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> ## Code for Comments on Kim and Patterson Jr. 2021
> ## "The Pandemic and Gender Inequality in Academia"
> ## Data: https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/IDCU63
>
> ## Code drawn or adapted from the Kim and Patterson Jr. 2021 code:
>
> library(tidyverse)
Error: package or namespace load failed for 'tidyverse' in loadNamespace(j <- i[[1L]],
c(lib.loc, .libPaths()), versionCheck = vI[[j]]):
 namespace 'lifecycle' 0.2.0 is already loaded, but >= 1.0.0 is required
In addition: Warning message:
package 'tidyverse' was built under R version 4.0.5
> top50 <- readRDS("G:dataverse_files/ps_top50.RDS")
> summary(lm(twitteruser ~ female*assistant + female*full , data=top50))

Call:
lm(formula = twitteruser ~ female * assistant + female * full,
    data = top50)

Residuals:
    Min      1Q  Median      3Q     Max
-0.6059 -0.3874 -0.3204  0.5385  0.6796

Coefficients:
                 Estimate Std. Error t value Pr(>|t|)
(Intercept)       0.41695    0.02812  14.829  < 2e-16 ***
female            0.04459    0.04552   0.980 0.327436
assistant         0.16547    0.04552   3.635 0.000286 ***
full             -0.09655    0.03355  -2.878 0.004056 **
female:assistant -0.02112    0.06874  -0.307 0.758648
female:full       0.02240    0.05880   0.381 0.703347
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.4829 on 1741 degrees of freedom
Multiple R-squared:  0.04265,   Adjusted R-squared:  0.0399
F-statistic: 15.51 on 5 and 1741 DF,  p-value: 5.906e-15

>
> ## Other code:
>
> REG1 <- lm(twitteruser ~ female + assistant + associate + full, data=top50)
> summary(REG1)

Call:
lm(formula = twitteruser ~ female + assistant + associate + full,
    data = top50)

Residuals:
    Min      1Q  Median      3Q     Max
-0.6195 -0.3743 -0.3246  0.5353  0.6754

Coefficients: (1 not defined because of singularities)
            Estimate Std. Error t value Pr(>|t|)
(Intercept)  0.32456    0.01705  19.033  < 2e-16 ***
female       0.04978    0.02514   1.980  0.04784 *
assistant    0.24515    0.03086   7.943 3.51e-15 ***
associate    0.09041    0.02747   3.291  0.00102 **
full              NA         NA      NA       NA
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.4827 on 1743 degrees of freedom
Multiple R-squared:  0.04238,   Adjusted R-squared:  0.04073
F-statistic: 25.71 on 3 and 1743 DF,  p-value: 2.83e-16
```

```
> nobs(REG1)
[1] 1747
>
> LOGIT <- glm(twitteruser ~ female + assistant + associate + full, data=top50,
family="binomial")
> summary(LOGIT)

Call:
glm(formula = twitteruser ~ female + assistant + associate +
    full, family = "binomial", data = top50)

Deviance Residuals:
    Min       1Q   Median       3Q      Max
-1.3911  -0.9660  -0.8867   1.2357   1.4992

Coefficients: (1 not defined because of singularities)
            Estimate Std. Error z value Pr(>|z|)
(Intercept) -0.73074    0.07498  -9.745  < 2e-16 ***
female       0.21082    0.10685   1.973  0.04849 *
assistant    1.00946    0.13132   7.687 1.51e-14 ***
associate    0.38395    0.11683   3.286  0.00101 **
full              NA         NA      NA       NA
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for binomial family taken to be 1)

    Null deviance: 2371.1  on 1746  degrees of freedom
Residual deviance: 2297.3  on 1743  degrees of freedom
AIC: 2305.3

Number of Fisher Scoring iterations: 4

> nobs(LOGIT)
[1] 1747
>
> summary(lm(twitteruser[assistant==1] ~ female[assistant==1], data=top50))

Call:
lm(formula = twitteruser[assistant == 1] ~ female[assistant ==
    1], data = top50)

Residuals:
    Min      1Q  Median      3Q     Max
-0.6059 -0.5824  0.3941  0.4176  0.4176

Coefficients:
                      Estimate Std. Error t value Pr(>|t|)
(Intercept)            0.58242    0.03650  15.957   <2e-16 ***
female[assistant == 1]  0.02346    0.05252   0.447    0.655
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.4924 on 350 degrees of freedom
Multiple R-squared:  0.00057,   Adjusted R-squared:  -0.002286
F-statistic: 0.1996 on 1 and 350 DF,  p-value: 0.6553

> summary(lm(twitteruser[associate==1] ~ female[associate==1], data=top50))

Call:
lm(formula = twitteruser[associate == 1] ~ female[associate ==
    1], data = top50)

Residuals:
    Min      1Q  Median      3Q     Max
-0.4615 -0.4169 -0.4169  0.5830  0.5830
```

```
Coefficients:
                      Estimate Std. Error t value Pr(>|t|)
(Intercept)            0.41695    0.02889  14.433   <2e-16 ***
female[associate == 1]  0.04459    0.04677   0.953    0.341
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.4962 on 475 degrees of freedom
Multiple R-squared:  0.00191,   Adjusted R-squared:  -0.0001913
F-statistic: 0.909 on 1 and 475 DF,  p-value: 0.3409

> summary(lm(twitteruser[full     ==1] ~ female[full     ==1], data=top50))

Call:
lm(formula = twitteruser[full == 1] ~ female[full == 1], data = top50)

Residuals:
    Min      1Q  Median      3Q     Max
-0.3874 -0.3204 -0.3204  0.6126  0.6796

Coefficients:
                 Estimate Std. Error t value Pr(>|t|)
(Intercept)       0.32040    0.01790   17.90   <2e-16 ***
female[full == 1]  0.06699    0.03640    1.84    0.066 .
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.4722 on 916 degrees of freedom
Multiple R-squared:  0.003684,  Adjusted R-squared:  0.002597
F-statistic: 3.387 on 1 and 916 DF,  p-value: 0.06603

>
> table(top50$female[top50$assistant==1])

  0   1
182 170
> table(top50$female[top50$associate==1])

  0   1
295 182
> table(top50$female[top50$full     ==1])

  0   1
696 222
>
> table(top50$female[top50$assistant==1 & top50$twitteruser==1])

  0   1
106 103
> table(top50$female[top50$associate==1 & top50$twitteruser==1])

  0   1
123  84
> table(top50$female[top50$full     ==1 & top50$twitteruser==1])

  0   1
223  86
>
```