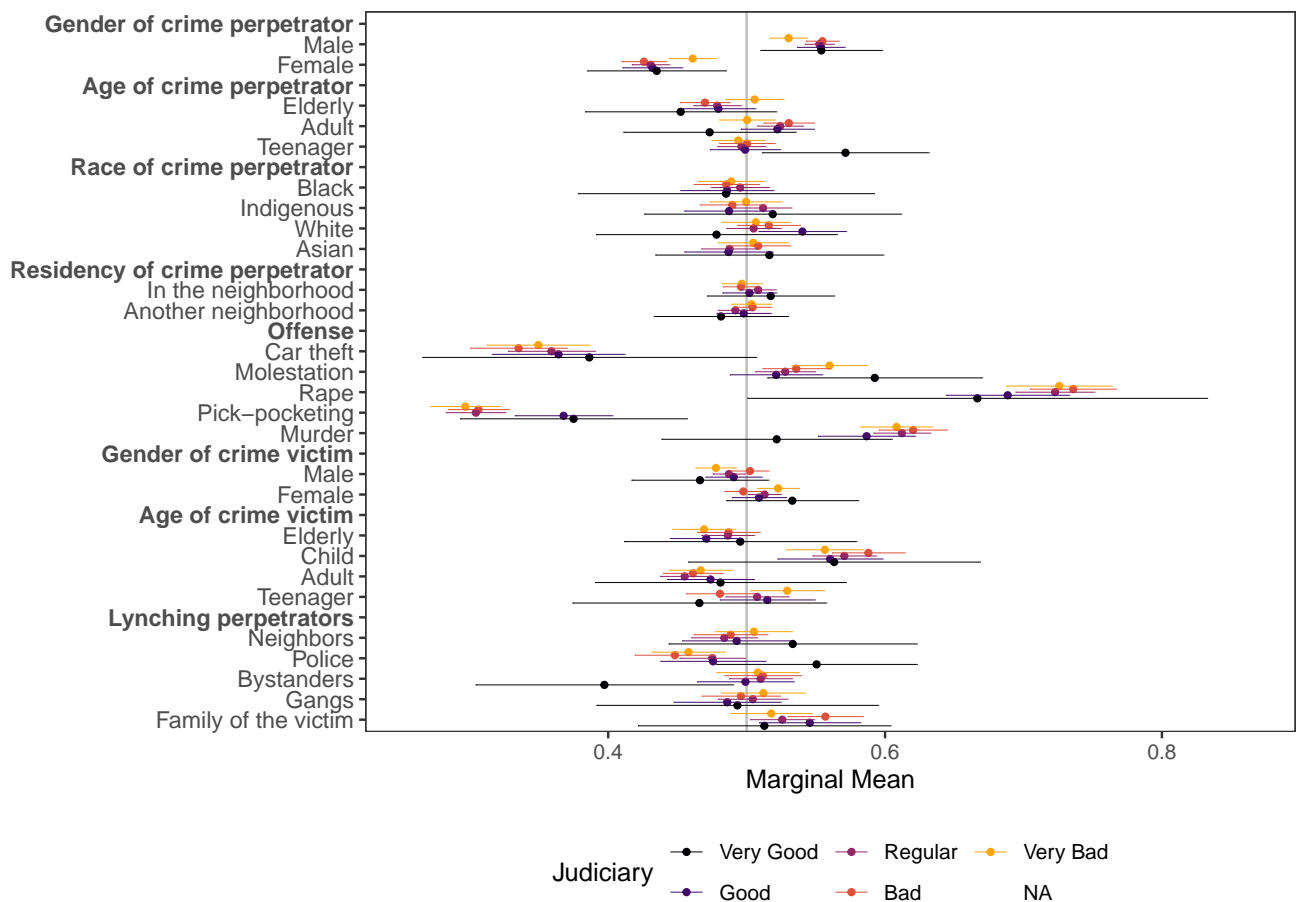
```
# Model
cjdt <- full_join(conjoint_data, df1, by = "response_id") %>%
  mutate(views_justice2 = case_when(views_justice == "Rather Not Say" ~ NA_character_,
    views_justice == "Don't Know" ~ NA_character_,
    TRUE ~ as.character(views_justice)),
  views_justice2 = fct_relevel(views_justice2, "Very Good", "Good",
    "Regular", "Bad", "Very Bad")) %>%

  drop_na(views_justice2)

cjdt$Judiciary <- factor(cjdt$views_justice2)

mm_by <- cj(cjdt, fm, id = ~response_id, estimate = "mm", h0 = 0.5, by = ~Judiciary)

# Plot
plot(mm_by, group = "Judiciary", vline = 0.5, header_fmt = "%s") +
  theme(legend.position = "bottom", axis.text.y = element_text(face = "bold", size = 10)) +
  scale_colour_viridis_d(option = "inferno", end = 0.8)
```



Tables

```
mm_vgood <- mm_by %>% filter(BY == "Very Good")
```

```
table_mm_by(mm_vgood, capt = "Marginal Means -- Opinion on the Judicial System: Very Good")
```

Table 51: Marginal Means – Opinion on the Judicial System: Very Good

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.435	0.026	0.011	0.385	0.485
Male	0.554	0.022	0.016	0.510	0.598
Age of crime perpetrator					
Teenager	0.571	0.031	0.020	0.511	0.631
Adult	0.473	0.032	0.400	0.411	0.535
Elderly	0.452	0.035	0.176	0.383	0.521
Race of crime perpetrator					
Asian	0.516	0.042	0.695	0.434	0.599
White	0.478	0.044	0.624	0.391	0.565
Indigenous	0.519	0.047	0.690	0.426	0.612
Black	0.485	0.055	0.785	0.378	0.592
Residency of crime perpetrator					
Another neighborhood	0.481	0.025	0.454	0.433	0.530
In the neighborhood	0.517	0.023	0.456	0.472	0.563
Offense					
Murder	0.522	0.042	0.608	0.439	0.605
Pick-pocketing	0.375	0.042	0.003	0.293	0.457
Rape	0.667	0.085	0.049	0.501	0.833
Molestation	0.593	0.040	0.019	0.515	0.670
Car theft	0.386	0.061	0.065	0.266	0.507
Gender of crime victim					
Female	0.533	0.024	0.175	0.485	0.581
Male	0.466	0.025	0.182	0.417	0.516
Age of crime victim					
Teenager	0.466	0.047	0.466	0.374	0.558
Adult	0.481	0.046	0.683	0.391	0.572
Child	0.563	0.054	0.240	0.458	0.669
Elderly	0.495	0.043	0.915	0.411	0.579
Lynching perpetrators					
Family of the victim	0.513	0.047	0.783	0.422	0.604
Gangs	0.493	0.052	0.898	0.392	0.595
Bystanders	0.397	0.047	0.030	0.304	0.490
Police	0.551	0.037	0.171	0.478	0.623
Neighbors	0.533	0.046	0.466	0.444	0.623

```
mm_good <- mm_by %>% filter(BY == "Good")
```

```
table_mm_by(mm_good, capt = "Marginal Means -- Opinion on the Judicial System: Good")
```


Table 52: Marginal Means – Opinion on the Judicial System: Good

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.432	0.011	0.000	0.410	0.454
Male	0.554	0.009	0.000	0.536	0.571
Age of crime perpetrator					
Teenager	0.499	0.013	0.933	0.474	0.524
Adult	0.522	0.013	0.099	0.496	0.549
Elderly	0.480	0.014	0.136	0.453	0.506
Race of crime perpetrator					
Asian	0.487	0.016	0.421	0.455	0.519
White	0.540	0.016	0.012	0.509	0.572
Indigenous	0.487	0.016	0.439	0.455	0.519
Black	0.486	0.017	0.410	0.452	0.519
Residency of crime perpetrator					
Another neighborhood	0.498	0.010	0.832	0.478	0.517
In the neighborhood	0.502	0.010	0.832	0.483	0.522
Offense					
Murder	0.587	0.018	0.000	0.552	0.622
Pick-pocketing	0.368	0.018	0.000	0.333	0.403
Rape	0.689	0.023	0.000	0.644	0.733
Molestation	0.521	0.017	0.211	0.488	0.555
Car theft	0.364	0.024	0.000	0.316	0.412
Gender of crime victim					
Female	0.509	0.010	0.369	0.489	0.529
Male	0.491	0.010	0.369	0.470	0.511
Age of crime victim					
Teenager	0.515	0.017	0.393	0.481	0.549
Adult	0.474	0.016	0.103	0.443	0.505
Child	0.560	0.019	0.002	0.522	0.598
Elderly	0.471	0.013	0.028	0.445	0.497
Lynching perpetrators					
Family of the victim	0.546	0.019	0.015	0.509	0.582
Gangs	0.486	0.020	0.478	0.447	0.525
Bystanders	0.499	0.018	0.963	0.464	0.534
Police	0.476	0.019	0.211	0.438	0.514
Neighbors	0.493	0.020	0.721	0.454	0.532

```
mm_regular <- mm_by %>% filter(BY == "Regular")
```

```
table_mm_by(mm_regular, capt = "Marginal Means -- Opinion on the Judicial System: Regular")
```

```
mm_bad <- mm_by %>% filter(BY == "Bad")
```

```
table_mm_by(mm_bad, capt = "Marginal Means -- Opinion on the Judicial System: Bad")
```

```
mm_vbad <- mm_by %>% filter(BY == "Very Bad")
```

```
table_mm_by(mm_vbad, capt = "Marginal Means -- Opinion on the Judicial System: Very Bad")
```

