

IPN Analyses

Derek Beaton

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Introduction

Code & Analyses

An example of `mean.impute` and `fast.csci` in use. We will first use `mean.impute` to impute missing data to the mean for `health1`. We will then use `fast.csci` to correct `zarscore` and `health1` by the age and sex of the participant. NOTE: `fast.csci` has to be used with some caution. Be very careful if using this to correct values when there are mixed data (e.g., predictors are mixes of factors and numeric) and only use it on outcomes that are numeric. Further, `fast.csci` requires more than 1 predictor. If you have only a single predictor you can use something like: `resid(lm(outcome~predictor,na.action = na.exclude))`

```
health1_impute <- mean.impute(as.matrix(fin.outs[, "health1"]))
summary(cbind(fin.outs[, "health1"], health1_impute))
```

```
##           V1           V2
##  Min.    :1.000   Min.    :1.000
##  1st Qu.:1.000   1st Qu.:1.000
##  Median :2.000   Median :2.000
##  Mean    :1.746   Mean    :1.746
##  3rd Qu.:2.000   3rd Qu.:2.000
##  Max.    :5.000   Max.    :5.000
##  NA's    :11
```

```
fin.preds$clinage <- as.numeric(fin.preds$clinage)
fin.preds$studysex <- as.factor(fin.preds$studysex)
health.corrected <- fast.csci(fin.outs[, c("health1", "zarscore")], fin.preds[, c("clinage", "studysex")],
head(health.corrected)
```

```
##           health1    zarscore
## 200004  0.2944862  -5.366933
## 200005 -0.7165702  11.038915
## 200008  0.3221273  29.118445
## 200032  0.2668452  17.147688
## 200086 -0.8257795  -7.340076
## 200113 -0.8257795 -14.340076
```

Conclusions