

# Study 1 (Gender NPR Study)

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## Items

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## Variable Names

| Variable              | Description                                                                                                    |
|-----------------------|----------------------------------------------------------------------------------------------------------------|
| treatment             | Binary indicator of whether a participant was randomly assigned to treatment condition (shown women feedback). |
| set_num               | Indicator of which feedback set was shown (1 or 2, with different percentage values).                          |
| women_feedback        | Binary indicator of whether women feedback was shown to participant.                                           |
| women_count           | Count of women selected across the three choices (0-3).                                                        |
| women_proportion      | Proportion of women selected (DV: ranges from 0 to 1).                                                         |
| age_feedback          | Binary indicator of whether age feedback was shown.                                                            |
| age_proportion        | Proportion of experts under 50 years old selected.                                                             |
| location_feedback     | Binary indicator of whether location feedback was shown.                                                       |
| location_proportion   | Proportion of experts based on West Coast selected.                                                            |
| university_feedback   | Binary indicator of whether university feedback was shown.                                                     |
| university_proportion | Proportion of experts working at a university selected.                                                        |
| choice-1 to choice-3  | The selected AI experts                                                                                        |
| gender                | Self-selected gender.                                                                                          |
| race                  | Self-selected race.                                                                                            |
| age                   | Self-entered age.                                                                                              |
| gender_code           | Dummy code for gender (male = 1).                                                                              |
| race_code             | Dummy code for race (white = 1).                                                                               |

## Demographics

```
## Excluded Participants: 495

##                                     Percentage gender
## 1                               Woman 55.21
## 2                               Man 43.89
## 3                Non-binary 0.90
## 4 Another gender not listed here: 0.00

##                                     Percentage Race
## 1 American Indian or Alaskan Native 0.80
## 2      Asian / Pacific Islander 7.21
## 3    Black or African American 13.13
## 4          Hispanic / Latinx 6.51
## 5        White / Caucasian 72.34

## # A tibble: 1 x 2
##   mean_age sd_age
##       <dbl>  <dbl>
## 1     43.8   13.2

## Treatment condition: 50 %

## Control condition: 50 %

## Set 1: 52 %

## Set 2: 48 %

## Mean proportion of women selected: 0.399

## SD proportion of women selected: 0.268

## Treatment × Set interaction: B = 0.041, p = 0.219

## Main effect of stimulus set: B = 0.001, p = 0.948
```

## Primary Analysis

```
# Primary model: Effect of treatment on proportion of women selected
# As preregistered: includes treatment (gender feedback) and Set1 indicator
r1 <- lm(women_proportion ~ treatment + set_num, data=d0)

# Display the summary with robust standard errors
robust_summary(r1)

## 
## Call:
## lm(formula = women_proportion ~ treatment + set_num, data = d0)
##
## Residuals:
##       Min     1Q   Median     3Q    Max
## -0.47288 -0.13955 -0.01445  0.19378  0.67401
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)    
## (Intercept) 0.30420   0.02638 11.530 < 2e-16 ***
## treatment   0.12510   0.01650  7.580 7.87e-14 ***
## set_num      0.02179   0.01654  1.317   0.188    
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.2608 on 997 degrees of freedom
## Multiple R-squared:  0.05577,    Adjusted R-squared:  0.05387 
## F-statistic: 29.44 on 2 and 997 DF,  p-value: 3.778e-13

robust_confint(r1)

##                  2.5 %    97.5 %
## (Intercept) 0.25242392 0.35597448
## treatment   0.09271652 0.15748842
## set_num     -0.01067624 0.05425673
```

## Robustness

```
## Model 2: Which feedback was shown with women, remove constant due to collinearity
r2 <- lm(women_proportion ~ women_feedback + age_feedback + location_feedback +
  university_feedback - 1, data=d0)
```

```
# Display the summary with robust standard errors
robust_summary(r2)
```

```
##
## Call:
## lm(formula = women_proportion ~ women_feedback + age_feedback +
##     location_feedback + university_feedback - 1, data = d0)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -0.46970 -0.13636 -0.00333  0.19697  0.66333
##
## Coefficients:
##                               Estimate Std. Error t value Pr(>|t|)
## women_feedback          0.23440   0.01476 15.881 < 2e-16 ***
## age_feedback             0.11945   0.01892  6.315 4.07e-10 ***
## location_feedback        0.11584   0.01947  5.950 3.70e-09 ***
## university_feedback      0.10137   0.01660  6.107 1.46e-09 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.2611 on 996 degrees of freedom
## Multiple R-squared:  0.7061, Adjusted R-squared:  0.705
## F-statistic: 598.4 on 4 and 996 DF,  p-value: < 2.2e-16
```

```
robust_confint(r2)
```

```
##
##                                2.5 %    97.5 %
## women_feedback      0.20543707 0.2633632
## age_feedback         0.08233186 0.1565759
## location_feedback   0.07763895 0.1540469
## university_feedback 0.06879546 0.1339442
```

```
## Model 3: Robust to demographic controls
r3 <- lm(women_proportion ~ women_feedback + gender_code + race_code + age, data=d0)
```

```
# Display the robust_summary with robust standard errors
robust_summary(r3)
```

```
##
## Call:
## lm(formula = women_proportion ~ women_feedback + gender_code +
##     race_code + age, data = d0)
##
```

```

## Residuals:
##      Min     1Q Median     3Q    Max
## -0.51243 -0.16417 -0.04477  0.16924  0.72109
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept) 3.949e-01 3.307e-02 11.942 < 2e-16 ***
## women_feedback 1.196e-01 1.635e-02 7.318 5.19e-13 ***
## gender_code   -9.763e-02 1.647e-02 -5.927 4.24e-09 ***
## race_code     -1.522e-02 1.850e-02 -0.823 0.411
## age          -4.289e-05 6.469e-04 -0.066 0.947
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.2565 on 993 degrees of freedom
## (2 observations deleted due to missingness)
## Multiple R-squared: 0.08684, Adjusted R-squared: 0.08317
## F-statistic: 23.61 on 4 and 993 DF, p-value: < 2.2e-16