Table 53: Marginal Means – Opinion on the Judicial System: Regular

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.431	0.007	0.000	0.417	0.444
Male	0.553	0.005	0.000	0.542	0.563
Age of crime perpetrator					
Teenager	0.496	0.009	0.683	0.479	0.514
Adult	0.524	0.008	0.004	0.508	0.541
Elderly	0.479	0.009	0.015	0.462	0.496
Race of crime perpetrator					
Asian	0.488	0.010	0.235	0.467	0.508
White	0.505	0.010	0.614	0.485	0.525
Indigenous	0.512	0.010	0.256	0.491	0.532
Black	0.495	0.011	0.665	0.475	0.516
Residency of crime perpetrator					
Another neighborhood	0.492	0.006	0.204	0.479	0.504
In the neighborhood	0.508	0.007	0.204	0.495	0.521
Offense					
Murder	0.612	0.010	0.000	0.592	0.633
Pick-pocketing	0.304	0.011	0.000	0.283	0.326
Rape	0.723	0.015	0.000	0.694	0.751
Molestation	0.528	0.011	0.011	0.506	0.549
Car theft	0.359	0.016	0.000	0.328	0.390
Gender of crime victim					
Female	0.513	0.006	0.031	0.501	0.525
Male	0.487	0.006	0.031	0.476	0.499
Age of crime victim					
Teenager	0.508	0.012	0.512	0.485	0.530
Adult	0.455	0.009	0.000	0.437	0.473
Child	0.571	0.012	0.000	0.548	0.593
Elderly	0.486	0.010	0.162	0.467	0.505
Lynching perpetrators					
Family of the victim	0.526	0.012	0.029	0.503	0.549
Gangs	0.504	0.013	0.729	0.479	0.530
Bystanders	0.510	0.012	0.382	0.487	0.533
Police	0.475	0.012	0.040	0.452	0.499
Neighbors	0.484	0.012	0.185	0.460	0.508

Table 54: Marginal Means – Opinion on the Judicial System: Bad

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.426	0.008	0.000	0.410	0.442
Male	0.555	0.006	0.000	0.543	0.567
Age of crime perpetrator					
Teenager	0.500	0.010	0.977	0.480	0.520
Adult	0.531	0.009	0.001	0.512	0.549
Elderly	0.470	0.009	0.001	0.452	0.488
Race of crime perpetrator					
Asian	0.508	0.012	0.479	0.485	0.532
White	0.516	0.012	0.165	0.493	0.539
Indigenous	0.490	0.012	0.381	0.466	0.513
Black	0.485	0.012	0.222	0.462	0.509
Residency of crime perpetrator					
Another neighborhood	0.504	0.007	0.531	0.491	0.518
In the neighborhood	0.496	0.007	0.530	0.483	0.509
Offense					
Murder	0.620	0.013	0.000	0.596	0.645
Pick-pocketing	0.306	0.011	0.000	0.284	0.328
Rape	0.736	0.016	0.000	0.705	0.767
Molestation	0.536	0.012	0.004	0.512	0.560
Car theft	0.335	0.018	0.000	0.300	0.370
Gender of crime victim					
Female	0.498	0.007	0.729	0.484	0.511
Male	0.502	0.007	0.729	0.489	0.516
Age of crime victim					
Teenager	0.481	0.012	0.122	0.456	0.505
Adult	0.461	0.011	0.000	0.440	0.483
Child	0.588	0.013	0.000	0.562	0.614
Elderly	0.487	0.012	0.258	0.464	0.510
Lynching perpetrators					
Family of the victim	0.557	0.014	0.000	0.530	0.584
Gangs	0.496	0.014	0.776	0.468	0.524
Bystanders	0.512	0.014	0.407	0.484	0.539
Police	0.448	0.015	0.000	0.419	0.477
Neighbors	0.488	0.014	0.395	0.462	0.515

Table 55: Marginal Means – Opinion on the Judicial System: Very Bad

Feature	Estimate	Std. Error	P-Value	Lower	Upper
Gender of crime perpetrator					
Female	0.461	0.009	0.000	0.444	0.478
Male	0.530	0.007	0.000	0.517	0.544
Age of crime perpetrator					
Teenager	0.494	0.010	0.542	0.475	0.513
Adult	0.500	0.010	0.974	0.480	0.520
Elderly	0.506	0.011	0.587	0.485	0.527
Race of crime perpetrator					
Asian	0.505	0.013	0.711	0.479	0.530
White	0.507	0.013	0.599	0.482	0.531
Indigenous	0.500	0.013	0.973	0.473	0.526
Black	0.489	0.012	0.369	0.465	0.513
Residency of crime perpetrator					
Another neighborhood	0.503	0.007	0.639	0.489	0.518
In the neighborhood	0.497	0.007	0.639	0.482	0.511
Offense					
Murder	0.608	0.013	0.000	0.582	0.634
Pick-pocketing	0.297	0.013	0.000	0.272	0.322
Rape	0.726	0.019	0.000	0.688	0.764
Molestation	0.560	0.014	0.000	0.533	0.587
Car theft	0.350	0.019	0.000	0.312	0.387
Gender of crime victim					
Female	0.523	0.008	0.003	0.508	0.538
Male	0.478	0.007	0.003	0.463	0.493
Age of crime victim					
Teenager	0.529	0.014	0.030	0.503	0.556
Adult	0.467	0.012	0.004	0.444	0.490
Child	0.556	0.014	0.000	0.529	0.584
Elderly	0.469	0.012	0.008	0.447	0.492
Lynching perpetrators					
Family of the victim	0.518	0.015	0.238	0.488	0.547
Gangs	0.512	0.015	0.433	0.482	0.542
Bystanders	0.508	0.015	0.594	0.478	0.538
Police	0.458	0.014	0.002	0.432	0.485
Neighbors	0.505	0.014	0.712	0.477	0.533

4.5 Text Analysis

In addition to the conjoint experiments, we also asked respondents to justify their profile choices. We added a text box after each conjoint and informed subjects that their responses were optional. However, we obtained 8297 responses in our survey, which we analyze here.

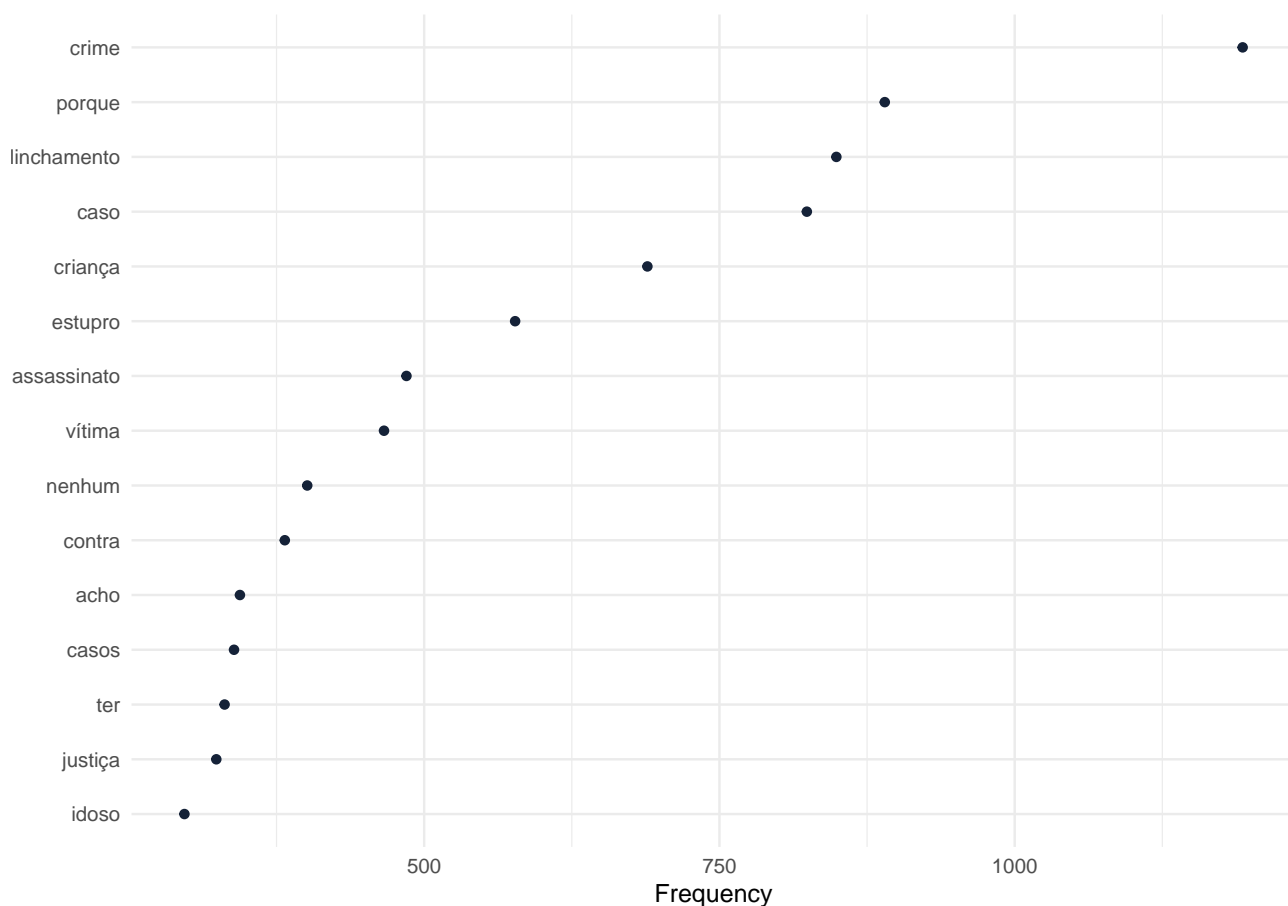
First, we concatenate all text responses into a single vector. Then we tokenize the sentences, remove Portuguese stop words and punctuation, and select the words that appear most frequently in the texts.

