analysis

Iris Zhong

4/27/2021

```
library(readr)
data_pair <- read_csv("data_pair.csv")
```

```
## Warning: Missing column names filled in: 'X1' [1]
```

```
##
## -- Column specification --------------------------------------------------------
## cols(
##   .default = col_double(),
##   day_A = col_character(),
##   day_P = col_character(),
##   gender_chr_A = col_character(),
##   gender_chr_P = col_character(),
##   partID_A = col_character(),
##   partID_P = col_character()
## )
## i Use `spec()` for the full column specifications.
```

```
data_pair$day_of_study_A <- as.numeric(data_pair$day_of_study_A)
data_pair$day_of_study_P <- as.numeric(data_pair$day_of_study_P)
data_pair <- data_pair %>%
  mutate(day_of_study_A = day_of_study_A -1,
         day_of_study_P = day_of_study_P - 1,
         fair_chores_C_A = fair_chores_A - mean(fair_chores_A, na.rm = T),
         fair_chores_C_P = fair_chores_P - mean(fair_chores_P, na.rm = T),
         grbs_C_A = grbs_ss_A - mean(grbs_ss_A, na.rm = T),
         grbs_C_P = grbs_ss_P - mean(grbs_ss_P, na.rm = T))
```

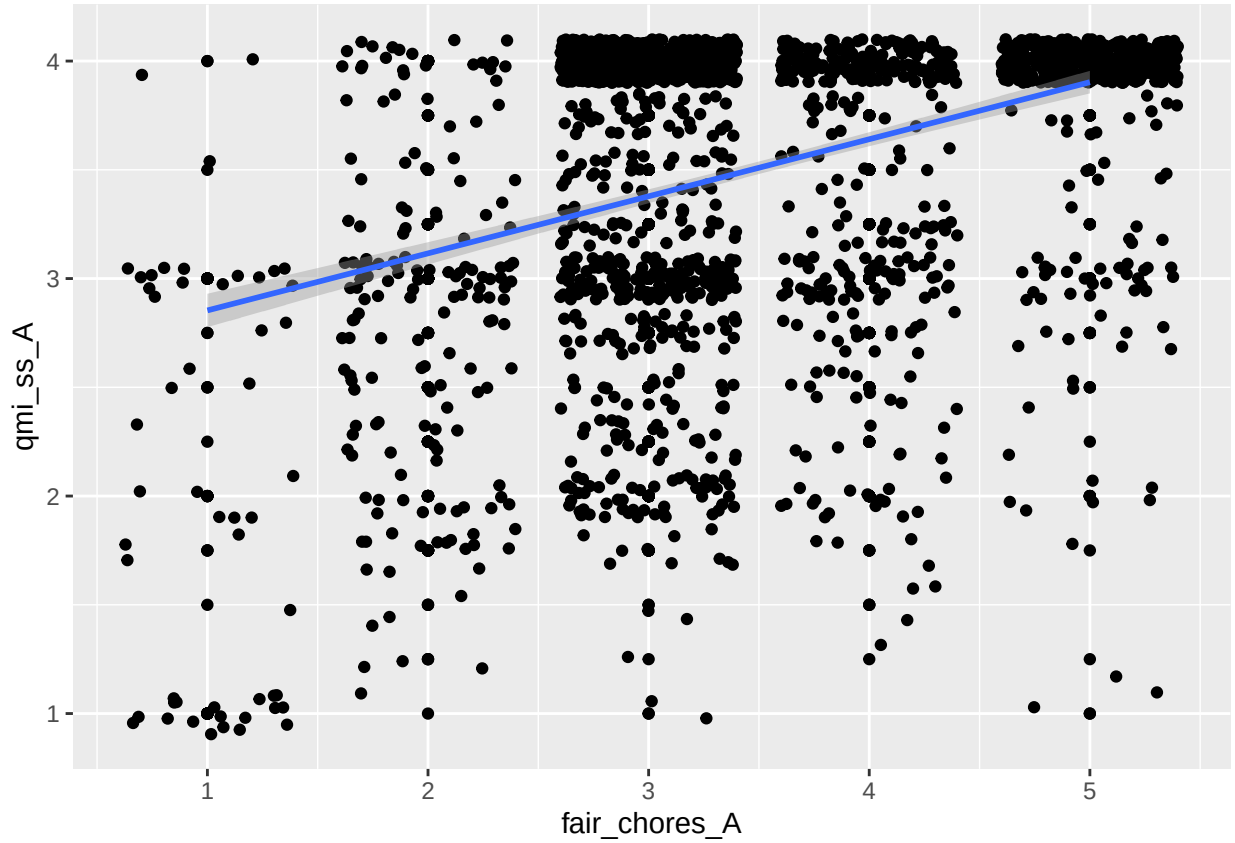
```
ggplot(data_pair, aes(x = fair_chores_A, y = qmi_ss_A)) +
  geom_point()+
  geom_jitter() +
  geom_smooth(method = "lm")
```

```
## `geom_smooth()` using formula 'y ~ x'
```

