

Study 5

2x2 Pool (Women vs Men) \times Feedback (Control vs Treatment)

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Variable Names

Variable	Description
treatment	Binary indicator of whether a participant was randomly assigned to treatment condition (1 = treat, 0 = control).
men_pool	Binary indicator of pool condition where women are underrepresented (1 = men pool/25% women, 0 = women pool/75% 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)
gender	Self-selected gender.
race	Self-selected race.
age	Self-entered age.

Demographics

```
## Excluded Participants: 63
```

```
## Total N: 396
```

```
## Percentage gender
```

```
## 1      Man  48.74
```

```
## 2 Non-binary  1.26
```

```
## 3      Woman 50.00
```

```
## Percentage Race
```

```
## 1 American Indian or Alaskan Native  0.76
```

```
## 2      Asian / Pacific Islander  6.82
```

```
## 3      Black or African American 12.63
```

```
## 4      Hispanic / Latinx  7.07
```

```
## 5      White / Caucasian 72.73
```

```
## # A tibble: 1 x 2
```

```
##   mean_age sd_age
```

```
##   <dbl> <dbl>
```

```
## 1    41.7  13.1
```

```
##
```

```
##
```

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

```
## # A tibble: 4 x 3
```

```
##   pool cond    n
```

```
##   <chr> <chr> <int>
```

```
## 1 men  control   98
```

```
## 2 men  treat    99
```

```
## 3 women control   99
```

```
## 4 women treat   100
```

```
##
```

```
##
```

```
## Mean number of women in initial 6 selections:  2.44
```

```
## SD of women in initial 6 selections:  1.71
```

```
## # A tibble: 4 x 5
```

```
##   cond pool mean  sd    n
```

```
##   <chr> <chr> <dbl> <dbl> <int>
```

```
## 1 control men   1.28 1.18   98
```

```
## 2 control women 3.60 1.32   99
```

```
## 3 treat  men   1.27 1.30   99
```

```
## 4 treat  women 3.6  1.21  100
```

```
##
```

```
##
```

```
## Proportion who selected a woman for final choice:  0.543
```

```
## SD: 0.499
```

```
## # A tibble: 4 x 5
```

```
##   cond   pool  mean    sd    n  
##   <chr>  <chr> <dbl> <dbl> <int>  
## 1 control men   0.316 0.467   98  
## 2 control women 0.667 0.474   99  
## 3 treat  men   0.495 0.503   99  
## 4 treat  women 0.69  0.465  100
```

Primary Analysis: 2x2 Interaction

```
## === 2x2 Interaction: Treatment × Women Underrepresented Pool ===
```

```
## Model: female_pick ~ treatment * men_pool
```

```
## (men_pool: 1 = women underrepresented, 0 = women overrepresented)
```

```
##
```

```
## Call:
```

```
## lm(formula = female_pick ~ treatment * men_pool, data = d0)
```

```
##
```

```
## Residuals:
```

```
##      Min       1Q   Median       3Q      Max  
## -0.6900 -0.4950  0.3100  0.3333  0.6837
```

```
##
```

```
## Coefficients:
```

```
##              Estimate Std. Error t value Pr(>|t|)  
## (Intercept)    0.66667    0.04786  13.929 < 2e-16 ***  
## treatment      0.02333    0.06688   0.349  0.727  
## men_pool      -0.35034    0.06740  -5.198 3.25e-07 ***  
## treatment:men_pool 0.15529    0.09645   1.610  0.108
```

```
## ---
```

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

```
##
```

```
## Residual standard error: 0.4774 on 392 degrees of freedom
```

```
## Multiple R-squared:  0.09096,    Adjusted R-squared:  0.08401
```

```
## F-statistic: 13.08 on 3 and 392 DF,  p-value: 3.729e-08
```

```
##              2.5 %      97.5 %
```

```
## (Intercept)    0.57256955  0.7607638
```

```
## treatment     -0.10815809  0.1548248
```

```
## men_pool      -0.48285759 -0.2178227
```

```
## treatment:men_pool -0.03433272  0.3449120
```

```
##
```

```
##
```

```
## Cell Means:
```

```
## # A tibble: 4 x 5
```

```
##   cond   pool    n mean_female_pick    se  
##   <chr> <chr> <int>          <dbl> <dbl>  
## 1 control men    98           31.6  4.72  
## 2 control women  99           66.7  4.76  
## 3 treat  men    99           49.5  5.05  
## 4 treat  women 100           69   4.65
```

Simple Effects by Pool

Women Underrepresented Pool (Men Pool, 25% Women)

