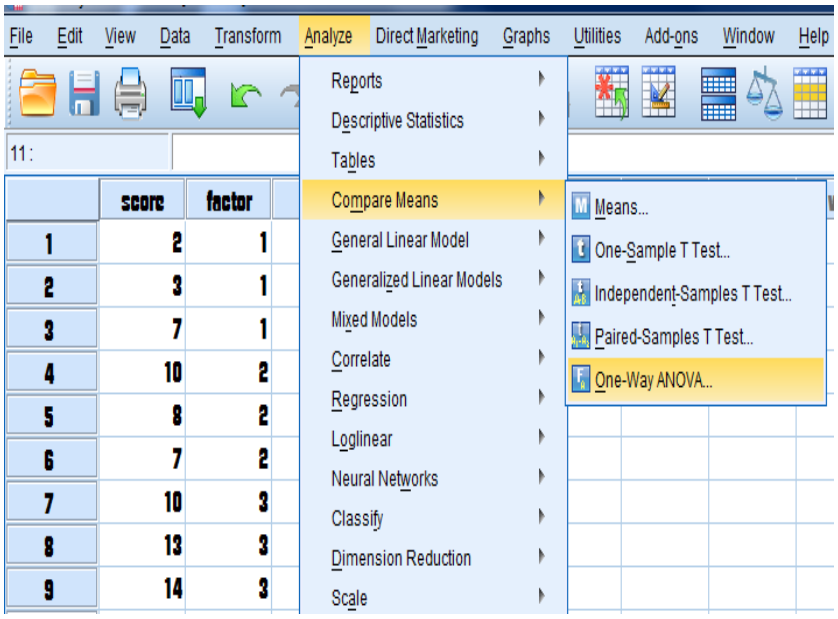
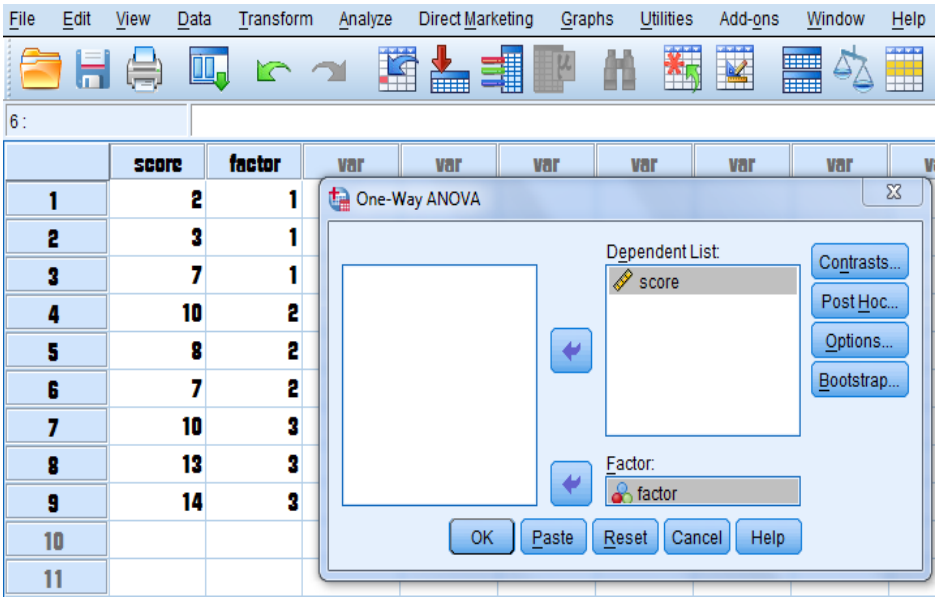
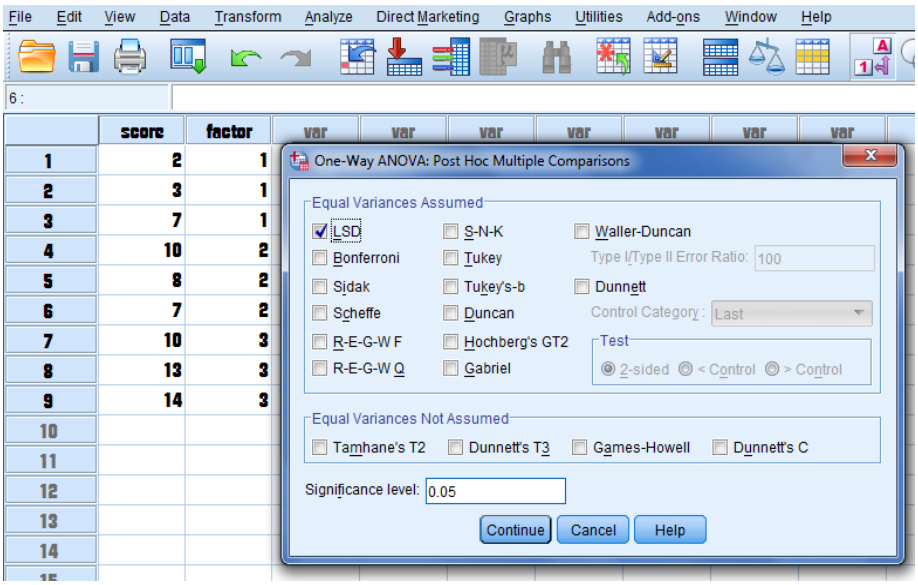
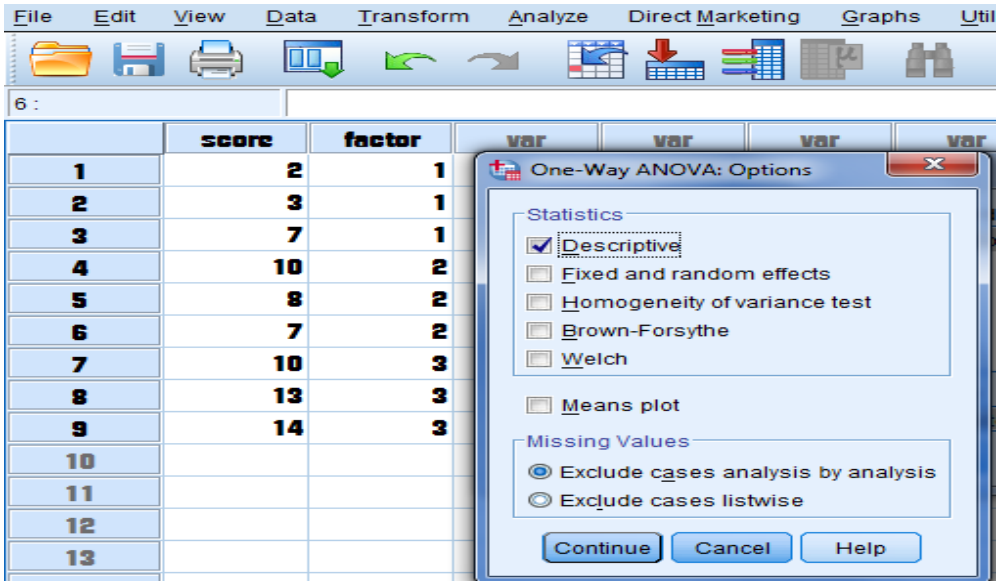
F test: Test between the means of more than two groups

