Study 3: Crombach's Alpha Calculations

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Contents

Reported Crombach's Alpha Results for Study 3

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Setup

```
# Load Data
s3 <- read.csv("GrahamS3data.csv")
```

```
# Load packages
library(tidyverse)
```

```
## -- Attaching packages ------------------ tidyverse 1.2.1 --
```

```
## v ggplot2 3.2.0     v purrr   0.3.2
## v tibble  2.1.3     v dplyr   0.8.1
## v tidyr   0.8.3     v stringr 1.4.0
## v readr   1.3.1     v forcats 0.4.0
```

```
## -- Conflicts --------------------- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

```
library(psych)
```

```
##
## Attaching package: 'psych'
```

```
## The following objects are masked from 'package:ggplot2':
##
##     %+%, alpha
```

Cronbach Alpha Calculations

Harm

```
Harm <- s3 %>% select(c("dogkick", "endangered", "overweight", "anthill",
    "palm"))
psych::alpha(Harm)
```

```
##
## Reliability analysis
## Call: psych::alpha(x = Harm)
##
##   raw_alpha std.alpha G6(smc) average_r S/N    ase mean  sd median_r
##       0.69      0.72    0.68      0.34 2.6 0.0054  6.2 1.2     0.35
##
##  lower alpha upper     95% confidence boundaries
## 0.68 0.69 0.7
##
##  Reliability if an item is dropped:
##            raw_alpha std.alpha G6(smc) average_r S/N alpha se  var.r med.r
## dogkick         0.62      0.65    0.59      0.31 1.8   0.0067 0.0077  0.31
## endangered      0.63      0.66    0.60      0.32 1.9   0.0067 0.0114  0.33
## overweight      0.61      0.65    0.59      0.31 1.8   0.0071 0.0099  0.31
## anthill         0.72      0.73    0.67      0.40 2.7   0.0049 0.0020  0.41
## palm            0.64      0.67    0.62      0.34 2.1   0.0065 0.0081  0.33
##
##  Item statistics
##                n raw.r std.r r.cor r.drop mean  sd
## dogkick     8129  0.69  0.73  0.64   0.52  7.3 1.5
## endangered 8129  0.67  0.71  0.61   0.50  7.2 1.5
## overweight 8132  0.75  0.73  0.64   0.52  6.3 2.1
```

```
## anthill    8119  0.65  0.57  0.38   0.33  3.1 2.3
## palm       8138  0.65  0.69  0.57   0.47  7.2 1.5
##
## Non missing response frequency for each item
##                1    2    3    4    5    6    7    8 miss
## dogkick     0.01 0.00 0.01 0.04 0.07 0.07 0.07 0.72 0.01
## endangered  0.02 0.00 0.01 0.02 0.06 0.10 0.14 0.64 0.01
## overweight  0.05 0.02 0.05 0.10 0.12 0.10 0.09 0.47 0.01
## anthill     0.37 0.13 0.15 0.12 0.06 0.03 0.04 0.10 0.01
## palm        0.01 0.01 0.02 0.05 0.07 0.07 0.08 0.70 0.01
```

Fairness

```
Fairness <- s3 %>% select(c("cards", "stealpoor", "apartment", "ballots",
    "racepledge"))
psych::alpha(Fairness)
```

```
##
## Reliability analysis
## Call: psych::alpha(x = Fairness)
##
##   raw_alpha std.alpha G6(smc) average_r S/N    ase mean  sd median_r
##       0.69      0.72    0.68      0.34 2.6 0.0051  6.7 1.2     0.36
##
##  lower alpha upper     95% confidence boundaries
## 0.68 0.69 0.7
##
##  Reliability if an item is dropped:
##             raw_alpha std.alpha G6(smc) average_r S/N alpha se  var.r med.r
## cards            0.61      0.65    0.60      0.32 1.9   0.0070 0.0115  0.35
## stealpoor        0.63      0.65    0.59      0.31 1.8   0.0064 0.0099  0.33
## apartment        0.70      0.72    0.66      0.40 2.6   0.0051 0.0013  0.41
## ballots          0.62      0.66    0.60      0.32 1.9   0.0064 0.0063  0.33
## racepledge       0.65      0.67    0.62      0.34 2.1   0.0060 0.0073  0.36
##
##  Item statistics
##                n raw.r std.r r.cor r.drop mean  sd
## cards       8124  0.77  0.72  0.62   0.53  5.7 2.2
## stealpoor   8121  0.68  0.73  0.64   0.53  7.4 1.3
## apartment   8126  0.63  0.59  0.41   0.35  5.7 2.0
## ballots     8134  0.71  0.71  0.62   0.50  7.1 1.8
## racepledge  8131  0.61  0.68  0.56   0.45  7.5 1.2
##
```

