

## Supplementary Material 1

Data sets are available from the authors upon reasonable request.

The R syntax we used in the analyses is recorded below:

```
#required packages-----
-----
library(foreign)
library(lavaan)

#import data sets-----
-----
df_RSES <- read.spss(file="Rep 13 Rosenberg Self-Esteem_nomiss.sav",
to.data.frame = T, max.value.labels = 1)
df_LOTR <- read.spss(file="Rep 14 Optimismus_nomiss.sav",
to.data.frame = T, max.value.labels = 1)
df_CSES <- read.spss(file="Rep 20 Core Self-Evaluation_nomiss.sav",
to.data.frame = T, max.value.labels = 1)
df_SRS <- read.spss(file="Rep 21 Selbstregulation_nomiss.sav",
to.data.frame = T, max.value.labels = 1)
df_ADS <- read.spss(file="Rep 13A
Allg_Depressionsskala_withPHQ2_nomiss.sav", to.data.frame = T,
max.value.labels = 1)
df_GPSK <- read.spss(file="Rep 22 Prokrastination_nomiss.sav",
to.data.frame = T, max.value.labels = 1)

#Exemplary analyses for the Rosenberg Self-Esteem Scale (RSES)-----
-----
#(Analyses for the other five scales are analogous)

#Uni-factorial model (1FM) - all items load on one factor

One_RSES <- "Cont1 =~ z9_01 + iz9_02 + z9_03 + z9_04 + iz9_05 + iz9_06
+ z9_07 + iz9_08 + iz9_09 + z9_10"

#Two-factorial model (2FM) - positive and negative items load on
separate factors

Two_RSES <- "Cont1 =~ z9_01 + z9_03 + z9_04 + z9_07 + z9_10
Cont2 =~ iz9_02 + iz9_05 + iz9_06 + iz9_08 + iz9_09"

#Unifactorial random intercept model (1FRIM) - all items load on both
the content and a method factor,
# loadings on the method
factor have been set to 1/-1 for all items, depending on
positive/negative wording
```

Doi: <https://doi.org/10.1027/1015-5759/a000583>

```

# the variance of the
content factor has been set to 1 for identification purposes
# the content and method
factors are uncorrelated

RI_RSES <- "Cont1 =~ NA*z9_01 + iz9_02 + z9_03 + z9_04 + iz9_05 +
iz9_06 + z9_07 + iz9_08 + iz9_09 + z9_10
          Meth1 =~ 1*z9_01 + (-1)*iz9_02 + 1*z9_03 + 1*z9_04 + (-
1)*iz9_05 + (-1)*iz9_06 + 1*z9_07 + (-1)*iz9_08 + (-1)*iz9_09 + 1*z9_10
          Cont1 ~~ 1*Cont1
          Cont1 ~~ 0*Meth1"

fit1 <- cfa(One_RSES, data=df_RSES, estimator="WLSMV",
auto.fix.first=F, std.lv=T) # fitting of the CFA models
fit2 <- cfa(Two_RSES, data=df_RSES, estimator="WLSMV",
auto.fix.first=F, std.lv=T) # .
fit3 <- cfa(RI_RSES, data=df_RSES, estimator="WLSMV")
# .
summary(fit1, fit.measures=T) # output generation
lavInspect(fit1, what = "std") # .
summary(fit2, fit.measures=T) # .
lavInspect(fit2, what = "std") # .
summary(fit3, fit.measures=T) # .
lavInspect(fit3, what = "std") # .

