

Host

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Cochrans C Test

Cochrans C Test
Import data

Cochrans C context

Cochrans C context
G3 by studytime

Means

[CochranCData] D:\DATA ANALYSIS\B Normality and Assumption Tests\Cochrans C Test\SPSS_Output\sav\Cochran-C-Test-data.sav

Case Processing Summary

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

Report

G3

studytime	N	Mean	Std. Deviation	Variance
1	212	10.84	3.219	10.360
2	305	12.09	3.243	10.518
3	97	13.23	2.502	6.261
4	35	13.06	3.038	9.232
Total	649	11.91	3.231	10.437

Group spread plots

Group spread plots
G3 by studytime

Explore

Study time group

Case Processing Summary

		Valid		Cases Missing		Total	
	studytime	N	Percent	N	Percent	N	Percent
G3	1	212	100.0%	0	0.0%	212	100.0%
	2	305	100.0%	0	0.0%	305	100.0%
	3	97	100.0%	0	0.0%	97	100.0%
	4	35	100.0%	0	0.0%	35	100.0%

Descriptives

studytime			Statistic	Std. Error
G3	1	Mean	10.84	.221
		95% Confidence Interval for Mean	Lower Bound	10.41
			Upper Bound	11.28
		5% Trimmed Mean	11.04	
		Median	11.00	
		Variance	10.360	
		Std. Deviation	3.219	
		Minimum	0	
		Maximum	18	
		Range	18	
		Interquartile Range	3	
		Skewness	-1.078	.167
		Kurtosis	3.117	.333
	2	Mean	12.09	.186
		95% Confidence Interval for Mean	Lower Bound	11.73
			Upper Bound	12.46
		5% Trimmed Mean	12.25	
		Median	12.00	
		Variance	10.518	
		Std. Deviation	3.243	

