PSS Item analyses

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Setup for data analysis

```
library(tidyverse)
library(psych)

data_path <- "P:/StudyData/RISK2/Methods/measures/development/item_analyses/pss"
```

Full 10 item scale

```
pss <- read_rds(file.path(data_path, "PSS_Risk1.rds")) %>%
  select(contains("PSS_")) %>%
  glimpse()
```

```
## Observations: 447
## Variables: 10
## $ PSS_1  <dbl> 3, 3, 3, 1, 2, 3, 2, 3, 1, 3, 3, 4, 3, 3, 4, 2, 3, 3, 4, 3, 2,...
## $ PSS_2  <dbl> 3, 3, 3, 1, 2, 1, 3, 2, 3, 4, 3, 4, 4, 3, 4, 3, 4, 3, 5, 2, 3,...
## $ PSS_3  <dbl> 3, 3, 3, 3, 3, 4, 4, 4, 4, 5, 4, 5, 5, 5, 5, 3, 4, 3, 5, 2, 2,...
## $ PSS_4  <dbl> 3, 3, 4, 4, 5, 5, 5, 4, 4, 2, 3, 3, 3, 3, 3, 5, 3, 3, 2, 5, 4,...
## $ PSS_5  <dbl> 3, 3, 3, 5, 5, 5, 3, 4, 3, 3, 4, 3, 3, 3, 2, 4, 4, 3, 3, 3, 3,...
## $ PSS_6  <dbl> 2, 3, 3, 3, 5, 3, 2, 2, 2, 3, 2, 3, 5, 5, 5, 2, 3, 3, 4, 3, 2,...
## $ PSS_7  <dbl> 4, 3, 4, 4, 3, 3, 4, 4, 4, 3, 3, 3, 4, 3, 3, 3, 3, 3, 2, 1, 3,...
## $ PSS_8  <dbl> 3, 3, 3, 2, 3, 4, 4, 3, 3, 3, 4, 4, 2, 2, 2, 4, 3, 3, 3, 3, 3,...
## $ PSS_9  <dbl> 3, 3, 3, 3, 3, 4, 1, 1, 1, 5, 3, 4, 5, 3, 4, 3, 3, 3, 4, 2, 2,...
## $ PSS_10 <dbl> 3, 3, 3, 3, 2, 2, 1, 1, 3, 3, 2, 3, 5, 4, 5, 2, 3, 2, 3, 2, 2,...
```

```
alpha(as.matrix(pss), keys = c("PSS_4","PSS_5","PSS_7","PSS_8"))
```

```
##
## Reliability analysis
## Call: alpha(x = as.matrix(pss), keys = c("PSS_4", "PSS_5", "PSS_7",
##     "PSS_8"))
##
##   raw_alpha std.alpha G6(smc) average_r S/N    ase mean   sd median_r
##       0.86      0.86    0.87      0.38 6.2 0.0095  2.8 0.61     0.37
##
##  lower alpha upper     95% confidence boundaries
```

```
## 0.84 0.86 0.88
##
##  Reliability if an item is dropped:
##        raw_alpha std.alpha G6(smc) average_r S/N alpha se var.r med.r
## PSS_1       0.85      0.85    0.86      0.39 5.8   0.0101 0.014  0.38
## PSS_2       0.84      0.84    0.85      0.37 5.3   0.0109 0.014  0.34
## PSS_3       0.84      0.84    0.85      0.37 5.3   0.0110 0.013  0.36
## PSS_4-      0.86      0.85    0.86      0.39 5.8   0.0100 0.014  0.39
## PSS_5-      0.85      0.85    0.85      0.39 5.7   0.0102 0.014  0.38
## PSS_6       0.84      0.84    0.85      0.37 5.3   0.0109 0.013  0.38
## PSS_7-      0.86      0.86    0.87      0.41 6.2   0.0095 0.013  0.43
## PSS_8-      0.85      0.84    0.85      0.38 5.4   0.0106 0.013  0.36
## PSS_9       0.86      0.85    0.86      0.39 5.8   0.0101 0.014  0.38
## PSS_10      0.84      0.84    0.84      0.36 5.1   0.0115 0.011  0.34
##
##  Item statistics
##          n raw.r std.r r.cor r.drop mean   sd
## PSS_1  447  0.60  0.61  0.56   0.51  2.8 0.80
## PSS_2  447  0.74  0.73  0.69   0.65  2.9 0.98
## PSS_3  447  0.74  0.73  0.70   0.66  3.3 0.91
## PSS_4- 447  0.61  0.62  0.56   0.51  2.4 0.89
## PSS_5- 447  0.63  0.64  0.58   0.53  2.7 0.82
## PSS_6  447  0.73  0.72  0.69   0.64  2.8 0.98
## PSS_7- 447  0.50  0.52  0.43   0.39  2.6 0.83
## PSS_8- 447  0.70  0.70  0.67   0.61  2.7 0.86
## PSS_9  447  0.61  0.61  0.55   0.51  2.8 0.90
## PSS_10 447  0.79  0.78  0.76   0.71  2.7 1.05
##
## Non missing response frequency for each item
##           1    2    3    4    5 miss
## PSS_1  0.05 0.30 0.51 0.11 0.02    0
## PSS_2  0.08 0.27 0.39 0.21 0.04    0
## PSS_3  0.02 0.14 0.45 0.28 0.11    0
## PSS_4  0.02 0.08 0.32 0.43 0.15    0
## PSS_5  0.01 0.13 0.46 0.33 0.06    0
## PSS_6  0.07 0.32 0.38 0.17 0.05    0
## PSS_7  0.02 0.08 0.44 0.38 0.09    0
## PSS_8  0.03 0.13 0.44 0.34 0.06    0
## PSS_9  0.08 0.25 0.47 0.17 0.02    0
## PSS_10 0.14 0.26 0.41 0.13 0.06    0
```

Conclusions