Study 4 Pilot

2x2 Pool (Women vs Men) × Feedback (Control vs Treatment)

November 19, 2025

Items

Variable Names

Variable	Description
`treatment`	Binary indicator of whether a participant was randomly assigned to treatment condition (1 = treat, 0 = control).
`women_pool`	Binary indicator of pool condition (1 = women pool/75% women, 0 = men pool/25% women).
`female_pick`	Binary indicator of whether the 7th (final) selection is a woman (PRIMARY DV).
`base_gender`	Count of women selected in the initial 6 choices (0-6).
`tech_pick`	Binary indicator of whether the 7th selection is a technologist.
`choice-1 to choice-7`	The selected CEOs/Founders (choices 1-6 are initial, choice-7 is final DV)
`internal_motiv`	Aggregated Internal Motivation scale (mean of I1Z-I4Z).
`external_motiv`	Aggregated External Motivation scale (mean of E1Z-E3Z).
`fairness`	Aggregated Fairness scale (mean of fair1Z-fair3Z).
`gender`	Self-selected gender.
`race`	Self-selected race.
`age`	Self-entered age.

Demographics

```
## Excluded Participants: 55
```

```
## Total N: 397
```

```
##                         Percentage gender
## 1 Another gender not listed here:   0.50
## 2                              Man  38.29
## 3                       Non-binary   1.51
## 4                            Woman  59.70
```

```
##                           Percentage  Race
## 1 American Indian or Alaskan Native  0.50
## 2          Asian / Pacific Islander  5.79
## 3         Black or African American 11.34
## 4                 Hispanic / Latinx  6.55
## 5                 White / Caucasian 75.82
```

```
## # A tibble: 1 x 2
##   mean_age sd_age
##      <dbl>  <dbl>
## 1     42.4   13.7
```

```
##
##
## Cell Sizes by Condition:
```

```
## # A tibble: 4 x 3
##   pool  cond        n
##   <chr> <chr>   <int>
## 1 men   control    99
## 2 men   treat      98
## 3 women control   100
## 4 women treat     100
```

```
##
##
## Mean number of women in initial 6 selections:  2.34
```

```
## SD of women in initial 6 selections:  1.74
```

```
## # A tibble: 4 x 5
##   cond    pool   mean    sd     n
##   <chr>   <chr> <dbl> <dbl> <int>
## 1 control men    1.03  1.24    99
## 2 control women  3.62  1.26   100
## 3 treat   men    1.16  1.22    98
## 4 treat   women  3.5   1.19   100
```

```
##
##
## Proportion who selected a woman for final choice:  0.567
```

```
## SD:  0.496
```

```
## # A tibble: 4 x 5
##   cond    pool   mean    sd     n
##   <chr>   <chr> <dbl> <dbl> <int>
## 1 control men   0.242 0.431    99
## 2 control women 0.78  0.416   100
## 3 treat   men   0.510 0.502    98
## 4 treat   women 0.73  0.446   100
```

Cronbach's Alpha

```
## Cronbach's Alpha for Internal Motivation Scale:  0.9297055
```

```
## Cronbach's Alpha for External Motivation Scale:  0.8889874
```

```
## Cronbach's Alpha for Fairness Scale:  0.9071399
```

Primary Analysis: 2x2 Interaction

```
## === 2x2 Interaction ===

## Model: female_pick ~ treatment * women_pool

##
## Call:
## lm(formula = female_pick ~ treatment * women_pool, data = d0)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -0.7800 -0.2424  0.2200  0.2700  0.7576
##
## Coefficients:
##                      Estimate Std. Error t value Pr(>|t|)
## (Intercept)           0.24242    0.04351   5.572 4.69e-08 ***
## treatment             0.26778    0.06705   3.994 7.77e-05 ***
## women_pool            0.53758    0.06037   8.905  < 2e-16 ***
## treatment:women_pool -0.31778    0.09087  -3.497 0.000524 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.4499 on 393 degrees of freedom
## Multiple R-squared:  0.184,  Adjusted R-squared:  0.1778
## F-statistic: 29.55 on 3 and 393 DF,  p-value: < 2.2e-16

##                          2.5 %     97.5 %
## (Intercept)           0.1568821  0.3279664
## treatment             0.1359546  0.3996051
## women_pool            0.4188961  0.6562554
## treatment:women_pool -0.4964369 -0.1391228

##
##
## Cell Means:

## # A tibble: 4 x 5
##   cond    pool      n mean_female_pick    se
##   <chr>   <chr> <int>            <dbl> <dbl>
## 1 control men      99             24.2  4.33
## 2 control women   100             78    4.16
## 3 treat   men      98             51.0  5.08
## 4 treat   women   100             73    4.46
```