Group spread plots
G3 by studytime

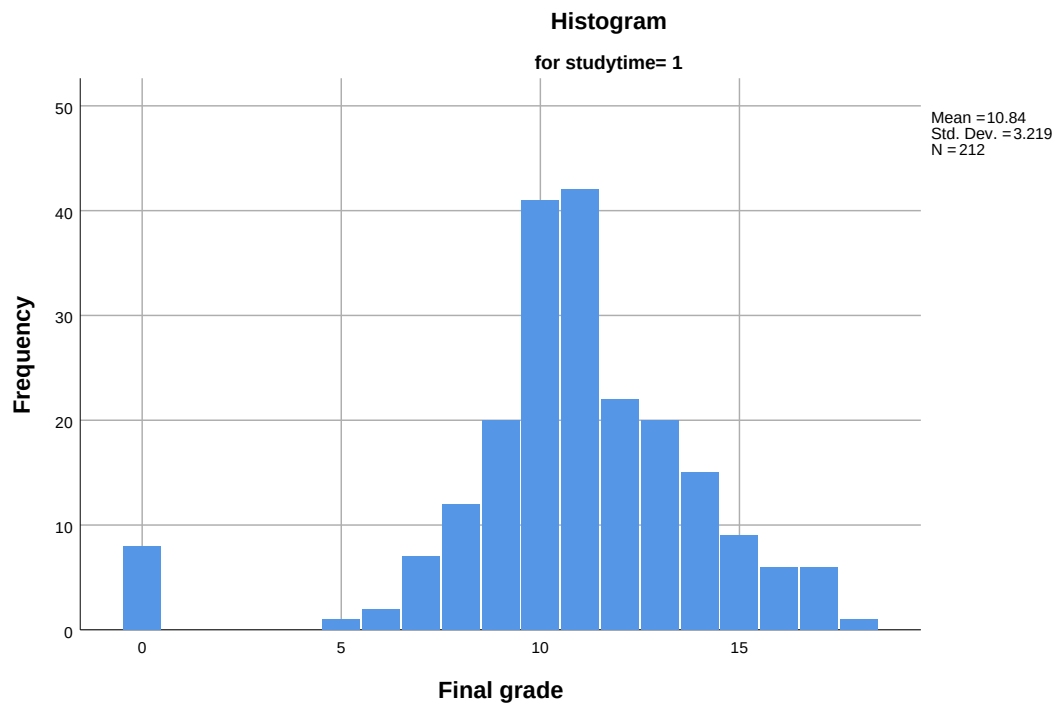
Descriptives

studytime		Statistic	Std. Error
3	Minimum	0	
	Maximum	19	
	Range	19	
	Interquartile Range	4	
	Skewness	-1.028	.140
	Kurtosis	3.044	.278
	Mean	13.23	.254
	95% Confidence Interval for Mean	Lower Bound	12.72
		Upper Bound	13.73
	5% Trimmed Mean	13.27	
	Median	13.00	
	Variance	6.261	
	Std. Deviation	2.502	
	Minimum	8	
	Maximum	18	
	Range	10	
	Interquartile Range	4	
	Skewness	-.190	.245
	Kurtosis	-.502	.485
4	Mean	13.06	.514
	95% Confidence Interval for Mean	Lower Bound	12.01
		Upper Bound	14.10
	5% Trimmed Mean	13.07	
	Median	13.00	
	Variance	9.232	
	Std. Deviation	3.038	
	Minimum	6	
	Maximum	19	
	Range	13	
	Interquartile Range	4	
	Skewness	.209	.398
	Kurtosis	-.339	.778

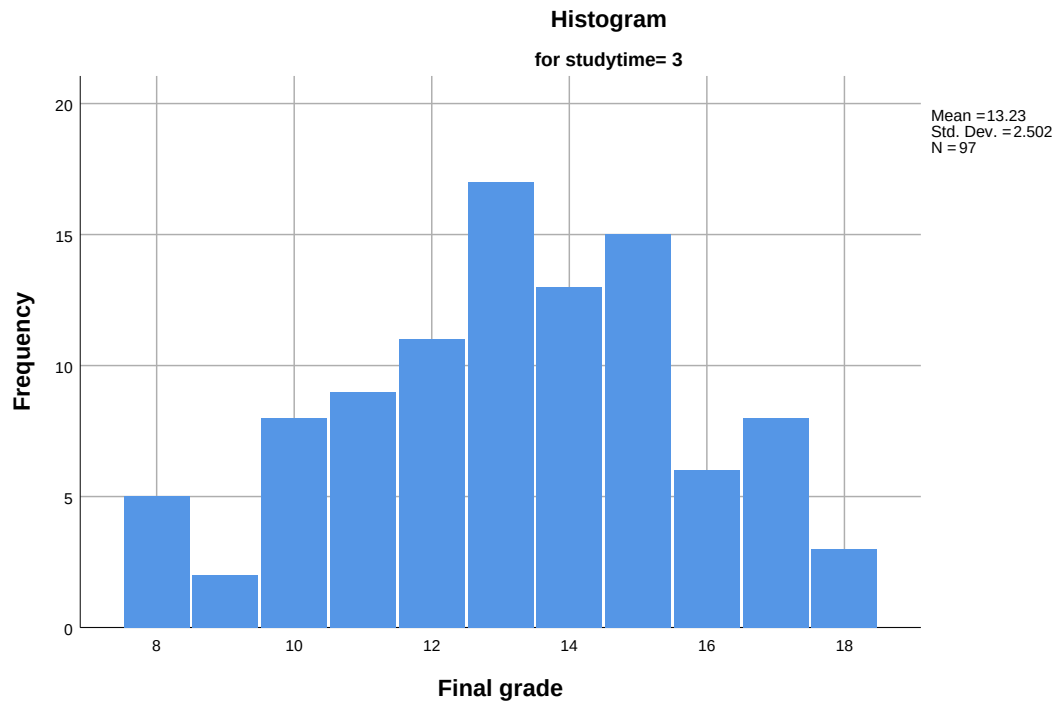
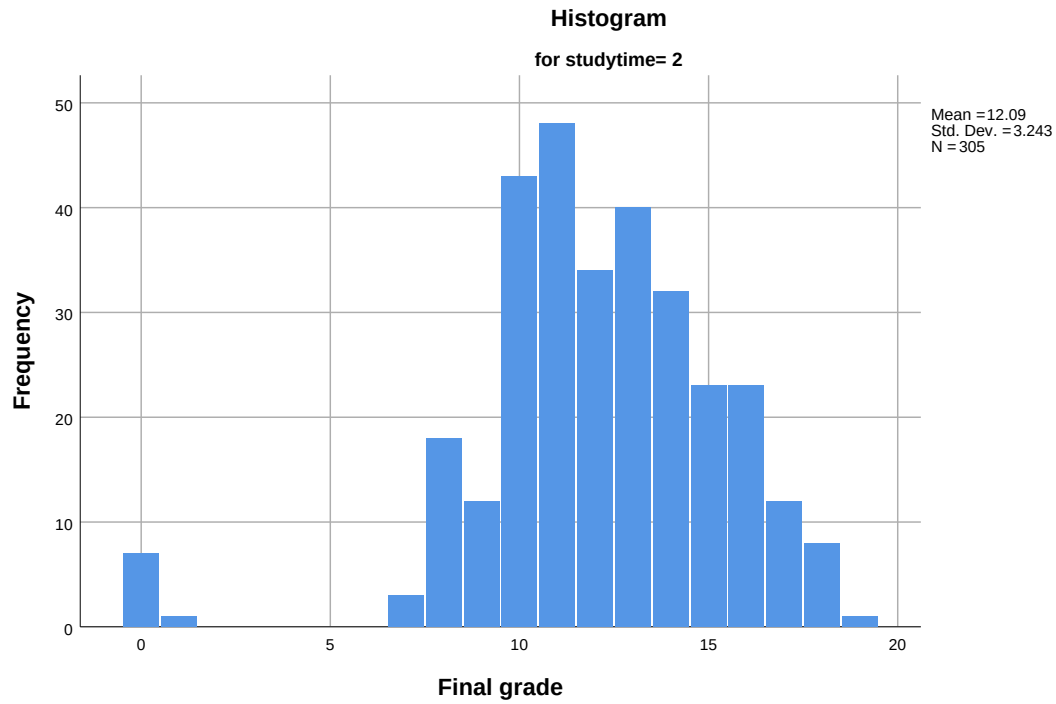
Group spread plots
G3 by studytime

