Univariate Analysis of Variance

Notes

Output Created		07-MAR-2016 07:51:09
Comments		
Input	Data	D:\Google Drive\ELEX_2016\CD\Bab 5\5.1.2.sav
	Active Dataset	DataSet2
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	15
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.
Syntax		UNIANOVA Y BY Perlakuan WITH X /CONTRAST(Perlakuan)=Simple /METHOD=SSTYPE(3) /INTERCEPT=INCLUDE /EMMEANS=TABLES(Perlakuan) WITH (X=MEAN) COMPARE ADJ(SIDAK) /PRINT=PARAMETER HOMOGENEITY DESCRIPTIVE /CRITERIA=ALPHA(.05) /DESIGN=X Perlakuan.
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.02

Between-Subjects Factors

		Value Label	N
Perlakuan	1	1	5
	2	2	5
	3	3	5

Descriptive Statistics

Dependent Variable: Y

Perlakuan	Mean	Std. Deviation	N
1	38.20	4.438	5
2	36.00	5.958	5
3	27.20	4.658	5
Total	33.80	6.795	15

Levene's Test of Equality of Error Variances[a]

Dependent Variable: Y

F	df1	df2	Sig.
1.066	2	12	.375

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + X + Perlakuan

Tests of Between-Subjects Effects

Dependent Variable: Y

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	607.829[a]	3	202.610	57.781	.000
Intercept	66.157	1	66.157	18.867	.001
X	269.029	1	269.029	76.723	.000
Perlakuan	417.151	2	208.575	59.483	.000
Error	38.571	11	3.506		
Total	17783.000	15			
Corrected Total	646.400	14			

a. R Squared = .940 (Adjusted R Squared = .924)

Parameter Estimates

Dependent Variable: Y

Parameter	B	Std. Error	t	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Intercept	4.377	2.737	1.599	.138	-1.647	10.401
X	.899	.103	8.759	.000	.673	1.124
[Perlakuan=1]	12.977	1.206	10.764	.000	10.323	15.630
[Perlakuan=2]	7.901	1.189	6.647	.000	5.285	10.518
[Perlakuan=3]	0[a]	.	.	.	.	.

a. This parameter is set to zero because it is redundant.

Custom Hypothesis Tests

Contrast Results (K Matrix)

Perlakuan Simple Contrast[a]			Dependent Variable: Y
Level 1 vs. Level 3	Contrast Estimate		12.977
	Hypothesized Value		0
	Difference (Estimate - Hypothesized)		12.977
	Std. Error		1.206
	Sig.		.000
	95% Confidence Interval for Difference	Lower Bound	10.323
		Upper Bound	15.630
Level 2 vs. Level 3	Contrast Estimate		7.901
	Hypothesized Value		0
	Difference (Estimate - Hypothesized)		7.901
	Std. Error		1.189
	Sig.		.000
	95% Confidence Interval for Difference	Lower Bound	5.285
		Upper Bound	10.518

a. Reference category = 3

Test Results

Dependent Variable: Y

Source	Sum of Squares	df	Mean Square	F	Sig.
Contrast	417.151	2	208.575	59.483	.000
Error	38.571	11	3.506		

Estimated Marginal Means

Perlakuan

Estimates

Dependent Variable: Y

Perlakuan	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	39.817[a]	.858	37.930	41.705
2	34.742[a]	.850	32.872	36.612
3	26.841[a]	.838	24.995	28.686

a. Covariates appearing in the model are evaluated at the following values: X = 25.00.

Pairwise Comparisons

Dependent Variable: Y

(I) Perlakuan	(J) Perlakuan	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	5.075*	1.229	.005	1.621	8.529
	3	12.977*	1.206	.000	9.588	16.365
2	1	-5.075*	1.229	.005	-8.529	-1.621
	3	7.901*	1.189	.000	4.560	11.242
3	1	-12.977*	1.206	.000	-16.365	-9.588
	2	-7.901*	1.189	.000	-11.242	-4.560

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Sidak.

Univariate Tests

Dependent Variable: Y

	Sum of Squares	df	Mean Square	F	Sig.
Contrast	417.151	2	208.575	59.483	.000
Error	38.571	11	3.506		

The F tests the effect of Perlakuan. This test is based on the linearly independent pairwise comparisons among the estimated marginal means.