For One-Way ANOVA test click analyze then Compare Means. After that click on One-Way ANOVA as shown below.






File Edit View Data Transform Analyze Direct Marketing Graphs Utilities Add-ons Window Help
6 :
score factor var var var var var var var
1 2 1
2 3 1
3 7 1
4 10 2
5 8 2
6 7 2
7 10 3
8 13 3
9 14 3
10
11
12
13
14
One-Way ANOVA: Post Hoc Multiple Comparisons
Equal Variances Assumed
LSD
S-N-K
Waller-Duncan
Bonferroni
Tukey
Type I/Type II Error Ratio: 100
Sidak
Tukey's-b
Dunnett
Scheffe
Duncan
Control Category : Last
R-E-G-W F
Hochberg's GT2
Test
R-E-G-W Q
Gabriel
2-sided < Control > Control
Equal Variances Not Assumed
Tamhane's T2
Dunnett's T3
Games-Howell
Dunnett's C
Significance level: 0.05
Continue
Cancel
Help


File Edit View Data Transform Analyze Direct Marketing Graphs Util
6 :
score factor var var var var
1 2 1
2 3 1
3 7 1
4 10 2
5 8 2
6 7 2
7 10 3
8 13 3
9 14 3
10
11
12
13
One-Way ANOVA: Options
Statistics
Descriptive
Fixed and random effects
Homogeneity of variance test
Brown-Forsythe
Welch
Means plot
Missing Values
Exclude cases analysis by analysis
Exclude cases listwise
Continue
Cancel
Help

SPSS Output Window

After running descriptive statistics and One-Way ANOVA, the results appear in a different window, known as SPSS output viewer window as shown below.

Descriptives

score

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1	3	4.00	2.646	1.528	-2.57-	10.57	2	7
2	3	8.33	1.528	.882	4.54	12.13	7	10
3	3	12.33	2.082	1.202	7.16	17.50	10	14
Total	9	8.22	4.055	1.352	5.11	11.34	2	14

اعتماد قيمه Sig لتحديد الفرق المعنوي

ANOVA

score

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	104.222	2	52.111	11.439	.009
Within Groups	27.333	6	4.556		
Total	131.556	8			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: score

LSD

(I) sample	(J) sample	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2	-4.333-*	1.743	.047	-8.60-	-.07-
	3	-8.333-*	1.743	.003	-12.60-	-4.07-
2	1	4.333*	1.743	.047	.07	8.60
	3	-4.000-	1.743	.061	-8.26-	.26
3	1	8.333*	1.743	.003	4.07	12.60
	2	4.000	1.743	.061	-.26-	8.26

*. The mean difference is significant at the 0.05 level.

Note:

*If sig value > 0.05 there is **no** significant difference

*If sig value < 0.05 there is a significant difference