

Host

Notes

Output Created		22-JUN-2026 23:51:52
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
Syntax	HOST COMMAND=['cmd /c if not exist "D:\DATA ANALYSIS\E ANOVA Family\Nested ANOVA\SPSS_Output" mkdir "D:\DATA ANALYSIS\E ANOVA Family\Nested ANOVA\SPSS_Output"'].	
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.25

Host

Notes

Output Created		22-JUN-2026 23:51:53
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
Syntax	HOST COMMAND=['cmd /c if not exist "D:\DATA ANALYSIS\E ANOVA Family\Nested ANOVA\SPSS_Output\sav " mkdir "D:\DATA ANALYSIS\E ANOVA Family\Nested ANOVA\SPSS_Output\sav "'].	
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.19

Host

Notes

Output Created		22-JUN-2026 23:51:53
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
Syntax	HOST COMMAND=['cmd /c if not exist "D:\DATA ANALYSIS\E ANOVA Family\Nested ANOVA\SPSS_Output\spv " mkdir "D:\DATA ANALYSIS\E ANOVA Family\Nested ANOVA\SPSS_Output\spv "'].	
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.22

Host

Notes

Output Created		22-JUN-2026 23:51:53
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
Syntax	HOST COMMAND=['cmd /c if not exist "D:\DATA ANALYSIS\E ANOVA Family\Nested ANOVA\SPSS_Output\pdf " mkdir "D:\DATA ANALYSIS\E ANOVA Family\Nested ANOVA\SPSS_Output\pdf "'].	
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.19

Host

Notes

Output Created		22-JUN-2026 23:51:53
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
Syntax	HOST COMMAND=['cmd /c if not exist "D:\DATA ANALYSIS\E ANOVA Family\Nested ANOVA\SPSS_Output\png" mkdir "D:\DATA ANALYSIS\E ANOVA Family\Nested ANOVA\SPSS_Output\png"'].	
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.11

Host

Notes

Output Created		22-JUN-2026 23:51:53
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
Syntax	HOST COMMAND=['cmd /c if not exist "D:\DATA ANALYSIS\E ANOVA Family\Nested ANOVA\SPSS_Output\csv" mkdir "D:\DATA ANALYSIS\E ANOVA Family\Nested ANOVA\SPSS_Output\csv"'].	
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.20

Host

Notes

Output Created		22-JUN-2026 23:51:53
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
Syntax	HOST COMMAND=['cmd /c if not exist "D:\DATA ANALYSIS\E ANOVA Family\Nested ANOVA\SPSS_Output\txt" mkdir "D:\DATA ANALYSIS\E ANOVA Family\Nested ANOVA\SPSS_Output\txt"...	
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.18

Host

Notes

Output Created		22-JUN-2026 23:51:54
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
Syntax	HOST COMMAND=['cmd /c del /q "D:\DATA ANALYSIS\E ANOVA Family\Nested ANOVA\SPSS_Output\png*.png" 2>nul'].]	
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.17

Host

Notes

Output Created		22-JUN-2026 23:51:54
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
Syntax		HOST COMMAND=['cmd /c del /q "D:\DATA ANALYSIS\E ANOVA Family\Nested ANOVA\SPSS_Output\csv *.csv" 2>nul'].
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.18

Host

Notes

Output Created		22-JUN-2026 23:51:54
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
Syntax		HOST COMMAND=['cmd /c del /q "D:\DATA ANALYSIS\E ANOVA Family\Nested ANOVA\SPSS_Output\txt*.txt" 2>nul'].
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.18

Host

Notes

Output Created		22-JUN-2026 23:51:54
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
Syntax	HOST COMMAND=['cmd /c del /q "D:\DATA ANALYSIS\E ANOVA Family\Nested ANOVA\SPSS_Output\pdf *.pdf" 2>nul'].	
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.15

Host

Notes

Output Created		22-JUN-2026 23:51:54
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
Syntax	HOST COMMAND=['cmd /c del /q "D:\DATA ANALYSIS\E ANOVA Family\Nested ANOVA\SPSS_Output\spv *.spv" 2>nul'].	
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.13

Host

Notes

Output Created		22-JUN-2026 23:51:54
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
Syntax		HOST COMMAND=['cmd /c del /q "D:\DATA ANALYSIS\E ANOVA Family\Nested ANOVA\SPSS_Output\sav *.sav" 2>nul'].
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.11

