

Host

Host

Host

Host

Correlation in SPSS

Correlation in SPSS
Import dataset from the Correlation in SPSS folder

Correlation in SPSS - Descriptive Statistics

Correlation in SPSS - Descriptive Statistics
 Numeric variables used in the Pearson correlation analysis

Descriptives

[CorrelationSPSSData] D:\DATA ANALYSIS\G Correlation Tests\Correlation in SPSS
 \SPSS_Output\sav\Correlation-in-SPSS-data.sav

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Student age	649	15	22	16.74	1.218
Mother education level	649	0	4	2.51	1.135
Father education level	649	0	4	2.31	1.100
Home to school travel time	649	1	4	1.57	.749
Weekly study time	649	1	4	1.93	.830
Number of past class failures	649	0	3	.22	.593
Family relationship quality	649	1	5	3.93	.956
Free time after school	649	1	5	3.18	1.051
Going out with friends	649	1	5	3.18	1.176
Workday alcohol consumption	649	1	5	1.50	.925
Weekend alcohol consumption	649	1	5	2.28	1.284
Current health status	649	1	5	3.54	1.446
School absences	649	0	32	3.66	4.641
First period grade	649	0	19	11.40	2.745
Second period grade	649	0	19	11.57	2.914
Final grade / main outcome variable	649	0	19	11.91	3.231
Valid N (listwise)	649				

Correlation in SPSS - Distribution and Normality Context

```
>Warning # 2004.  Command name: SUBTITLE  
>The subtitle given exceeds 60 characters in length.  The first 60 characters  
>will be used.
```

Correlation in SPSS - Distribution and Normality Context
 Histograms, normal Q-Q plots, and descriptive output for key

Explore

Case Processing Summary

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
First period grade	649	100.0%	0	0.0%	649	100.0%
Second period grade	649	100.0%	0	0.0%	649	100.0%
Final grade / main outcome variable	649	100.0%	0	0.0%	649	100.0%

Descriptives

		Statistic	Std. Error	
First period grade	Mean	11.40	.108	
	95% Confidence Interval for Mean	Lower Bound	11.19	
		Upper Bound	11.61	
	5% Trimmed Mean	11.39		
	Median	11.00		
	Variance	7.536		
	Std. Deviation	2.745		
	Minimum	0		
	Maximum	19		
	Range	19		
	Interquartile Range	3		
	Skewness	-.003	.096	
	Kurtosis	.037	.192	
Second period grade	Mean	11.57	.114	
	95% Confidence Interval for Mean	Lower Bound	11.35	
		Upper Bound	11.79	
	5% Trimmed Mean	11.60		
	Median	11.00		
	Variance	8.489		
	Std. Deviation	2.914		
	Minimum	0		
	Maximum	19		

Correlation in SPSS - Distribution and Normality Context
Histograms, normal Q-Q plots, and descriptive output for key

Descriptives

		Statistic	Std. Error	
	Range	19		
	Interquartile Range	3		
	Skewness	-.360	.096	
	Kurtosis	1.662	.192	
Final grade / main outcome variable	Mean	11.91	.127	
	95% Confidence Interval for Mean	Lower Bound	11.66	
		Upper Bound	12.16	
	5% Trimmed Mean	12.06		
	Median	12.00		
	Variance	10.437		
	Std. Deviation	3.231		
	Minimum	0		
	Maximum	19		
	Range	19		
	Interquartile Range	4		
	Skewness	-.913	.096	
	Kurtosis	2.712	.192	

