

## **Spearman Correlation: 2-tailed**

### ***Large Effect Size***

Sample size for a Spearman correlation was determined using power analysis. The power analysis was conducted in G-POWER using an alpha of 0.05, a power of 0.80, and a large effect size ( $f = 0.5$ ) for a two-tailed test. Because Spearman's rank correlation coefficient is computationally identical to Pearson product-moment coefficient, power analysis was conducted using software for estimating power of a Pearson's correlation. Based on the aforementioned assumptions, the required sample size was determined to be 29.

### ***Medium Effect Size***

Sample size for a Spearman correlation was determined using power analysis. The power analysis was conducted in G-POWER using an alpha of 0.05, a power of 0.80, and a medium effect size ( $f = 0.3$ ) for a two-tailed test. Because Spearman's rank correlation coefficient is computationally identical to Pearson product-moment coefficient, power analysis was conducted using software for estimating power of a Pearson's correlation. Based on the aforementioned assumptions, the required sample size was determined to be 82.

### ***Small Effect Size***

Sample size for a Spearman correlation was determined using power analysis. The power analysis was conducted in G-POWER using an alpha of 0.05, a power of 0.80, and a small effect size ( $f = 0.1$ ) for a two-tailed test. Because Spearman's rank correlation coefficient is computationally identical to Pearson product-moment coefficient, power analysis was conducted using software for estimating power of a Pearson's correlation. Based on the aforementioned assumptions, the required sample size was determined to be 779.

### ***Reference***

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2008). G\*Power Version 3.1.2 [computer software]. Universität Kiel, Germany. Retrieved from <http://www.psych.uni-duesseldorf.de/abteilungen/aap/gpower3/download-and-register>

Statistics Solutions. (2010). Sample Size Write-up [WWW Document]. Retrieved from <http://www.statisticssolutions.com/resources/sample-size-calculator/spearman-correlation-2-tailed/>