The graphs shows that *crime* (same as in English), *porque* (because), *linchamento* (lynching), and *caso* (case) are the words respondents use most often. This is expected as subjects were asked to justify their choices. The next words in the list are related to victim or crime characteristics, such as *criança* (child), *estupro* (rape), *assassinato* (murder), and *vítima* (victim). Indeed, they provide evidence for our previous findings and confirm that respondents select lynching victim profiles according to these two factors. Criminal characteristics, such as age or race, do not seem to be particularly relevant, as respondents do not mention them as much. The following terms are *nenhum* (none), *contra* (against), *acho* (I think), *casos* (cases), *ter* (have to), and *justiça* (justice). We believe these words correspond to cases where respondents wanted to affirm that they do not have any preference regarding the lynching profiles, or that they would rather not have chosen any of the alternatives.

```
dfmat <- df1 %>%
  select(q13_text, q14_text, q15_text, q16_text, q17_text) %>%
  gather() %>%
  corpus(text_field = "value") %>%
  tokens(remove_punct = TRUE, remove_numbers = TRUE,
          remove_symbol = TRUE) %>%
  dfm() %>%
  dfm_remove(., pattern = c(stopwords("pt", source = "snowball"),
                            "é", "ser"))

# Plot
dfmat %>%
  textstat_frequency(n = 15) %>%
  ggplot(aes(x = reorder(feature, frequency), y = frequency)) +
  geom_point(colour = "#152238") +
  coord_flip() +
```

```
labs(x = NULL, y = "Frequency") +
theme_minimal()
```



We also construct a feature co-occurrence matrix (FCM) that shows which words appear together in the responses we collected. Again, the results confirm the findings of the conjoint experiment. As suggested in the previous graph, we see a central cluster that describes crime and victim characteristics and includes the words *linchamentos* (lynchings), *caso* (case), *estupro* (rape), *criança* (child), *assassinato* (murder), and *vítima* (victim). This highlights that these are the most important reasons why respondents choose lynching profiles.

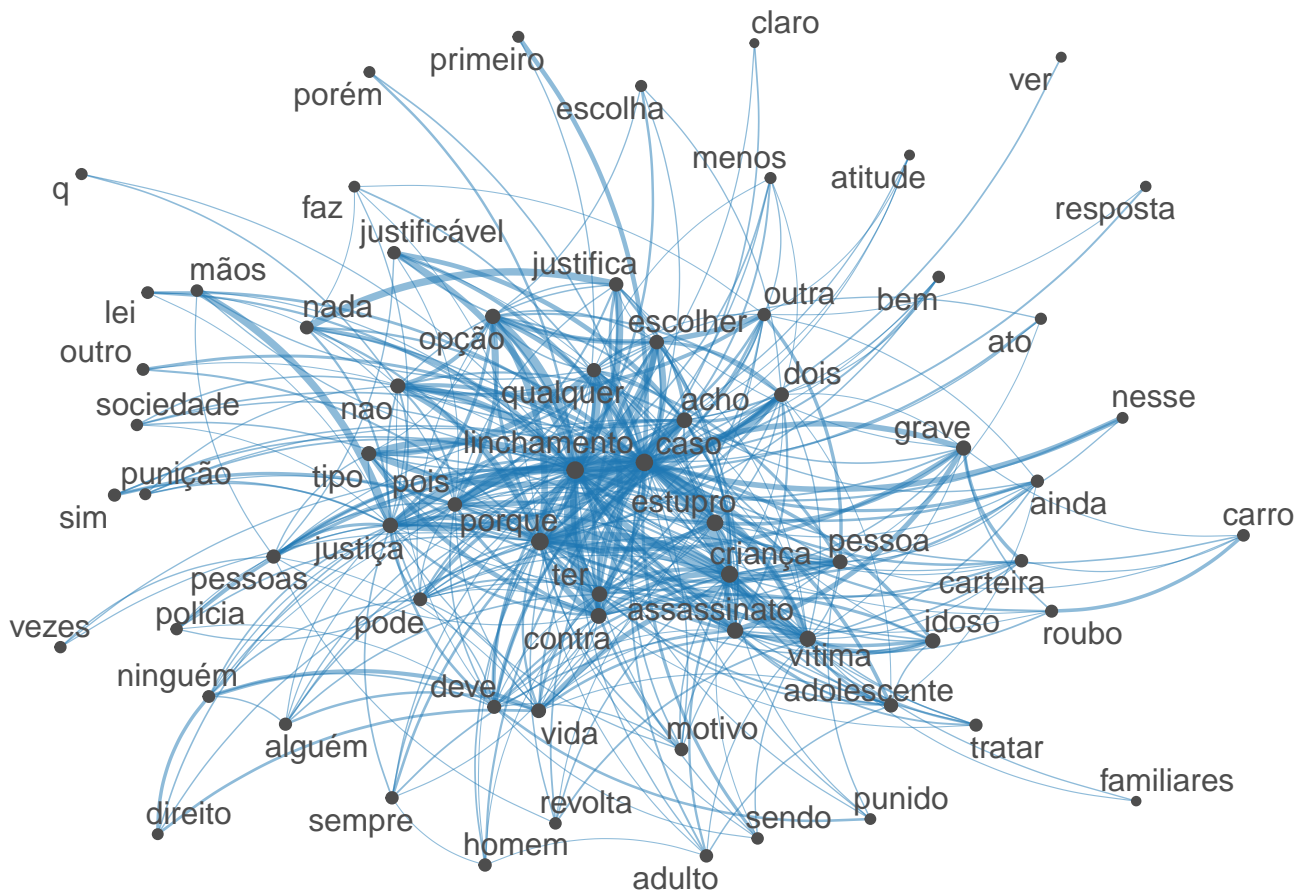
We note that there is another word cluster on the left. It contains words that indicate that some respondents do not support lynchings, such as *não* (no), *opção* (choice), *nada* (nothing), *justifica* (justifies), *justificável* (justifiable), and *escolher* (choose).

```
fcmat <- fcm(dfmat)
feat <- names(topfeatures(fcmat, 70))
fcmat_select <- fcm_select(fcmat, pattern = feat, selection = "keep")
size <- log(colSums(dfmat_select(dfmat, feat, selection = "keep")))
```

```
# Plot
```

```
set.seed(144)

textplot_network(fcmat_select, min_freq = 0.8, vertex_size = size / max(size) * 3, max.overlaps = 30)
```



We estimate a latent Dirichlet allocation (LDA) model to identify the three most important topics in our corpus. The first topic includes words that refer to victim and crime characteristics, many of which have also appeared in our previous estimations. Some of the most common words in this group are *crime* (crime), *criança* (child), *estupro* (rape), *vítima* (victim), *porque* (because), *idoso* (elderly), *grave* (serious), and *molestar* (molest). When we count the number of topics in the corpus, we see that this is the predominant one. The second topic identified by the model describes lynching perpetrators, as it contains the words like *polícia* (police), *pessoas* (people), and *família* (family). The third topic identifies the same words we associate with respondents who are against lynchings, such as *nenhum* (none), *opção* (choice), *não* (no), and *contra* (against). As our results show, respondents decide which individual deserves punishment based on factors related to the crime he/she committed, especially the crime victim. There is also a group of respondents that oppose lynchings in principle, who affirm that lynchings are never justified.

```
# Unsupervised LDA

tmod_lda <- textmodel_lda(dfmat, k = 3)

terms(tmod_lda, 10)
```

```

##      topic1      topic2
## [1,] "crime"      "porque"
## [2,] "criança"    "justiça"
## [3,] "vítima"     "pessoas"
## [4,] "estupro"    "polícia"
## [5,] "assassinato" "vida"
## [6,] "porque"     "fazer"
## [7,] "idoso"      "família"
## [8,] "grave"      "pq"
## [9,] "molestar"   "deve"
## [10,] "vitima"    "crimes"
##      topic3
## [1,] "linchamento"
## [2,] "caso"
## [3,] "nenhum"
## [4,] "casos"
## [5,] "opção"
## [6,] "acho"
## [7,] "concordo"
## [8,] "nao"
## [9,] "dois"
## [10,] "contra"

table(topics(tmod_lda))

##
## topic1 topic2 topic3
## 3495   2339   2426

```

Our last model is a semisupervised LDA, in which we include a series of keywords to measure how frequently some pre-defined topics appear often in the responses. We adopt a conservative approach and only include words that we have a high degree of confidence that are not ambiguous. There are four pre-defined topics in this estimation. The first refers to victims, and include the Portuguese words for *children*, *life*, and *victim* (along with possible variations). The second topic describes crime characteristics with words such as *murder*, *rape*, *kill*, *molest*, and *steal*. The next group has four keywords that describe lynching perpetrators, and they are *gangs*, *family*, *bystanders*, and *police*. The fourth topic includes terms to identify respondents who are against lynchings, and

we added *against*, *none*, *do not agree*, and *choice* as seed terms. We see that the topic describing crime characteristics is the one that appears more often.

```
# Semisupervised LDA
```

```
keywords <- dictionary(list(victim      = c("crian*", "vida*", "v*tima*"),
                           crime       = c("assassin*", "estupr*", "mata*", "molest*", "roub*"),
                           perpetrator = c("gang*", "fam*lia*", "pedestr*", "pol*cia*"),
                           against     = c("contra", "escolha", "nenhum*", "n*o concord*", "op**o"))))
```

```
sllda <- textmodel_seededlda(dfmat, keywords, residual = TRUE)
```

```
terms(sllda, 10)
```

```
##      victim      crime
## [1,] "criança"    "crime"
## [2,] "vítima"     "estupro"
## [3,] "vida"       "assassinato"
## [4,] "vitima"     "molestar"
## [5,] "crianças"   "molestou"
## [6,] "crianca"    "assassinou"
## [7,] "vítimas"    "roubo"
## [8,] "criancas"   "assassino"
## [9,] "vitimas"    "roubar"
## [10,] "criança.mas" "estuprou"
##      perpetrator against      other
## [1,] "família"    "nenhum"    "porque"
## [2,] "polícia"    "contra"    "sei"
## [3,] "gangues"    "linchamento" "crimes"
## [4,] "polícia"    "opção"      "pq"
## [5,] "família"    "caso"        "pessoas"
## [6,] "policiais"  "nenhuma"     "pra"
## [7,] "gangue"     "escolha"     "sim"
## [8,] "familiares" "opinião"     "mesma"
## [9,] "pedestres"  "opcao"       "sempre"
## [10,] "policial"  "opção"       "vezes"
```

```
table(topics(sllda))
```

```
##
```

```
##      victim      crime perpetrator
```

##	1699	2247	1172
##	against	other	
##	1680	1462	

5 Experiment 03

5.1 Description

Our last experiment measures the effect of information provision on attitudes about lynching. In particular, we test whether reminding respondents about the legal and social consequences of vigilante justice reduces the subjects' level of support for such practice.