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

## Model: female_pick ~ treatment

##
## Call:
## lm(formula = female_pick ~ treatment, data = d0 %>% filter(men_pool ==
##    1))
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -0.4950 -0.4950 -0.3163  0.5050  0.6837
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.31633    0.04746   6.665 2.65e-10 ***
## treatment    0.17862    0.06949   2.570  0.0109 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.4854 on 195 degrees of freedom
## Multiple R-squared:  0.03307,    Adjusted R-squared:  0.02811
## F-statistic:  6.67 on 1 and 195 DF,  p-value: 0.01054

##              2.5 %    97.5 %
## (Intercept) 0.22272449 0.4099286
## treatment   0.04156827 0.3156777

##
##
## Cell Means - Women Underrepresented Pool:

## # A tibble: 2 x 4
##   cond      n mean_female_pick    se
##   <chr> <int>          <dbl> <dbl>
## 1 control   98           31.6  4.72
## 2 treat    99           49.5  5.05
```

Women Overrepresented Pool (Women Pool, 75% Women)

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

## --- MAIN EFFECT MODEL ---

## Model: female_pick ~ treatment

##
## Call:
## lm(formula = female_pick ~ treatment, data = d0 %>% filter(men_pool ==
##    0))
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -0.6900 -0.6667  0.3100  0.3333  0.3333
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.66667    0.04786  13.929  <2e-16 ***
## treatment    0.02333    0.06688   0.349   0.728
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.4693 on 197 degrees of freedom
## Multiple R-squared:  0.0006238, Adjusted R-squared: -0.004449
## F-statistic: 0.123 on 1 and 197 DF, p-value: 0.7262

##              2.5 %    97.5 %
## (Intercept)  0.5722802 0.7610531
## treatment    -0.1085624 0.1552290

##
##
## Cell Means by Treatment:

## # A tibble: 2 x 4
##   cond      n mean_female_pick    se
##   <chr> <int>          <dbl> <dbl>
## 1 control    99             66.7  4.76
## 2 treat    100             69    4.65

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

## Gender distribution in Women Overrepresented Pool:

## # A tibble: 3 x 2
##   gender      n
##   <chr>    <int>
## 1 Man        92
## 2 Non-binary   4
## 3 Woman     103
```

```

## Analysis restricted to Woman and Man participants only

## N = 195

## Model: female_pick ~ treatment * gender

##
## Call:
## lm(formula = female_pick ~ treatment * gender, data = d_women_pool_binary)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -0.7719 -0.5610  0.2281  0.3922  0.4390
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)      0.60784    0.06973   8.717 1.37e-15 ***
## treatment        -0.04687    0.10571  -0.443   0.658
## genderWoman       0.10955    0.09730   1.126   0.262
## treatment:genderWoman 0.10141    0.13776   0.736   0.463
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.4668 on 191 degrees of freedom
## Multiple R-squared:  0.03208,    Adjusted R-squared:  0.01688
## F-statistic:  2.11 on 3 and 191 DF,  p-value: 0.1003

##              2.5 %    97.5 %
## (Intercept)      0.47029668 0.7453896
## treatment        -0.25536824 0.1616332
## genderWoman       -0.08238181 0.3014781
## treatment:genderWoman -0.17032993 0.3731420

##
##
## 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     51           60.8  6.90
## 2 control Woman   46           71.7  6.71
## 3 treat  Man     41           56.1  7.85
## 4 treat  Woman   57           77.2  5.61

##
##
## --- 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
## -0.7719 -0.2447  0.2281  0.2826  0.2826
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)   0.71739    0.06786  10.571  <2e-16 ***
## treatment     0.05454    0.08835   0.617   0.538
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.4378 on 101 degrees of freedom
## Multiple R-squared:  0.003896, Adjusted R-squared:  -0.005967
## F-statistic: 0.395 on 1 and 101 DF, p-value: 0.5311

## Treatment coefficient: 0.0545

## 95% CI: [-0.1207, 0.2298]

## 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
## -0.6078 -0.5610  0.3922  0.4039  0.4390
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)   0.60784    0.06973   8.717 1.34e-13 ***
## treatment    -0.04687    0.10571  -0.443   0.659
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.4973 on 90 degrees of freedom
## Multiple R-squared:  0.002238, Adjusted R-squared:  -0.008848
## F-statistic: 0.2019 on 1 and 90 DF, p-value: 0.6543

## Treatment coefficient: -0.0469

## 95% CI: [-0.2569, 0.1631]

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

## Treatment effect (Women participants): 0.0545 (SE = 0.0883)

```

Treatment effect (Men participants): -0.0469 (SE = 0.1057)

Difference: 0.1014

SE of difference: 0.1378

Z-statistic: 0.7361

P-value: 0.4617

CONCLUSION: Participant gender does NOT significantly moderate the treatment effect ($p \geq 0.05$).