```
## Warning: Removed 1 rows containing non-finite values (stat_smooth).
```

```
## Warning: Removed 1 rows containing missing values (geom_point).
```

```
## Warning: Removed 1 rows containing missing values (geom_point).
```




```
mod_qmi_chore  <- lme(qmi_ss_A ~ gender_chr_A + gender_chr_A:day_of_study_A + fair_chores_C_A:gender_chr
                      data = data_pair,
                      random = ~ gender_chr_A - 1|dyadID,
                      correlation = corCompSymm(form = ~1|dyadID/obsid),
                      weights = varIdent(form = ~1|gender_chr_A),
                      na.action = na.omit)

summary(mod_qmi_chore)
```

```
## Linear mixed-effects model fit by REML
##   Data: data_pair
##        AIC      BIC    logLik
##   2339.985 2407.787 -1157.993
##
## Random effects:
##  Formula: ~gender_chr_A - 1 | dyadID
##  Structure: General positive-definite, Log-Cholesky parametrization
##               StdDev    Corr
## gender_chr_AM 0.6040865 gn__AM
## gender_chr_AW 0.5590111 0.79
## Residual      0.4051733
##
## Correlation Structure: Compound symmetry
##  Formula: ~1 | dyadID/obsid
##  Parameter estimate(s):
```

```
##       Rho
## 0.2939514
## Variance function:
##  Structure: Different standard deviations per stratum
##  Formula: ~1 | gender_chr_A
##  Parameter estimates:
##         W         M
## 1.0000000 0.8741117
## Fixed effects:  qmi_ss_A ~ gender_chr_A + gender_chr_A:day_of_study_A + fair_chores_C_A:gender_chr_A
##                                    Value  Std.Error   DF  t-value p-value
## gender_chr_AM                   3.563025 0.07021843 2021 50.74202  0.0000
## gender_chr_AW                   3.426148 0.06642862 2021 51.57638  0.0000
## gender_chr_AM:day_of_study_A   -0.002881 0.00274384 2021 -1.05013  0.2938
## gender_chr_AW:day_of_study_A    0.006602 0.00313943 2021  2.10280  0.0356
## gender_chr_AM:fair_chores_C_A   0.069398 0.01762136 2021  3.93826  0.0001
## gender_chr_AW:fair_chores_C_A   0.085162 0.01881061 2021  4.52735  0.0000
##  Correlation:
##                                gn__AM gn__AW g__AM:___ g__AW:___ g__AM:__C
## gender_chr_AW                   0.737
## gender_chr_AM:day_of_study_A   -0.243 -0.086
## gender_chr_AW:day_of_study_A   -0.071 -0.294  0.295
## gender_chr_AM:fair_chores_C_A -0.004  0.000 -0.039     0.006
## gender_chr_AW:fair_chores_C_A -0.001 -0.004 -0.001     0.074     0.053
##
## Standardized Within-Group Residuals:
##         Min          Q1         Med          Q3         Max
## -7.18273039 -0.14752593  0.05854595  0.29040436  3.70348951
##
## Number of Observations: 2107
## Number of Groups: 81
```

```
stargazer(mod_qmi_chore)
```

```
##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harva
## % Date and time: Tue, May 04, 2021 - 1:58:49 PM
## \begin{table}[!htbp] \centering
##   \caption{}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{1}{c}{\textit{Dependent variable:}} \\
## \cline{2-2}
## \\[-1.8ex] & qmi\_ss\_A \\
## \hline \\[-1.8ex]
##  gender\_chr\_AM & 3.563$^{***}$ \\
##   & (0.070) \\
##   & \\
##  gender\_chr\_AW & 3.426$^{***}$ \\
##   & (0.066) \\
##   & \\
##  gender\_chr\_AM:day\_of\_study\_A & $-$0.003 \\
##   & (0.003) \\
```