Final grade

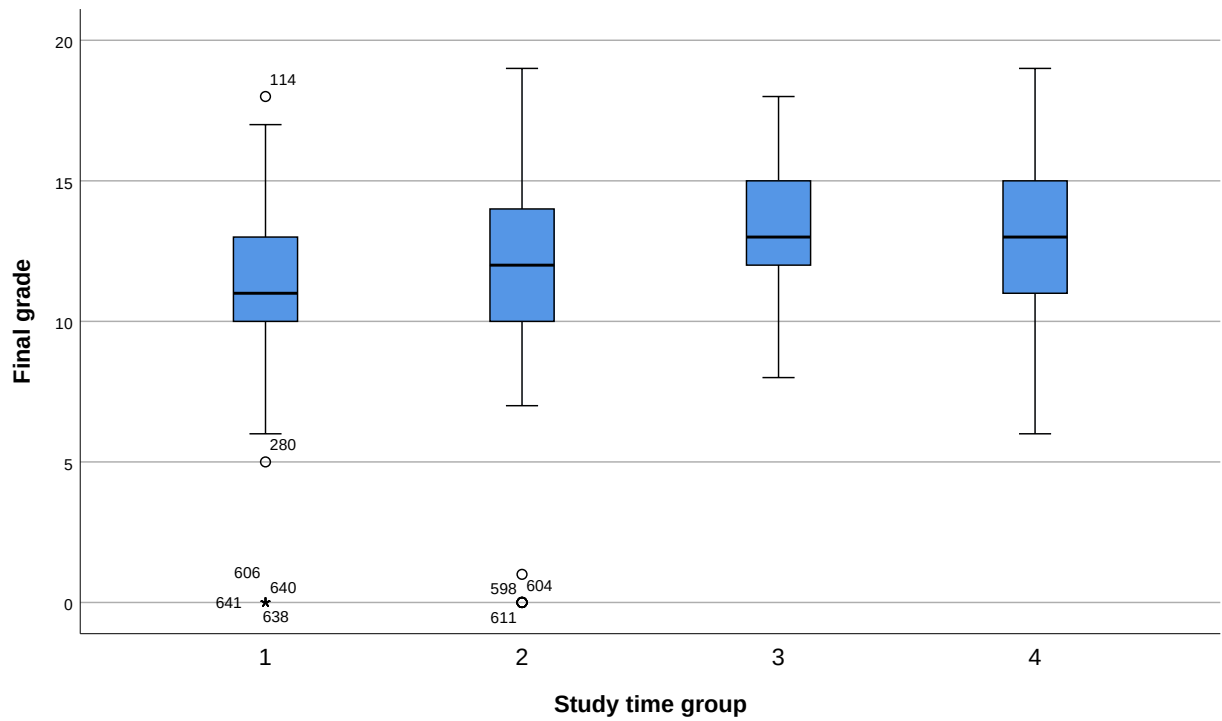
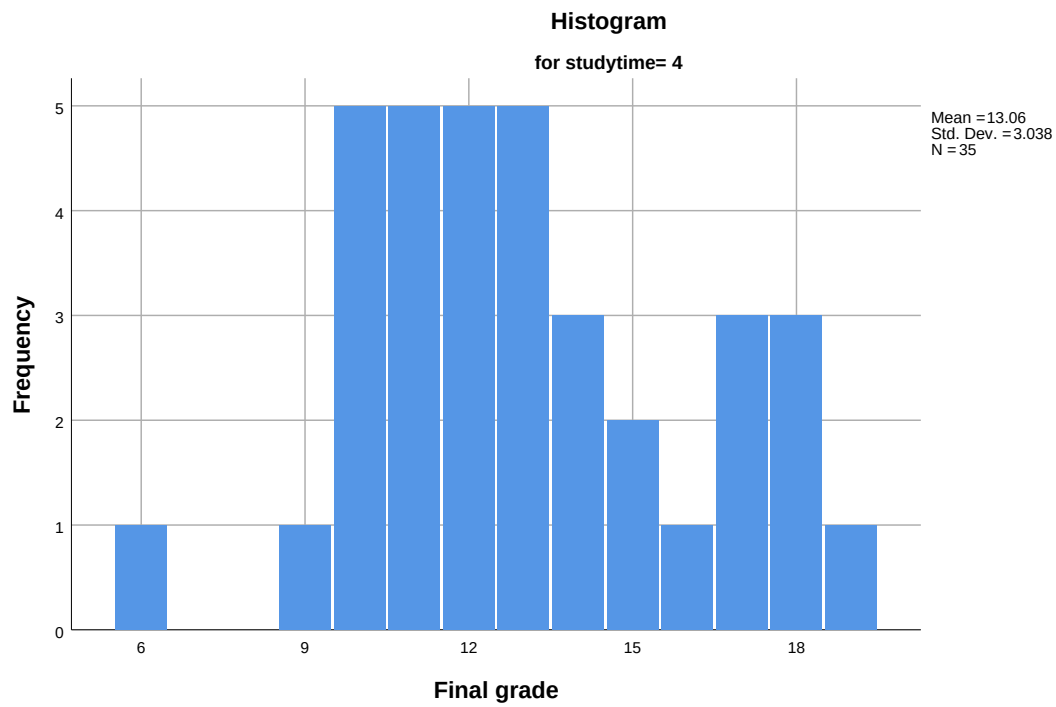
Histograms