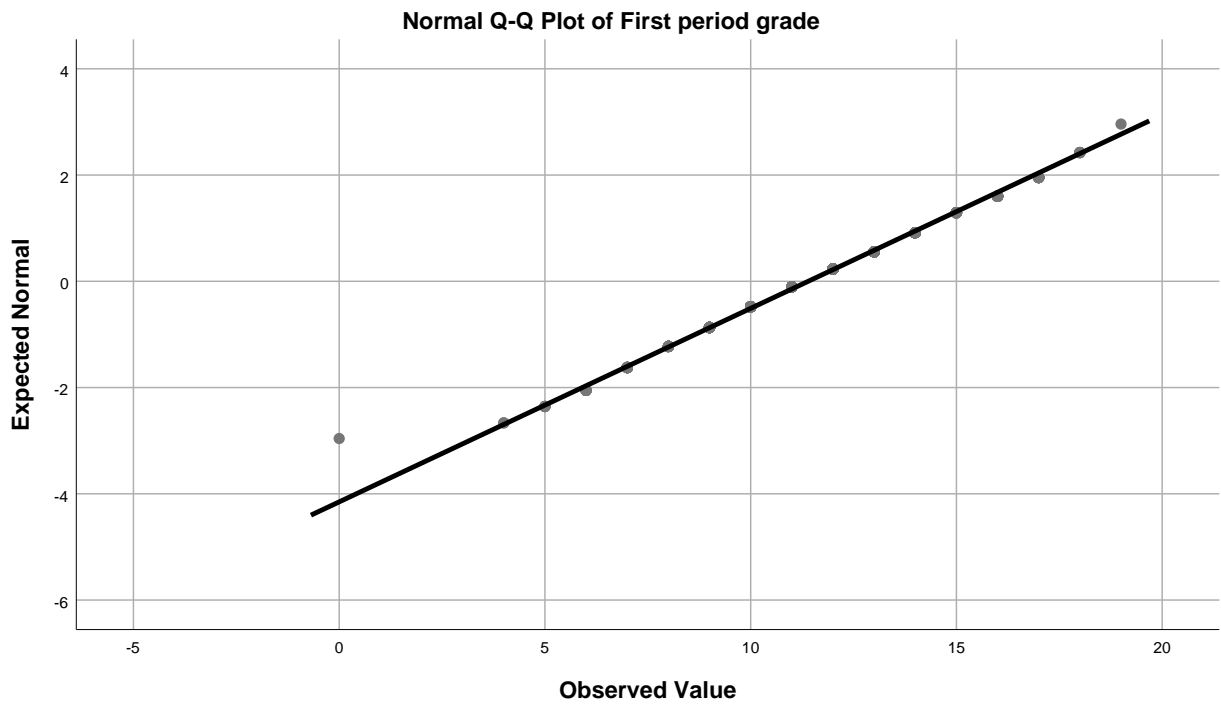
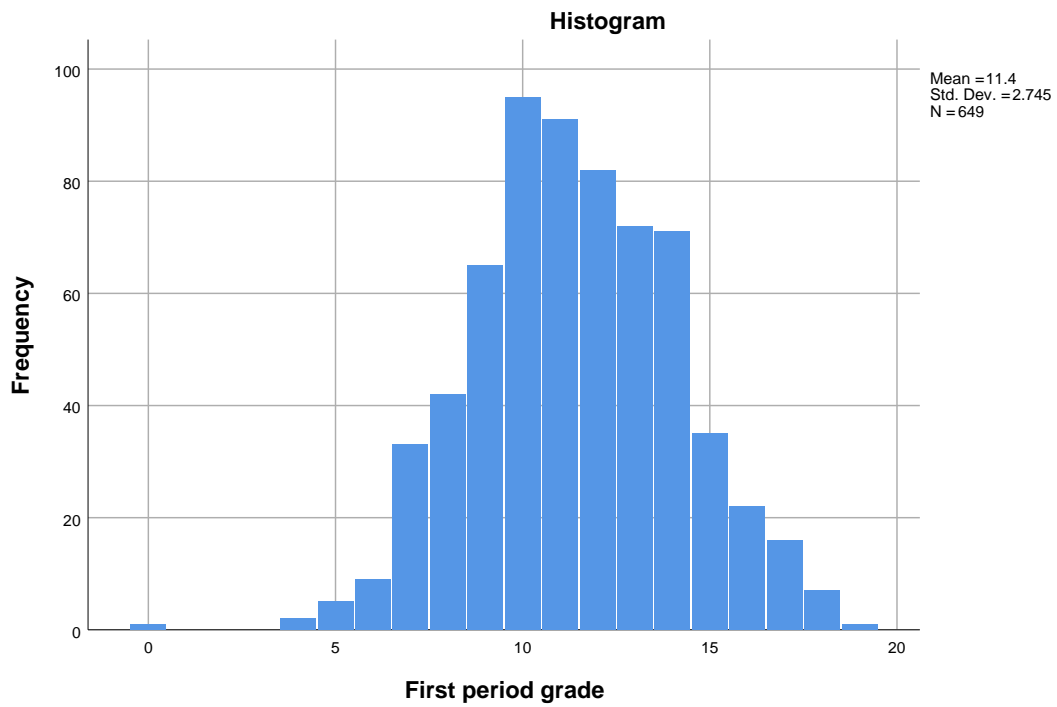
Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
First period grade	.086	649	.000	.986	649	.000
Second period grade	.088	649	.000	.962	649	.000
Final grade / main outcome variable	.124	649	.000	.926	649	.000