```
##   & \\
##  gender\_chr\_AW:day\_of\_study\_A & 0.007$^{**}$ \\
##   & (0.003) \\
##   & \\
##  gender\_chr\_AM:fair\_chores\_C\_A & 0.069$^{***}$ \\
##   & (0.018) \\
##   & \\
##  gender\_chr\_AW:fair\_chores\_C\_A & 0.085$^{***}$ \\
##   & (0.019) \\
##   & \\
## \hline \\[-1.8ex]
## Observations & 2,107 \\
## Log Likelihood & $-$1,157.993 \\
## Akaike Inf. Crit. & 2,339.985 \\
## Bayesian Inf. Crit. & 2,407.787 \\
## \hline
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{1}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}
```

Table 1:

	Dependent variable:
	qmi_ss_A
gender_chr_AM	3.563***
	(0.070)
gender_chr_AW	3.426***
	(0.066)
gender_chr_AM:day_of_study_A	−0.003
	(0.003)
gender_chr_AW:day_of_study_A	0.007**
	(0.003)
gender_chr_AM:fair_chores_C_A	0.069***
	(0.018)
gender_chr_AW:fair_chores_C_A	0.085***
	(0.019)
Observations	2,107
Log Likelihood	−1,157.993
Akaike Inf. Crit.	2,339.985
Bayesian Inf. Crit.	2,407.787
Note:	*p<0.1; **p<0.05; ***p<0.01

```r
mod_qmi_chore_APIM  <- lme(qmi_ss_A ~ gender_chr_A + gender_chr_A:day_of_study_A + fair_chores_C_A:gende
                      data = data_pair,
                      random = ~ gender_chr_A - 1|dyadID,
                      correlation = corCompSymm(form = ~1|dyadID/obsid),
                      weights = varIdent(form = ~1|gender_chr_A),
                      na.action = na.omit)

summary(mod_qmi_chore_APIM)
```

```
## Linear mixed-effects model fit by REML
##   Data: data_pair
##        AIC      BIC    logLik
##   2355.818 2434.907 -1163.909
##
## Random effects:
##  Formula: ~gender_chr_A - 1 | dyadID
##  Structure: General positive-definite, Log-Cholesky parametrization
##               StdDev    Corr
## gender_chr_AM 0.6063608 gn__AM
## gender_chr_AW 0.5610447 0.792
## Residual      0.4052960
##
## Correlation Structure: Compound symmetry
##  Formula: ~1 | dyadID/obsid
##  Parameter estimate(s):
##       Rho
## 0.2936967
## Variance function:
##  Structure: Different standard deviations per stratum
##  Formula: ~1 | gender_chr_A
##  Parameter estimates:
##         W         M
## 1.0000000 0.8741505
## Fixed effects:  qmi_ss_A ~ gender_chr_A + gender_chr_A:day_of_study_A + fair_chores_C_A:gender_chr_A
##                                    Value  Std.Error   DF  t-value p-value
## gender_chr_AM                   3.563150 0.07046262 2019 50.56795  0.0000
## gender_chr_AW                   3.426267 0.06664337 2019 51.41196  0.0000
## gender_chr_AM:day_of_study_A   -0.002984 0.00275515 2019 -1.08302  0.2789
## gender_chr_AW:day_of_study_A    0.006585 0.00314538 2019  2.09362  0.0364
## gender_chr_AM:fair_chores_C_A   0.068927 0.01884934 2019  3.65674  0.0003
## gender_chr_AW:fair_chores_C_A   0.082186 0.02020809 2019  4.06698  0.0000
## gender_chr_AM:fair_chores_C_P -0.008273 0.01813876 2019 -0.45607  0.6484
## gender_chr_AW:fair_chores_C_P -0.003392 0.02106712 2019 -0.16100  0.8721