Group spread plots
G3 by studytime



Group spread plots
G3 by studytime



Cochrans C group table

Cochrans C group table
Variance shares

List

[CochranGroups] D:\DATA ANALYSIS\B Normality and Assumption Tests\Cochrans C T
est\SPSS_Output\temp\cochran_groups.sav

>Error # 13007 in column 10. Text: ALL

>The CASES subcommand specification is incorrect. A number must follow FROM,
>T0, or BY.

>Execution of this command stops.

Cochrans C result

Cochrans C result
Largest variance

List

Cochrans C result
Largest variance

number_of_groups	total_n	min_n	max_n	sum_variance	max_variance	cochran_c
4	649.00	35	305	36.36986	10.51786	.28919

Number of cases read: 1 Number of cases listed: 1

>Warning # 67. Command name: GET FILE

>The document is already in use by another user or process. If you make
>changes to the document they may overwrite changes made by others or your
>changes may be overwritten by others.

>File opened D:\DATA ANALYSIS\B Normality and Assumption Tests\Cochrans C Test
\SPSS_Output\sav\Cochran-C-Test-data.sav

Dataset Name

Warnings

The active dataset will replace the existing dataset named
CochranCData2.

Levene comparison

Levene comparison
Homogeneity context

Oneway

[CochranCData2]

Descriptives

G3

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum
					Lower Bound	Upper Bound	
1	212	10.84	3.219	.221	10.41	11.28	0
2	305	12.09	3.243	.186	11.73	12.46	0
3	97	13.23	2.502	.254	12.72	13.73	8
4	35	13.06	3.038	.514	12.01	14.10	6
Total	649	11.91	3.231	.127	11.66	12.16	0

Descriptives

G3

	Maximum
1	18
2	19
3	18
4	19
Total	19

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
G3	Based on Mean	.985	3	645	.400
	Based on Median	1.026	3	645	.380
	Based on Median and with adjusted df	1.026	3	609.885	.380
	Based on trimmed mean	1.081	3	645	.356

Levene comparison
Homogeneity context

ANOVA

G3

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	465.078	3	155.026	15.876	.000
Within Groups	6298.189	645	9.765		
Total	6763.267	648			

Normality context

Normality context
Cochran assumption

Explore

Study time group

Case Processing Summary

		Valid		Cases Missing		Total	
	studytime	N	Percent	N	Percent	N	Percent
G3	1	212	100.0%	0	0.0%	212	100.0%
	2	305	100.0%	0	0.0%	305	100.0%
	3	97	100.0%	0	0.0%	97	100.0%
	4	35	100.0%	0	0.0%	35	100.0%

