Scale of Antisemitic Stereotypes EFA

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Overview This document contains exploratory factor analyses on data collected by the ADL and NORC on the Scale of Antisemitic Stereotypes (Packman et al., under review).

Participants view the following instructions and respond to each statement on a Likert scale from 1 (“strongly disagree”) to 6 (“Strongly agree”). An even-numbered Likert scale prevents participants from hiding behind neutral answers.

Instructions: “Below are a number of statements with which you will agree or disagree. There are absolutely no right or wrong answers. Use the specified scale to indicate the number that best matches your response to each statement.”

Warmth Items

1. Jewish people are often very rude. ¬
2. Jewish people tend to complain a lot.
3. All things considered, Jewish people are untrustworthy.
4. Jewish people can be sneaky.
5. When they feel slighted, Jewish people will be vengeful.

Competence Items

6. Jewish people tend to be very good with money.
7. Jewish people tend to influence the media.
8. When it comes to education, Jewish people tend to be overachievers.

Bonus Item

9. On the whole, Jewish people are loyal to Israel.

```
knitr::opts_chunk$set(output = FALSE)
#Load Required Packages
library(GPArotation)
library(tidyr)
library(nFactors)
```

```
## Loading required package: lattice
```

```
##
## Attaching package: 'nFactors'
```

```
## The following object is masked from 'package:lattice':
##
##     parallel
```

```
library(tidyverse)
```

```
## ── Attaching core tidyverse packages ──────────────────────── tidyverse 2.0.0 ──
## ✔ dplyr     1.1.4     ✔ purrr     1.0.2
## ✔ forcats   1.0.0     ✔ readr     2.1.4
## ✔ ggplot2   3.5.1     ✔ stringr   1.5.0
## ✔ lubridate 1.9.2     ✔ tibble    3.2.1
```

```
## ── Conflicts ────────────────────────────────────────── tidyverse_conflicts() ──
## ✖ dplyr::filter() masks stats::filter()
## ✖ dplyr::lag()    masks stats::lag()
## ℹ Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts
to become errors
```

```
library(haven)
library(psych)
```

```
##
## Attaching package: 'psych'
##
## The following objects are masked from 'package:ggplot2':
##
##     %+%, alpha
##
## The following objects are masked from 'package:GPArotation':
##
##     equamax, varimin
```

```
library(plyr)
```

```
## ------------------------------------------------------------------------------
## You have loaded plyr after dplyr - this is likely to cause problems.
## If you need functions from both plyr and dplyr, please load plyr first, then dplyr:
## library(plyr); library(dplyr)
## ------------------------------------------------------------------------------
##
## Attaching package: 'plyr'
##
## The following objects are masked from 'package:dplyr':
##
##     arrange, count, desc, failwith, id, mutate, rename, summarise,
##     summarize
##
## The following object is masked from 'package:purrr':
##
##     compact
```

```
library(Rmisc)
library(coefficientalpha)
```

```
## Loading required package: rsem
## Loading required package: MASS
##
## Attaching package: 'MASS'
##
## The following object is masked from 'package:dplyr':
##
##     select
##
## Loading required package: lavaan
## This is lavaan 0.6-18
## lavaan is FREE software! Please report any bugs.
##
## Attaching package: 'lavaan'
##
## The following object is masked from 'package:psych':
##
##     cor2cov
##
##
## Attaching package: 'coefficientalpha'
##
## The following objects are masked from 'package:psych':
##
##     alpha, omega
##
## The following object is masked from 'package:ggplot2':
##
##     alpha
```

```
library(lavaan)
library(dplyr)
library(ggpubr)
```

```
##
## Attaching package: 'ggpubr'
##
## The following object is masked from 'package:plyr':
##
##     mutate
```

```
library(mvnormtest)
library(QuantPsyc)
```

```
## Loading required package: boot
##
## Attaching package: 'boot'
##
## The following object is masked from 'package:psych':
##
##     logit
##
## The following object is masked from 'package:lattice':
##
##     melanoma
##
##
## Attaching package: 'QuantPsyc'
##
## The following object is masked from 'package:base':
##
##     norm
```

```
library(ltm)
```

```
## Loading required package: msm
##
## Attaching package: 'msm'
##
## The following object is masked from 'package:boot':
##
##     cav
##
## Loading required package: polycor
##
## Attaching package: 'polycor'
##
## The following object is masked from 'package:psych':
##
##     polyserial
##
##
## Attaching package: 'ltm'
##
## The following object is masked from 'package:psych':
##
##     factor.scores
```

```
library(easystats)
```

```
## # Attaching packages: easystats 0.7.0 (red = needs update)
## ✖ bayestestR  0.13.1   ✖ correlation 0.8.4
## ✖ datawizard  0.9.1    ✖ effectsize  0.8.6
## ✖ insight     0.19.7   ✖ modelbased  0.8.6
## ✖ performance 0.10.8   ✖ parameters  0.21.3
## ✖ report      0.5.8    ✖ see         0.8.1
##
## Restart the R-Session and update packages with `easystats::easystats_update()`.
```

```
library(performance)
library(parameters)
```

