

# NPR Study

November 10, 2025

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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: 493

##                                     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

## # A tibble: 2 x 4
##   treatment  mean     sd     n
##       <dbl>  <dbl>  <dbl> <int>
## 1         0 0.337 0.251    500
## 2         1 0.461 0.270    500

##
## Welch Two Sample t-test
##
## data: women_proportion by treatment
## t = -7.5563, df = 992.54, p-value = 9.406e-14
## alternative hypothesis: true difference in means between group 0 and group 1 is not equal to 0
## 95 percent confidence interval:
## -0.15704250 -0.09229083
## sample estimates:
## mean in group 0 mean in group 1
## 0.3366667      0.4613333
```

## 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

```
##  
## 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  
  
##                      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  
  
##  
##  
## Dropout Robustness Check (PREREGISTERED):  
  
## ======  
  
## No dropouts detected after condition assignment.  
## All participants who were assigned to conditions completed their expert selections.
```

## 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  

##  

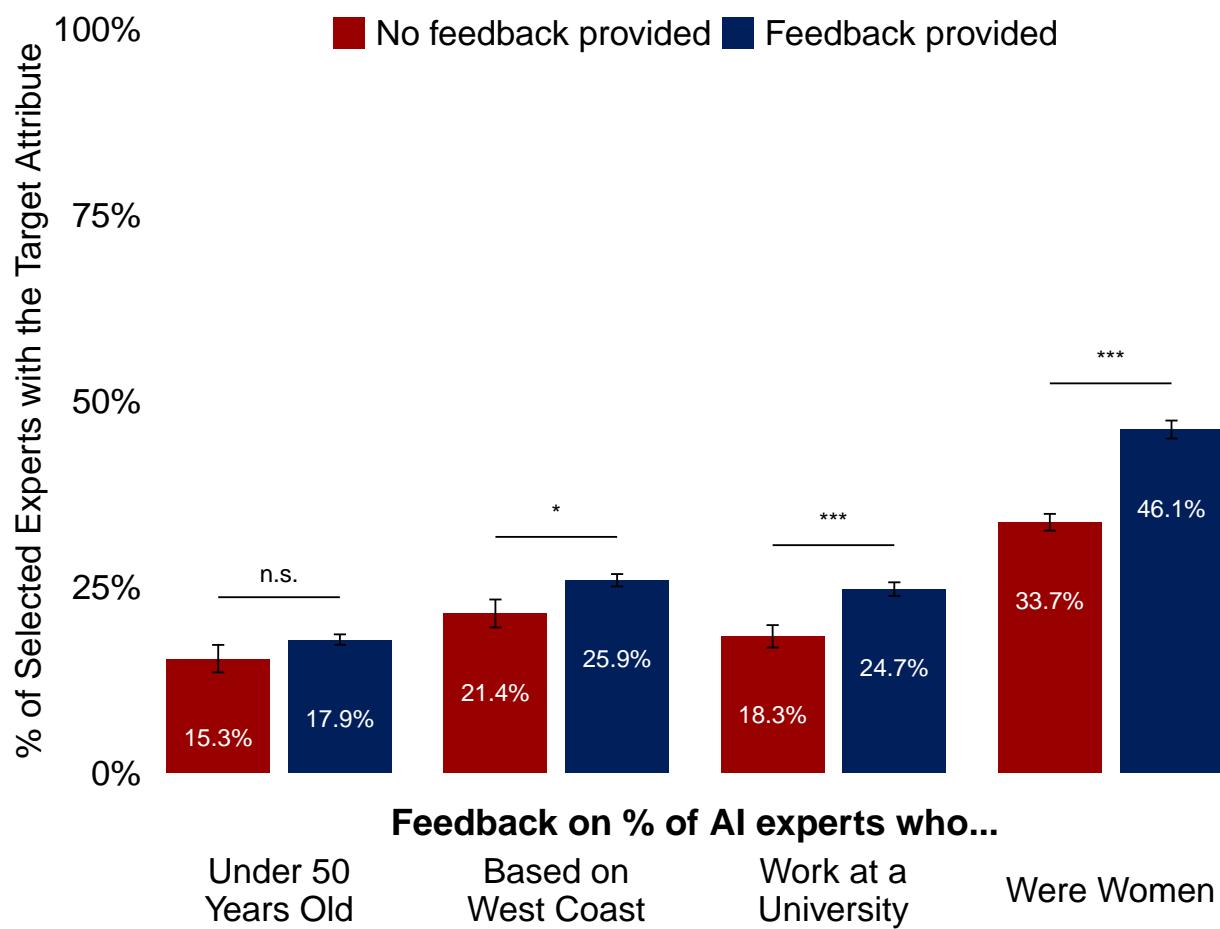
##              2.5 %     97.5 %  

## (Intercept) 0.15347514 0.21291604  

## university_feedback 0.02878294 0.09822957

```

## Visualization



## System of Simultaneous Equations

```
## Wald Tests for Cross-Equation Comparisons:

## =====

## Test 1: Women Feedback Effect vs. Age Feedback Effect

## ----

## Linear hypothesis test (Theil's F test)
##
## Hypothesis:
## ageeq_age_feedback - womeneq_women_feedback = 0
##
## Model 1: restricted model
## Model 2: unrestricted_age
##
##   Res.Df Df      F    Pr(>F)
## 1    1991
## 2    1990  1 779.22 < 2.2e-16 ***
## ---
## 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:
## locationeq_location_feedback - womeneq_women_feedback = 0
##
## Model 1: restricted model
## Model 2: unrestricted_location
##
##   Res.Df Df      F    Pr(>F)
## 1    1991
## 2    1990  1 287.24 < 2.2e-16 ***
## ---
## 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:
## universityeq_university_feedback - womeneq_women_feedback = 0
##
## Model 1: restricted model
## Model 2: unrestricted_university
##
##   Res.Df Df      F    Pr(>F)
## 1    1991
## 2    1990  1 333.76 < 2.2e-16 ***
## ---
## 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      779.22 <2e-16     Yes
## Women vs. Location Feedback 287.24 <2e-16     Yes
## Women vs. University Feedback 333.76 <2e-16     Yes

```