

Appendix A

Power calculations G*Power Protocols

[1] -- Thursday, March 28, 2019 -- 10:29:26

t tests - Means: Difference between two dependent means (matched pairs)

Analysis: A priori: Compute required sample size

Input: Tail(s) = One

Effect size $d_z = 0.5$

α err prob = 0.01

Power (1- β err prob) = 0.95

Output: Noncentrality parameter $\delta = 4.0620192$

Critical t = 2.3850968

Df = 65

Total sample size = 66

Actual power = 0.9505564

[2] -- Thursday, March 28, 2019 -- 15:01:52

z tests - Correlations: Two dependent Pearson rs (common index)

Analysis: A priori: Compute required sample size

Input: Tail(s) = One

H1 corr $\rho_{ac} = .2$

α err prob = .01

Power (1- β err prob) = 0.8

H0 corr ρ_{ab} = .4

Corr ρ_{bc} = .2

Output: Critical z = -2.3263479

Sample size = 361

Actual power = 0.8007772