The experiment has three treatment conditions and a control group. In all of them we present respondents with a short statement affirming that some Brazilians support vigilantism under certain conditions. Respondents were asked to use 0 to 49 if they disagree, 50 if they neither agree nor disagree, and 50-100 if they agree with the sentence.

Each of the three treatment groups received a different message about the legal or social consequences of lynching in Brazil. In the first treatment arm, we informed subjects about how the Brazilian constitution and penal code punishes civilian violence. The second treatment group was notified about the human rights guarantees enshrined in Brazil's legal framework. The last group read a vignette that mentions how lynchings can spark *vendettas* and initiate a cycle of violence in the community. Subjects in the control group received no information about the consequences of lynchings. The text shown to the control and treatment groups can be read below.

- *Control group*: In Brazil, some people believe that lynching may be justified under certain conditions. To what degree do you agree or disagree that lynching can be justified? Please use the slider below to indicate your preference. For disagreement, use 0 to 49; for agreement, use 51 to 100. Please use 50 if you neither agree nor disagree.⁹
- *Treatment 01 - Legal punishment for lynching perpetrators*: In Brazil, some people believe that lynching may be justified under certain conditions. **However, the Brazilian constitution**

⁹In Portuguese: No Brasil, algumas pessoas acreditam que linchamentos são justificados sob certas condições. O quanto você concorda ou discorda que linchamentos podem ser justificados? Por favor, use a barra abaixo para indicar sua preferência. Para indicar que discorda, use de 0 a 49; para concordar, use de 51 a 100. Por favor, use 50 caso você não concorde nem discorde.

and penal code strictly forbid lynching and those involved can be accused of torture or murder. To what degree do you agree or disagree that lynching can be justified? Please use the slider below to indicate your preference. For disagreement, use 0 to 49; for agreement, use 51 to 100. Please use 50 if you neither agree nor disagree.¹⁰

- *Treatment 02 - Human rights:* In Brazil, some people believe that lynching may be justified under certain conditions. **However, the Brazilian constitution states that all individuals have the right of not being tortured, including criminals.** To what degree do you agree or disagree that lynching can be justified? Please use the slider below to indicate your preference. For disagreement, use 0 to 49; for agreement, use 51 to 100. Please use 50 if you neither agree nor disagree.¹¹
- *Treatment 03 - Vendettas:* In Brazil, some people believe that lynching may be justified under certain conditions. **However, lynchings can trigger a new cycle of violence as the family or friends of the victim may retaliate the community.** To what degree do you agree or disagree that lynching can be justified? Please use the slider below to indicate your preference. For disagreement, use 0 to 49; for agreement, use 51 to 100. Please use 50 if you neither agree nor disagree.¹²

5.2 Main Results

Our results are available in table 56. Reminding respondents of the legal consequences of lynchings has a strong, negative effect on individual levels of lynching support. We see a reduction of about 4.5%, which corresponds to an 11% change when compared to the baseline levels. Our second treatment condition, reminding subjects of human rights guarantees, has no statistically significant effect.

¹⁰In Portuguese: No Brasil, algumas pessoas acreditam que linchamentos são justificados sob certas condições. **Entretanto, a constituição e o código penal do Brasil proíbem estritamente os linchamentos e os envolvidos podem ser acusados de tortura ou assassinato.** O quanto você concorda ou discorda que linchamentos podem ser justificados? Por favor, use a barra abaixo para indicar sua preferência. Para indicar que discorda, use de 0 a 49; para concordar, use de 51 a 100. Por favor, use 50 caso você não concorde nem discorde.

¹¹In Portuguese: No Brasil, algumas pessoas acreditam que linchamentos são justificados sob certas condições. **Entretanto, a constituição do Brasil afirma que todos os indivíduos têm o direito de não serem torturados, inclusive criminosos.** O quanto você concorda ou discorda que linchamentos podem ser justificados? Por favor, use a barra abaixo para indicar sua preferência. Para indicar que discorda, use de 0 a 49; para concordar, use de 51 a 100. Por favor, use 50 caso você não concorde nem discorde.

¹²In Portuguese: No Brasil, algumas pessoas acreditam que linchamentos são justificados sob certas condições. **Entretanto, linchamentos podem iniciar um ciclo de violência pois a família ou amigos da vítima podem retaliar a comunidade.** O quanto você concorda ou discorda que linchamentos podem ser justificados? Por favor, use a barra abaixo para indicar sua preferência. Para indicar que discorda, use de 0 a 49; para concordar, use de 51 a 100. Por favor, use 50 caso você não concorde nem discorde.

Informing respondents that lynchings can trigger a cycle of violence also has a large negative effect. It decreases lynching support by 3%, which is an 8% reduction in comparison with the control group. When we combine all treatments, we still detect a negative impact of the treatment conditions.

```
df_exp03 <- df1 %>%
  mutate(exp03_outcomes = coalesce(exp03_control, exp03_constitution, exp03_rights, exp03_vendetta),
         exp03_any_treat = case_when(!is.na(exp03_control) ~ "0", !is.na(exp03_constitution) ~ "1",
                                     !is.na(exp03_rights) ~ "1", !is.na(exp03_vendetta) ~ "1",
                                     TRUE ~ NA_character_),
         exp03_constitution_treat = case_when(!is.na(exp03_control) ~ "0",
                                              !is.na(exp03_constitution) ~ "1"),
         exp03_rights_treat = case_when(!is.na(exp03_control) ~ "0",
                                       !is.na(exp03_rights) ~ "1"),
         exp03_vendetta_treat = case_when(!is.na(exp03_control) ~ "0",
                                          !is.na(exp03_vendetta) ~ "1"))

m1 <- lm(exp03_outcomes ~ exp03_constitution_treat, data = df_exp03)
m2 <- lm(exp03_outcomes ~ exp03_rights_treat, data = df_exp03)
m3 <- lm(exp03_outcomes ~ exp03_vendetta_treat, data = df_exp03)
m4 <- lm(exp03_outcomes ~ exp03_any_treat, data = df_exp03)

stargazer(m1, m2, m3, m4, se = starprep(m1, m2, m3, m4), header = FALSE,
          p = starprep(m1, m2, m3, m4, stat = "p.value"), align = TRUE,
          title = "Experiment 03 -- Main Results", style = "apsr", label = "tab:exp03main",
          dep.var.labels = "\\textbf{Lynching Support}\\vspace{.5cm}",
          covariate.labels = c("Constitution and penal code", "Human rights",
                               "Vendettas", "Combined treatments"),
          column.sep.width = "3pt", notes = "Robust standard errors in parentheses.",
          keep.stat = "n", no.space = TRUE)
```

5.3 Determinants of Baseline Levels

As we did in the first experiment, we evaluate how individual characteristics impact lynching support. The results are similar to those presented in table 13, with the exception that the coefficient for white respondents is negative in two estimations, and the coefficient for male does not reach statistical significance in the last model (p -value = 0.11).

Table 56: Experiment 03 – Main Results

	Lynching Support			
	(1)	(2)	(3)	(4)
Constitution and penal code	−4.509** (1.805)			
Human rights		−1.571 (1.801)		
Vendettas			−3.156* (1.879)	
Combined treatments				−3.023** (1.493)
Constant	40.823*** (1.293)	40.823*** (1.293)	40.823*** (1.293)	40.823*** (1.293)
N	1,114	1,173	1,092	2,215

*p < .1; **p < .05; ***p < .01

Robust standard errors in parentheses.

```
df_exp03_group <- df_exp03 %>%
  filter(gender == c("Female", "Male"),
         race %in% c("Asian", "Black", "Mixed Race", "White"),
         ideology %in% c("Center", "Center-Left", "Center-Right", "Left", "Right")) %>%
  mutate(race = fct_relevel(race, "Black"), ideology = fct_relevel(ideology, "Center"))

df_exp03_gender <- df_exp03 %>% filter(gender == c("Female", "Male"))
df_exp03_race <- df_exp03 %>% filter(race %in% c("Asian", "Black", "Mixed Race", "White")) %>%
  mutate(race = fct_relevel(race, "Black"))
df_exp03_ideology <- df_exp03 %>%
  filter(ideology %in% c("Center", "Center-Left", "Center-Right", "Left", "Right")) %>%
  mutate(ideology = fct_relevel(ideology, "Center"))

m1 <- lm(exp03_outcomes ~ gender, data = df_exp03_gender)
m2 <- lm(exp03_outcomes ~ race, data = df_exp03_race)
m3 <- lm(exp03_outcomes ~ ideology, data = df_exp03_ideology)
m4 <- lm(exp03_outcomes ~ gender + race + ideology, data = df_exp03_group)

stargazer(m1, m2, m3, m4, se = starprep(m1, m2, m3, m4), p = starprep(m1, m2, m3, m4, stat = "p.value"),
          header = FALSE, align = TRUE, label = "tab:exp03baseline",
          title = "Experiment 01 -- Determinants of Baseline Levels of
```

```
Lynching Support", style = "apsr", dep.var.labels = "\\textbf{Lynching Support}\\vspace{.5cm}",
covariate.labels = c("Male", "Asian", "Mixed Race", "White",
                    "Left", "Center-Left", "Center-Right", "Right"),
column.sep.width = "3pt", notes = "Robust standard errors in parentheses.",
keep.stat = "n", no.space = TRUE)
```