See methodological appendix here for information about the survey and data collection: https://www.adl.org/resources/report/antisemitic-attitudes-america-topline-findings (https://www.adl.org/resources/report/antisemitic-attitudes-america-topline-findings)

Note that SASS stands for “Scale of antisemitic stereotypes”

```
#Load in data set
ADLdata1 <- read_dta("ADL2022_Reweighted_9Dec22.dta")
SASSADL1 <- data.frame(ADLdata1[,149:157])
#Drop NAs
SASSNoNA <- na.omit(SASSADL1)
#Clean data
SASSclean <- SASSNoNA[!(SASSNoNA$Q39==98 | SASSNoNA$Q40==98 |SASSNoNA$Q41==98 | SASSNoNA
$Q42==98 |SASSNoNA$Q43==98 | SASSNoNA$Q44==98 |SASSNoNA$Q45==98 |SASSNoNA$Q46==98 |SASSN
oNA$Q47==98),]
#Renaming variables
SASSclean2 <- SASSclean %>%
  mutate(Jewish.people.are.often.very.rude = SASSclean$Q39,
          Jewish.people.tend.to.complain.a.lot = Q40,
         All.things.considered.Jewish.people.are.untrustworthy = Q41,
         Jewish.people.can.be.sneaky = Q42,
         When.they.feel.slighted.Jewish.people.will.be.vengeful = Q43,
         Jewish.people.tend.to.be.good.with.money = Q44,
         Jewish.people.tend.to.influence.the.media = Q45,
         When.it.comes.to.education.Jewish.people.tend.to.be.overachievers = Q46,
         On.the.whole.Jewish.people.are.loyal.to.Israel = Q47
         )
#Clean dataframe
SASSclean3 <- data.frame(SASSclean2[,10:18])
```