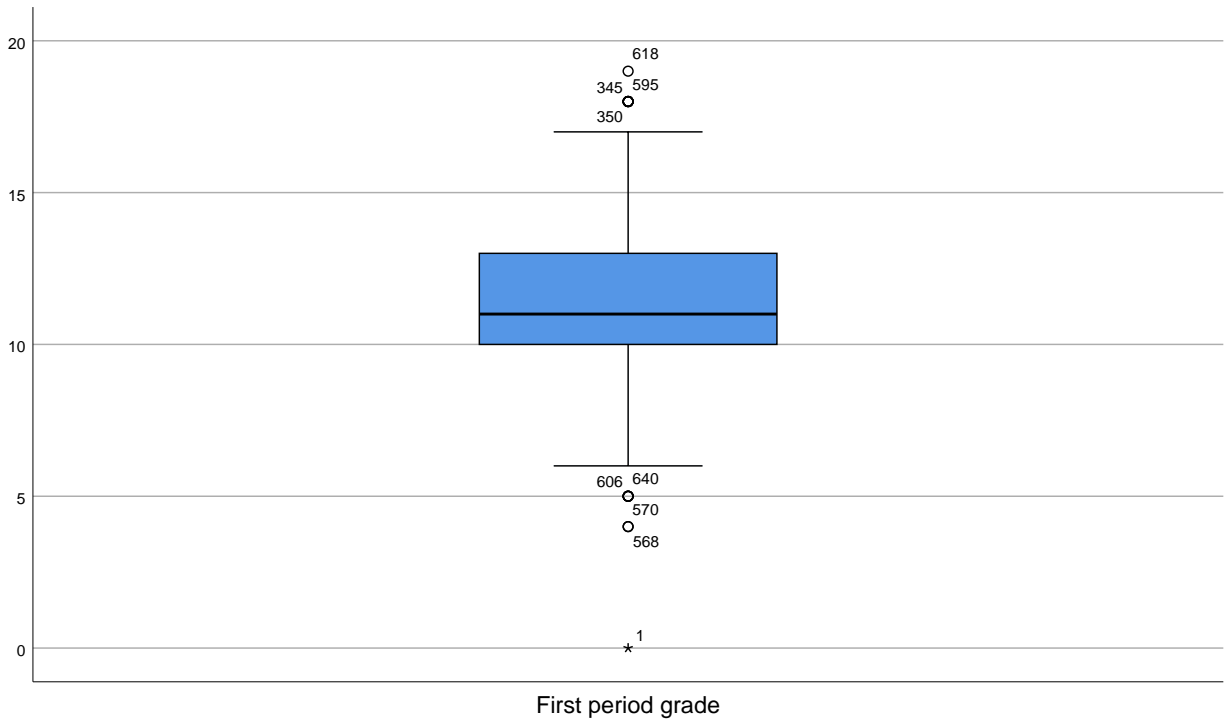