Descriptives

studytime			Statistic	Std. Error
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		95% Confidence Interval for Mean	Lower Bound	10.41
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		5% Trimmed Mean	11.04	
		Median	11.00	
		Variance	10.360	
		Std. Deviation	3.219	
		Minimum	0	
		Maximum	18	
		Range	18	
		Interquartile Range	3	
		Skewness	-1.078	.167
		Kurtosis	3.117	.333
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		5% Trimmed Mean	12.25	
		Median	12.00	
		Variance	10.518	
		Std. Deviation	3.243	

Normality context
Cochran assumption

Descriptives

studytime		Statistic	Std. Error
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	Maximum	19	
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	Skewness	.209	.398
	Kurtosis	-.339	.778

Normality context
Cochran assumption

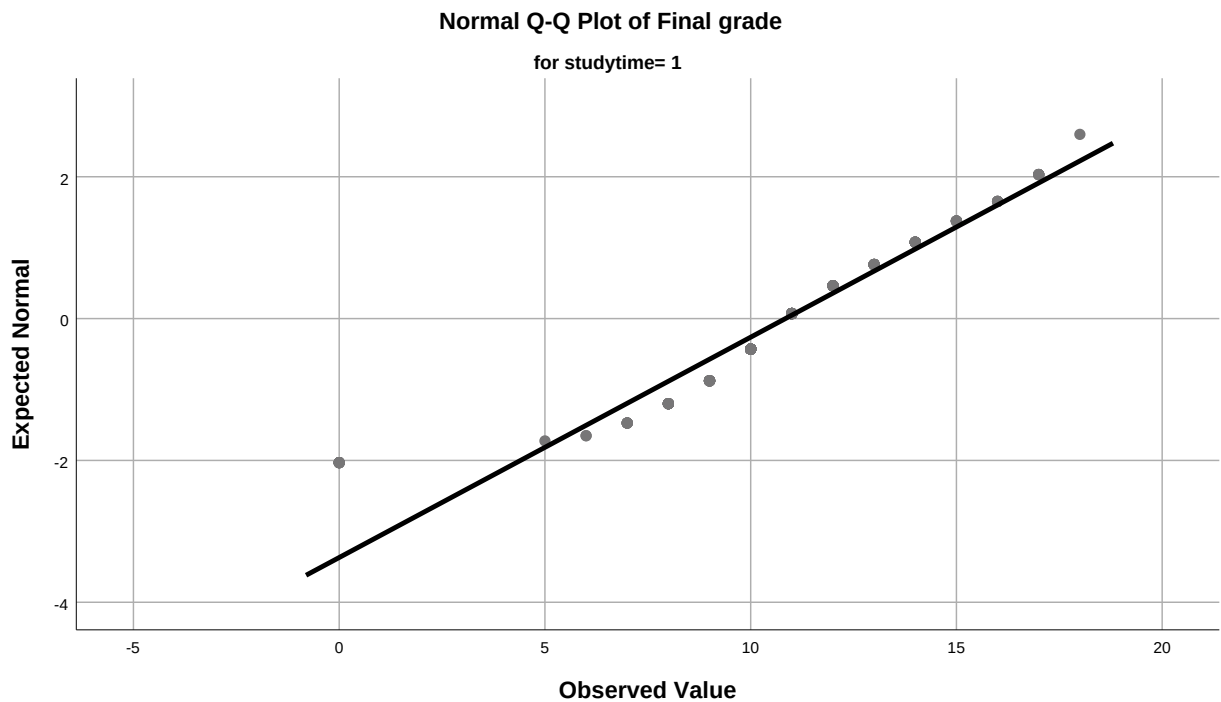
Tests of Normality

		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	studytime	Statistic	df	Sig.	Statistic	df	Sig.
G3	1	.161	212	.000	.898	212	.000
	2	.125	305	.000	.917	305	.000
	3	.103	97	.013	.970	97	.025
	4	.136	35	.099	.955	35	.166