#Reliability Analyses-----
-----

#1FM-----
-----
loadings <- lavInspect(fit1, what="est")$lambda #Extract loadings
sigma <- sum(lavInspect(fit1, what="sigma")) #Extract covariance
matrix

#omega
(sum(loadings[,1])^2) / sigma #According to Bentler (2009;
Equation 13)

#2FM-----
-----
loadings <- lavInspect(fit2, what="est")$lambda #Extract
loadings
fact_var <- lavInspect(fit2, what="est")$psi #Extract
factor variances
sigma1 <- sum(lavInspect(fit2, what="sigma")[1:5,1:5]) #Extract
covariance matrix of positive items
sigma2 <- sum(lavInspect(fit2, what="sigma")[6:10,6:10]) #Extract
covariance matrix of negative items

#omega
(sum(loadings[,1])^2)*fact_var[1,1] / sigma1 #According to
Bentler (2009; Equation 13)
```

```

(sum(loadings[,2])^2)*fact_var[2,2] / sigma2 #Same for
Factor 2

#1FRIM-----
-----

loadings<-lavInspect(fit3, what="est")$lambda
#Extract loadings
fact_var <- lavInspect(fit3, what="est")$psi
#Extract factor variance
variances<-diag(lavInspect(fit3, what="est")$theta)
#Extract the unique variances of the indicators (u = 1-h²)
m <- as.data.frame(cbind(loadings, variances))
#Combine in a data.frame for simplicity

#omegaH
((sum(m[,1])^2) + (sum(m[,2])^2)*fact_var[2,2]) / (sum(m[,1])^2 +
(sum(m[,2])^2)*fact_var[2,2] + sum(m[,3])) #According to Rodriguez,
Reise, & Haviland (2016; Equation 4)
(sum(m[,1])^2) / (sum(m[,1])^2 + (sum(m[,2])^2)*fact_var[2,2] +
sum(m[,3])) #According to Rodriguez,
Reise, & Haviland (2016; Equation 6)
(sum(m[,2])^2)*fact_var[2,2] / (sum(m[,1])^2 +
(sum(m[,2])^2)*fact_var[2,2] + sum(m[,3])) #Same
for Method Factor

#LOT-R-----
-----

One_LOTR <- "Cont1 =~ q101 + q104 + q110 + iq103 + iq107 + iq109"
Two_LOTR <- "Cont1 =~ q101 + q104 + q110
Cont2 =~ iq103 + iq107 + iq109"
RI_LOTR <- "Cont1 =~ NA*q101 + q104 + q110 + iq103 + iq107 + iq109
Meth1 =~ 1*q101 + 1*q104 + 1*q110 + (-1)*iq103 + (-1)*iq107 + (-
1)*iq109
Cont1 ~~ 1*Cont1
Cont1 ~~ 0*Meth1"

fit1 <- cfa(One_LOTR, data=df_LOTR, estimator="WLSMV",
auto.fix.first=F, std.lv=T)
fit2 <- cfa(Two_LOTR, data=df_LOTR, estimator="WLSMV",
auto.fix.first=F, std.lv=T)
fit3 <- cfa(RI_LOTR, data=df_LOTR, estimator="WLSMV")
summary(fit1, fit.measures=T)
lavInspect(fit1, what = "std")
summary(fit2, fit.measures=T)
lavInspect(fit2, what = "std")
summary(fit3, fit.measures=T)
lavInspect(fit3, what = "std")

```

```
#Reliability-----  
-----  
  
#1FM-----  
-----  
loadings <-lavInspect(fit1, what="est")$lambda  
sigma <- sum(lavInspect(fit1, what="sigma"))  
  
#omega  
(sum(loadings[,1])^2) / sigma  
  
#2FM-----  
-----  
loadings <- lavInspect(fit2, what="est")$lambda  
fact_var <- lavInspect(fit2, what="est")$psi  
sigma1 <- sum(lavInspect(fit2, what="sigma")[1:3,1:3])  
sigma2 <- sum(lavInspect(fit2, what="sigma")[4:6,4:6])  
  
#omega  
(sum(loadings[,1])^2)*fact_var[1,1] / sigma1  
(sum(loadings[,2])^2)*fact_var[2,2] / sigma2  
  
#1FRIM-----  
-----  
  
loadings <- lavInspect(fit3, what="est")$lambda  
fact_var <- lavInspect(fit3, what="est")$psi  