##  Correlation:
##                                gn__AM gn__AW g__AM:___ g__AW:___ g__AM:__C_A
## gender_chr_AW                   0.739
## gender_chr_AM:day_of_study_A   -0.242 -0.086
## gender_chr_AW:day_of_study_A   -0.071 -0.293  0.296
## gender_chr_AM:fair_chores_C_A -0.004 -0.001 -0.047    -0.014
## gender_chr_AW:fair_chores_C_A -0.002 -0.004  0.030     0.083    -0.010
## gender_chr_AM:fair_chores_C_P -0.004 -0.002  0.086     0.030    -0.074
## gender_chr_AW:fair_chores_C_P -0.001 -0.005 -0.014    -0.048     0.347
##                                g__AW:__C_A g__AM:__C_P
```

```
## gender_chr_AW
## gender_chr_AM:day_of_study_A
## gender_chr_AW:day_of_study_A
## gender_chr_AM:fair_chores_C_A
## gender_chr_AW:fair_chores_C_A
## gender_chr_AM:fair_chores_C_P  0.355
## gender_chr_AW:fair_chores_C_P -0.090      -0.009
##
## Standardized Within-Group Residuals:
##         Min          Q1         Med          Q3         Max
## -7.17635854 -0.14029584  0.05879081  0.28437019  3.70465556
##
## Number of Observations: 2107
## Number of Groups: 81
```

```
mod_qmi_chore_APIM_2  <- lme(qmi_ss_A ~ gender_chr_A + gender_chr_A:day_of_study_A + fair_chores_C_A:ge
                      data = data_pair,
                      random = ~ gender_chr_A - 1|dyadID,
                      correlation = corCompSymm(form = ~1|dyadID/obsid),
                      weights = varIdent(form = ~1|gender_chr_A),
                      na.action = na.omit)

summary(mod_qmi_chore_APIM_2)
```

```
## Linear mixed-effects model fit by REML
##   Data: data_pair
##       AIC      BIC   logLik
##   2391.68 2504.607 -1175.84
##
## Random effects:
##  Formula: ~gender_chr_A - 1 | dyadID
##  Structure: General positive-definite, Log-Cholesky parametrization
##               StdDev    Corr
## gender_chr_AM 0.6108624 gn__AM
## gender_chr_AW 0.5675382 0.803
## Residual      0.4055762
##
## Correlation Structure: Compound symmetry
##  Formula: ~1 | dyadID/obsid
##  Parameter estimate(s):
##       Rho
## 0.2939971
## Variance function:
##  Structure: Different standard deviations per stratum
##  Formula: ~1 | gender_chr_A
##  Parameter estimates:
##         W         M
## 1.0000000 0.8739161
## Fixed effects:  qmi_ss_A ~ gender_chr_A + gender_chr_A:day_of_study_A + fair_chores_C_A:gender_chr_A
##                                         Value  Std.Error   DF  t-value
## gender_chr_AM                        3.551778 0.07180647 2013 49.46320
## gender_chr_AW                        3.431381 0.06813773 2013 50.35949
## gender_chr_AM:day_of_study_A        -0.002904 0.00277025 2013 -1.04817
## gender_chr_AW:day_of_study_A         0.006223 0.00316621 2013  1.96536
```

```