Wald Test: Comparing Treatment Effects Across Pools

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

Treatment Effect (Men Pool 25%): 0.1786 (SE = 0.0695)

Treatment Effect (Women Pool 75%): 0.0233 (SE = 0.0669)

Difference in Treatment Effects: 0.1553

Standard Error of Difference: 0.0964

Wald Statistic (z): 1.6101

P-value (two-tailed): 0.1074

95% CI for Difference: [-0.0338, 0.3443]

Visualization

Interaction Plot: Treatment × Pool

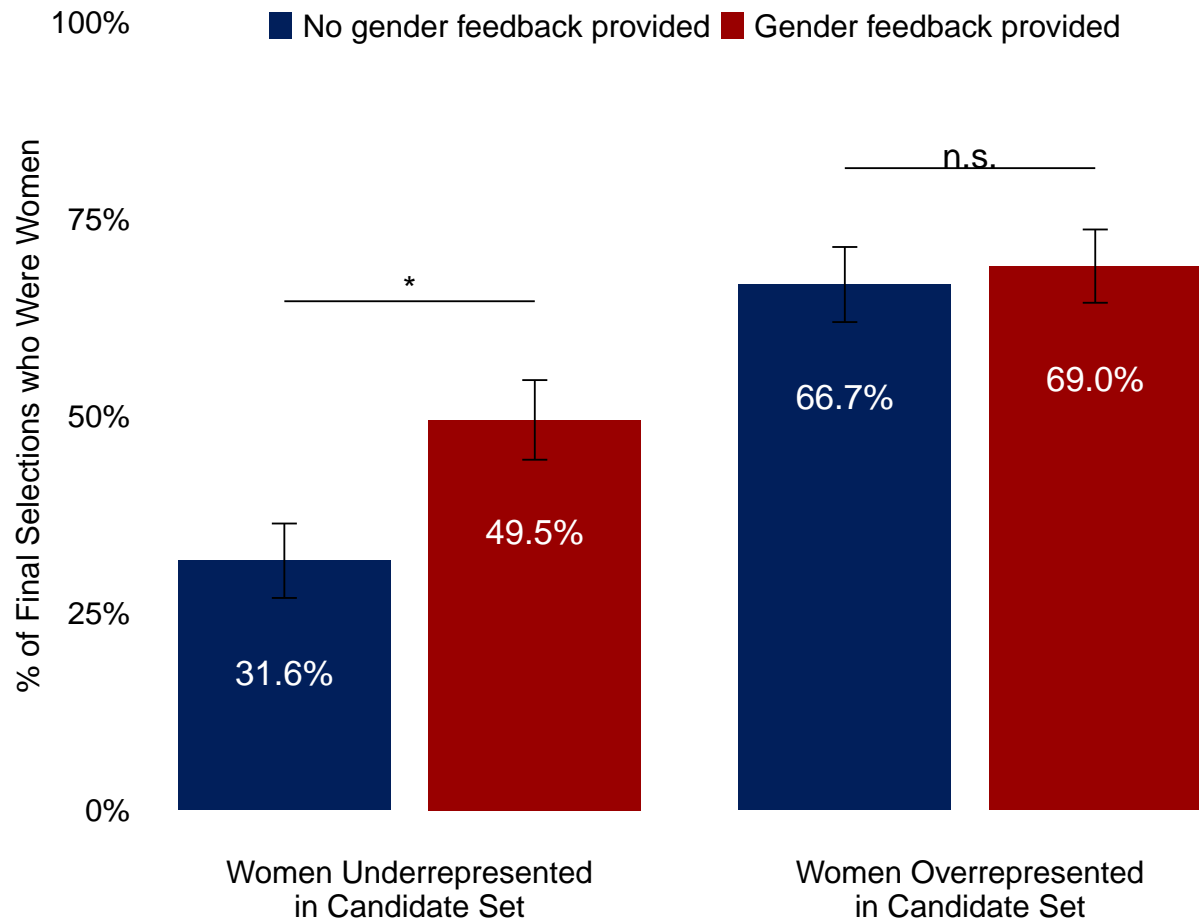


Figure 1: Effect of Gender Feedback by Pool Condition

Robustness Checks

Logistic Regression Analyses

```
## =====

## ROBUSTNESS CHECK: LOGISTIC REGRESSION ANALYSES

## =====

## --- H1 TEST: MEN POOL (WOMEN UNDERREPRESENTED) ONLY ---

##
## Call:
## glm(formula = female_pick ~ treatment, family = binomial(link = "logit"),
##      data = d0 %>% filter(men_pool == 1))
##
## Coefficients:
##              Estimate Std. Error z value Pr(>|z|)
## (Intercept)  -0.7707      0.2172  -3.548 0.000388 ***
## treatment      0.7505      0.2960   2.536 0.011218 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for binomial family taken to be 1)
##
##      Null deviance: 266.11  on 196  degrees of freedom
## Residual deviance: 259.55  on 195  degrees of freedom
## AIC: 263.55
##
## Number of Fisher Scoring iterations: 4

##
##
## Odds Ratios and 95% CIs:

##              OR      2.5 %    97.5 %
## (Intercept) 0.4626866 0.2984094 0.7015656
## treatment   2.1180645 1.1914174 3.8100561

## --- H1 & H2 TEST: FULL 2x2 INTERACTION ---

##
## Call:
## glm(formula = female_pick ~ treatment * men_pool, family = binomial(link = "logit"),
##      data = d0)
##
## Coefficients:
##              Estimate Std. Error z value Pr(>|z|)
## (Intercept)      0.6931      0.2132   3.251 0.00115 **
## treatment        0.1070      0.3037   0.352 0.72463
```

```

## men_pool          -1.4639      0.3044  -4.810 1.51e-06 ***
## treatment:men_pool  0.6435      0.4240   1.518 0.12910
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for binomial family taken to be 1)
##
##    Null deviance: 546.05  on 395  degrees of freedom
## Residual deviance: 509.40  on 392  degrees of freedom
## AIC: 517.4
##
## Number of Fisher Scoring iterations: 4

##
##
## Odds Ratios and 95% CIs:

##              OR      2.5 %    97.5 %
## (Intercept)    2.0000000 1.3277073 3.0720650
## treatment      1.1129032 0.6134135 2.0231309
## men_pool       0.2313433 0.1259329 0.4161955
## treatment:men_pool 1.9031884 0.8301230 4.3839414

```

Models with Demographic Controls

```