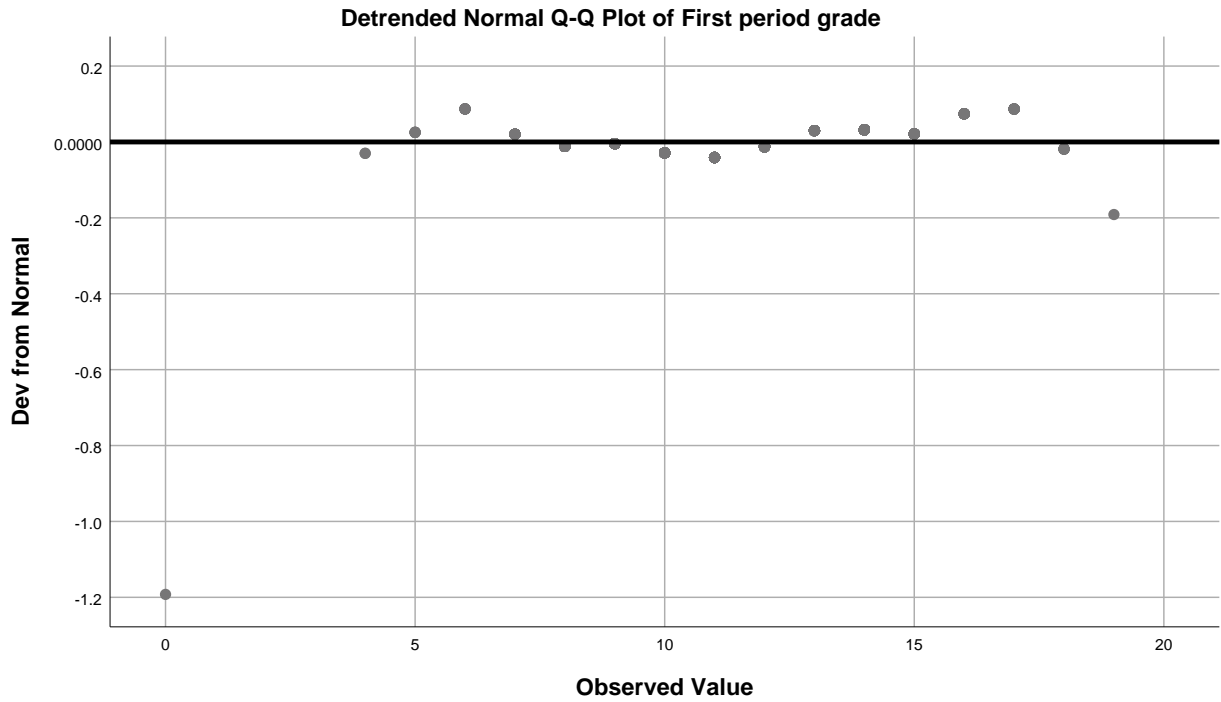
a. Lilliefors Significance Correction