We separate the scale into warmth and competence subscales, then calculate summary statistics and internal consistency.

```
#Full scale
summary.data.frame(SASSclean3)
```

```
##  Jewish.people.are.often.very.rude Jewish.people.tend.to.complain.a.lot
##  Min.   :1.00                      Min.   :1.000
##  1st Qu.:4.00                      1st Qu.:3.000
##  Median :4.00                      Median :4.000
##  Mean   :4.37                      Mean   :4.147
##  3rd Qu.:5.00                      3rd Qu.:5.000
##  Max.   :6.00                      Max.   :6.000
##  All.things.considered.Jewish.people.are.untrustworthy
##  Min.   :1.000
##  1st Qu.:4.000
##  Median :5.000
##  Mean   :4.724
##  3rd Qu.:6.000
##  Max.   :6.000
##  Jewish.people.can.be.sneaky
##  Min.   :1.000
##  1st Qu.:3.000
##  Median :4.000
##  Mean   :4.257
##  3rd Qu.:5.000
##  Max.   :6.000
##  When.they.feel.slighted.Jewish.people.will.be.vengeful
##  Min.   :1.000
##  1st Qu.:3.000
##  Median :4.000
##  Mean   :4.073
##  3rd Qu.:5.000
##  Max.   :6.000
##  Jewish.people.tend.to.be.good.with.money
##  Min.   :1.000
##  1st Qu.:2.000
##  Median :3.000
##  Mean   :2.805
##  3rd Qu.:3.000
##  Max.   :6.000
##  Jewish.people.tend.to.influence.the.media
##  Min.   :1.000
##  1st Qu.:3.000
##  Median :4.000
##  Mean   :3.927
##  3rd Qu.:5.000
##  Max.   :6.000
##  When.it.comes.to.education.Jewish.people.tend.to.be.overachievers
##  Min.   :1.000
##  1st Qu.:3.000
##  Median :3.000
##  Mean   :3.202
##  3rd Qu.:4.000
##  Max.   :6.000
##  On.the.whole.Jewish.people.are.loyal.to.Israel
##  Min.   :1.000
##  1st Qu.:2.000
```

```
##  Median :3.000
##  Mean   :2.894
##  3rd Qu.:4.000
##  Max.   :6.000
```

```
cronbach.alpha(SASSclean3, CI = TRUE)
```

```
##
## Cronbach's alpha for the 'SASSclean3' data-set
##
## Items: 9
## Sample units: 1960
## alpha: 0.832
##
## Bootstrap 95% CI based on 1000 samples
##  2.5% 97.5%
## 0.817 0.845
```

```
#Sub scales based on Steretoype Content Model Dimensions
WarmADL1 <- data.frame(SASSclean3[,1:5])
summary(WarmADL1)
```

```
##  Jewish.people.are.often.very.rude Jewish.people.tend.to.complain.a.lot
##  Min.   :1.00                      Min.   :1.000
##  1st Qu.:4.00                      1st Qu.:3.000
##  Median :4.00                      Median :4.000
##  Mean   :4.37                      Mean   :4.147
##  3rd Qu.:5.00                      3rd Qu.:5.000
##  Max.   :6.00                      Max.   :6.000
##  All.things.considered.Jewish.people.are.untrustworthy
##  Min.   :1.000
##  1st Qu.:4.000
##  Median :5.000
##  Mean   :4.724
##  3rd Qu.:6.000
##  Max.   :6.000
##  Jewish.people.can.be.sneaky
##  Min.   :1.000
##  1st Qu.:3.000
##  Median :4.000
##  Mean   :4.257
##  3rd Qu.:5.000
##  Max.   :6.000
##  When.they.feel.slighted.Jewish.people.will.be.vengeful
##  Min.   :1.000
##  1st Qu.:3.000
##  Median :4.000
##  Mean   :4.073
##  3rd Qu.:5.000
##  Max.   :6.000
```

```
CompADL1 <- data.frame(SASSclean3[,6:9])
summary(CompADL1)
```

```
##  Jewish.people.tend.to.be.good.with.money
##  Min.   :1.000
##  1st Qu.:2.000
##  Median :3.000
##  Mean   :2.805
##  3rd Qu.:3.000
##  Max.   :6.000
##  Jewish.people.tend.to.influence.the.media
##  Min.   :1.000
##  1st Qu.:3.000
##  Median :4.000
##  Mean   :3.927
##  3rd Qu.:5.000
##  Max.   :6.000
##  When.it.comes.to.education.Jewish.people.tend.to.be.overachievers
##  Min.   :1.000
##  1st Qu.:3.000
##  Median :3.000
##  Mean   :3.202
##  3rd Qu.:4.000
##  Max.   :6.000
##  On.the.whole.Jewish.people.are.loyal.to.Israel
##  Min.   :1.000
##  1st Qu.:2.000
##  Median :3.000
##  Mean   :2.894
##  3rd Qu.:4.000
##  Max.   :6.000
```

```
cronbach.alpha(WarmADL1, standardized = TRUE, CI = TRUE)
```

```
##
## Standardized Cronbach's alpha for the 'WarmADL1' data-set
##
## Items: 5
## Sample units: 1960
## alpha: 0.885
##
## Bootstrap 95% CI based on 1000 samples
##  2.5% 97.5%
## 0.874 0.896
```

```
cronbach.alpha(CompADL1, standardized = TRUE, CI = TRUE)
```

```
##
## Standardized Cronbach's alpha for the 'CompADL1' data-set
##
## Items: 4
## Sample units: 1960
## alpha: 0.65
##
## Bootstrap 95% CI based on 1000 samples
##  2.5% 97.5%
## 0.619 0.677
```

```
#Alternative sub scales shown because status of "Jews manipulate media" is not clearly w
armth or competence.
WarmADL2 <- SASSclean3 %>%
    dplyr::select("Jewish.people.are.often.very.rude",
                  "Jewish.people.tend.to.complain.a.lot",
                  "All.things.considered.Jewish.people.are.untrustworthy",
                    "Jewish.people.can.be.sneaky",
                    "When.they.feel.slighted.Jewish.people.will.be.vengeful",
                    "Jewish.people.tend.to.influence.the.media")
CompADL2 <- SASSclean3 %>%
  dplyr::select("Jewish.people.tend.to.be.good.with.money",
         "When.it.comes.to.education.Jewish.people.tend.to.be.overachievers",
         "On.the.whole.Jewish.people.are.loyal.to.Israel")
cronbach.alpha(WarmADL2, standardized = TRUE, CI = TRUE)
```

```
##
## Standardized Cronbach's alpha for the 'WarmADL2' data-set
##
## Items: 6
## Sample units: 1960
## alpha: 0.887
##
## Bootstrap 95% CI based on 1000 samples
##  2.5% 97.5%
## 0.876 0.896
```

```
cronbach.alpha(CompADL2, standardized = TRUE, CI = TRUE)
```