Table 57: Experiment 01 – Determinants of Baseline Levels of Lynching Support

	Lynching Support			
	(1)	(2)	(3)	(4)
Male	4.825*** (1.809)			3.329 (2.089)
Asian		1.584 (4.729)		1.487 (8.218)
Mixed Race		-0.422 (2.393)		-4.205 (4.126)
White		-3.873* (2.247)		-8.962** (3.883)
Left			-10.475*** (2.268)	-12.049*** (3.058)
Center-Left			-14.893*** (2.525)	-16.576*** (3.639)
Center-Right			-2.564 (2.745)	-5.600 (3.813)
Right			0.887 (2.179)	2.194 (3.109)
Constant	36.063*** (1.223)	40.898*** (2.079)	43.358*** (1.679)	48.833*** (4.275)
N	1,141	2,185	1,625	831

*p < .1; **p < .05; ***p < .01

Robust standard errors in parentheses.

5.4 Heterogeneous Effects

In this section, we explore whether our pre-treatment covariates impact the treatment effect. We use the same flexible approach we employed in the previous experiment, and estimate all models using Bayesian Additive Regression Trees (BART). The algorithm produces average treatment effects for each category in the moderator variables.

5.4.1 Treatment 01: Legal Punishment for Lynching Perpetrators

We find no evidence of heterogeneous effects in this treatment condition. All coefficients are largely similar across all model specifications.

```
df_exp03_het <- df_exp03 %>%
  filter(gender %in% c("Female", "Male")) %>%
  mutate(race = fct_relevel(race, "White", "Black", "Mixed Race", "Asian",
                           "Indigenous"),
         education = fct_relevel(education, "Primary School", "Secondary School",
                                  "High School", "College", "Graduate School"),
         views_police = fct_relevel(views_police, "Regular", "Very Good", "Good",
                                      "Bad", "Very Bad"),
         views_justice = fct_relevel(views_justice, "Regular", "Very Good", "Good",
                                      "Bad", "Very Bad"),
         ideology = fct_relevel(ideology, "Center", "Left", "Center-Left",
                                  "Center-Right", "Right", "Don't Know", "Rather Not Say"),
         household_income = fct_relevel(household_income, "Up to R$1,000", "From R$1,001 to R$2,000",
                                          "From R$2,001 to R$3,000", "From R$3,001 to R$5,000",
                                          "From R$5,001 to R$10,000", "From R$10,001 to R$20,000",
                                          "Above R$20,000"),
         previous_victim_dummy = fct_relevel(previous_victim_dummy, "Yes", "No"),
         death_penalty = fct_relevel(death_penalty, "Yes", "No"),
         age2 = case_when(age >= 18 & age <= 34 ~ "18-34", age >= 35 & age <= 54 ~ "35-54",
                           age >= 55 ~ "55 plus", TRUE ~ as.character(age)))

df_exp03_constitution <- df_exp03_het %>%
  mutate(exp03_constitution_treat = as.numeric(exp03_constitution_treat)) %>%
  drop_na(exp03_constitution_treat)

# Gender

summary(bartc(exp03_outcomes, exp03_constitution_treat, gender,
              group.by = gender, group.effects = TRUE, data = df_exp03_constitution,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp03_outcomes, treatment = exp03_constitution_treat,
```

```

##           confounders = gender, data = df_exp03_constitution, group.by = gender,
##           group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##   estimate    sd ci.lower ci.upper    n
## 1      -4.324 3.045  -10.292  1.64464  567
## 2      -4.591 3.168  -10.801  1.61847  542
## tot    -4.454 2.234   -8.832 -0.07629 1109
## Estimates fit from 1109 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Age
df_exp03_constitution2 <- df_exp03_constitution %>% drop_na(age2)
summary(bartc(exp03_outcomes, exp03_constitution_treat, age2,
              group.by = age2, group.effects = TRUE, data = df_exp03_constitution2,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp03_outcomes, treatment = exp03_constitution_treat,
##           confounders = age2, data = df_exp03_constitution2, group.by = age2,
##           group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##   estimate    sd ci.lower ci.upper    n
## 1      -5.564 3.619  -12.657  1.5283  378
## 2      -5.059 3.783  -12.473  2.3559  353

```



```

## 3      -2.788 3.624   -9.890   4.3139  377
## tot    -4.459 2.208   -8.787  -0.1304 1108
## Estimates fit from 1108 total observations
## 95% credible interval calculated by: normal approximation
## population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Race

summary(bartc(exp03_outcomes, exp03_constitution_treat, race,
              group.by = race, group.effects = TRUE, data = df_exp03_constitution,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp03_outcomes, treatment = exp03_constitution_treat,
##             confounders = race, data = df_exp03_constitution, group.by = race,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
## model.rsp: bart
## model.trt: bart
##
## Treatment effect (pate):
##      estimate      sd ci.lower ci.upper
## 1     -5.6730   2.769  -11.101  -0.24493
## 2     -3.0775   5.758  -14.363   8.20825
## 3     -2.1744   3.819   -9.660   5.31151
## 4       0.4951  11.394  -21.837  22.82763
## 5     -2.3681  25.187  -51.734  46.99792
## 6     -4.0899  19.913  -43.119  34.93878
## 7     -2.4672  13.440  -28.809  23.87497
## tot   -4.3069   2.220   -8.657   0.04335
##
##      n
## 1    661
## 2    102
## 3    306
## 4     20

```

```

## 5      3
## 6      5
## 7     12
## tot 1109

## if (n < 10) group-size estimates may be unstable
## Estimates fit from 1109 total observations
## 95% credible interval calculated by: normal approximation
## population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Education

summary(bartc(exp03_outcomes, exp03_constitution_treat, education,
              group.by = education, group.effects = TRUE, data = df_exp03_constitution,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp03_outcomes, treatment = exp03_constitution_treat,
##             confounders = education, data = df_exp03_constitution, group.by = education,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
## model.rsp: bart
## model.trt: bart
##
## Treatment effect (pate):
##      estimate      sd ci.lower ci.upper
## 1      -4.235 17.005  -37.565  29.0949
## 2      -4.520  8.324  -20.834  11.7941
## 3      -5.273  3.373  -11.884   1.3377
## 4      -4.252  2.877   -9.891   1.3878
## 5      -2.921  5.920  -14.524   8.6822
## 6      -2.954 19.792  -41.745  35.8382
## tot     -4.486  2.190   -8.779  -0.1939
##
##      n
## 1      7
## 2     39

```

```

## 3      385
## 4      570
## 5      103
## 6         5
## tot 1109

## if (n < 10) group-size estimates may be unstable
## Estimates fit from 1109 total observations
## 95% credible interval calculated by: normal approximation
## population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Household Income
summary(bartc(exp03_outcomes, exp03_constitution_treat, household_income,
              group.by = household_income, group.effects = TRUE, data = df_exp03_constitution,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp03_outcomes, treatment = exp03_constitution_treat,
##             confounders = household_income, data = df_exp03_constitution,
##             group.by = household_income, group.effects = TRUE, n.chains = 5L,
##             seed = 144)
##
## Causal inference model fit by:
## model.rsp: bart
## model.trt: bart
##
## Treatment effect (pate):
##      estimate    sd ci.lower ci.upper    n
## 1      -5.079 6.187  -17.206   7.0485   77
## 2      -2.254 5.269  -12.582   8.0740  134
## 3      -6.630 4.695  -15.832   2.5722  173
## 4      -5.934 3.899  -13.576   1.7077  267
## 5      -2.131 3.880   -9.735   5.4732  296
## 6      -6.221 5.605  -17.207   4.7653  110
## 7      -5.253 7.378  -19.715   9.2081   52
## tot     -4.520 2.206   -8.844  -0.1959 1109

```

```

## Estimates fit from 1109 total observations
## 95% credible interval calculated by: normal approximation
## population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Political Ideology
summary(bartc(exp03_outcomes, exp03_constitution_treat, ideology,
              group.by = ideology, group.effects = TRUE, data = df_exp03_constitution,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp03_outcomes, treatment = exp03_constitution_treat,
##             confounders = ideology, data = df_exp03_constitution, group.by = ideology,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
## model.rsp: bart
## model.trt: bart
##
## Treatment effect (pate):
##      estimate    sd ci.lower ci.upper    n
## 1      -2.2621 4.947  -11.958   7.4335  144
## 2      -5.6883 4.456  -14.421   3.0444  191
## 3      -2.0756 5.840  -13.522   9.3712   99
## 4      -2.0208 5.600  -12.997   8.9550  104
## 5      -9.4915 4.226  -17.774  -1.2094  271
## 6      -0.6939 5.042  -10.575   9.1875  150
## 7      -3.7738 4.795  -13.172   5.6242  150
## tot    -4.5719 2.175   -8.835  -0.3083 1109
## Estimates fit from 1109 total observations
## 95% credible interval calculated by: normal approximation
## population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Support for Death Penalty
summary(bartc(exp03_outcomes, exp03_constitution_treat, death_penalty,