Simple Effects by Pool

Men Pool (25% Women)

```
## === MEN POOL (25% WOMEN) ===

## Model: female_pick ~ treatment

##
## Call:
## lm(formula = female_pick ~ treatment, data = d0 %>% filter(women_pool ==
##     0))
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -0.5102 -0.2424 -0.2424  0.4898  0.7576
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.24242    0.04351   5.572 8.30e-08 ***
## treatment    0.26778    0.06705   3.994 9.21e-05 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.4678 on 195 degrees of freedom
## Multiple R-squared:  0.07643,    Adjusted R-squared:  0.0717
## F-statistic: 16.14 on 1 and 195 DF,  p-value: 8.403e-05

##                 2.5 %    97.5 %
## (Intercept) 0.1566130 0.3282355
## treatment   0.1355398 0.4000198

##
##
## Cell Means - Men Pool:

## # A tibble: 2 x 4
##   cond        n mean_female_pick    se
##   <chr>   <int>            <dbl> <dbl>
## 1 control    99             24.2  4.33
## 2 treat      98             51.0  5.08
```

Women Pool (75% Women)

```
## === WOMEN POOL (75% WOMEN) ===

## --- MAIN EFFECT MODEL ---

## Model: female_pick ~ treatment

##
## Call:
## lm(formula = female_pick ~ treatment, data = d0 %>% filter(women_pool ==
##     1))
##
## Residuals:
##    Min     1Q Median     3Q    Max
##  -0.78   0.22   0.22   0.27   0.27
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.78000    0.04184  18.641   <2e-16 ***
## treatment   -0.05000    0.06133  -0.815    0.416
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.4315 on 198 degrees of freedom
## Multiple R-squared:  0.003379,   Adjusted R-squared:  -0.001655
## F-statistic: 0.6713 on 1 and 198 DF,  p-value: 0.4136

##                  2.5 %     97.5 %
## (Intercept)  0.6974848 0.86251525
## treatment   -0.1709517 0.07095174

##
##
## Cell Means by Treatment:

## # A tibble: 2 x 4
##   cond        n mean_female_pick    se
##   <chr>   <int>            <dbl> <dbl>
## 1 control   100               78  4.16
## 2 treat     100               73  4.46

##
##
## --- MODERATION BY PARTICIPANT GENDER ---

## Gender distribution in Women Pool:

## # A tibble: 4 x 2
##   gender                              n
##   <chr>                           <int>
## 1 Another gender not listed here:     1
## 2 Man                                78
## 3 Non-binary                          5
## 4 Woman                             116
```

```
## Analysis restricted to Woman and Man participants only

## N = 194

## Model: female_pick ~ treatment * gender

##
## Call:
## lm(formula = female_pick ~ treatment * gender, data = d_women_pool_binary)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -0.8305  0.1695  0.2456  0.2703  0.2927
##
## Coefficients:
##                        Estimate Std. Error t value Pr(>|t|)
## (Intercept)             0.72973    0.07504   9.725   <2e-16 ***
## treatment              -0.02241    0.10457  -0.214    0.831
## genderWoman             0.10078    0.09000   1.120    0.264
## treatment:genderWoman -0.05371    0.12951  -0.415    0.679
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.4271 on 190 degrees of freedom
## Multiple R-squared:  0.01257,    Adjusted R-squared:  -0.003019
## F-statistic: 0.8064 on 3 and 190 DF,  p-value: 0.4917

##                             2.5 %    97.5 %
## (Intercept)            0.58171609 0.8777434
## treatment             -0.22868581 0.1838605
## genderWoman           -0.07674269 0.2783002
## treatment:genderWoman -0.30916646 0.2017468

##
##
## Cell Means by Treatment × Participant Gender:

## # A tibble: 4 x 5
##   cond    gender     n mean_female_pick    se
##   <chr>   <chr>  <int>            <dbl> <dbl>
## 1 control Man       37             73.0  7.40
## 2 control Woman     59             83.1  4.93
## 3 treat   Man       41             70.7  7.19
## 4 treat   Woman     57             75.4  5.75

##
##
## --- SIMPLE SLOPES ---

## Treatment Effect for Women Participants:
```

```
##
## Call:
## lm(formula = female_pick ~ treatment, data = d_women_pool_binary %>%
##     filter(gender == "Woman"))
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -0.8305  0.1695  0.1695  0.2456  0.2456
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.83051    0.04969  16.715   <2e-16 ***
## treatment   -0.07612    0.07640  -0.996    0.321
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.4068 on 114 degrees of freedom
## Multiple R-squared:  0.008826,   Adjusted R-squared:  0.0001313
## F-statistic: 1.015 on 1 and 114 DF,  p-value: 0.3158

## Treatment coefficient:  -0.0761

## 95% CI: [-0.2275, 0.0752]

## Treatment Effect for Men Participants:

##
## Call:
## lm(formula = female_pick ~ treatment, data = d_women_pool_binary %>%
##     filter(gender == "Man"))
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -0.7297 -0.7073  0.2703  0.2927  0.2927
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.72973    0.07504   9.725 5.52e-15 ***
## treatment   -0.02241    0.10457  -0.214    0.831
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.4557 on 76 degrees of freedom
## Multiple R-squared:  0.0006185,  Adjusted R-squared:  -0.01253
## F-statistic: 0.04704 on 1 and 76 DF,  p-value: 0.8289

## Treatment coefficient:  -0.0224

## 95% CI: [-0.2307, 0.1859]

## --- DIFFERENCE IN TREATMENT EFFECTS ---

## Treatment effect (Women participants): -0.0761 (SE = 0.0764)
```

```
## Treatment effect (Men participants):   -0.0224 (SE = 0.1046)

## Difference: -0.0537

## SE of difference: 0.1295

## Z-statistic: -0.4147

## P-value: 0.6783

## CONCLUSION: Participant gender does NOT significantly moderate the treatment effect (p >= 0.05).
```

