Stats\_Research

1740221\_31\_65

28/08/2019

knitr::opts\_chunk$set()

### Hypothesis:

The

effect size :+-0.2,0.5,0.8 population standard deviation: significance level: 5% and 1% power: 0.8 and 0.9 standardised effect size = 0.5,1.0,1.5 sample size : 200

library(pwr)  
pwr.t.test(d=0.2, sig.level=.05, power = .90, type = 'two.sample')

##   
## Two-sample t test power calculation   
##   
## n = 526.3332  
## d = 0.2  
## sig.level = 0.05  
## power = 0.9  
## alternative = two.sided  
##   
## NOTE: n is number in \*each\* group

## Including Plots

You can also embed plots, for example:

pwr.t.test(d=0.5, sig.level=.05, power = .90, type = 'two.sample')

##   
## Two-sample t test power calculation   
##   
## n = 85.03128  
## d = 0.5  
## sig.level = 0.05  
## power = 0.9  
## alternative = two.sided  
##   
## NOTE: n is number in \*each\* group

pwr.t.test(d=0.8, sig.level=.05, power = .90, type = 'two.sample')

##   
## Two-sample t test power calculation   
##   
## n = 33.82555  
## d = 0.8  
## sig.level = 0.05  
## power = 0.9  
## alternative = two.sided  
##   
## NOTE: n is number in \*each\* group

pwr.t.test(d=0.2, sig.level=.05, power = .80, type = 'two.sample')

##   
## Two-sample t test power calculation   
##   
## n = 393.4057  
## d = 0.2  
## sig.level = 0.05  
## power = 0.8  
## alternative = two.sided  
##   
## NOTE: n is number in \*each\* group

pwr.t.test(d=0.5, sig.level=.05, power = .80, type = 'two.sample')

##   
## Two-sample t test power calculation   
##   
## n = 63.76561  
## d = 0.5  
## sig.level = 0.05  
## power = 0.8  
## alternative = two.sided  
##   
## NOTE: n is number in \*each\* group

pwr.t.test(d=0.8, sig.level=.05, power = .80, type = 'two.sample')

##   
## Two-sample t test power calculation   
##   
## n = 25.52458  
## d = 0.8  
## sig.level = 0.05  
## power = 0.8  
## alternative = two.sided  
##   
## NOTE: n is number in \*each\* group

pwr.t.test(d=0.2, sig.level=.01, power = .80, type = 'two.sample')

##   
## Two-sample t test power calculation   
##   
## n = 585.6093  
## d = 0.2  
## sig.level = 0.01  
## power = 0.8  
## alternative = two.sided  
##   
## NOTE: n is number in \*each\* group

pwr.t.test(d=0.5, sig.level=.01, power = .80, type = 'two.sample')

##   
## Two-sample t test power calculation   
##   
## n = 95.10364  
## d = 0.5  
## sig.level = 0.01  
## power = 0.8  
## alternative = two.sided  
##   
## NOTE: n is number in \*each\* group

pwr.t.test(d=0.8, sig.level=.01, power = .80, type = 'two.sample')

##   
## Two-sample t test power calculation   
##   
## n = 38.18831  
## d = 0.8  
## sig.level = 0.01  
## power = 0.8  
## alternative = two.sided  
##   
## NOTE: n is number in \*each\* group

pwr.t.test(d=0.2, sig.level=.01, power = .90, type = 'two.sample')

##   
## Two-sample t test power calculation   
##   
## n = 745.63  
## d = 0.2  
## sig.level = 0.01  
## power = 0.9  
## alternative = two.sided  
##   
## NOTE: n is number in \*each\* group

pwr.t.test(d=0.5,sig.level=.01, power = .90, type = 'two.sample')

##   
## Two-sample t test power calculation   
##   
## n = 120.7055  
## d = 0.5  
## sig.level = 0.01  
## power = 0.9  
## alternative = two.sided  
##   
## NOTE: n is number in \*each\* group

pwr.t.test(d=0.8, sig.level=.01, power = .90, type = 'two.sample')

##   
## Two-sample t test power calculation   
##   
## n = 48.1861  
## d = 0.8  
## sig.level = 0.01  
## power = 0.9  
## alternative = two.sided  
##   
## NOTE: n is number in \*each\* group

Actually used : 10 per group Minimum calculated : 26 per group for effect size 0.8, significance level 0.05, poer 0.8

library(readxl)  
 data3 <- read\_excel("C:/Users/Snigdha/Desktop/Stats Research/12302\_2014\_14\_MOESM3\_ESM.xlsx", skip = 1)

class(data3)

## [1] "tbl\_df" "tbl" "data.frame"