## =====

## ROBUSTNESS CHECK: MODELS WITH DEMOGRAPHIC CONTROLS

## =====

## Demographic Variable Summary:

## Man (1=Man, 0=Not-Man):  48.7%

## White (1=White, 0=Non-White):  0.0%

## Age (mean):  41.74

## Missing Data:

## Gender missing:  0

## Race missing:  0

## Age missing:  0

## --- PRIMARY MODEL WITH DEMOGRAPHIC CONTROLS ---

## Model: female_pick ~ treatment * men_pool + man + white + age + missing indicators

##
## Call:
## lm(formula = female_pick ~ treatment * men_pool + man + white +
##     age_clean + gender_missing + race_missing + age_missing,
##     data = d0_controls)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -0.8743 -0.4518  0.2026  0.3958  0.7805
##
## Coefficients: (4 not defined because of singularities)
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)    0.557411   0.092874   6.002 4.46e-09 ***
## treatment       0.005129   0.066806   0.077  0.93885
## men_pool      -0.361877   0.066029  -5.481 7.62e-08 ***
## man           -0.129761   0.048231  -2.690  0.00744 **
## white                  NA         NA      NA      NA
## age_clean       0.004271   0.001789   2.387  0.01747 *
## gender_missing    NA         NA      NA      NA
## race_missing     NA         NA      NA      NA
## age_missing      NA         NA      NA      NA
## treatment:men_pool 0.191665   0.095212   2.013  0.04480 *
## ---
```

```
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.4709 on 390 degrees of freedom
## Multiple R-squared:  0.1202, Adjusted R-squared:  0.1089
## F-statistic: 10.65 on 5 and 390 DF,  p-value: 1.315e-09
```

```
##              2.5 %      97.5 %
## (Intercept)    0.3748144  0.74000662
## treatment     -0.1262162  0.13647372
## men_pool      -0.4916949 -0.23205979
## man          -0.2245870 -0.03493497
## white              NA           NA
## age_clean     -0.1829214  0.19146339
## gender_missing        NA           NA
## race_missing         NA           NA
## age_missing          NA           NA
## treatment:men_pool  0.0968390  0.28649100
```


Dropout Sensitivity Analyses

```
## =====  
  
## ROBUSTNESS CHECK: DROPOUT SENSITIVITY ANALYSES  
  
## =====  
  
## Dropout Summary:  
## Participants who finished but didn't select choice-7: 54  
## Participants who didn't finish: 9  
## Total dropouts after assignment: 63  
##  
## Running sensitivity analyses...  
##  
## --- SCENARIO 1: ASSUME DROPOUTS CHOSE MAN ---  
##  
## Model: female_pick ~ treatment * men_pool  
##  
##  
## --- SCENARIO 2: ASSUME DROPOUTS CHOSE WOMAN ---  
##  
## Model: female_pick ~ treatment * men_pool  
  
##                2.5 %      97.5 %  
## (Intercept)      0.71853484 0.85009261  
## treatment        -0.20725737 0.01862992  
## men_pool          -0.58212284 -0.35385155  
## treatment:men_pool 0.09571107 0.45016231
```