Wald Test: Comparing Treatment Effects Across Pools

```
## === WALD TEST: DIFFERENCE IN TREATMENT EFFECTS BETWEEN POOLS ===

## Treatment Effect (Men Pool 25%):   0.2678 (SE = 0.0671)

## Treatment Effect (Women Pool 75%): -0.0500 (SE = 0.0613)

## Difference in Treatment Effects: 0.3178

## Standard Error of Difference:    0.0909

## Wald Statistic (z):              3.4970

## P-value (two-tailed):            0.0005

## 95% CI for Difference:           [0.1397, 0.4959]
```

Visualization

Interaction Plot: Treatment × Pool

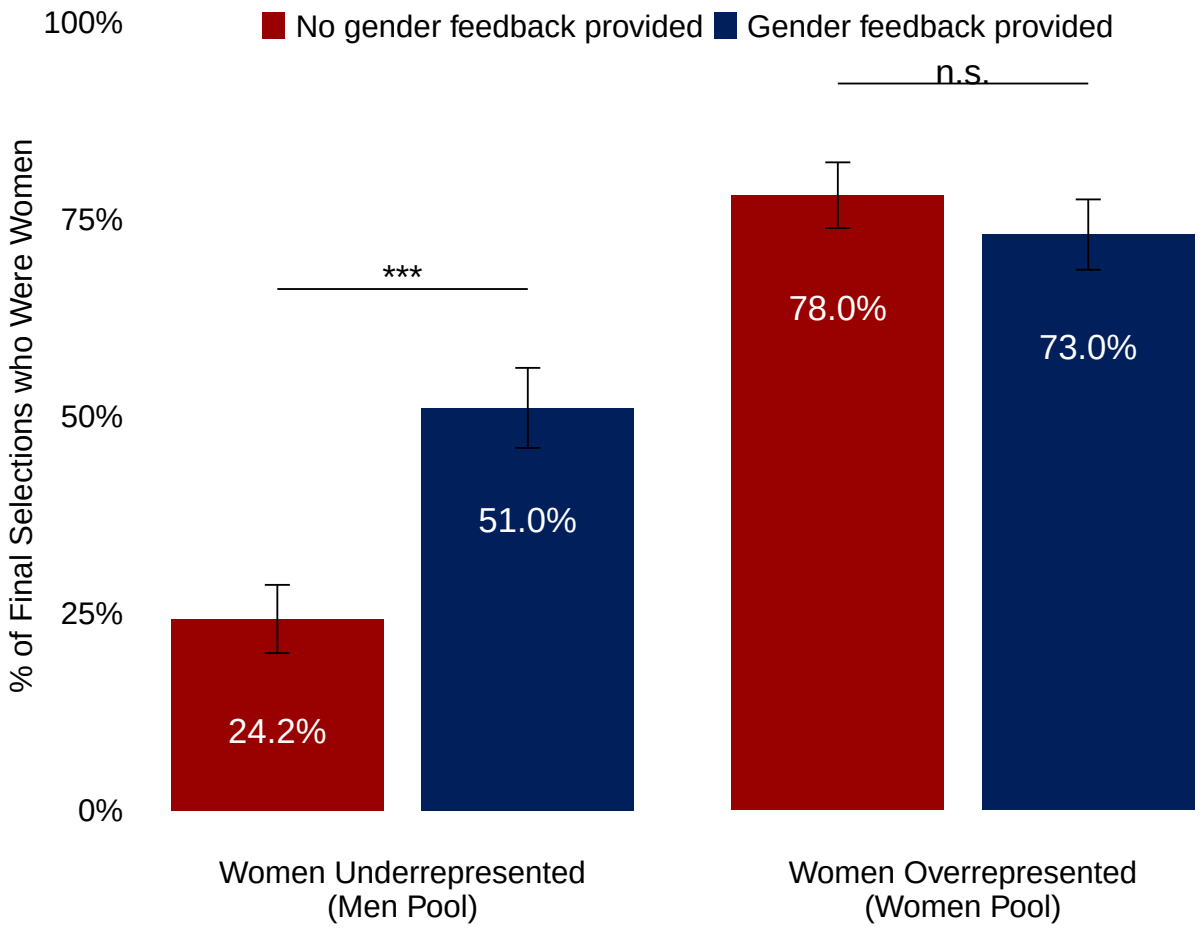

Figure 1: Effect of Gender Feedback by Pool Condition

Conditional Mediation Analyses

Mediation in Men Pool (Women Underrepresented)

```
## ========================================================

## CONDITIONAL MEDIATION: MEN POOL (WOMEN UNDERREPRESENTED)

## ========================================================

## --- INTERNAL MOTIVATION - MEN POOL ---

##
## Call:
## lm(formula = internal_motiv ~ treatment, data = d_men)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -1.55433 -0.70540 -0.03962  0.74600  1.80700
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept) -0.15526    0.09261  -1.677   0.0952 .
## treatment    0.34645    0.13130   2.639   0.0090 **
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.9214 on 195 degrees of freedom
## Multiple R-squared:  0.03447,    Adjusted R-squared:  0.02952
## F-statistic: 6.963 on 1 and 195 DF,  p-value: 0.008996

##
## Call:
## lm(formula = female_pick ~ treatment + internal_motiv, data = d_men)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -0.6704 -0.3543 -0.1577  0.4637  0.9027
##
## Coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)     0.26108    0.04613   5.660 5.38e-08 ***
## treatment       0.22616    0.06608   3.422 0.000757 ***
## internal_motiv  0.12013    0.03541   3.392 0.000840 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.4557 on 194 degrees of freedom
## Multiple R-squared:  0.1281, Adjusted R-squared:  0.1192
## F-statistic: 14.26 on 2 and 194 DF,  p-value: 1.671e-06

## Sobel test for Internal Motivation (Men Pool):
```

```