Nested ANOVA: G3 by Studytime Nested within School

Means

Notes

Output Created		22-JUN-2026 23:51:55
Comments		
Input	Data	D:\DATA ANALYSIS\E ANOVA Family\Nested ANOVA\SPSS_Output\sav\nested_anova_spss_ready_data.sav
	Active Dataset	NestedANOVADData
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Missing Value Handling	Definition of Missing	For each dependent variable in a table, user-defined missing values for the dependent and all grouping variables are treated as missing.
	Cases Used	Cases used for each table have no missing values in any independent variable, and not all dependent variables have missing values.
Syntax		MEANS TABLES=G3 BY school BY studytime /CELLS=COUNT MEAN STDDEV MEDIAN MIN MAX.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.02

[NestedANOVADData] D:\DATA ANALYSIS\E ANOVA Family\Nested ANOVA\SPSS_Output\sav\nested_anova_spss_ready_data.sav

Nested ANOVA: G3 by Studytime Nested within School

Case Processing Summary

	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
G3 * school * studytime	649	100.0%	0	0.0%	649	100.0%

Report

G3

school	studytime	N	Mean	Std. Deviation	Median	Minimum	Maximum
GP	1.00	119	11.5294	2.75504	11.0000	.00	18.00
	2.00	206	12.7330	2.45378	13.0000	1.00	18.00
	3.00	71	13.5634	2.24074	14.0000	8.00	18.00
	4.00	27	13.4074	2.80466	13.0000	10.00	19.00
	Total	423	12.5768	2.62564	13.0000	.00	19.00
MS	1.00	93	9.9677	3.55531	10.0000	.00	17.00
	2.00	99	10.7576	4.16764	11.0000	.00	19.00
	3.00	26	12.3077	2.96337	12.0000	8.00	18.00
	4.00	8	11.8750	3.68152	12.0000	6.00	18.00
	Total	226	10.6504	3.83399	11.0000	.00	19.00
Total	1.00	212	10.8443	3.21862	11.0000	.00	18.00
	2.00	305	12.0918	3.24313	12.0000	.00	19.00
	3.00	97	13.2268	2.50210	13.0000	8.00	18.00
	4.00	35	13.0571	3.03841	13.0000	6.00	19.00
	Total	649	11.9060	3.23066	12.0000	.00	19.00

General Linear Model

Nested ANOVA: G3 by Studytime Nested within School

Notes

Output Created		22-JUN-2026 23:51:55
Comments		
Input	Data	D:\DATA ANALYSIS\ANOVA Family\Nested ANOVA\SPSS_Output\sav\nested_anova_spss_ready_data.sav
	Active Dataset	NestedANOVADData
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
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		GLM G3 BY school studytime /METHOD=SSTYPE(1) /INTERCEPT=INCLUDE /PRINT=DESCRIPTIVE ETASQ HOMOGENEITY /CRITERIA=ALPHA(.05) /DESIGN=school school*studytime.
Resources	Processor Time	00:00:00.05
	Elapsed Time	00:00:00.39

Between-Subjects Factors

		Value Label	N
school	GP		423
	MS		226
studytime	1.00	Studytime 1	212
	2.00	Studytime 2	305
	3.00	Studytime 3	97
	4.00	Studytime 4	35

Nested ANOVA: G3 by Studytime Nested within School

Descriptive Statistics

Dependent Variable: G3

school	studytime	Mean	Std. Deviation	N
GP	1.00	11.5294	2.75504	119
	2.00	12.7330	2.45378	206
	3.00	13.5634	2.24074	71
	4.00	13.4074	2.80466	27
	Total	12.5768	2.62564	423
MS	1.00	9.9677	3.55531	93
	2.00	10.7576	4.16764	99
	3.00	12.3077	2.96337	26
	4.00	11.8750	3.68152	8
	Total	10.6504	3.83399	226
Total	1.00	10.8443	3.21862	212
	2.00	12.0918	3.24313	305
	3.00	13.2268	2.50210	97
	4.00	13.0571	3.03841	35
	Total	11.9060	3.23066	649

Levene's Test of Equality of Error Variances^{a,b}

		Levene Statistic	df1	df2	Sig.
G3	Based on Mean	3.420	7	641	.001
	Based on Median	3.304	7	641	.002
	Based on Median and with adjusted df	3.304	7	483.824	.002
	Based on trimmed mean	3.376	7	641	.002

