## **BIOLOGY AND HOMOSEXUALITY**

## 13. Using Nonparametric Methods

The F-test presented in Section 7 has the underlying assumptions of normality and equal variances. However, the graphical displays of the data in Section 4 indicate that the assumptions might be violated. Moreover, the data provided consist of a relatively small number of observations, ten in each group. Under these circumstances, the Kruskal-Wallis test provides a very good alternative to the F-test.

The Kruskal-Wallis one-way ANOVA can be found in the *K Independent Samples*... item of the *Nonparametric Tests* menu.

S	tatistics <u>G</u> r	aphs	<u>U</u> tilitie:	s <u>W</u> indo	ow <u>H</u> elp		
	S <u>u</u> mmarize		•	a E1	A-Z		
	Custom <u>T</u> ables						
	Compare <u>M</u> eans						
	ANO <u>V</u> A Models			av			
	Correlate						
	Regression •						
	L <u>o</u> glinear			ar	var		
	Classify		•			-	
	<u>D</u> ata Reduc	ction	•				
	Sc <u>a</u> le		•				
	Nonparametric Tests 🔸		<u>C</u> hi-Square				
	T <u>i</u> me Series		•	<u>B</u> inomial			
	<u>S</u> urvival		•	<u>R</u> uns			
	Mu <u>l</u> tiple Response 🔷 🕨			<u>1</u> -Sample K-S			
0	1	.00		<u>2</u> Independent Samples			
				<u>K</u> Inde	pendent Sam	ples	
Û	1	.00		2 Re <u>l</u> a	ated Samples.		
n	1	00		K Rela	ated <u>S</u> amples.		

The following Tests for Several Independent Samples dialog box is displayed.



Click on the variable *time* and then on the upper right arrow to transfer it to *Test Variable List* box. Then click on the *code* variable and then on the lower right arrow to transfer it to the *Grouping Variable* box. Make sure that the Kruskal-Wallis H test box is checked.

Click on the *Define Range* box and type 1 into *Minimum* box and 5 into the *Maximum* box. Click on *Continue*.

Several Indepe	×	
Range for G	irouping Variable	Continue
M <u>i</u> nimum:	1	Cancel
M <u>a</u> ximum:	5	Help

The Kruskal-Wallis output is displayed in Section 9.