```

```

        group.by = death_penalty, group.effects = TRUE, data = df_exp03_constitution,
        n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp03_outcomes, treatment = exp03_constitution_treat,
##             confounders = death_penalty, data = df_exp03_constitution,
##             group.by = death_penalty, group.effects = TRUE, n.chains = 5L,
##             seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##      estimate    sd ci.lower ci.upper    n
## 1      -6.932 3.196  -13.195  -0.6689  465
## 2      -2.269 3.007   -8.162   3.6248  518
## 3      -4.152 7.135  -18.136   9.8323   72
## 4      -2.251 7.548  -17.046  12.5434   54
## tot     -4.345 2.115   -8.491  -0.2001 1109
## Estimates fit from 1109 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Previous Victimization
df_exp03_constitution2 <- df_exp03_constitution %>% drop_na(previous_victim_dummy)
summary(bartc(exp03_outcomes, exp03_constitution_treat, previous_victim_dummy,
              group.by = previous_victim_dummy, group.effects = TRUE, data = df_exp03_constitution2,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp03_outcomes, treatment = exp03_constitution_treat,
##             confounders = previous_victim_dummy, data = df_exp03_constitution2,
##             group.by = previous_victim_dummy, group.effects = TRUE, n.chains = 5L,

```

```

##          seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##   estimate    sd ci.lower ci.upper    n
## 1      -5.199 3.503  -12.064   1.6663  428
## 2      -3.356 2.799   -8.842   2.1295  669
## tot    -4.075 2.205   -8.396   0.2457 1097
## Estimates fit from 1097 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Opinion on the Police
summary(bartc(exp03_outcomes, exp03_constitution_treat, views_police,
              group.by = views_police, group.effects = TRUE, data = df_exp03_constitution,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp03_outcomes, treatment = exp03_constitution_treat,
##             confounders = views_police, data = df_exp03_constitution,
##             group.by = views_police, group.effects = TRUE, n.chains = 5L,
##             seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##   estimate    sd ci.lower ci.upper
## 1      -2.894 3.313   -9.387  3.59959
## 2      -3.644 6.919  -17.204  9.91657
## 3      -3.759 4.152  -11.896  4.37825

```

```

## 4      -4.831  4.287  -13.235  3.57169
## 5      -8.575  5.070  -18.511  1.36176
## 6      -2.778 12.600  -27.473 21.91682
## 7      -6.469 16.001  -37.830 24.89167
## tot    -4.382  2.215   -8.722 -0.04129

##      n
## 1     409
## 2      62
## 3     229
## 4     219
## 5     168
## 6      14
## 7       8
## tot 1109

## if (n < 10) group-size estimates may be unstable
## Estimates fit from 1109 total observations
## 95% credible interval calculated by: normal approximation
## population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Opinion on the Judicial System
summary(bartc(exp03_outcomes, exp03_constitution_treat, views_justice,
              group.by = views_police, group.effects = TRUE, data = df_exp03_constitution,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp03_outcomes, treatment = exp03_constitution_treat,
##             confounders = views_justice, data = df_exp03_constitution,
##             group.by = views_police, group.effects = TRUE, n.chains = 5L,
##             seed = 144)
##
## Causal inference model fit by:
## model.rsp: bart
## model.trt: bart
##
## Treatment effect (pate):

```

```
##      estimate      sd ci.lower ci.upper
## 1      -3.674  2.895   -9.348   2.0007
## 2      -3.642  5.962  -15.327   8.0423
## 3      -3.221  3.505  -10.092   3.6486
## 4      -5.582  3.741  -12.914   1.7495
## 5      -4.558  4.122  -12.636   3.5207
## 6      -2.268 11.986  -25.759  21.2240
## 7      -3.737 15.268  -33.661  26.1870
## tot     -4.072  2.168   -8.321   0.1769

##      n
## 1     409
## 2      62
## 3     229
## 4     219
## 5     168
## 6      14
## 7       8
## tot 1109

## if (n < 10) group-size estimates may be unstable
## Estimates fit from 1109 total observations
## 95% credible interval calculated by: normal approximation
## population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains
```

5.4.2 Treatment 02: Human Rights

Our results show no presence of heterogeneous effects.

```
df_exp03_rights <- df_exp03_het %>%
  mutate(exp03_rights_treat = as.numeric(exp03_rights_treat)) %>%
  drop_na(exp03_rights_treat)

# Gender

summary(bartc(exp03_outcomes, exp03_rights_treat, gender,
              group.by = gender, group.effects = TRUE, data = df_exp03_rights,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'
```



```

## Call: bartc(response = exp03_outcomes, treatment = exp03_rights_treat,
##           confounders = gender, data = df_exp03_rights, group.by = gender,
##           group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##      estimate    sd ci.lower ci.upper    n
## 1      -1.922 3.109   -8.015    4.171  589
## 2      -1.268 3.120   -7.382    4.847  579
## tot     -1.598 2.228   -5.964    2.769 1168
## Estimates fit from 1168 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Age
df_exp03_rights2 <- df_exp03_rights %>% drop_na(age2)
summary(bartc(exp03_outcomes, exp03_rights_treat, age2,
              group.by = age2, group.effects = TRUE, data = df_exp03_rights2,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp03_outcomes, treatment = exp03_rights_treat,
##           confounders = age2, data = df_exp03_rights2, group.by = age2,
##           group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##      estimate    sd ci.lower ci.upper    n
## 1      -2.4412 3.723   -9.737    4.855  380

```

```

## 2    -2.3703 3.640   -9.505    4.764  394
## 3     0.1061 3.644   -7.036    7.248  393
## tot  -1.5594 2.196   -5.864    2.745 1167
## Estimates fit from 1167 total observations
## 95% credible interval calculated by: normal approximation
##  population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Race

summary(bartc(exp03_outcomes, exp03_rights_treat, race,
              group.by = race, group.effects = TRUE, data = df_exp03_rights,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp03_outcomes, treatment = exp03_rights_treat,
##             confounders = race, data = df_exp03_rights, group.by = race,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
##  model.rsp: bart
##  model.trt: bart
##
## Treatment effect (pate):
##      estimate      sd ci.lower ci.upper    n
## 1    -2.0721  2.697   -7.358    3.214  689
## 2    -1.6737  5.429  -12.315    8.967  117
## 3    -0.5999  3.664   -7.781    6.581  314
## 4     1.1361  9.376  -17.241   19.514   31
## 5    -0.2715 17.389  -34.353   33.810    7
## 6    -1.5078 25.799  -52.073   49.058    3
## 7    -1.0834 17.228  -34.849   32.682    7
## tot  -1.5331  2.209   -5.862    2.796 1168
##  if (n < 10) group-size estimates may be unstable
## Estimates fit from 1168 total observations
## 95% credible interval calculated by: normal approximation
##  population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

```

```

# Education

summary(bartc(exp03_outcomes, exp03_rights_treat, education,
              group.by = education, group.effects = TRUE, data = df_exp03_rights,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp03_outcomes, treatment = exp03_rights_treat,
##             confounders = education, data = df_exp03_rights, group.by = education,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##      estimate      sd ci.lower ci.upper    n
## 1   -1.8035 18.601  -38.261   34.654    6
## 2   -2.3123  9.547  -21.024   16.399   32
## 3   -3.0268  3.414   -9.719    3.665  417
## 4   -0.7781  2.869   -6.401    4.845  606
## 5    0.6694  5.970  -11.031   12.370  103
## 6   -1.5588 22.538  -45.733   42.615    4
## tot  -1.5033  2.188   -5.791    2.785 1168
##   if (n < 10) group-size estimates may be unstable
## Estimates fit from 1168 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Household Income

summary(bartc(exp03_outcomes, exp03_rights_treat, household_income,
              group.by = household_income, group.effects = TRUE, data = df_exp03_rights,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

```

```

## Call: bartc(response = exp03_outcomes, treatment = exp03_rights_treat,
##           confounders = household_income, data = df_exp03_rights, group.by = household_income,
##           group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##      estimate    sd ci.lower ci.upper    n
## 1   -1.1723 6.755  -14.412   12.068   68
## 2   -1.4412 4.964  -11.171    8.289  153
## 3   -2.8851 4.438  -11.584    5.814  193
## 4   -1.9194 3.830   -9.427    5.588  275
## 5    0.9267 3.866   -6.650    8.503  304
## 6   -3.1190 5.189  -13.289    7.051  133
## 7   -1.0605 7.877  -16.500   14.379   42
## tot -1.3378 2.184   -5.619    2.943 1168
## Estimates fit from 1168 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Political Ideology
summary(bartc(exp03_outcomes, exp03_rights_treat, ideology,
              group.by = ideology, group.effects = TRUE, data = df_exp03_rights,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp03_outcomes, treatment = exp03_rights_treat,
##           confounders = ideology, data = df_exp03_rights, group.by = ideology,
##           group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart

