Quiz 4

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A. Hypotheses

Hypothesis 1

There is a positive relationship between self-esteem and academic performance, such that as self-esteem increases, academic performance increases.

Hypothesis 2

There is a negative relationship between self-esteem and quality of dating relationships, such that as self-esteem increases, quality of dating relationships decreases.

Hypothesis 3

There is a positive relationship between self-esteem and quality of friendships, such that as self-esteem increases, quality of friendships increases.

B. Analysis Plan A

Hypothesis 1

I will test hypothesis 1 using a bivariate correlation. I conducted a traditional power analysis as a meta-analysis had been conducted and I was able to estimate a population correlation of *rho*=.50. This power analysis revealed that an N of 28 would be necessary for a power of 80.

Hypothesis 2

I will test hypothesis 2 using a bivariate correlation. I conducted a safeguard power analysis based on the lower bound of the confidence interval for the original study, r=-.11. This power analysis revealed that an N of 645 would be necessary for a power of 80.

Hypothesis 3

I will test hypothesis 3 using a bivariate correlation. I conducted a traditional power analysis based on a weak positive relation according to Bosco, Aguinis, Singh, Field and Pierce (2015), r=.07. This power analysis revealed that an N of 1599 would be necessary for a power of 80.

C. Analysis Plan B

Hypothesis 1

I will test hypothesis 1 using a bivariate correlation. I conducted a traditional power analysis as a meta-analysis had been conducted and I was able to estimate a population correlation of *rho*=.50. This power analysis revealed that an N of 37 would be necessary to ensure a confidence interval that does not exceed the magnitude of the effect.

Hypothesis 2

I will test hypothesis 2 using a bivariate correlation. I conducted a safeguard power analysis based on the lower bound of the confidence interval for the original study, r=-.11. This power analysis revealed that an N of 1250 would be necessary to ensure a confidence interval that does not exceed the magnitude of the effect.

Hypothesis 3

I will test hypothesis 3 using a bivariate correlation. I conducted a traditional power analysis based on a weak positive relation according to Bosco, Aguinis, Singh, Field and Pierce (2015), r=.07. This power analysis revealed that an N of 3200 would be necessary to ensure a confidence interval that does not exceed the magnitude of the effect.