

## LEARNING CHECK

1. How is the Mann-Whitney  $U$  test similar to the independent samples  $t$  test? How are these two tools different?

A: These tools are similar in that they both compare two groups on some outcome. They differ based on the measurement of the outcome being analyzed. The independent samples  $t$  test is used when the outcome is a scale variable. The Mann-Whitney  $U$  test is used when the outcome is an ordinal variable.

2. How is the Mann-Whitney  $U$  test similar to the Spearman rank-order correlation? How are these two tools different?

A: These tools are similar in that they both use ordinal data. They differ in that the Spearman rank-order correlation examines two ordinal variables and tests for a relationship between them. The Mann-Whitney  $U$  test uses a nominal variable and tests for differences between the two categories on ordinal outcome data.