```

```
##
## Treatment effect (pate):
##      estimate    sd ci.lower ci.upper    n
## 1      -1.7810 4.486  -10.573    7.011  177
## 2      -3.2122 4.396  -11.828    5.404  204
## 3      -0.5505 5.612  -11.549   10.448  100
## 4      -0.2645 5.469  -10.984   10.455  112
## 5      -3.7523 4.169  -11.923    4.418  253
## 6       3.2061 5.170   -6.928   13.340  158
## 7      -1.3512 4.596  -10.360    7.658  164
## tot   -1.4722 2.155   -5.695    2.751 1168
## Estimates fit from 1168 total observations
## 95% credible interval calculated by: normal approximation
## population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Support for Death Penalty
summary(bartc(exp03_outcomes, exp03_rights_treat, death_penalty,
              group.by = death_penalty, group.effects = TRUE, data = df_exp03_rights,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp03_outcomes, treatment = exp03_rights_treat,
##             confounders = death_penalty, data = df_exp03_rights, group.by = death_penalty,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
## model.rsp: bart
## model.trt: bart
##
## Treatment effect (pate):
##      estimate    sd ci.lower ci.upper    n
## 1      -4.1051 3.236  -10.447    2.236  486
## 2      -0.8426 2.995   -6.713    5.027  538
## 3       5.8459 6.845   -7.570   19.262   86
## 4       3.9524 7.992  -11.711   19.616   58
```

```

## tot  -1.4695 2.119   -5.622    2.683 1168
## Estimates fit from 1168 total observations
## 95% credible interval calculated by: normal approximation
##  population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Previous Victimization
df_exp03_rights2 <- df_exp03_rights %>% drop_na(previous_victim_dummy)
summary(bartc(exp03_outcomes, exp03_rights_treat, previous_victim_dummy,
              group.by = previous_victim_dummy, group.effects = TRUE, data = df_exp03_rights2,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp03_outcomes, treatment = exp03_rights_treat,
##             confounders = previous_victim_dummy, data = df_exp03_rights2,
##             group.by = previous_victim_dummy, group.effects = TRUE, n.chains = 5L,
##             seed = 144)
##
## Causal inference model fit by:
##  model.rsp: bart
##  model.trt: bart
##
## Treatment effect (pate):
##    estimate    sd ci.lower ci.upper    n
## 1   -4.0502 3.389  -10.692    2.591  482
## 2   -0.2588 2.854   -5.853    5.336  674
## tot  -1.8396 2.179   -6.110    2.431 1156
## Estimates fit from 1156 total observations
## 95% credible interval calculated by: normal approximation
##  population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Opinion on the Police
summary(bartc(exp03_outcomes, exp03_rights_treat, views_police,
              group.by = views_police, group.effects = TRUE, data = df_exp03_rights,
              n.chains = 5L, seed = 144))

```

```

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp03_outcomes, treatment = exp03_rights_treat,
##             confounders = views_police, data = df_exp03_rights, group.by = views_police,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##      estimate      sd ci.lower ci.upper    n
## 1  -1.07410  3.156   -7.259    5.111  464
## 2   0.51459  6.939  -13.087   14.116   65
## 3  -0.04506  4.261   -8.396    8.306  234
## 4  -3.16121  4.319  -11.626    5.304  223
## 5  -3.65200  4.911  -13.277    5.973  165
## 6  -0.46121 15.460  -30.762   29.839    9
## 7  -1.82366 16.214  -33.602   29.955    8
## tot -1.54259  2.157   -5.770    2.685 1168
##   if (n < 10) group-size estimates may be unstable
## Estimates fit from 1168 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Opinion on the Judicial System
summary(bartc(exp03_outcomes, exp03_rights_treat, views_justice,
              group.by = views_police, group.effects = TRUE, data = df_exp03_rights,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp03_outcomes, treatment = exp03_rights_treat,
##             confounders = views_justice, data = df_exp03_rights, group.by = views_police,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##

```

```
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##   estimate      sd ci.lower ci.upper    n
## 1    -1.8396   2.812   -7.351    3.671  464
## 2     1.0743   5.924  -10.537   12.685   65
## 3    -0.4890   3.670   -7.682    6.704  234
## 4    -3.0053   3.579  -10.021    4.010  223
## 5    -2.3906   4.217  -10.656    5.875  165
## 6    -1.0520  14.792  -30.043   27.939    9
## 7    -0.4508  15.554  -30.935   30.034    8
## tot  -1.6917   2.195   -5.993    2.610 1168
##   if (n < 10) group-size estimates may be unstable
## Estimates fit from 1168 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains
```

5.4.3 Treatment 03: Vendettas

We do not find considerable heterogeneity in the results. Overall, the three treatment conditions are very stable, thus we are confident that the main results are not driven by any particular group.

```
df_exp03_vendetta <- df_exp03_het %>%
  mutate(exp03_vendetta_treat = as.numeric(exp03_vendetta_treat)) %>%
  drop_na(exp03_vendetta_treat)

# Gender
summary(bartc(exp03_outcomes, exp03_vendetta_treat, gender,
              group.by = gender, group.effects = TRUE, data = df_exp03_vendetta,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp03_outcomes, treatment = exp03_vendetta_treat,
##             confounders = gender, data = df_exp03_vendetta, group.by = gender,
```



```

##           group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##   estimate    sd ci.lower ci.upper    n
## 1      -2.639 3.233   -8.975    3.697 553
## 2      -3.606 3.351  -10.174    2.961 533
## tot     -3.114 2.356   -7.733    1.505 1086
## Estimates fit from 1086 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Age
df_exp03_vendetta2 <- df_exp03_vendetta %>% drop_na(age2)
summary(bartc(exp03_outcomes, exp03_vendetta_treat, age2,
              group.by = age2, group.effects = TRUE, data = df_exp03_vendetta2,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp03_outcomes, treatment = exp03_vendetta_treat,
##             confounders = age2, data = df_exp03_vendetta2, group.by = age2,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##   estimate    sd ci.lower ci.upper    n
## 1      -1.230 3.920   -8.913    6.454 342
## 2      -5.794 3.865  -13.369    1.781 347
## 3      -0.913 3.691   -8.147    6.321 396

```

```

## tot    -2.574 2.303   -7.087    1.939 1085
## Estimates fit from 1085 total observations
## 95% credible interval calculated by: normal approximation
##  population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Race

summary(bartc(exp03_outcomes, exp03_vendetta_treat, race,
              group.by = race, group.effects = TRUE, data = df_exp03_vendetta,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp03_outcomes, treatment = exp03_vendetta_treat,
##             confounders = race, data = df_exp03_vendetta, group.by = race,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
##  model.rsp: bart
##  model.trt: bart
##
## Treatment effect (pate):
##      estimate      sd ci.lower ci.upper    n
## 1    -4.4185  2.875  -10.053   1.217  636
## 2    -2.0908  5.670  -13.205   9.023  108
## 3    -0.5885  3.980   -8.390   7.213  297
## 4    -1.2263  9.646  -20.133  17.680   30
## 5    -2.9699 22.649  -47.360  41.420    4
## 6    -2.7226 25.883  -53.453  48.008    3
## 7    -2.4259 16.662  -35.083  30.232    8
## tot   -3.0267  2.291   -7.516   1.463 1086
##  if (n < 10) group-size estimates may be unstable
## Estimates fit from 1086 total observations
## 95% credible interval calculated by: normal approximation
##  population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Education

summary(bartc(exp03_outcomes, exp03_vendetta_treat, education,

```

```

    group.by = education, group.effects = TRUE, data = df_exp03_vendetta,
    n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp03_outcomes, treatment = exp03_vendetta_treat,
##             confounders = education, data = df_exp03_vendetta, group.by = education,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##      estimate      sd ci.lower ci.upper    n
## 1      -1.244 16.878  -34.324  31.8369     8
## 2      -3.365  9.076  -21.154  14.4249    34
## 3      -6.387  3.669  -13.579   0.8046   377
## 4      -1.202  3.033   -7.146   4.7419   571
## 5      -1.202  6.364  -13.675  11.2717    92
## 6      -2.781 22.705  -47.281  41.7189     4
## tot     -3.076  2.271   -7.526   1.3747 1086
##   if (n < 10) group-size estimates may be unstable
## Estimates fit from 1086 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Household Income
summary(bartc(exp03_outcomes, exp03_vendetta_treat, household_income,
              group.by = household_income, group.effects = TRUE, data = df_exp03_vendetta,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp03_outcomes, treatment = exp03_vendetta_treat,
##             confounders = household_income, data = df_exp03_vendetta,

```

```

##           group.by = household_income, group.effects = TRUE, n.chains = 5L,
##           seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##   estimate    sd ci.lower ci.upper    n
## 1      -1.826 6.861  -15.272   11.621   65
## 2      -1.637 5.147  -11.725    8.451  129
## 3      -2.953 4.442  -11.660    5.754  186
## 4      -4.705 4.324  -13.181    3.770  235
## 5      -1.855 3.793   -9.288    5.579  285
## 6      -2.273 4.940  -11.956    7.410  141
## 7      -3.095 7.565  -17.923   11.732   45
## tot     -2.738 2.295   -7.236    1.761 1086
## Estimates fit from 1086 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Political Ideology
summary(bartc(exp03_outcomes, exp03_vendetta_treat, ideology,
              group.by = ideology, group.effects = TRUE, data = df_exp03_vendetta,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp03_outcomes, treatment = exp03_vendetta_treat,
##             confounders = ideology, data = df_exp03_vendetta, group.by = ideology,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##

```

```

## Treatment effect (pate):
##      estimate    sd ci.lower ci.upper    n
## 1    -0.9546 4.954  -10.663    8.754  162
## 2    -3.5401 4.516  -12.391    5.311  189
## 3    -3.2219 5.682  -14.358    7.914  105
## 4    -0.9631 6.014  -12.750   10.824   98
## 5    -6.5072 4.469  -15.266    2.252  241
## 6     1.5010 5.417   -9.117   12.119  149
## 7    -3.7910 5.088  -13.763    6.181  142
## tot  -2.8907 2.265   -7.331    1.549 1086

## Estimates fit from 1086 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Support for Death Penalty
summary(bartc(exp03_outcomes, exp03_vendetta_treat, death_penalty,
              group.by = death_penalty, group.effects = TRUE, data = df_exp03_vendetta,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp03_outcomes, treatment = exp03_vendetta_treat,
##             confounders = death_penalty, data = df_exp03_vendetta, group.by = death_penalty,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##      estimate    sd ci.lower ci.upper    n
## 1    -4.420 3.279  -10.847    2.007  460
## 2    -2.633 3.158   -8.822    3.556  493
## 3    -1.514 7.006  -15.247   12.218   74
## 4    -2.535 7.825  -17.872   12.801   59
## tot  -3.308 2.216   -7.652    1.035 1086