```

```
robust_confint(r3)
```

```

##              2.5 %      97.5 %
## (Intercept) 0.330039664 0.459830682
## women_feedback 0.087555376 0.151719828
## gender_code   -0.129955492 -0.065308997
## race_code     -0.051534867 0.021088453
## age          -0.001312263 0.001226475

```

## Secondary Analysis: Other Attributes

```
## Effect of age feedback:

##
## Call:
## lm(formula = age_proportion ~ age_feedback, data = d0)
##
## Residuals:
##    Min     1Q Median     3Q    Max
## -0.1788 -0.1788 -0.1532  0.1545  0.8212
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept) 0.15323   0.01854   8.265 4.42e-16 ***
## age_feedback 0.02562   0.01982   1.293   0.196
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.2069 on 998 degrees of freedom
## Multiple R-squared:  0.001665, Adjusted R-squared:  0.0006649
## F-statistic: 1.665 on 1 and 998 DF, p-value: 0.1973

##                  2.5 %    97.5 %
## (Intercept) 0.11684568 0.18960593
## age_feedback -0.01327099 0.06450583

##
## Effect of location feedback:

##
## Call:
## lm(formula = location_proportion ~ location_feedback, data = d0)
##
## Residuals:
##    Min     1Q Median     3Q    Max
## -0.25866 -0.25866  0.07467  0.07467  0.74134
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept) 0.21393   0.01889 11.325 <2e-16 ***
## location_feedback 0.04473   0.02063  2.168   0.0304 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.2405 on 998 degrees of freedom
## Multiple R-squared:  0.004007, Adjusted R-squared:  0.003009
## F-statistic: 4.015 on 1 and 998 DF, p-value: 0.04535

##                  2.5 %    97.5 %
## (Intercept) 0.176862344 0.2509984
## location_feedback 0.004251318 0.0852090
```

```

##  

## Effect of university feedback:  

##  

## Call:  

## lm(formula = university_proportion ~ university_feedback, data = d0)  

##  

## Residuals:  

##      Min      1Q Median      3Q     Max  

## -0.24670 -0.24670  0.08663  0.08663  0.81680  

##  

## Coefficients:  

##              Estimate Std. Error t value Pr(>|t|)  

## (Intercept) 0.18320   0.01515 12.096 < 2e-16 ***  

## university_feedback 0.06351   0.01769  3.589 0.000348 ***  

## ---  

## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1  

##  

## Residual standard error: 0.2478 on 998 degrees of freedom  

## Multiple R-squared:  0.01192,    Adjusted R-squared:  0.01093  

## F-statistic: 12.04 on 1 and 998 DF,  p-value: 0.0005417  

##  

##              2.5 %     97.5 %  

## (Intercept) 0.15347514 0.21291604  

## university_feedback 0.02878294 0.09822957

```

**Figure 3A**

## System of Simultaneous Equations

```
## SUR Model Coefficients:  
  
## -----  
  
## Women feedback effect: 0.0956  
  
## Age feedback effect: 0.0378  
  
## Location feedback effect: 0.0275  
  
## University feedback effect: 0.033  
  
##  
##  
## Wald Tests for Cross-Equation Comparisons:  
  
## -----  
  
## Test 1: Women Feedback Effect vs. Age Feedback Effect  
  
## -----  
  
## Linear hypothesis test (Theil's F test)  
##  
## Hypothesis:  
## womeneq_women_feedback - ageeq_age_feedback = 0  
##  
## Model 1: restricted model  
## Model 2: sur_model  
##  
##   Res.Df Df      F  Pr(>F)  
## 1    3989  
## 2    3988  1 6.629 0.01007 *  
## ---  
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1  
  
##  
##  
## Test 2: Women Feedback Effect vs. Location Feedback Effect  
  
## -----  
  
## Linear hypothesis test (Theil's F test)  
##  
## Hypothesis:  
## womeneq_women_feedback - locationeq_location_feedback = 0  
##  
## Model 1: restricted model  
## Model 2: sur_model
```

```

##          Res.Df Df      F    Pr(>F)
## 1      3989
## 2      3988  1 8.3509 0.003876 **
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

## 
## 
## Test 3: Women Feedback Effect vs. University Feedback Effect

## -----
## Linear hypothesis test (Theil's F test)
## 
## Hypothesis:
## womeneq_women_feedback - universityeq_university_feedback = 0
## 
## Model 1: restricted model
## Model 2: sur_model
## 
##          Res.Df Df      F    Pr(>F)
## 1      3989
## 2      3988  1 12.841 0.0003431 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

## 
## 
## Summary of Wald Tests:

## -----
##                  Test F_Statistic P_Value Significant
## Women vs. Age Feedback      6.63 0.010069      Yes
## Women vs. Location Feedback  8.35 0.003876      Yes
## Women vs. University Feedback 12.84 0.000343      Yes

```