## gender_chr_AM:fair_chores_C_A           0.072220 0.01901282 2013  3.79851
## gender_chr_AW:fair_chores_C_A           0.076382 0.02090415 2013  3.65391
## gender_chr_AM:fair_chores_C_P          -0.007095 0.01843006 2013 -0.38497
## gender_chr_AW:fair_chores_C_P          -0.002954 0.02167911 2013 -0.13627
## gender_chr_AM:grbs_C_A                  0.072012 0.08164134 2013  0.88206
## gender_chr_AW:grbs_C_A                  0.042565 0.07318491 2013  0.58161
## gender_chr_AM:fair_chores_C_A:grbs_C_A -0.035623 0.02507536 2013 -1.42064
## gender_chr_AW:fair_chores_C_A:grbs_C_A -0.036299 0.03030353 2013 -1.19786
## gender_chr_AM:fair_chores_C_P:grbs_C_A  0.000591 0.02846254 2013  0.02076
## gender_chr_AW:fair_chores_C_P:grbs_C_A -0.015888 0.02903808 2013 -0.54714
##                                        p-value
## gender_chr_AM                           0.0000
## gender_chr_AW                           0.0000
## gender_chr_AM:day_of_study_A            0.2947
## gender_chr_AW:day_of_study_A            0.0495
## gender_chr_AM:fair_chores_C_A           0.0001
## gender_chr_AW:fair_chores_C_A           0.0003
## gender_chr_AM:fair_chores_C_P           0.7003
## gender_chr_AW:fair_chores_C_P           0.8916
## gender_chr_AM:grbs_C_A                  0.3779
## gender_chr_AW:grbs_C_A                  0.5609
## gender_chr_AM:fair_chores_C_A:grbs_C_A  0.1556
## gender_chr_AW:fair_chores_C_A:grbs_C_A  0.2311
## gender_chr_AM:fair_chores_C_P:grbs_C_A  0.9834
## gender_chr_AW:fair_chores_C_P:grbs_C_A  0.5843
##  Correlation:
##                                        gn__AM gn__AW g__AM:___ g__AW:___
## gender_chr_AW                           0.720
## gender_chr_AM:day_of_study_A           -0.237 -0.083
## gender_chr_AW:day_of_study_A           -0.069 -0.291  0.295
## gender_chr_AM:fair_chores_C_A          -0.005 -0.007 -0.047    -0.013
## gender_chr_AW:fair_chores_C_A           0.001 -0.018  0.033     0.108
## gender_chr_AM:fair_chores_C_P          -0.008  0.000  0.067     0.024
## gender_chr_AW:fair_chores_C_P          -0.006  0.021 -0.015    -0.063
## gender_chr_AM:grbs_C_A                 -0.154  0.075  0.001    -0.003
## gender_chr_AW:grbs_C_A                 -0.083  0.141  0.008    -0.017
## gender_chr_AM:fair_chores_C_A:grbs_C_A  0.010  0.017 -0.028    -0.005
## gender_chr_AW:fair_chores_C_A:grbs_C_A -0.005 -0.039  0.017     0.106
## gender_chr_AM:fair_chores_C_P:grbs_C_A  0.003  0.000  0.099     0.019
## gender_chr_AW:fair_chores_C_P:grbs_C_A  0.001  0.054 -0.004    -0.029
##                                        gn__AM:__C_A gn__AW:__C_A gn__AM:__C_P
## gender_chr_AW
## gender_chr_AM:day_of_study_A
## gender_chr_AW:day_of_study_A
## gender_chr_AM:fair_chores_C_A
## gender_chr_AW:fair_chores_C_A          -0.007
## gender_chr_AM:fair_chores_C_P          -0.065        0.329
## gender_chr_AW:fair_chores_C_P           0.331       -0.124       -0.005
## gender_chr_AM:grbs_C_A                 -0.004       -0.019        0.033
## gender_chr_AW:grbs_C_A                 -0.030       -0.035        0.010
## gender_chr_AM:fair_chores_C_A:grbs_C_A -0.121       -0.014       -0.006
## gender_chr_AW:fair_chores_C_A:grbs_C_A -0.004        0.244       -0.052
## gender_chr_AM:fair_chores_C_P:grbs_C_A -0.021        0.046       -0.172
## gender_chr_AW:fair_chores_C_P:grbs_C_A -0.029       -0.081       -0.009
```

```