```

```

## Estimates fit from 1086 total observations
## 95% credible interval calculated by: normal approximation
## population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Previous Victimization

df_exp03_vendetta2 <- df_exp03_vendetta %>% drop_na(previous_victim_dummy)
summary(bartc(exp03_outcomes, exp03_vendetta_treat, previous_victim_dummy,
              group.by = previous_victim_dummy, group.effects = TRUE, data = df_exp03_vendetta2,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp03_outcomes, treatment = exp03_vendetta_treat,
##             confounders = previous_victim_dummy, data = df_exp03_vendetta2,
##             group.by = previous_victim_dummy, group.effects = TRUE, n.chains = 5L,
##             seed = 144)
##
## Causal inference model fit by:
## model.rsp: bart
## model.trt: bart
##
## Treatment effect (pate):
##      estimate    sd ci.lower ci.upper    n
## 1      -4.498 3.579  -11.513    2.516  427
## 2      -1.797 2.921   -7.521    3.927  648
## tot     -2.870 2.280   -7.339    1.599 1075
## Estimates fit from 1075 total observations
## 95% credible interval calculated by: normal approximation
## population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Opinion on the Police

summary(bartc(exp03_outcomes, exp03_vendetta_treat, views_police,
              group.by = views_police, group.effects = TRUE, data = df_exp03_vendetta,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

```

```

## Call: bartc(response = exp03_outcomes, treatment = exp03_vendetta_treat,
##             confounders = views_police, data = df_exp03_vendetta, group.by = views_police,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart
##   model.trt: bart
##
## Treatment effect (pate):
##      estimate      sd ci.lower ci.upper    n
## 1    -4.2406   3.360  -10.826    2.345  422
## 2    -0.9748   7.323  -15.328   13.379   58
## 3    -1.8766   4.388  -10.476    6.723  220
## 4    -1.9563   4.398  -10.577    6.664  213
## 5    -3.8309   4.942  -13.518    5.856  154
## 6    -0.5442  14.413  -28.792   27.704   11
## 7    -2.6556  16.281  -34.567   29.255    8
## tot  -3.0320   2.293   -7.527    1.463 1086
##   if (n < 10) group-size estimates may be unstable
## Estimates fit from 1086 total observations
## 95% credible interval calculated by: normal approximation
##   population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains

# Opinion on the Judicial System

summary(bartc(exp03_outcomes, exp03_vendetta_treat, views_justice,
              group.by = views_police, group.effects = TRUE, data = df_exp03_vendetta,
              n.chains = 5L, seed = 144))

## fitting treatment model via method 'bart'
## fitting response model via method 'bart'

## Call: bartc(response = exp03_outcomes, treatment = exp03_vendetta_treat,
##             confounders = views_justice, data = df_exp03_vendetta, group.by = views_police,
##             group.effects = TRUE, n.chains = 5L, seed = 144)
##
## Causal inference model fit by:
##   model.rsp: bart

```

```
## model.trt: bart
##
## Treatment effect (pate):
##      estimate      sd ci.lower ci.upper    n
## 1      -3.1590  2.948   -8.936    2.618  422
## 2      -0.9988  6.300  -13.347   11.349   58
## 3      -1.7080  3.839   -9.232    5.816  220
## 4      -3.4462  3.821  -10.936    4.044  213
## 5      -4.1983  4.383  -12.790    4.393  154
## 6      -1.5944 13.541  -28.134   24.946   11
## 7      -1.9265 15.739  -32.774   28.921    8
## tot     -2.9285  2.285   -7.408    1.551 1086
## if (n < 10) group-size estimates may be unstable
## Estimates fit from 1086 total observations
## 95% credible interval calculated by: normal approximation
## population TE approximated by: posterior predictive distribution
## Result based on 800 posterior samples times 5 chains
```

6 Ethics Statement

We adhered to the ethical guidelines provided by the Institutional Review Board at Brown University and APSA's Principles and Guidance. To facilitate transparency, we comment here on a few aspects of our research design. First, we worked with the Brown University IRB to reduce the risk of harm for participants taking the survey. This included consultation with a cultural expert to inform the phrasing of the survey. Second, respondents received compensation via Qualtrics, which paid respondents directly after they completed the questionnaire. Each subject in Qualtrics' online panel received the equivalent of 2.5 USD in Brazilian Reals (local currency). Respondents who do not finish the survey will not receive compensation. The compensation is appropriate for the participant population. As of August 17, 2020, Brazil's monthly minimum wage is BRL1039, which amounts to 191 US dollars. Assuming 40 working hours per week, the hourly minimum wage equals 1.19 US dollars. Our survey takes about 20 minutes to complete and respondents received 2.5 USD, therefore subjects will receive a monetary compensation that is 6 times higher than the local minimum wage. Third, we do not see any potential or perceived conflicts of interest in carrying out this research. We received a grant of \$10,000 to conduct this research from the Centre for the Study of Governance &

Society at King's College London, which receives support from the Templeton Foundation. We are aware of no conflicts of interest from either source. All of the code and data will be made publicly available.

7 Session Information

```
sessionInfo()

## R version 4.0.2 (2020-06-22)
## Platform: x86_64-apple-darwin17.0 (64-bit)
## Running under: macOS 10.16
##
## Matrix products: default
## BLAS: /Library/Frameworks/R.framework/Versions/4.0/Resources/lib/libRblas.dylib
## LAPACK: /Library/Frameworks/R.framework/Versions/4.0/Resources/lib/libRlapack.dylib
##
## locale:
## [1] en_US.UTF-8/en_US.UTF-8/en_US.UTF-8/C/en_US.UTF-8/en_US.UTF-8
##
## attached base packages:
## [1] grid      stats      graphics
## [4] grDevices utils      datasets
## [7] methods   base
##
## other attached packages:
## [1] keyATM_0.4.0      bartCause_1.0-4
## [3] seededlda_0.5.1   quanteda_2.1.2
## [5] policytree_1.0.3  grf_1.2.0
## [7] estimatr_0.30.2   forcats_0.5.1
## [9] stringr_1.4.0     dplyr_1.0.4
## [11] purrr_0.3.4       readr_1.4.0
## [13] tidyr_1.1.2       tibble_3.1.0
## [15] tidyverse_1.3.0   stargazer_5.2.2
## [17] janitor_2.1.0     kableExtra_1.3.4
## [19] cregg_0.4.0       cjoint_2.1.0
## [21] survey_4.0         survival_3.2-7
## [23] Matrix_1.3-2      ggplot2_3.3.3
```

```

## [25] lmtest_0.9-38      zoo_1.8-8
## [27] sandwich_3.0-0     rmarkdown_2.7
## [29] nvimcom_0.9-115
##
## loaded via a namespace (and not attached):
## [1] colorspace_2.0-0
## [2] ellipsis_0.3.1
## [3] ggstance_0.3.5
## [4] snakecase_0.11.0
## [5] fs_1.5.0
## [6] rstudioapi_0.13
## [7] farver_2.1.0
## [8] ggrepel_0.9.1
## [9] fansi_0.4.2
## [10] lubridate_1.7.9.2
## [11] xml2_1.3.2
## [12] codetools_0.2-18
## [13] splines_4.0.2
## [14] dbarts_0.9-19
## [15] knitr_1.31
## [16] texreg_1.37.5
## [17] Formula_1.2-4
## [18] jsonlite_1.7.2
## [19] broom_0.7.5.9000
## [20] dbplyr_2.1.0
## [21] shiny_1.6.0
## [22] compiler_4.0.2
## [23] httr_1.4.2
## [24] backports_1.2.1
## [25] assertthat_0.2.1
## [26] fastmap_1.1.0
## [27] cli_2.4.0
## [28] later_1.1.0.1
## [29] htmltools_0.5.1.1
## [30] tools_4.0.2
## [31] coda_0.19-4
## [32] gtable_0.3.0

```

```
## [33] glue_1.4.2
## [34] fastmatch_1.1-0
## [35] Rcpp_1.0.6
## [36] rle_0.9.2
## [37] cellranger_1.1.0
## [38] statnet.common_4.4.1
## [39] vctrs_0.3.7
## [40] svglite_1.2.3.2
## [41] xfun_0.22
## [42] stopwords_2.2
## [43] ps_1.6.0
## [44] network_1.16.1
## [45] rvest_0.3.6
## [46] mime_0.10
## [47] lifecycle_1.0.0
## [48] scales_1.1.1
## [49] hms_1.0.0
## [50] promises_1.2.0.1
## [51] parallel_4.0.2
## [52] yaml_2.2.1
## [53] gdtools_0.2.3
## [54] stringi_1.5.3
## [55] highr_0.8
## [56] rlang_0.4.10
## [57] pkgconfig_2.0.3
## [58] systemfonts_1.0.1
## [59] evaluate_0.14
## [60] lattice_0.20-41
## [61] labeling_0.4.2
## [62] tidyselect_1.1.0
## [63] plyr_1.8.6
## [64] magrittr_2.0.1
## [65] R6_2.5.0
## [66] generics_0.1.0
## [67] sna_2.6
## [68] DBI_1.1.1
## [69] pillar_1.5.1
```

```
## [70] haven_2.3.1
## [71] withr_2.4.1
## [72] modelr_0.1.8
## [73] crayon_1.4.1
## [74] utf8_1.2.1
## [75] readxl_1.3.1
## [76] data.table_1.14.0
## [77] reprex_1.0.0
## [78] digest_0.6.27
## [79] webshot_0.5.2
## [80] xtable_1.8-4
## [81] httpuv_1.5.5
## [82] RcppParallel_5.0.2
## [83] munsell_0.5.0
## [84] viridisLite_0.3.0
## [85] mitools_2.4
```

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