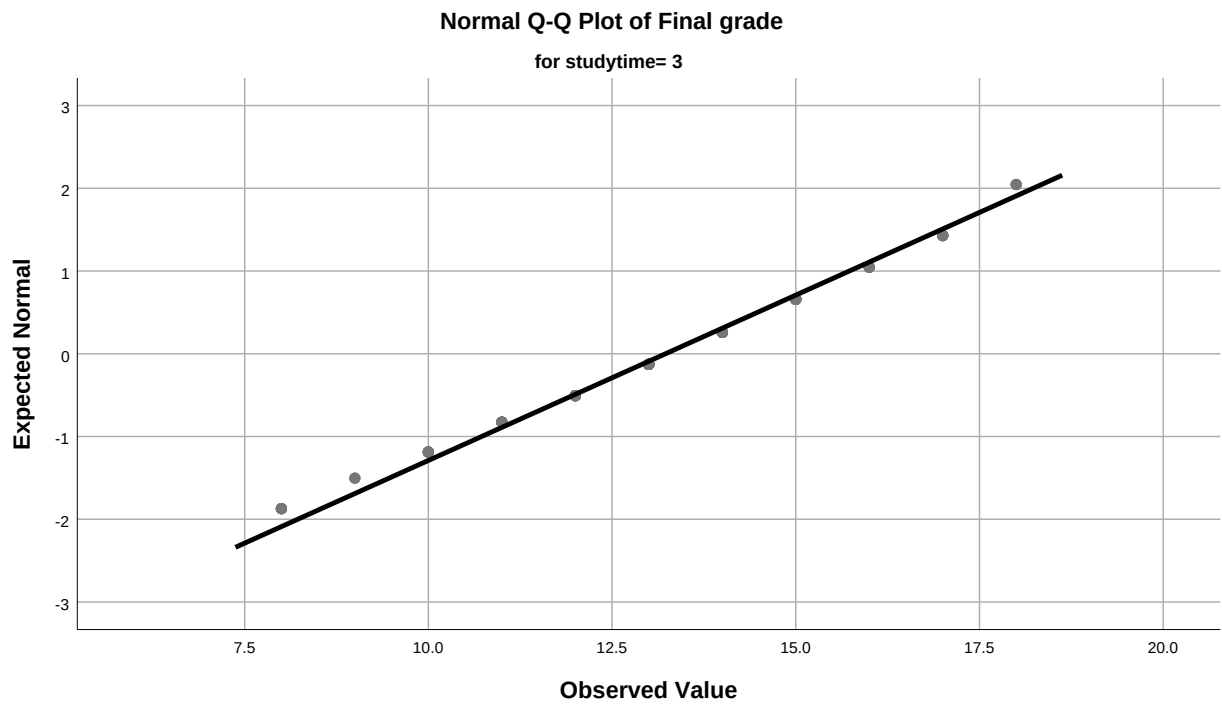
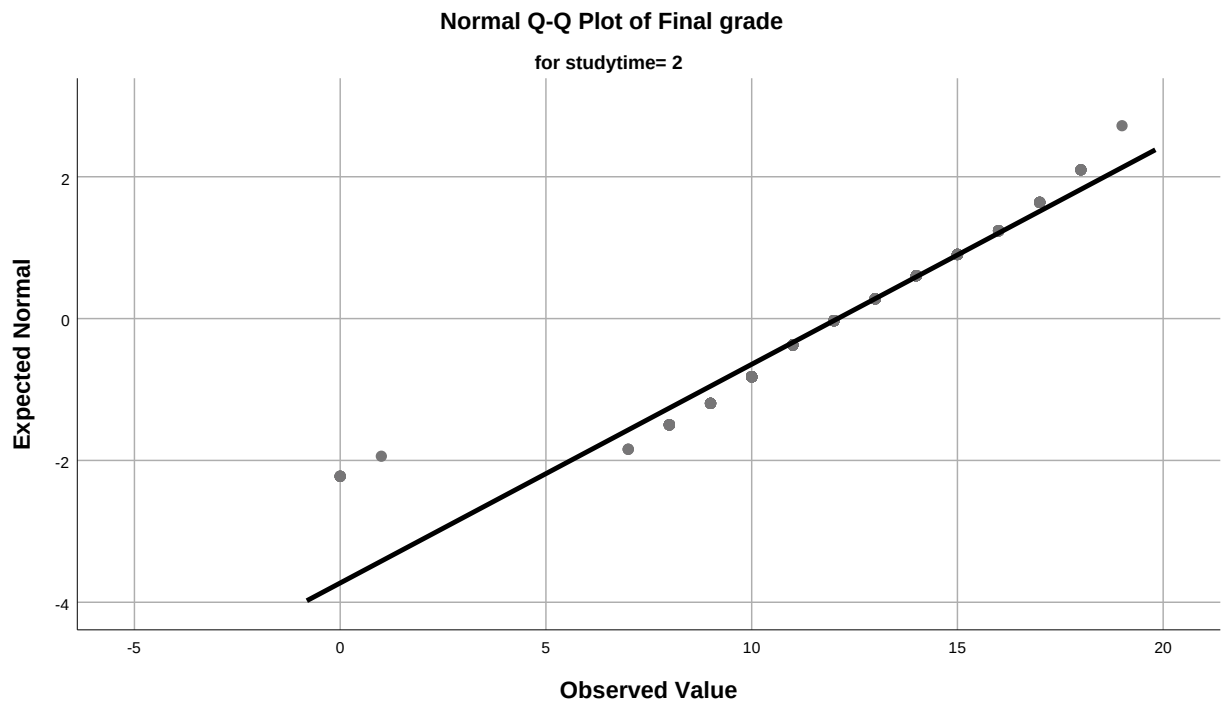
a. Lilliefors Significance Correction