##                                       gn__AW:__C_P g__AM:_C g__AW:_C
## gender_chr_AW
## gender_chr_AM:day_of_study_A
## gender_chr_AW:day_of_study_A
## gender_chr_AM:fair_chores_C_A
## gender_chr_AW:fair_chores_C_A
## gender_chr_AM:fair_chores_C_P
## gender_chr_AW:fair_chores_C_P
## gender_chr_AM:grbs_C_A                   0.035
## gender_chr_AW:grbs_C_A                   0.082        0.536
## gender_chr_AM:fair_chores_C_A:grbs_C_A  0.033        0.035    0.023
## gender_chr_AW:fair_chores_C_A:grbs_C_A -0.102        0.028   -0.102
## gender_chr_AM:fair_chores_C_P:grbs_C_A -0.013       -0.039    0.033
## gender_chr_AW:fair_chores_C_P:grbs_C_A  0.200        0.022   -0.036
##                                       g__AM:__C_A: g__AW:__C_A: g__AM:__C_P:
## gender_chr_AW
## gender_chr_AM:day_of_study_A
## gender_chr_AW:day_of_study_A
## gender_chr_AM:fair_chores_C_A
## gender_chr_AW:fair_chores_C_A
## gender_chr_AM:fair_chores_C_P
## gender_chr_AW:fair_chores_C_P
## gender_chr_AM:grbs_C_A
## gender_chr_AW:grbs_C_A
## gender_chr_AM:fair_chores_C_A:grbs_C_A
## gender_chr_AW:fair_chores_C_A:grbs_C_A  0.011
## gender_chr_AM:fair_chores_C_P:grbs_C_A -0.135        0.214
## gender_chr_AW:fair_chores_C_P:grbs_C_A  0.224       -0.050        0.008
##
## Standardized Within-Group Residuals:
##         Min          Q1         Med          Q3         Max
## -7.19086987 -0.12192501  0.05742598  0.29034113  3.69795490
##
## Number of Observations: 2107
## Number of Groups: 81
```

```
report(mod_qmi_chore_APIM_2)
```

```
## We fitted a linear mixed model (estimated using REML and nlminb optimizer) to predict qmi_ss_A with g
##
##   - The effect of gender_chr_A [M] is statistically significant and positive (beta = 3.55, 95% CI [3
##   - The effect of gender_chr_A [W] is statistically significant and positive (beta = 3.43, 95% CI [3
##   - The interaction effect of day_of_study_A on gender_chr_A [M] is statistically non-significant an
##   - The interaction effect of day_of_study_A on gender_chr_A [W] is statistically significant and pos
##   - The interaction effect of fair_chores_C_A on gender_chr_A [M] is statistically significant and po
##   - The interaction effect of fair_chores_C_A on gender_chr_A [W] is statistically significant and po
##   - The interaction effect of fair_chores_C_P on gender_chr_A [M] is statistically non-significant ar
##   - The interaction effect of fair_chores_C_P on gender_chr_A [W] is statistically non-significant ar
##   - The interaction effect of grbs_C_A on gender_chr_A [M] is statistically non-significant and posit
##   - The interaction effect of grbs_C_A on gender_chr_A [W] is statistically non-significant and posit
##   - The interaction effect of grbs_C_A on gender_chr_A [M] * fair_chores_C_A is statistically non-sig
##   - The interaction effect of grbs_C_A on gender_chr_A [W] * fair_chores_C_A is statistically non-sig
##   - The interaction effect of grbs_C_A on gender_chr_A [M] * fair_chores_C_P is statistically non-sig
##   - The interaction effect of grbs_C_A on gender_chr_A [W] * fair_chores_C_P is statistically non-sig
```