## $statistic
## internal_motiv
##       3.333266
##
## $p_value
## internal_motiv
##   0.0008583272
##
## $se
## internal_motiv
##     0.03604053

##
## Causal Mediation Analysis
##
## Nonparametric Bootstrap Confidence Intervals with the Percentile Method
##
##                Estimate 95% CI Lower 95% CI Upper p-value
## ACME           0.041620     0.008404     0.084040  0.0088 **
## ADE            0.226159     0.094993     0.356740  <2e-16 ***
## Total Effect   0.267780     0.135183     0.395690  <2e-16 ***
## Prop. Mediated 0.155428     0.032435     0.365090  0.0088 **
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Sample Size Used: 197
##
##
## Simulations: 10000

## --- EXTERNAL MOTIVATION - MEN POOL ---

##
## Call:
## lm(formula = external_motiv ~ treatment, data = d_men)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -1.2438 -0.6948 -0.2967  0.6313  2.2783
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept) -0.08932    0.09311  -0.959   0.3386
## treatment    0.22805    0.13201   1.728   0.0857 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.9264 on 195 degrees of freedom
## Multiple R-squared:  0.01507,    Adjusted R-squared:  0.01002
## F-statistic: 2.984 on 1 and 195 DF,  p-value: 0.08565

##
## Call:
```

```
## lm(formula = female_pick ~ treatment + external_motiv, data = d_men)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -0.5213 -0.2515 -0.2401  0.4868  0.7779
##
## Coefficients:
##                 Estimate Std. Error t value Pr(>|t|)
## (Intercept)     0.241628   0.047240   5.115 7.51e-07 ***
## treatment       0.269812   0.067329   4.007 8.75e-05 ***
## external_motiv -0.008912   0.036248  -0.246    0.806
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.4689 on 194 degrees of freedom
## Multiple R-squared:  0.07672,    Adjusted R-squared:  0.0672
## F-statistic:  8.06 on 2 and 194 DF,  p-value: 0.0004338
```

```
## Sobel test for External Motivation (Men Pool):
```

```
## $statistic
## external_motiv
##      -0.228981
##
## $p_value
## external_motiv
##      0.8188837
##
## $se
## external_motiv
##     0.03892138
```

```