variances <- diag(lavInspect(fit3, what="est")$theta)  
m <- as.data.frame(cbind(loadings, variances))  
  
#omegaH  
((sum(m[,1])^2) + (sum(m[,2])^2)*fact_var[2,2]) / (sum(m[,1])^2 +  
(sum(m[,2])^2)*fact_var[2,2] + sum(m[,3]))  
(sum(m[,1])^2) / (sum(m[,1])^2 + (sum(m[,2])^2)*fact_var[2,2] +  
sum(m[,3]))  
(sum(m[,2])^2)*fact_var[2,2] / (sum(m[,1])^2 +  
(sum(m[,2])^2)*fact_var[2,2] + sum(m[,3]))  
  
#CSES-----  
-----  
  
One_CSES <- "Cont1 =~ q231 + iq232 + q233 + iq234 + q235 + iq236 +  
q237 + iq238 + q239 + iq2310 + q2311 + iq2312"  
Two_CSES <- "Cont1 =~ q231 + q233 + q235 + q237 + q239 + q2311  
Cont2 =~ iq232 + iq234 + iq236 + iq238 + iq2310 + iq2312"  
RI_CSES <- "Cont1 =~ NA*q231 + iq232 + q233 + iq234 + q235 + iq236 +  
q237 + iq238 + q239 + iq2310 + q2311 + iq2312  
Meth1 =~ 1*q231 + (-1)*iq232 + 1*q233 + (-1)*iq234 + 1*q235 + (-  
1)*iq236 + 1*q237 + (-1)*iq238 + 1*q239 + (-1)*iq2310 + 1*q2311 + (-  
1)*iq2312  
Cont1 ~~ 1*Cont1  
Cont1 ~~ 0*Meth1"
```

```
fit1 <- cfa(One_CSES, data=df_CSES, estimator="WLSMV",
auto.fix.first=F, std.lv=T)
fit2 <- cfa(Two_CSES, data=df_CSES, estimator="WLSMV",
auto.fix.first=F, std.lv=T)
fit3 <- cfa(RI_CSES, data=df_CSES, estimator="WLSMV")
summary(fit1, fit.measures=T)
lavInspect(fit1, what = "std")
summary(fit2, fit.measures=T)
lavInspect(fit2, what = "std")
summary(fit3, fit.measures=T)
lavInspect(fit3, what = "std")

#Reliability-----
-----

#1FM-----
-----
loadings <-lavInspect(fit1, what="est")$lambda
sigma <- sum(lavInspect(fit1, what="sigma"))

#omega
(sum(loadings[,1])^2) / sigma

#2FM-----
-----
loadings <- lavInspect(fit2, what="est")$lambda
fact_var <- lavInspect(fit2, what="est")$psi
sigma1 <- sum(lavInspect(fit2, what="sigma")[1:6,1:6])
sigma2 <- sum(lavInspect(fit2, what="sigma")[7:12,7:12])

#omega
(sum(loadings[,1])^2)*fact_var[1,1] / sigma1
(sum(loadings[,2])^2)*fact_var[2,2] / sigma2

#1FRIM-----
-----
loadings <- lavInspect(fit3, what="est")$lambda
fact_var <- lavInspect(fit3, what="est")$psi
variances <- diag(lavInspect(fit3, what="est")$theta)
m <- as.data.frame(cbind(loadings, variances))

#omegaH
((sum(m[,1])^2) + (sum(m[,2])^2)*fact_var[2,2]) / (sum(m[,1])^2 +
(sum(m[,2])^2)*fact_var[2,2] + sum(m[,3]))
(sum(m[,1])^2) / (sum(m[,1])^2 + (sum(m[,2])^2)*fact_var[2,2] +
sum(m[,3]))
(sum(m[,2])^2)*fact_var[2,2] / (sum(m[,1])^2 +
(sum(m[,2])^2)*fact_var[2,2] + sum(m[,3]))
```

```
#SRS-----  
-----  
  
One_SRS <- "Cont1 =~ q29_01 + q29_02 + q29_03 + q29_04 + iq29_05 +  
q29_06 + iq29_07 + q29_08 + iq29_09 + q29_10"  
Two_SRS <- "Cont1 =~ q29_01 + q29_02 + q29_03 + q29_04 + q29_06 +  
q29_08 + q29_10  
Cont2 =~ iq29_05 + iq29_07 + iq29_09"  
RI_SRS <- "Cont1 =~ NA*q29_01 + q29_02 + q29_03 + q29_04 + iq29_05 +  
q29_06 + iq29_07 + q29_08 + iq29_09 + q29_10  
Meth1 =~ 1*q29_01 + 1*q29_02 + 1*q29_03 + 1*q29_04 + (-1)*iq29_05 +  
1*q29_06 + (-1)*iq29_07 + 1*q29_08 + (-1)*iq29_09 + 1*q29_10  
Cont1 ~~ 1*Cont1  
Cont1 ~~ 0*Meth1"  
  