```
##
## Standardized parameters were obtained by fitting the model on a standardized version of the dataset.
```

grbs_ss_A:fair_chores_C_A + grbs_ss_A:fair_chores_C_P

```r
mod_chore_work  <- lme(fair_chores_C_A ~ gender_chr_A + telework_A:gender_chr_A  - 1,
                       data = data_pair,
                       random = ~ gender_chr_A - 1|dyadID,
                       correlation = corCompSymm(form = ~1|dyadID/obsid),
                       weights = varIdent(form = ~1|gender_chr_A),
                       na.action = na.omit)

summary(mod_chore_work)
```

```
## Linear mixed-effects model fit by REML
##   Data: data_pair
##        AIC      BIC    logLik
##   4328.078 4384.594 -2154.039
##
## Random effects:
##  Formula: ~gender_chr_A - 1 | dyadID
##  Structure: General positive-definite, Log-Cholesky parametrization
##                StdDev    Corr
## gender_chr_AM 0.7657685 gn__AM
## gender_chr_AW 0.8507501 0.423
## Residual      0.6076911
##
## Correlation Structure: Compound symmetry
##  Formula: ~1 | dyadID/obsid
##  Parameter estimate(s):
##        Rho
## 0.04660539
## Variance function:
##  Structure: Different standard deviations per stratum
##  Formula: ~1 | gender_chr_A
##  Parameter estimates:
##        W        M
## 1.000000 0.963792
## Fixed effects:  fair_chores_C_A ~ gender_chr_A + telework_A:gender_chr_A - 1
##                                 Value Std.Error   DF    t-value p-value
## gender_chr_AM             0.08303975 0.1245339 2024  0.6668046  0.5050
## gender_chr_AW            -0.01607141 0.1720142 2024 -0.0934307  0.9256
## gender_chr_AM:telework_A -0.05148252 0.1628840 2024 -0.3160687  0.7520
## gender_chr_AW:telework_A -0.06817588 0.1989979 2024 -0.3425960  0.7319
##  Correlation:
##                          gn__AM gn__AW g__AM:
## gender_chr_AW             0.048
## gender_chr_AM:telework_A -0.714  0.157
## gender_chr_AW:telework_A  0.134 -0.828 -0.188
##
## Standardized Within-Group Residuals:
##         Min          Q1         Med          Q3         Max
## -6.13738060 -0.34591366 -0.03104953  0.33620544  3.96661127
```

```
##
## Number of Observations: 2108
## Number of Groups: 81
```

```
mod_chore_work_2  <- lme(fair_chores_C_A ~ genderE_A + telework_A:genderE_A + childnum + r_years + inco
                      data = data_pair,
                      random = ~ gender_chr_A - 1|dyadID,
                      correlation = corCompSymm(form = ~1|dyadID/obsid),
                      weights = varIdent(form = ~1|gender_chr_A),
                      na.action = na.omit)

summary(mod_chore_work_2)
```

```
## Linear mixed-effects model fit by REML
##   Data: data_pair
##        AIC      BIC    logLik
##   3717.624 3778.087 -1847.812
##
## Random effects:
##  Formula: ~gender_chr_A - 1 | dyadID
##  Structure: General positive-definite, Log-Cholesky parametrization
##               StdDev    Corr
## gender_chr_AM 0.7873361 gn__AM
## gender_chr_AW 0.8161295 0.295
## Residual      0.6042331
##
## Correlation Structure: Compound symmetry
##  Formula: ~1 | dyadID/obsid
##  Parameter estimate(s):
##        Rho
## 0.07255474
## Variance function:
##  Structure: Different standard deviations per stratum
##  Formula: ~1 | gender_chr_A
##  Parameter estimates:
##         W         M
## 1.0000000 0.9535371
## Fixed effects:  fair_chores_C_A ~ genderE_A + telework_A:genderE_A + childnum +      r_years + incom
##                            Value  Std.Error   DF    t-value p-value
## genderE_A            -0.05333357 0.12554404 1724 -0.4248196  0.6710
## childnum              0.04761534 0.07305583   79  0.6517664  0.5164
## r_years              -0.00581213 0.00478030   79 -1.2158492  0.2277
## income_A              0.00000074 0.00000090 1724  0.8211674  0.4117
## genderE_A:telework_A -0.02805075 0.15756234 1724 -0.1780295  0.8587
##  Correlation:
##                      gndE_A chldnm r_yers incm_A
## childnum              0.109
## r_years               0.047 -0.329
## income_A              0.050 -0.163 -0.461
## genderE_A:telework_A -0.878 -0.128 -0.047 -0.027
##
## Standardized Within-Group Residuals:
##         Min          Q1         Med          Q3         Max
## -6.28510460 -0.35680423 -0.02669892  0.32528372  3.79718594
```

```
##
## Number of Observations: 1807
## Number of Groups: 81
```