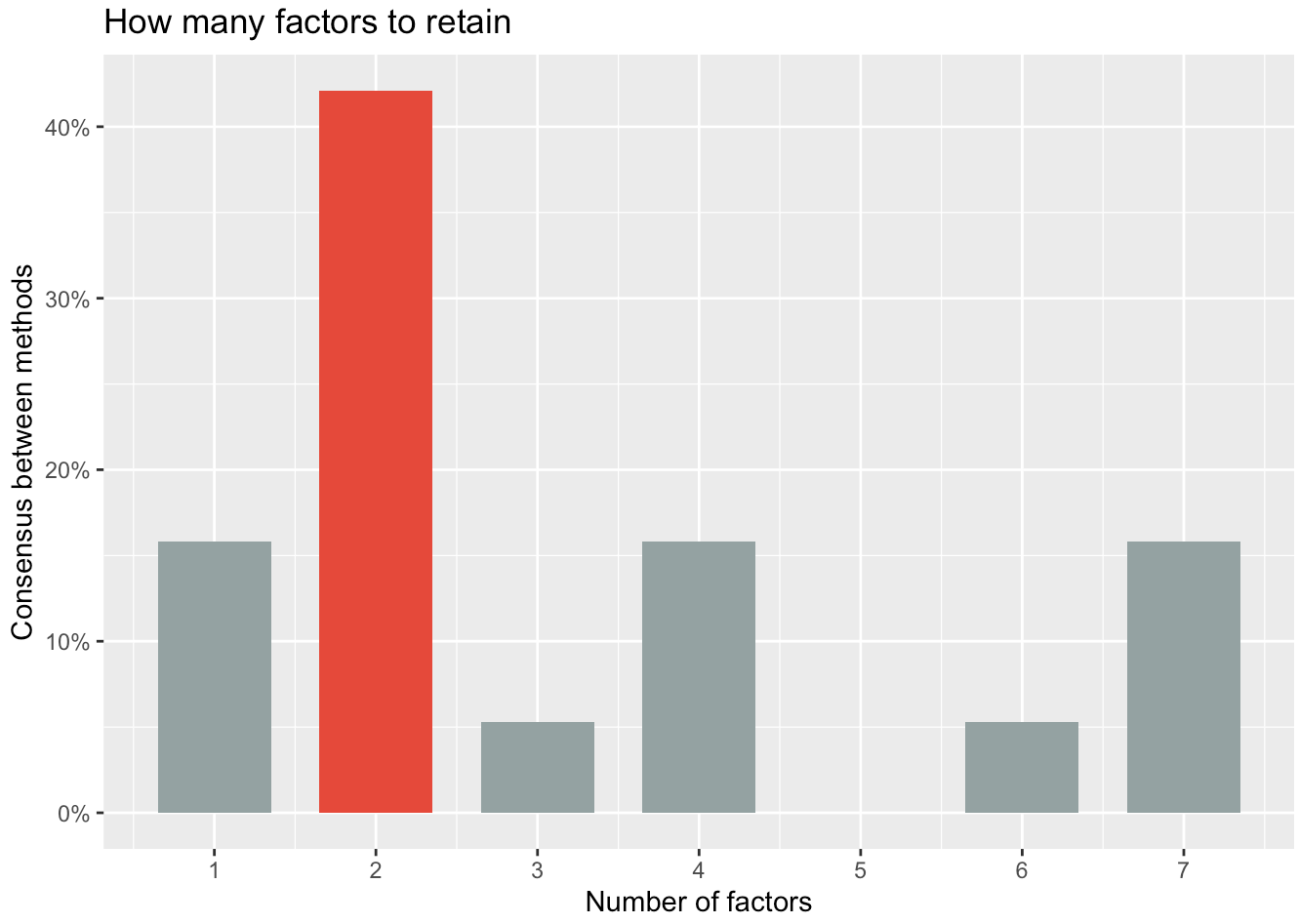
```
##
## Standardized Cronbach's alpha for the 'CompADL2' data-set
##
## Items: 3
## Sample units: 1960
## alpha: 0.635
##
## Bootstrap 95% CI based on 1000 samples
##  2.5% 97.5%
## 0.601 0.666
```