fit1 <- cfa(One_SRS, data=df_SRS, estimator="WLSMV", auto.fix.first=F,  
std.lv=T)  
fit2 <- cfa(Two_SRS, data=df_SRS, estimator="WLSMV", auto.fix.first=F,  
std.lv=T)  
fit3 <- cfa(RI_SRS, data=df_SRS, estimator="WLSMV")  
summary(fit1, fit.measures=T)  
lavInspect(fit1, what = "std")  
summary(fit2, fit.measures=T)  
lavInspect(fit2, what = "std")  
summary(fit3, fit.measures=T)  
lavInspect(fit3, what = "std")  
  
#Reliability-----  
-----  
  
#1FM-----  
-----  
loadings <- lavInspect(fit1, what="est")$lambda  
sigma <- sum(lavInspect(fit1, what="sigma"))  
  
#omega  
(sum(loadings[,1])^2) / sigma  
  
#2FM-----  
-----  
loadings <- lavInspect(fit2, what="est")$lambda  
fact_var <- lavInspect(fit2, what="est")$psi  
sigma1 <- sum(lavInspect(fit2, what="sigma")[1:7,1:7])  
sigma2 <- sum(lavInspect(fit2, what="sigma")[8:10,8:10])  
  
#omega  
(sum(loadings[,1])^2)*fact_var[1,1] / sigma1  
(sum(loadings[,2])^2)*fact_var[2,2] / sigma2  
  
#1FRIM-----  
-----
```

```

loadings <- lavInspect(fit3, what="est")$lambda
fact_var <- lavInspect(fit3, what="est")$psi
variances <- diag(lavInspect(fit3, what="est")$theta)
m <- as.data.frame(cbind(loadings, variances))

#omegaH
((sum(m[,1])^2) + (sum(m[,2])^2)*fact_var[2,2]) / (sum(m[,1])^2 +
(sum(m[,2])^2)*fact_var[2,2] + sum(m[,3]))
(sum(m[,1])^2) / (sum(m[,1])^2 + (sum(m[,2])^2)*fact_var[2,2] +
sum(m[,3]))
(sum(m[,2])^2)*fact_var[2,2] / (sum(m[,1])^2 +
(sum(m[,2])^2)*fact_var[2,2] + sum(m[,3]))

#CES-D-----
-----

One_ADS <- "Cont1 =~ z61_01 + z61_02 + z61_03 + iz61_04 + z61_05 +
z61_06 + z61_07 + iz61_08 + z61_09 + z61_10 + z61_11 + iz61_12 +
z61_13 + z61_14 + z61_15 + iz61_16 + z61_17 + z61_18 + z61_19 +
z61_20"
Two_ADS <- "Cont1 =~ z61_01 + z61_02 + z61_03 + z61_05 + z61_06 +
z61_07 + z61_09 + z61_10 + z61_11 + z61_13 + z61_14 + z61_15 + z61_17
+ z61_18 + z61_19 + z61_20
Cont2 =~ iz61_04 + iz61_08 + iz61_12 + iz61_16"
RI_ADS <- "Cont1 =~ NA*z61_01 + z61_02 + z61_03 + iz61_04 + z61_05 +
z61_06 + z61_07 + iz61_08 + z61_09 + z61_10 + z61_11 + iz61_12 +
z61_13 + z61_14 + z61_15 + iz61_16 + z61_17 + z61_18 + z61_19 + z61_20
Meth1 =~ 1*z61_01 + 1*z61_02 + 1*z61_03 + (-1)*iz61_04 + 1*z61_05 +
1*z61_06 + 1*z61_07 + (-1)*iz61_08 + 1*z61_09 + 1*z61_10 + 1*z61_11 +
(-1)*iz61_12 + 1*z61_13 + 1*z61_14 + 1*z61_15 + (-1)*iz61_16 +
1*z61_17 + 1*z61_18 + 1*z61_19 + 1*z61_20
Cont1 ~~ 1*Cont1
Cont1 ~~ 0*Meth1"

fit1 <- cfa(One_ADS, data=df_ADS, estimator="WLSMV", auto.fix.first=F,
std.lv=T)
fit2 <- cfa(Two_ADS, data=df_ADS, estimator="WLSMV", auto.fix.first=F,
std.lv=T)
fit3 <- cfa(RI_ADS, data=df_ADS, estimator="WLSMV")
summary(fit1, fit.measures=T)
lavInspect(fit1, what = "std")
summary(fit2, fit.measures=T)
lavInspect(fit2, what = "std")
summary(fit3, fit.measures=T)
lavInspect(fit3, what = "std")

#Reliability-----
-----

#1FM-----
-----

```

Doi: [https://doi.org/ 10.1027/1015-5759/a000583](https://doi.org/10.1027/1015-5759/a000583)

```
loadings <- lavInspect(fit1, what="est")$lambda
sigma <- sum(lavInspect(fit1, what="sigma"))