##
## Causal Mediation Analysis
##
## Nonparametric Bootstrap Confidence Intervals with the Percentile Method
##
##                   Estimate 95% CI Lower 95% CI Upper p-value
## ACME           -0.0020324   -0.0263197    0.0165251  0.8046
## ADE             0.2698123    0.1385305    0.4000965  <2e-16 ***
## Total Effect    0.2677798    0.1373561    0.3972783  <2e-16 ***
## Prop. Mediated -0.0075899   -0.1140556    0.0681451  0.8046
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Sample Size Used: 197
##
##
## Simulations: 10000
```

```
## --- FAIRNESS SCALE - MEN POOL ---
```

```
##
```

```
## Call:
## lm(formula = fairness ~ treatment, data = d_men)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -1.54594 -0.81348  0.01592  0.57473  2.14700
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept) -0.22884    0.09023  -2.536    0.012 *
## treatment    0.54841    0.12793   4.287 2.85e-05 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.8978 on 195 degrees of freedom
## Multiple R-squared:  0.08613,    Adjusted R-squared:  0.08144
## F-statistic: 18.38 on 1 and 195 DF,  p-value: 2.846e-05

##
## Call:
## lm(formula = female_pick ~ treatment + fairness, data = d_men)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -0.8042 -0.3222 -0.1553  0.3886  0.9411
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.28452    0.04482   6.348 1.51e-09 ***
## treatment    0.16691    0.06541   2.552   0.0115 *
## fairness     0.18394    0.03500   5.255 3.88e-07 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.4388 on 194 degrees of freedom
## Multiple R-squared:  0.1915, Adjusted R-squared:  0.1832
## F-statistic: 22.98 on 2 and 194 DF,  p-value: 1.107e-09

## Sobel test for Fairness (Men Pool):

## $statistic
## fairness
## 5.173211
##
## $p_value
##     fairness
## 2.301045e-07
##
## $se
##  fairness
## 0.0355554

##
```

```
## Causal Mediation Analysis
##
## Nonparametric Bootstrap Confidence Intervals with the Percentile Method
##
##                Estimate 95% CI Lower 95% CI Upper p-value
## ACME           0.100873     0.048556     0.161040  <2e-16 ***
## ADE            0.166907     0.041626     0.297028  0.0096 **
## Total Effect   0.267780     0.135905     0.397321  <2e-16 ***
## Prop. Mediated 0.376700     0.178712     0.734500  <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Sample Size Used: 197
##
##
## Simulations: 10000
```

