**Power Analysis for the ZPF**

To determine power you will need to specify not only the values of the two correlation coefficients being compared (*rab* and *rxy*), but also those of the correlations between (ab) and (xy). Consider the example presented in [Comparing Correlated but Nonoverlapping Correlation Coefficients](http://core.ecu.edu/psyc/wuenschk/StatHelp/ZPF.docx). Imagine that we intend to have 603 cases and we want to determine what power would be for a 5% non-directional test if the difference between the two population correlations were .14465.





*k* = (.45 − .31\*.38)\*(.55 − .31\*.25) + (.53 − .45\*.25)\*(.31 − .45\*.38)

+ (.45 − .53\*.25)\*(.55 − .53\*.38) + (.53 − .38\*.55)\*(.31 − .55\*.25) = .38105.



Under the null, the critical difference between the two transformed correlation coefficients = 1.96(.0504) for a 5% nondirectional test. That is, the absolute difference for the difference between the two transformed correlation coefficients must equal or exceed .0988 to reject the null of no difference.

If the truth were that the difference is .14465, the probability of getting .0988 or more would be obtained from , which yields power of 82%.

[SAS and SPSS Programs for Comparing Pearson Correlations and OLS Regression Coefficients](http://core.ecu.edu/psyc/wuenschk/W&W/W&W.htm)

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