Factor Analysis

```
#Is factor analysis is warranted?
performance::check_factorstructure(SASSclean3)
```

```
## # Is the data suitable for Factor Analysis?
##
##
##   - Sphericity: Bartlett's test of sphericity suggests that there is sufficient signi
ficant correlation in the data for factor analysis (Chisq(36) = 7051.59, p < .001).
##   - KMO: The Kaiser, Meyer, Olkin (KMO) overall measure of sampling adequacy suggests
that data seems appropriate for factor analysis (KMO = 0.88). The individual KMO scores
are: Jewish.people.are.often.very.rude (0.89), Jewish.people.tend.to.complain.a.lot (0.9
1), All.things.considered.Jewish.people.are.untrustworthy (0.88), Jewish.people.can.be.s
neaky (0.89), When.they.feel.slighted.Jewish.people.will.be.vengeful (0.92), Jewish.peop
le.tend.to.be.good.with.money (0.76), Jewish.people.tend.to.influence.the.media (0.92),
When.it.comes.to.education.Jewish.people.tend.to.be.overachievers (0.78), On.the.whole.J
ewish.people.are.loyal.to.Israel (0.72).
```

```
#Factor analysis is warranted. We identify the appropriate number of factors:
n_factors(SASSclean3, n_max = 25) %>%
  plot()
```



```
#Consensus method recommends 2 factors
#2 factors
SASS_efa_NORC <- psych::fa(SASSclean3, nfactors = 2, rotate="oblimin", fm="pa") %>% mode
l_parameters(sort = TRUE, threshold = "max")

SASS_efa_NORC
```

```
## # Rotated loadings from Factor Analysis (oblimin-rotation)
##
## Variable                                                                | PA1  | PA2  | Com
plexity | Uniqueness
## ------------------------------------------------------------------------------------------
------------------
## Jewish.people.are.often.very.rude                                       | 0.83 |      |
1.01    |    0.33
## Jewish.people.can.be.sneaky                                             | 0.82 |      |
1.00    |    0.32
## All.things.considered.Jewish.people.are.untrustworthy                   | 0.80 |      |
1.06    |    0.41
## When.they.feel.slighted.Jewish.people.will.be.vengeful                  | 0.73 |      |
1.04    |    0.41
## Jewish.people.tend.to.complain.a.lot                                    | 0.72 |      |
1.02    |    0.45
## Jewish.people.tend.to.influence.the.media                               | 0.54 |      |
1.45    |    0.55
## Jewish.people.tend.to.be.good.with.money                                |      | 0.70 |
1.01    |    0.48
## When.it.comes.to.education.Jewish.people.tend.to.be.overachievers       |      | 0.57 |
1.01    |    0.66
## On.the.whole.Jewish.people.are.loyal.to.Israel                          |      | 0.56 |
1.04    |    0.71
##
## The 2 latent factors (oblimin rotation) accounted for 51.97% of the total variance of
the original data (PA1 = 37.71%, PA2 = 14.26%).
```

```
#Optional table aesthetic modifications
#Load in code to produce fa_table function
#source("https://raw.githubusercontent.com/franciscowilhelm/r-collection/master/fa_tabl
e.R")
#library(gt)

#SASS_efa_NORC1_table <- fa_table(SASS_efa_NORC1)
#SASS_efa_NORC1_table
```