List 1 Demographics

2024-06-11

```
# Analysis of list 1
source("functions.R")
set.seed(122357)


numCores <- parallel::detectCores()

doParallel::registerDoParallel(numCores)

Z_method <- "worry_upset"
# "better_worry",
# "smile",
# "better_upset",
# "love",
# "easy_talk
# aggregate
# worry_upset

outcome <- "ideation" # ideation or attempt


interact <- FALSE

df_x <- read_csv(paste0("../data/list1_X_", Z_method, "_", outcome, ".csv"))
```

```
## Rows: 4510 Columns: 13
## -- Column specification --------------------------------------------------------
## Delimiter: ","
## chr  (2): src_subject_id, sex
## dbl (11): age, income, sib_num, sib_order, family_conflict, family_mental_he...
##
## i Use `spec()` to retrieve the full column specification for this data.
## i Specify the column types or set `show_col_types = FALSE` to quiet this message.
```

```
df_yz <- read_csv(paste0("../data/list1_YZG_", Z_method, "_", outcome, ".csv"))
```

```
## Rows: 4510 Columns: 5
## -- Column specification --------------------------------------------------------
## Delimiter: ","
## chr (1): src_subject_id
## dbl (4): suicide, parent_accept, sex_min, peer_victimization
##
## i Use `spec()` to retrieve the full column specification for this data.
## i Specify the column types or set `show_col_types = FALSE` to quiet this message.
```

```r
G <- df_yz$sex_min
Z <- df_yz$parent_accept
Y <- df_yz$suicide

table(Z)
```

0	1
2120	2390

```r
table(G)
```

0	1
3718	792

```r
table(Y)
```

0	1
3411	1099

```r
# Allowable covariates
options(na.action='na.pass')


#mediators <- c("peer_victimization")
mediators <- c("src_subject_id", "family_mental_health")
# allowable_covs <- c("age", "sex", "sib_order", "sib_num")
allowable_covs <- c("age", "sex")
#allowable_covs <- c("age", "sex", "family_conflict")
#allowable_covs <- c("age", "sex", "sib_num", "sib_order", "income", "adi")
non_allowable_covs <- setdiff(names(df_x)[!names(df_x) %in% mediators], allowable_covs)

df_allowable <- model.matrix(~ .^2 -1, data = df_x %>% select(all_of(allowable_covs))) %>%
  data.frame() %>% NAImpute() %>% tibble()
```

```
## [1] "Missing values found in column 1 of X; imputing and adding missingness indicators"
## [1] "Missing values found in column 2 of X; imputing and adding missingness indicators"
## [1] "Missing values found in column 3 of X; imputing and adding missingness indicators"
## [1] "Missing values found in column 4 of X; imputing and adding missingness indicators"
```

```r
df_non_allowable <- model.matrix(~ . -1, data = df_x %>% select(all_of(non_allowable_covs))) %>%
  data.frame() %>% NAImpute() %>% tibble()
```

```
## [1] "Missing values found in column 1 of X; imputing and adding missingness indicators"
## [1] "Missing values found in column 3 of X; imputing and adding missingness indicators"
## [1] "Missing values found in column 5 of X; imputing and adding missingness indicators"
## [1] "Missing values found in column 8 of X; imputing and adding missingness indicators"
## [1] "Missing values found in column 9 of X; imputing and adding missingness indicators"
```

```r
my.render.cont <- function(x) {
  with(stats.apply.rounding(stats.default(x), digits=2), c("",
                                                           "Mean (SD)"=sprintf("%s (%s)", MEAN, SD)))
```

```
}
my.render.cat <- function(x) {
  c("", sapply(stats.default(x), function(y) with(y,
                                                  sprintf("%d (%0.0f%%)", FREQ, PCT))))
}

pvalue <- function(x, ...) {
  # Construct vectors of data y, and groups (strata) g
  y <- unlist(x)
  g <- factor(rep(1:length(x), times=sapply(x, length)))
  if (is.numeric(y)) {
    # For numeric variables, perform a standard 2-sample t-test
    p <- t.test(y ~ g)$p.value
  } else {
    # For categorical variables, perform a chi-squared test of independence
    p <- chisq.test(table(y, g))$p.value
  }
  # Format the p-value, using an HTML entity for the less-than sign.
  # The initial empty string places the output on the line below the variable label.
  c("", sub("<", "&lt;", format.pval(p, digits=3, eps=0.001)))
}

demog_df <- full_join(df_x, df_yz, by = "src_subject_id")
demog_df$sex_min <- factor(demog_df$sex_min, levels = c(0, 1), labels = c("Heterosexual", "Sexual Minori
demog_df$parent_accept <- factor(demog_df$parent_accept, levels = c(0, 1), labels = c("Poor Parental Ac
demog_df$sex <- factor(demog_df$sex, levels = c("F", "M"), labels = c("Female", "Male"))
demog_df$family_mental_health <- as.logical(demog_df$family_mental_health)
demog_df$income <- factor(demog_df$income, levels = c(1, 2, 3, 4, 5, 6, 7, 8, 9, 10))
label(demog_df$parent_accept) <- "Parental Acceptance"
label(demog_df$sex_min) <- "Sexual Minority Status"
label(demog_df$age) <- "Age"
units(demog_df$age) <- "years"
label(demog_df$sex) <- "Sex Assigned at Birth"
label(demog_df$sib_num) <- "Number of Siblings"
label(demog_df$sib_order) <- "Birth Order"
label(demog_df$income) <- "Household Income"
units(demog_df$income) <- "scale of 1-10, 1 is lowest income bracket"
label(demog_df$adi) <- "Area Deprivation Index"
units(demog_df$adi) <- "numeric measurement, larger is more deprived"
label(demog_df$family_conflict) <- "Family Conflict"
units(demog_df$family_conflict) <- "numeric measurement, larger is more conflict"
label(demog_df$family_mental_health) <- "Previous Suicide Attempt in Family"
label(demog_df$peer_victimization.x) <- "Peer Victimization"
units(demog_df$peer_victimization.x) <- "numeric measurement, larger is more severe"
label(demog_df$school_safety) <- "School Safety"
units(demog_df$school_safety) <- "numeric measurement, larger is safer"
label(demog_df$neighborhood_safety) <- "Neighborhood Safety"
units(demog_df$neighborhood_safety) <- "numeric measurement, larger is safer"
label(demog_df$structural_stigma) <- "Structural Stigma"
units(demog_df$structural_stigma) <- "State level indicators of sexism from survey and implicit bias mea

t1 <- table1(~age + sex + sib_num + sib_order + income + adi +
               family_conflict + family_mental_health + peer_victimization.x +
```

```
              school_safety + neighborhood_safety + adi + structural_stigma | sex_min*parent_accept,
            data = demog_df,
            render.continuous=my.render.cont,
            render.categorical=my.render.cat, overall = F)
x <- t1
```

```
x %>%
    kbl(caption = "Example", # Adding caption
        format = "latex", booktabs = TRUE) %>%
  kable_styling(latex_options = "striped")
```

```
t1flex(x)
```

```
## Warning: fonts used in `flextable` are ignored because the `pdflatex` engine is
## used and not `xelatex` or `lualatex`. You can avoid this warning by using the
## `set_flextable_defaults(fonts_ignore=TRUE)` command or use a compatible engine
## by defining `latex_engine: xelatex` in the YAML header of the R Markdown
## document.
```