Final grade

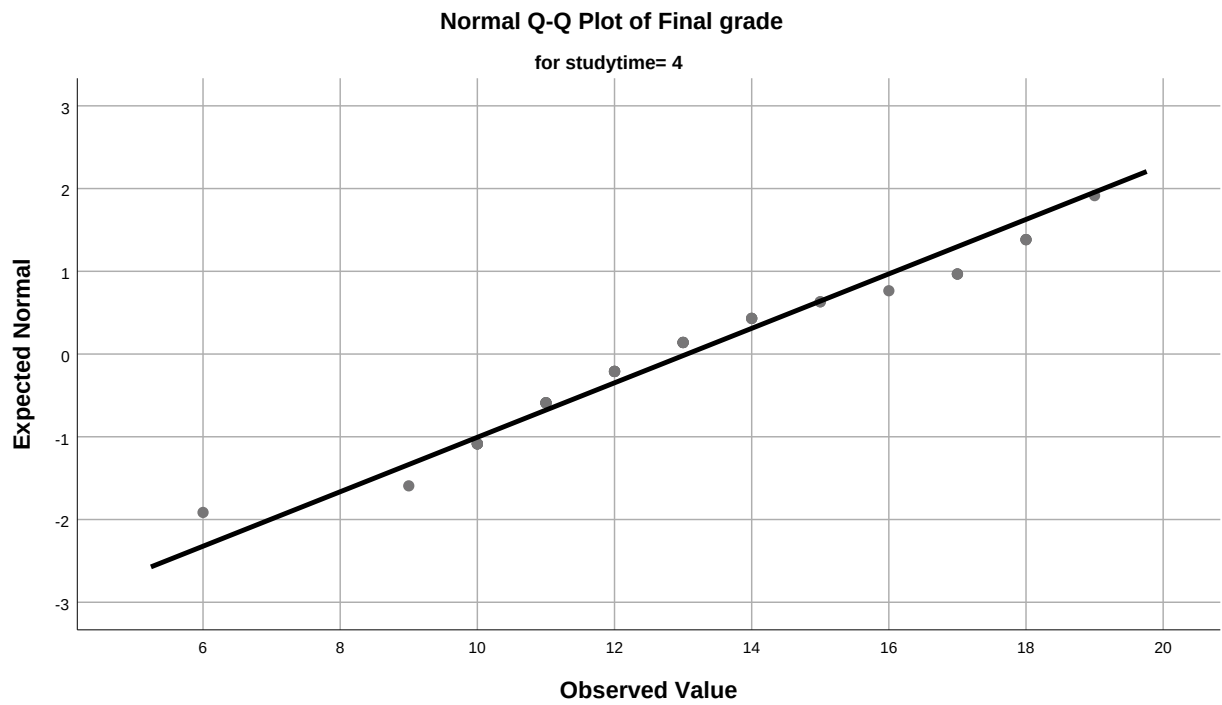
Normal Q-Q Plots



Normality context
Cochran assumption

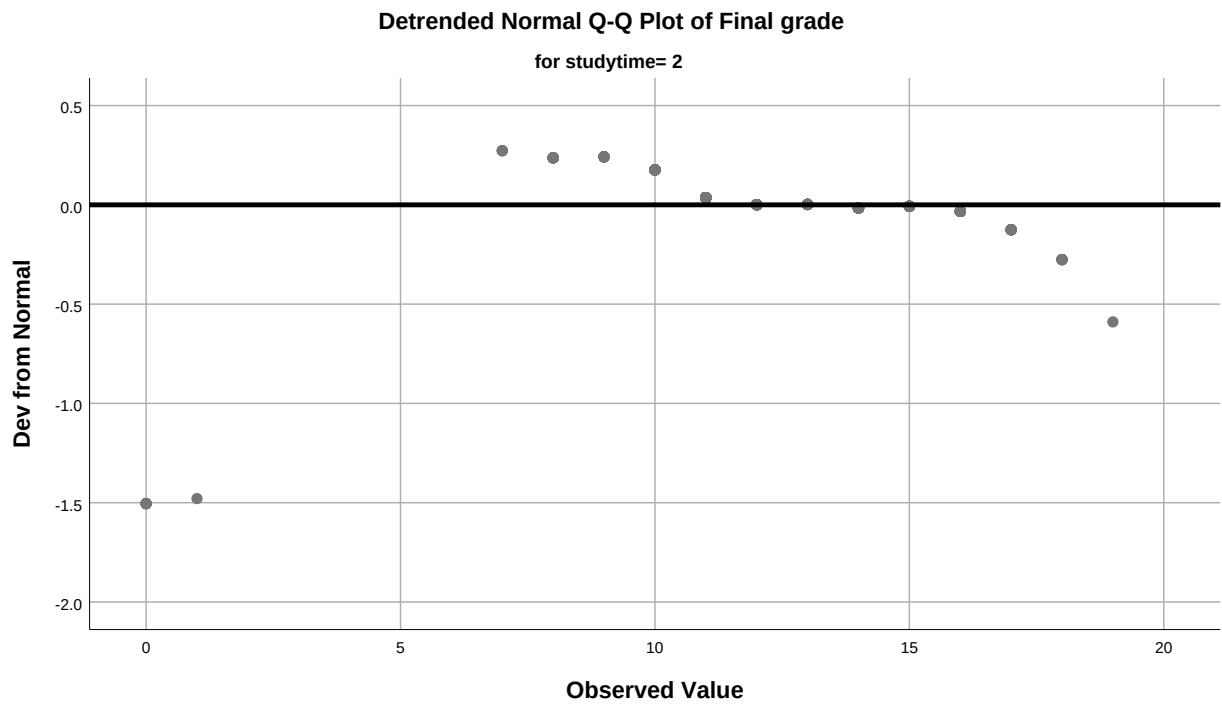