#omega
(sum(loadings[,1])^2) / sigma

#2FM-----
-----
loadings <- lavInspect(fit2, what="est")$lambda
fact_var <- lavInspect(fit2, what="est")$psi
sigma1 <- sum(lavInspect(fit2, what="sigma")[1:16,1:16])
sigma2 <- sum(lavInspect(fit2, what="sigma")[17:20,17:20])

#omega
(sum(loadings[,1])^2)*fact_var[1,1] / sigma1
(sum(loadings[,2])^2)*fact_var[2,2] / sigma2

#1FRIM-----
-----

loadings <- lavInspect(fit3, what="est")$lambda
fact_var <- lavInspect(fit3, what="est")$psi
variances <- diag(lavInspect(fit3, what="est")$theta)
m <- as.data.frame(cbind(loadings, variances))

#omegaH
((sum(m[,1])^2) + (sum(m[,2])^2)*fact_var[2,2]) / (sum(m[,1])^2 +
(sum(m[,2])^2)*fact_var[2,2] + sum(m[,3]))
(sum(m[,1])^2) / (sum(m[,1])^2 + (sum(m[,2])^2)*fact_var[2,2] +
sum(m[,3]))
(sum(m[,2])^2)*fact_var[2,2] / (sum(m[,1])^2 +
(sum(m[,2])^2)*fact_var[2,2] + sum(m[,3]))

#GPS-K-----
-----

One_GPSK <- "Cont1 =~ q5301 + q5302 + q5303 + q5304 + iq5305 + iq5306
+ iq5307 + q5308 + iq5309"
Two_GPSK <- "Cont1 =~ q5301 + q5302 + q5303 + q5304 + q5308
Cont2 =~ iq5305 + iq5306 + iq5307 + iq5309"
RI_GPSK <- "Cont1 =~ NA*q5301 + q5302 + q5303 + q5304 + iq5305 +
iq5306 + iq5307 + q5308 + iq5309
Meth1 =~ 1*q5301 + 1*q5302 + 1*q5303 + 1*q5304 + (-1)*iq5305 + (-
1)*iq5306 + (-1)*iq5307 + 1*q5308 + (-1)*iq5309
Cont1 ~~ 1*Meth1
Cont1 ~~ 0*Meth1"

fit1 <- cfa(One_GPSK, data=df_GPSK, estimator="WLSMV",
auto.fix.first=F, std.lv=T)
fit2 <- cfa(Two_GPSK, data=df_GPSK, estimator="WLSMV",
auto.fix.first=F, std.lv=T)
fit3 <- cfa(RI_GPSK, data=df_GPSK, estimator="WLSMV")
```



```
summary(fit1, fit.measures=T)
lavInspect(fit1, what = "std")
summary(fit2, fit.measures=T)
lavInspect(fit2, what = "std")
summary(fit3, fit.measures=T)
lavInspect(fit3, what = "std")

#Reliability-----
-----

#1FM-----
-----
loadings <-lavInspect(fit1, what="est")$lambda
sigma <- sum(lavInspect(fit1, what="sigma"))

#omega
(sum(loadings[,1])^2) / sigma

#2FM-----
-----
loadings <- lavInspect(fit2, what="est")$lambda
fact_var <- lavInspect(fit2, what="est")$psi
sigma1 <- sum(lavInspect(fit2, what="sigma")[1:5,1:5])
sigma2 <- sum(lavInspect(fit2, what="sigma")[6:9,6:9])

#omega
(sum(loadings[,1])^2)*fact_var[1,1] / sigma1
(sum(loadings[,2])^2)*fact_var[2,2] / sigma2

#1FRIM-----
-----

loadings <- lavInspect(fit3, what="est")$lambda
fact_var <- lavInspect(fit3, what="est")$psi
variances <- diag(lavInspect(fit3, what="est")$theta)
m <- as.data.frame(cbind(loadings, variances))

#omegaH
((sum(m[,1])^2) + (sum(m[,2])^2)*fact_var[2,2]) / (sum(m[,1])^2 +
(sum(m[,2])^2)*fact_var[2,2] + sum(m[,3]))
(sum(m[,1])^2) / (sum(m[,1])^2 + (sum(m[,2])^2)*fact_var[2,2] +
sum(m[,3]))
(sum(m[,2])^2)*fact_var[2,2] / (sum(m[,1])^2 +
(sum(m[,2])^2)*fact_var[2,2] + sum(m[,3]))

#####
#####

#PHQ2 - Convergent Validity
```

```
#The following analyses serve the purpose of calculating the
association between the latent variables (and the sum score) of the
primary models
#and the latent factor of the PHQ-2.