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

a. Dependent variable: G3

b. Design: Intercept + school + school * studytime

Nested ANOVA: G3 by Studytime Nested within School

Tests of Between-Subjects Effects

Dependent Variable: G3

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	897.822 ^a	7	128.260	14.017	.000	.133
Intercept	91997.733	1	91997.733	10053.892	.000	.940
school	546.629	1	546.629	59.738	.000	.085
school * studytime	351.194	6	58.532	6.397	.000	.056
Error	5865.444	641	9.150			
Total	98761.000	649				
Corrected Total	6763.267	648				

a. R Squared = .133 (Adjusted R Squared = .123)

Graph

Notes

Output Created		22-JUN-2026 23:51:56
Comments		
Input	Data	D:\DATA ANALYSIS\E ANOVA Family\Nested ANOVA\SPSS_Output\sav\nested_anova_spss_read_y_data.sav
	Active Dataset	NestedANOVAData
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Syntax		GRAPH /BOXPLOT=G3 BY school BY studytime /TITLE='Nested ANOVA Distribution: G3 by Studytime within School'.
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.07

>Error # 17804 in column 4. Text: BOXPLOT

Nested ANOVA: G3 by Studytime Nested within School

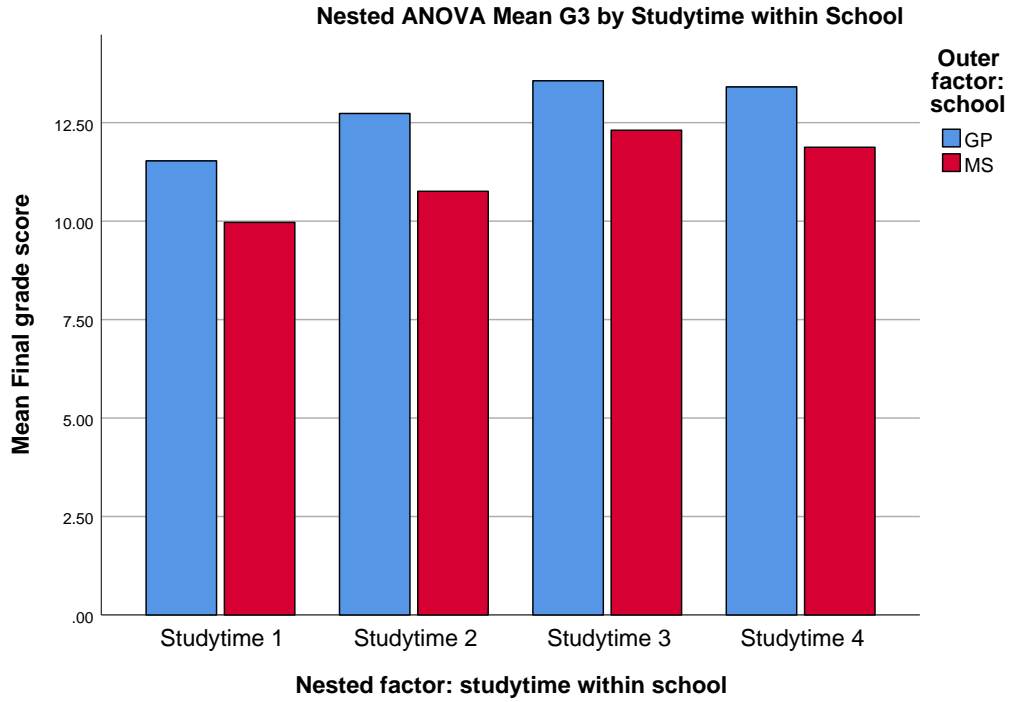
```
>Unrecognized subcommand was found.  Recognized subcommands are: TITLE,
>SUBTITLE, FOOTNOTE, BAR, PIE, LINE, HISTOGRAM, SCATTERPLOT, HILO, ERRORBAR and
>TEMPLATE.  Skipping to a "/".
>Execution of this command stops.
```

Graph

Notes

Output Created		22-JUN-2026 23:51:56
Comments		
Input	Data	D:\DATA ANALYSIS\EANOVA Family\Nested ANOVA\SPSS_Output\sav\nested_anova_spss_ready_data.sav
	Active Dataset	NestedANOVAData
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Syntax		GRAPH /BAR(GROUPED) =MEAN(G3) BY studytime BY school /TITLE='Nested ANOVA Mean G3 by Studytime within School'.
Resources	Processor Time	00:00:04.30
	Elapsed Time	00:00:04.20

Nested ANOVA: G3 by Studytime Nested within School



```
File "<string>", line 15
  report_lines.append(f"CSV file: {csv_file}")
  ^
```

SyntaxError: invalid syntax