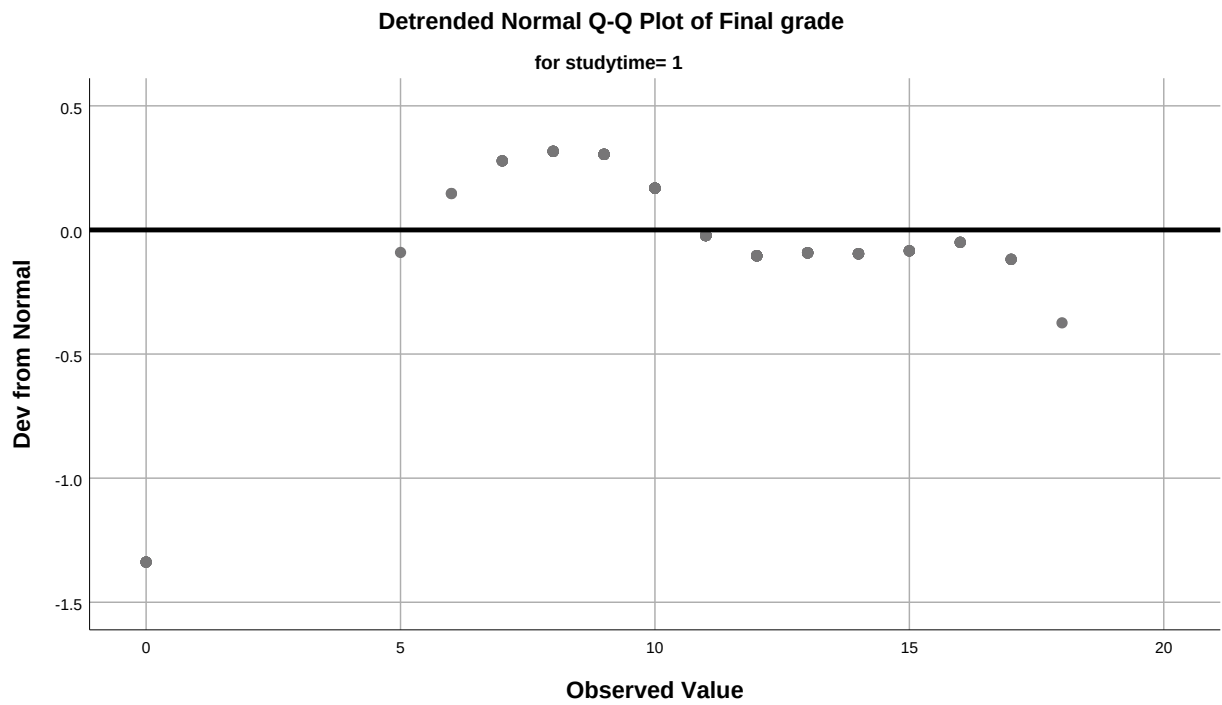


Normality context
Cochran assumption



Detrended Normal Q-Q Plots

Normality context
Cochran assumption



Normality context
Cochran assumption