```
## Non missing response frequency for each item
##                1    2    3    4    5    6    7    8 miss
## cards       0.07 0.02 0.08 0.15 0.13 0.10 0.09 0.36 0.01
## stealpoor   0.01 0.00 0.01 0.03 0.06 0.07 0.08 0.75 0.01
## apartment   0.06 0.01 0.04 0.17 0.20 0.13 0.09 0.30 0.01
## ballots     0.05 0.00 0.01 0.03 0.05 0.07 0.10 0.70 0.01
## racepledge 0.02 0.00 0.00 0.01 0.03 0.06 0.12 0.75 0.01
```

Ingroup

```
Ingroup <- s3 %>% select(c("sportsbet", "flagburn", "talkradio", "familyshun",
    "citizenrenounce", "leaveclub"))
psych::alpha(Ingroup)
```

```
##
## Reliability analysis
## Call: psych::alpha(x = Ingroup)
##
##   raw_alpha std.alpha G6(smc) average_r S/N    ase mean  sd median_r
##       0.68      0.68    0.66      0.26 2.1 0.0052  5.3 1.4     0.21
##
##  lower alpha upper     95% confidence boundaries
## 0.67 0.68 0.69
##
##  Reliability if an item is dropped:
##                 raw_alpha std.alpha G6(smc) average_r S/N alpha se  var.r
## sportsbet            0.64      0.64    0.61      0.26 1.8   0.0060 0.0094
## flagburn             0.59      0.60    0.55      0.23 1.5   0.0069 0.0029
## talkradio            0.62      0.62    0.58      0.24 1.6   0.0065 0.0063
## familyshun           0.67      0.67    0.63      0.29 2.0   0.0056 0.0108
## citizenrenounce      0.65      0.64    0.61      0.26 1.8   0.0059 0.0115
## leaveclub            0.67      0.67    0.63      0.29 2.0   0.0055 0.0109
##                 med.r
## sportsbet        0.21
## flagburn         0.21
## talkradio        0.21
## familyshun       0.25
## citizenrenounce  0.20
## leaveclub        0.26
##
##  Item statistics
##                   n raw.r std.r r.cor r.drop mean  sd
## sportsbet       8090  0.63  0.62  0.50   0.42  3.2 2.3
```

```
## flagburn        8126  0.74  0.70  0.65   0.54  4.0 2.6
## talkradio       8141  0.69  0.67  0.58   0.49  5.3 2.4
## familyshun      8126  0.49  0.56  0.40   0.32  7.0 1.6
## citizenrenounce 8128  0.65  0.62  0.49   0.41  5.9 2.6
## leaveclub       8092  0.51  0.55  0.39   0.31  6.2 1.9
##
## Non missing response frequency for each item
##                    1    2    3    4    5    6    7    8 miss
## sportsbet       0.38 0.10 0.14 0.13 0.08 0.04 0.06 0.07 0.01
## flagburn        0.28 0.08 0.12 0.13 0.08 0.05 0.07 0.18 0.01
## talkradio       0.10 0.04 0.10 0.15 0.13 0.09 0.09 0.31 0.01
## familyshun      0.05 0.00 0.00 0.01 0.05 0.12 0.21 0.55 0.01
## citizenrenounce 0.19 0.00 0.01 0.02 0.04 0.11 0.31 0.31 0.01
## leaveclub       0.07 0.00 0.01 0.06 0.13 0.19 0.22 0.33 0.01
```

Authority

```
Authority <- s3 %>% select(c("parentcurse", "founderscurse", "handgesture",
    "rottentomato", "fatherslap"))
psych::alpha(Authority)
```