Mediation in Women Pool (Women Overrepresented)

```
## ======================================================

## CONDITIONAL MEDIATION: WOMEN POOL (WOMEN OVERREPRESENTED)

## ======================================================

## --- INTERNAL MOTIVATION - WOMEN POOL ---

##
## Call:
## lm(formula = internal_motiv ~ treatment, data = d_women)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -1.52076 -0.66935 -0.03162  0.69286  1.84304
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept) -0.19130    0.08685  -2.203  0.02878 *
## treatment    0.34892    0.12283   2.841  0.00497 **
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.8685 on 198 degrees of freedom
## Multiple R-squared:  0.03916,    Adjusted R-squared:  0.03431
## F-statistic:  8.07 on 1 and 198 DF,  p-value: 0.004972

##
## Call:
## lm(formula = female_pick ~ treatment + internal_motiv, data = d_women)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -0.8292  0.1708  0.2311  0.2536  0.3106
##
## Coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)     0.78511    0.04373  17.955   <2e-16 ***
## treatment      -0.05931    0.06233  -0.952    0.342
## internal_motiv  0.02669    0.03535   0.755    0.451
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.432 on 197 degrees of freedom
## Multiple R-squared:  0.006255,   Adjusted R-squared:  -0.003834
## F-statistic:  0.62 on 2 and 197 DF,  p-value: 0.539

## Sobel test for Internal Motivation (Women Pool):

## $statistic
```

```
## internal_motiv
##      0.7633446
##
## $p_value
## internal_motiv
##      0.4452579
##
## $se
## internal_motiv
##     0.03496504


##
## Causal Mediation Analysis
##
## Nonparametric Bootstrap Confidence Intervals with the Percentile Method
##
##                  Estimate 95% CI Lower 95% CI Upper p-value
## ACME            0.0093129   -0.0137998    0.0400297  0.4218
## ADE            -0.0593129   -0.1791589    0.0630063  0.3560
## Total Effect   -0.0500000   -0.1684520    0.0688391  0.4268
## Prop. Mediated -0.1862573   -2.7007467    2.3336481  0.6634
##
## Sample Size Used: 200
##
##
## Simulations: 10000

## --- EXTERNAL MOTIVATION - WOMEN POOL ---

##
## Call:
## lm(formula = external_motiv ~ treatment, data = d_women)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -1.1643 -0.6153 -0.2649  0.6529  2.2957
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept) -0.10677    0.08777  -1.216    0.225
## treatment    0.16602    0.12413   1.337    0.183
##
## Residual standard error: 0.8777 on 198 degrees of freedom
## Multiple R-squared:  0.008954,   Adjusted R-squared:  0.003949
## F-statistic: 1.789 on 1 and 198 DF,  p-value: 0.1826


##
## Call:
## lm(formula = female_pick ~ treatment + external_motiv, data = d_women)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -0.7994  0.2033  0.2238  0.2645  0.2798
```

```