```

```
#Exemplary analyses for the Rosenberg Self-Esteem Scale (RSES)-----
-----
```

```
 #(Analyses for the other five scales are analogous)
```

```
#Uni-factorial model (1FM) - all items load on one factor + PHQ-2
latent var. + Correlation between the latent variables
One_RSES <- "Cont1 =~ z9_01 + z9_02 + z9_03 + z9_04 + z9_05 + z9_06 +
z9_07 + z9_08 + z9_09 + z9_10
            PHQ2 =~ z8a+z8b
            Cont1 ~~ PHQ2"
```

```
#Two-factorial model (2FM) - positive and negative items load on
separate factors + PHQ-2 latent var. + Correlations between the latent
variables
```

```
Two_RSES <- "Cont1 =~ z9_01 + z9_03 + z9_04 + z9_07 + z9_10
Cont2 =~ z9_02 + z9_05 + z9_06 + z9_08 + z9_09
PHQ2 =~ z8a+z8b
Cont1 ~~ PHQ2
Cont2 ~~ PHQ2"
```

```
#Unifactorial random intercept model (1FRIM) - all items load on both
the content and a method factor,
```

```
factor have been set to 1 # loadings on the method
                           # the variance of the
content factor has been set to 1 for identification purposes
                           # the content and method
factors are uncorrelated   # + PHQ-2 + Correlations
between the latent variables
```

```
RI_RSES <- "Cont1 =~ NA*z9_01 + z9_02 + z9_03 + z9_04 + z9_05 + z9_06
+ z9_07 + z9_08 + z9_09 + z9_10
Meth1 =~ 1*z9_01 + 1*z9_02 + 1*z9_03 + 1*z9_04 + 1*z9_05 + 1*z9_06 +
1*z9_07 + 1*z9_08 + 1*z9_09 + 1*z9_10
Cont1 ~~ 1*Cont1
Cont1 ~~ 0*Meth1
PHQ2 =~ z8a+z8b
Cont1 ~~ PHQ2
Meth1 ~~ PHQ2"
```

```
fit1 <- cfa(One_RSES, data=df_RSES, estimator="WLSMV") # fitting of
the CFA models
fit2 <- cfa(Two_RSES, data=df_RSES, estimator="WLSMV") # .
fit3 <- cfa(RI_RSES, data=df_RSES, estimator="WLSMV") # .
lavInspect(fit1, what = "std")$psi # Output factor correlations
```

Doi: <https://doi.org/10.1027/1015-5759/a000583>

```
lavInspect(fit2, what = "std")$psi # .
lavInspect(fit3, what = "std")$psi # .

#Correlation between the empirical RSES Sum Score and the PHQ-2 latent
factor
model <- "PHQ2 =~ z8a + z8b
          PHQ2 ~ SUM_SCORE"
fit <- cfa(model, data=df_RSES, estimator="WLSMV") # fitting of the
CFA model
summary(fit, fit.measures=T) # output generation
lavInspect(fit, what = "std") # .