```
##
## Reliability analysis
## Call: psych::alpha(x = Authority)
##
##   raw_alpha std.alpha G6(smc) average_r S/N    ase mean  sd median_r
##       0.67      0.67    0.63      0.29 2.1 0.0057  4.2 1.6     0.28
##
##  lower alpha upper     95% confidence boundaries
## 0.66 0.67 0.68
##
##  Reliability if an item is dropped:
##               raw_alpha std.alpha G6(smc) average_r S/N alpha se  var.r
## parentcurse        0.64      0.64    0.57      0.31 1.8   0.0065 0.0020
## founderscurse      0.60      0.61    0.54      0.28 1.5   0.0071 0.0020
## handgesture        0.61      0.61    0.55      0.28 1.6   0.0069 0.0022
## rottentomato       0.62      0.62    0.55      0.29 1.6   0.0069 0.0011
## fatherslap         0.63      0.63    0.57      0.30 1.7   0.0066 0.0021
##               med.r
## parentcurse    0.32
## founderscurse  0.26
## handgesture    0.27
## rottentomato   0.28
```

```
## fatherslap     0.30
##
##  Item statistics
##                   n raw.r std.r r.cor r.drop mean  sd
## parentcurse    8130  0.60  0.63  0.48   0.39  6.6 2.1
## founderscurse 8128  0.70  0.68  0.56   0.46  3.3 2.6
## handgesture    8123  0.67  0.67  0.54   0.44  4.9 2.5
## rottentomato   8136  0.68  0.66  0.53   0.44  3.6 2.7
## fatherslap     8130  0.64  0.64  0.49   0.40  2.8 2.4
##
## Non missing response frequency for each item
##                    1    2    3    4    5    6    7    8 miss
## parentcurse    0.07 0.01 0.02 0.05 0.08 0.10 0.13 0.54 0.01
## founderscurse 0.41 0.12 0.11 0.09 0.05 0.03 0.05 0.14 0.01
## handgesture    0.18 0.03 0.08 0.12 0.13 0.13 0.13 0.20 0.01
## rottentomato   0.41 0.05 0.08 0.11 0.09 0.06 0.05 0.15 0.01
## fatherslap     0.53 0.05 0.10 0.09 0.06 0.03 0.04 0.09 0.01
```

Purity

```
Purity <- s3 %>% select(c("soulsell", "eatdog", "tail", "molesterblood",
    "stageanimal"))
psych::alpha(Purity)
```

```
##
## Reliability analysis
## Call: psych::alpha(x = Purity)
##
##   raw_alpha std.alpha G6(smc) average_r S/N    ase mean  sd median_r
##       0.58      0.63    0.58      0.25 1.7 0.0069  5.9 1.3     0.25
##
##  lower alpha upper     95% confidence boundaries
## 0.56 0.58 0.59
##
##  Reliability if an item is dropped:
##               raw_alpha std.alpha G6(smc) average_r S/N alpha se  var.r
## soulsell           0.52      0.58    0.52      0.26 1.4   0.0083 0.0062
## eatdog             0.50      0.54    0.48      0.23 1.2   0.0082 0.0041
## tail               0.55      0.58    0.52      0.26 1.4   0.0078 0.0026
## molesterblood      0.55      0.61    0.55      0.28 1.6   0.0074 0.0033
## stageanimal        0.49      0.54    0.48      0.23 1.2   0.0084 0.0034
##               med.r
## soulsell       0.27
```

```
## eatdog         0.22
## tail           0.25
## molesterblood  0.30
## stageanimal    0.23
##
##  Item statistics
##                   n raw.r std.r r.cor r.drop mean  sd
## soulsell       8117  0.72  0.62  0.46   0.37  5.3 2.9
## eatdog         8117  0.60  0.67  0.55   0.40  6.9 1.7
## tail           8128  0.48  0.62  0.46   0.33  7.4 1.1
## molesterblood 8120  0.66  0.57  0.38   0.31  3.5 2.8
## stageanimal    8134  0.63  0.68  0.56   0.41  6.2 1.9
##
## Non missing response frequency for each item
##                   1    2    3    4    5    6    7    8 miss
## soulsell       0.21 0.06 0.05 0.06 0.05 0.04 0.09 0.44 0.01
## eatdog         0.03 0.00 0.02 0.05 0.09 0.10 0.12 0.60 0.01
## tail           0.01 0.00 0.00 0.01 0.03 0.07 0.24 0.64 0.01
## molesterblood 0.50 0.02 0.04 0.08 0.08 0.06 0.07 0.16 0.01
## stageanimal    0.05 0.01 0.03 0.09 0.15 0.14 0.18 0.35 0.01
```