##
## Coefficients:
##                 Estimate Std. Error t value Pr(>|t|)
## (Intercept)     0.780903   0.043417  17.986   <2e-16 ***
## treatment      -0.051404   0.061448  -0.837    0.404
## external_motiv  0.008455   0.035023   0.241    0.809
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.4326 on 197 degrees of freedom
## Multiple R-squared:  0.003674,   Adjusted R-squared:  -0.006441
## F-statistic: 0.3632 on 2 and 197 DF,  p-value: 0.6959
```

```
## Sobel test for External Motivation (Women Pool):
```

```
## $statistic
## external_motiv
##      0.2339738
##
## $p_value
## external_motiv
##      0.8150053
##
## $se
## external_motiv
##     0.03613817
```

```
##
## Causal Mediation Analysis
##
## Nonparametric Bootstrap Confidence Intervals with the Percentile Method
##
##                  Estimate 95% CI Lower 95% CI Upper p-value
## ACME            0.0014038   -0.0122609    0.0202178  0.8230
## ADE            -0.0514038   -0.1751851    0.0698113  0.3964
## Total Effect   -0.0500000   -0.1700683    0.0700000  0.4110
## Prop. Mediated -0.0280753   -0.8909984    0.9184232  0.8836
##
## Sample Size Used: 200
##
##
## Simulations: 10000
```

```
## --- FAIRNESS SCALE - WOMEN POOL ---
```

```
##
## Call:
## lm(formula = fairness ~ treatment, data = d_women)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -1.3373 -0.8132 -0.1540  0.6082  2.1157
##
```

```
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)  -0.1976     0.0889  -2.223   0.0274 *
## treatment     0.3085     0.1257   2.454   0.0150 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.889 on 198 degrees of freedom
## Multiple R-squared:  0.02952,    Adjusted R-squared:  0.02462
## F-statistic: 6.023 on 1 and 198 DF,  p-value: 0.01498


##
## Call:
## lm(formula = female_pick ~ treatment + fairness, data = d_women)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -0.8084  0.1916  0.2251  0.2578  0.3199
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.77454    0.04373  17.713   <2e-16 ***
## treatment   -0.04148    0.06200  -0.669    0.504
## fairness    -0.02763    0.03453  -0.800    0.425
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.4319 on 197 degrees of freedom
## Multiple R-squared:  0.006607,   Adjusted R-squared:  -0.003478
## F-statistic: 0.6551 on 2 and 197 DF,  p-value: 0.5205

## Sobel test for Fairness (Women Pool):

## $statistic
##   fairness
## -0.7530191
##
## $p_value
##  fairness
## 0.4514384
##
## $se
##  fairness
## 0.0366859


##
## Causal Mediation Analysis
##
## Nonparametric Bootstrap Confidence Intervals with the Percentile Method
##
##                  Estimate 95% CI Lower 95% CI Upper p-value
## ACME           -0.0085237   -0.0365560    0.0147596  0.4584
## ADE            -0.0414763   -0.1620438    0.0792399  0.4934
```

```
## Total Effect   -0.0500000   -0.1708683    0.0697187  0.4062
## Prop. Mediated  0.1704733   -2.0100290    2.3409593  0.6772
##
## Sample Size Used: 200
##
##
## Simulations: 10000
```