#LOTR-----
-----

One_LOTR <- "Cont1 =~ q101 + q104 + q110 + q103 + q107 + q109
PHQ2 =~ q8a+q8b
Cont1 ~~ PHQ2"
Two_LOTR <- "Cont1 =~ q101 + q104 + q110
Cont2 =~ q103 + q107 + q109
PHQ2 =~ q8a+q8b
Cont1 ~~ PHQ2
Cont2 ~~ PHQ2"
RI_LOTR <- "Cont1 =~ NA*q101 + q104 + q110 + q103 + q107 + q109
Meth1 =~ 1*q101 + 1*q104 + 1*q110 + 1*q103 + 1*q107 + 1*q109
Cont1 ~~ 1*Cont1
Cont1 ~~ 0*Meth1
PHQ2 =~ q8a+q8b
Cont1 ~~ PHQ2
Meth1 ~~ PHQ2"

fit1 <- cfa(One_LOTR, data=df_LOTR, estimator="WLSMV")
fit2 <- cfa(Two_LOTR, data=df_LOTR, estimator="WLSMV")
fit3 <- cfa(RI_LOTR, data=df_LOTR, estimator="WLSMV")
lavInspect(fit1, what = "std")$psi
lavInspect(fit2, what = "std")$psi
lavInspect(fit3, what = "std")$psi

#Sum Score Correlation
model <- "PHQ2 =~ q8a + q8b
          PHQ2 ~ SUM_SCORE"
fit <- cfa(model, data=df_LOTR, estimator="WLSMV")
lavInspect(fit, what = "std")
```

```
#CSES-----
-----
```

```
One_CSES <- "Cont1 =~ q231 + q232 + q233 + q234 + q235 + q236 + q237 +
q238 + q239 + q2310 + q2311 + q2312
PHQ2 =~q261+q262
Cont1 ~~ PHQ2"
Two_CSES <- "Cont1 =~ q231 + q233 + q235 + q237 + q239 + q2311
Cont2 =~ q232 + q234 + q236 + q238 + q2310 + q2312
PHQ2 =~q261+q262
Cont1 ~~ PHQ2
Cont2 ~~ PHQ2"
RI_CSES <- "Cont1 =~ NA*q231 + q232 + q233 + q234 + q235 + q236 + q237
+ q238 + q239 + q2310 + q2311 + q2312
Meth1 =~ 1*q231 + 1*q232 + 1*q233 + 1*q234 + 1*q235 + 1*q236 + 1*q237
+ 1*q238 + 1*q239 + 1*q2310 + 1*q2311 + 1*q2312
Cont1 ~~ 1*Cont1
Cont1 ~~ 0*Meth1
PHQ2 =~q261+q262
Cont1 ~~ PHQ2
Meth1 ~~ PHQ2"

fit1 <- cfa(One_CSES, data=df_CSES, estimator="WLSMV")
fit2 <- cfa(Two_CSES, data=df_CSES, estimator="WLSMV")
fit3 <- cfa(RI_CSES, data=df_CSES, estimator="WLSMV")
lavInspect(fit1, what = "std")$psi
lavInspect(fit2, what = "std")$psi
lavInspect(fit3, what = "std")$psi

#Sum Score Correlation
model <- "PHQ2 =~ q261 + q262
          PHQ2 ~ SUM_SCORE"
fit <- cfa(model, data=df_CSES, estimator="WLSMV")
lavInspect(fit, what = "std")

#SRS-----
-----

One_SRS <- "Cont1 =~ q29_01 + q29_02 + q29_03 + q29_04 + q29_05 +
q29_06 + q29_07 + q29_08 + q29_09 + q29_10
PHQ2 =~q44_01+q44_02
Cont1 ~~ PHQ2"
Two_SRS <- "Cont1 =~ q29_01 + q29_02 + q29_03 + q29_04 + q29_06 +
q29_08 + q29_10
Cont2 =~ q29_05 + q29_07 + q29_09
PHQ2 =~q44_01+q44_02
Cont1 ~~ PHQ2
Cont2 ~~ PHQ2"
RI_SRS <- "Cont1 =~ NA*q29_01 + q29_02 + q29_03 + q29_04 + q29_05 +
q29_06 + q29_07 + q29_08 + q29_09 + q29_10
Meth1 =~ 1*q29_01 + 1*q29_02 + 1*q29_03 + 1*q29_04 + 1*q29_05 +
1*q29_06 + 1*q29_07 + 1*q29_08 + 1*q29_09 + 1*q29_10
Cont1 ~~ 1*Cont1
```

```
Cont1 ~~ 0*Meth1
PHQ2 =~q44_01+q44_02
Cont1 ~~ PHQ2
Meth1 ~~ PHQ2"
```

```
fit1 <- cfa(One_SRS, data=df_SRS, estimator="WLSMV")
fit2 <- cfa(Two_SRS, data=df_SRS, estimator="WLSMV")
fit3 <- cfa(RI_SRS, data=df_SRS, estimator="WLSMV")
lavInspect(fit1, what = "std")$psi