	Poor Parenta (N=1
Age (years)	
Mean (SD)	9.9 (
Missing	1 (0.
Sex Assigned at Birth	
Female	608 (
Male	990 (
Missing	1 (0.
Number of Siblings	
Mean (SD)	1.5 (
Birth Order	
Mean (SD)	1.7 (
Missing	5 (0.
Household Income (scale of 1-10, 1 is lowest income bracket)	
1	22 (
2	19 (
3	13 (
4	27 (
5	31 (
6	64 (
7	73 (
8	90 (

	Poor Parenta (N=1
9	304 (
10	132 (
Missing	824 (5
Area Deprivation Index (numeric measurement, larger is more deprived)	
Mean (SD)	41 (
Missing	101 (6
Family Conflict (numeric measurement, larger is more conflict)	
Mean (SD)	2.6 (
Previous Suicide Attempt in Family	
Yes	86 (
No	1421 (
Missing	92 (5
Peer Victimization (numeric measurement, larger is more severe)	
Mean (SD)	12 (
Missing	5 (0.
School Safety (numeric measurement, larger is safer)	
Mean (SD)	19 (
Neighborhood Safety (numeric measurement, larger is safer)	
Mean (SD)	3.9 (
Structural Stigma (State level indicators of sexism from survey and implicit bias measures)	
Mean (SD)	-0.29 (
Missing	0 (

Table 4: Example

	Poor Parental Acceptance
	(N=1599)
Age (years)	
Mean (SD)	9.9 (0.63)
Missing	1 (0.1%)
Sex Assigned at Birth	
Female	608 (38%)
Male	990 (62%)
Missing	1 (0.1%)
Number of Siblings	
Mean (SD)	1.5 (1.3)
Birth Order	
Mean (SD)	1.7 (1.0)
Missing	5 (0.3%)
Household Income (scale of 1-10, 1 is lowest income bracket)	
1	22 (1%)
2	19 (1%)
3	13 (1%)
4	27 (2%)
5	31 (2%)
6	64 (4%)
7	73 (5%)
8	90 (6%)
9	304 (19%)
10	132 (8%)
Missing	824 (51.5%)
Area Deprivation Index (numeric measurement, larger is more deprived)	
Mean (SD)	41 (27)
Missing	101 (6.3%)
Family Conflict (numeric measurement, larger is more conflict)	
Mean (SD)	2.6 (1.6)
Previous Suicide Attempt in Family	
Yes	86 (5%)
No	1421 (89%)
Missing	92 (5.8%)
Peer Victimization (numeric measurement, larger is more severe)	
Mean (SD)	12 (3.5)
Missing	5 (0.3%)
School Safety (numeric measurement, larger is safer)	
Mean (SD)	19 (2.0)
Neighborhood Safety (numeric measurement, larger is safer)	
Mean (SD)	3.9 (0.80)
Structural Stigma (State level indicators of sexism from survey and implicit bias measures)	
Mean (SD)	-0.29 (0.86)
Missing	0 (0%)