Summary: Mediation Results for Women Pool (Overrepresented)

```
## ======================================================

## MEDIATION SUMMARY: WOMEN POOL (OVERREPRESENTED)

## ======================================================

## INTERNAL MOTIVATION

## * Indirect Effect (ACME): 0.0093

## * 95% CI: [-0.0138, 0.0400]

## * p-value: 0.4218

## EXTERNAL MOTIVATION

## * Indirect Effect (ACME): 0.0014

## * 95% CI: [-0.0123, 0.0202]

## * p-value: 0.8230

## FAIRNESS

## * Indirect Effect (ACME): -0.0085

## * 95% CI: [-0.0366, 0.0148]

## * p-value: 0.4584
```

Individual Item Analysis

```
## ======================================================

## DESCRIPTIVE STATISTICS: INDIVIDUAL SCALE ITEMS

## ======================================================

## SAMPLE: OVERREPRESENTED POOL (WOMEN POOL) ONLY

## N =  200

## --- INTERNAL MOTIVATION ITEMS ---

## I1 :
##   Overall: M = 3.71, SD = 2.08
##   Control:   M = 3.36, SD = 2.06
##   Treatment: M = 4.07, SD = 2.05
##
## I2 :
##   Overall: M = 3.83, SD = 1.90
##   Control:   M = 3.51, SD = 1.91
##   Treatment: M = 4.14, SD = 1.85
##
## I3 :
##   Overall: M = 3.62, SD = 1.94
##   Control:   M = 3.20, SD = 1.89
##   Treatment: M = 4.04, SD = 1.90
##
## I4 :
##   Overall: M = 3.56, SD = 1.89
##   Control:   M = 3.26, SD = 1.87
##   Treatment: M = 3.86, SD = 1.86

##
## --- EXTERNAL MOTIVATION ITEMS ---

## E1 :
##   Overall: M = 3.15, SD = 1.85
##   Control:   M = 2.99, SD = 1.86
##   Treatment: M = 3.32, SD = 1.83
##
## E2 :
##   Overall: M = 3.03, SD = 1.79
##   Control:   M = 2.87, SD = 1.78
##   Treatment: M = 3.19, SD = 1.79
##
## E3 :
##   Overall: M = 2.74, SD = 1.68
##   Control:   M = 2.61, SD = 1.69
##   Treatment: M = 2.87, SD = 1.67
```

```
##
## --- FAIRNESS ITEMS ---

## fair1 :
##   Overall: M = 3.21, SD = 1.86
##   Control:   M = 2.91, SD = 1.85
##   Treatment: M = 3.51, SD = 1.82
##
## fair2 :
##   Overall: M = 2.92, SD = 1.77
##   Control:   M = 2.64, SD = 1.73
##   Treatment: M = 3.19, SD = 1.77
##
## fair3 :
##   Overall: M = 3.69, SD = 2.00
##   Control:   M = 3.38, SD = 1.96
##   Treatment: M = 4.00, SD = 2.01
```

Individual Item Mediation: Overrepresented Pool Only

```
## ======================================================

## INDIVIDUAL ITEM MEDIATION ANALYSIS

## OVERREPRESENTED POOL (WOMEN POOL) ONLY

## ======================================================

## N =  200

## ======================================================

## INTERNAL MOTIVATION ITEMS

## ======================================================

## --------------------------------------

## Internal Motivation Item 1 (I1)

## --------------------------------------

## Step 1: Treatment -> I1

## Coefficient: 0.3410, p = 0.0155

## Step 2: I1 -> Female Pick (controlling for treatment)

## Coefficient: 0.0020, p = 0.9485

## MEDIATION RESULTS:

## * Indirect Effect (ACME): 0.0007

## * 95% CI: [-0.0219, 0.0259]

## * p-value: 0.9266

## * Sobel test: z = 0.0646

## --------------------------------------

## Internal Motivation Item 2 (I2)

## --------------------------------------
```

```
## Step 1: Treatment -> I2: 0.3310, p = 0.0189

## Step 2: I2 -> Female Pick: 0.0163, p = 0.6007

## ACME: 0.0054 [-0.0155, 0.0318], p = 0.6036

## ---------------------------------------

## Internal Motivation Item 3 (I3)

## ---------------------------------------

## ACME: 0.0124, p = 0.3574

## ---------------------------------------

## Internal Motivation Item 4 (I4)

## ---------------------------------------

## ACME: 0.0121, p = 0.2250

## =====================================================

## EXTERNAL MOTIVATION ITEMS

## =====================================================

## ---------------------------------------

## External Motivation Item 1 (E1)

## ---------------------------------------

## ACME: 0.0031, p = 0.6220

## ---------------------------------------

## External Motivation Item 2 (E2)

## ---------------------------------------

## ACME: 0.0042, p = 0.5546

## ---------------------------------------

## External Motivation Item 3 (E3)
```

```
## ---------------------------------------

## ACME: -0.0033, p = 0.6754

## ======================================================

## FAIRNESS ITEMS

## ======================================================

## ---------------------------------------

## Fairness Item 1 (fair1)

## ---------------------------------------

## ACME: -0.0047, p = 0.6766

## ---------------------------------------

## Fairness Item 2 (fair2)

## ---------------------------------------

## ACME: -0.0098, p = 0.3766

## ---------------------------------------

## Fairness Item 3 (fair3)

## ---------------------------------------

## ACME: -0.0069, p = 0.4748
```

Summary Table: All Individual Items

```
## ======================================================

## SUMMARY: INDIVIDUAL ITEM MEDIATION RESULTS

## OVERREPRESENTED POOL (WOMEN POOL) ONLY

## ======================================================
```