lavInspect(fit2, what = "std")$psi
lavInspect(fit3, what = "std")$psi
```

```
#Sum Score Correlation
model <- "PHQ2 =~ q44_01 + q44_02
          PHQ2 ~ SUM_SCORE"
fit <- cfa(model, data=df_SRS, estimator="WLSMV")
lavInspect(fit, what = "std")
```

```
#ADS-----
-----
```

```
One_ADS <- "Cont1 =~ z61_01 + z61_02 + z61_03 + z61_04 + z61_05 +
z61_06 + z61_07 + z61_08 + z61_09 + z61_10 + z61_11 + z61_12 + z61_13
+ z61_14 + z61_15 + z61_16 + z61_17 + z61_18 + z61_19 + z61_20
PHQ2 =~z8a+z8b
Cont1 ~~ PHQ2"
Two_ADS <- "Cont1 =~ z61_01 + z61_02 + z61_03 + z61_05 + z61_06 +
z61_07 + z61_09 + z61_10 + z61_11 + z61_13 + z61_14 + z61_15 + z61_17
+ z61_18 + z61_19 + z61_20
Cont2 =~ z61_04 + z61_08 + z61_12 + z61_16
PHQ2 =~z8a+z8b
Cont1 ~~ PHQ2
Cont2 ~~ PHQ2"
RI_ADS <- "Cont1 =~ NA*z61_01 + z61_02 + z61_03 + z61_04 + z61_05 +
z61_06 + z61_07 + z61_08 + z61_09 + z61_10 + z61_11 + z61_12 + z61_13
+ z61_14 + z61_15 + z61_16 + z61_17 + z61_18 + z61_19 + z61_20
Meth1 =~ 1*z61_01 + 1*z61_02 + 1*z61_03 + 1*z61_04 + 1*z61_05 +
1*z61_06 + 1*z61_07 + 1*z61_08 + 1*z61_09 + 1*z61_10 + 1*z61_11 +
1*z61_12 + 1*z61_13 + 1*z61_14 + 1*z61_15 + 1*z61_16 + 1*z61_17 +
1*z61_18 + 1*z61_19 + 1*z61_20
Cont1 ~~ 1*Cont1
Cont1 ~~ 0*Meth1
PHQ2 =~z8a+z8b
Cont1 ~~ PHQ2
Meth1 ~~ PHQ2"
```

```
fit1 <- cfa(One_ADS, data=df_ADS, estimator="WLSMV")
fit2 <- cfa(Two_ADS, data=df_ADS, estimator="WLSMV")
fit3 <- cfa(RI_ADS, data=df_ADS, estimator="WLSMV")
lavInspect(fit1, what = "std")$psi
```

Doi: <https://doi.org/10.1027/1015-5759/a000583>

```
lavInspect(fit2, what = "std")$psi
lavInspect(fit3, what = "std")$psi

#Sum Score Correlation
model <- "PHQ2 =~ z8a + z8b
          PHQ2 ~ SUM_SCORE"
fit <- cfa(model, data=df_ADS, estimator="WLSMV")
lavInspect(fit, what = "std")

#GPSK-----
-----

One_GPSK <- "Cont1 =~ q5301 + q5302 + q5303 + q5304 + q5305 + q5306 +
q5307 + q5308 + q5309
PHQ2 =~q5601+q5602
Cont1 ~~ PHQ2"
Two_GPSK <- "Cont1 =~ q5301 + q5302 + q5303 + q5304 + q5308
Cont2 =~ q5305 + q5306 + q5307 + q5309
PHQ2 =~q5601+q5602
Cont1 ~~ PHQ2
Cont2 ~~ PHQ2"
RI_GPSK <- "Cont1 =~ NA*q5301 + q5302 + q5303 + q5304 + q5305 + q5306
+ q5307 + q5308 + q5309
Meth1 =~ 1*q5301 + 1*q5302 + 1*q5303 + 1*q5304 + 1*q5305 + 1*q5306 +
1*q5307 + 1*q5308 + 1*q5309
PHQ2 =~q5601+q5602
Cont1 ~~ 1*Cont1
Cont1 ~~ 0*Meth1
Cont1 ~~ PHQ2
Meth1 ~~ PHQ2"

fit1 <- cfa(One_GPSK, data=df_GPSK, estimator="WLSMV")
fit2 <- cfa(Two_GPSK, data=df_GPSK, estimator="WLSMV")
fit3 <- cfa(RI_GPSK, data=df_GPSK, estimator="WLSMV")
lavInspect(fit1, what = "std")$psi
lavInspect(fit2, what = "std")$psi
lavInspect(fit3, what = "std")$psi

#Sum Score Correlation
model <- "PHQ2 =~ q5601+q5602
          PHQ2 ~ SUM_SCORE"
fit <- cfa(model, data=df_GPSK, estimator="WLSMV")
lavInspect(fit, what = "std")
```