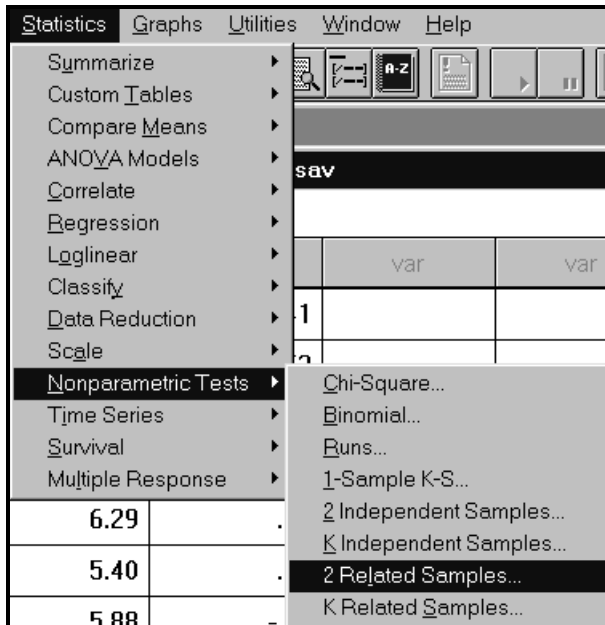


COMPARING THE DURABILITY OF TIRES

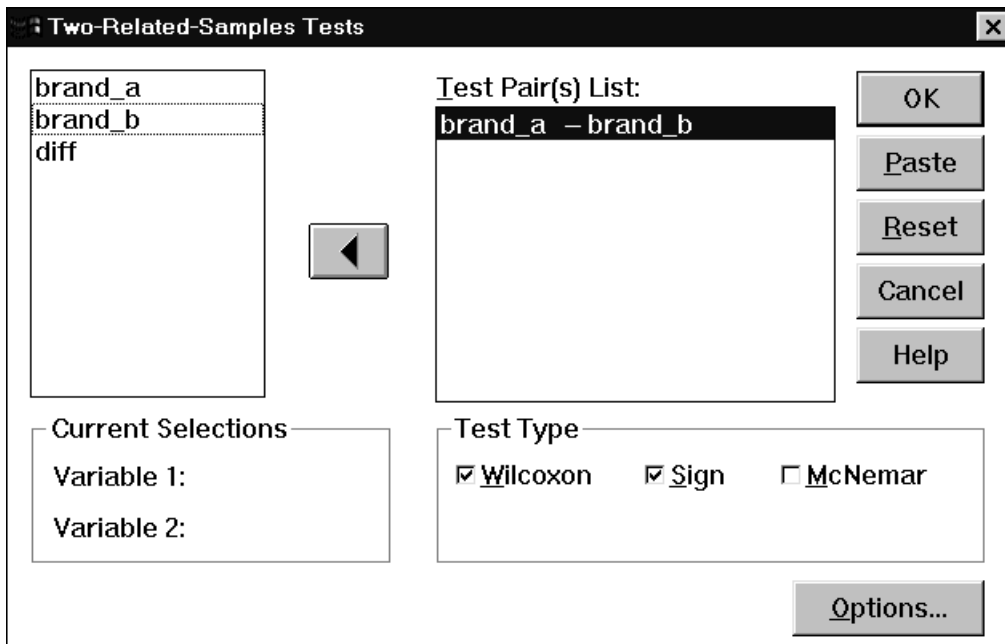
12. Using Nonparametric Methods to Make Inferences

SPSS has a wide selection of nonparametric tests in the *Nonparametric Tests* submenu of *Statistics*. The Sign and Wilcoxon tests are nonparametric counterparts of the paired samples t-test.

In order to access the tests choose *Statistics* in the menu, and then *Nonparametric Tests* command.



Click on *2 Related Samples* command to obtain the *Two-Related-Samples* dialog box.



Highlight the variables names and transfer them to the *Test Pair(s) List* box. Click on OK to run the test. The results are shown below.

Wilcoxon Matched-Pairs Signed-Ranks Test

BRAND_A with BRAND_B

Mean Rank	Sum of Ranks	Cases
11.91	190.5	16 - Ranks (BRAND_B LT BRAND_A)
4.88	19.50	4 + Ranks (BRAND_B GT BRAND_A)
		0 0 Ties (BRAND_B EQ BRAND_A)
		--
		20 Total

Z = -3.1925 2-Tailed P = .0014

Sign Test

BRAND_A with BRAND_B

Cases

16 - Diffs (BRAND_B LT BRAND_A)	
4 + Diffs (BRAND_B GT BRAND_A)	
0 Ties	
--	(Binomial)
20 Total	Exact 2-Tailed P = .0118

The outputs are discussed in Section 8.