First period grade

Correlation in SPSS - Distribution and Normality Context
Histograms, normal Q-Q plots, and descriptive output for key

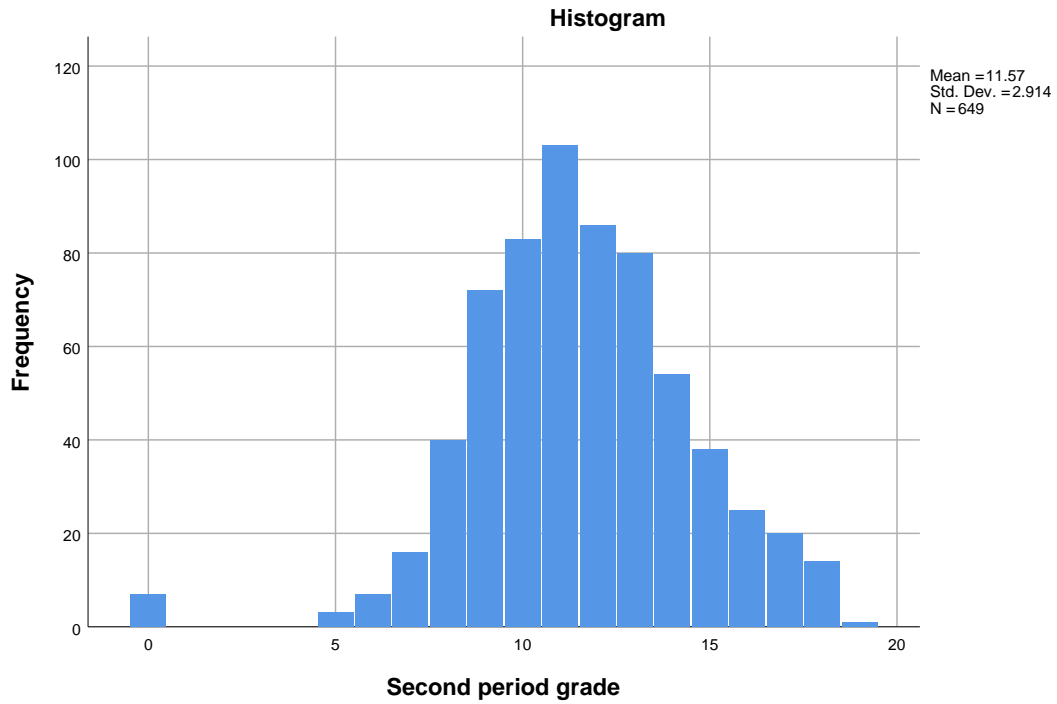


Correlation in SPSS - Distribution and Normality Context
Histograms, normal Q-Q plots, and descriptive output for key

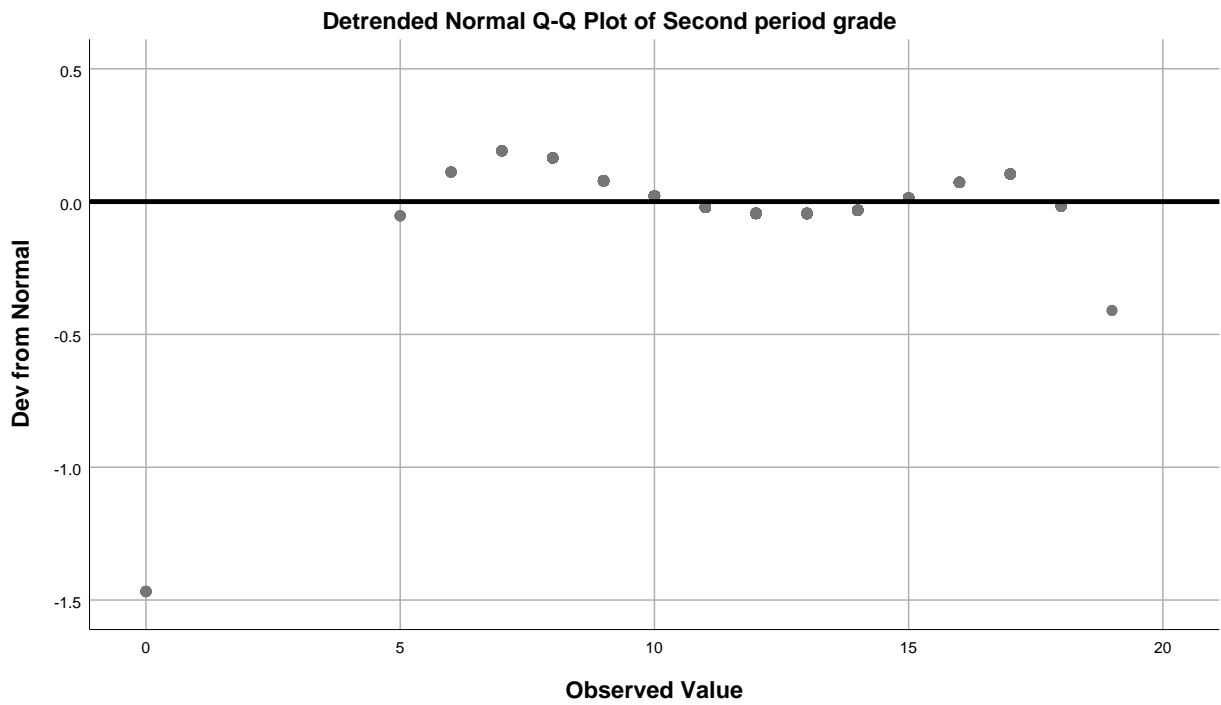
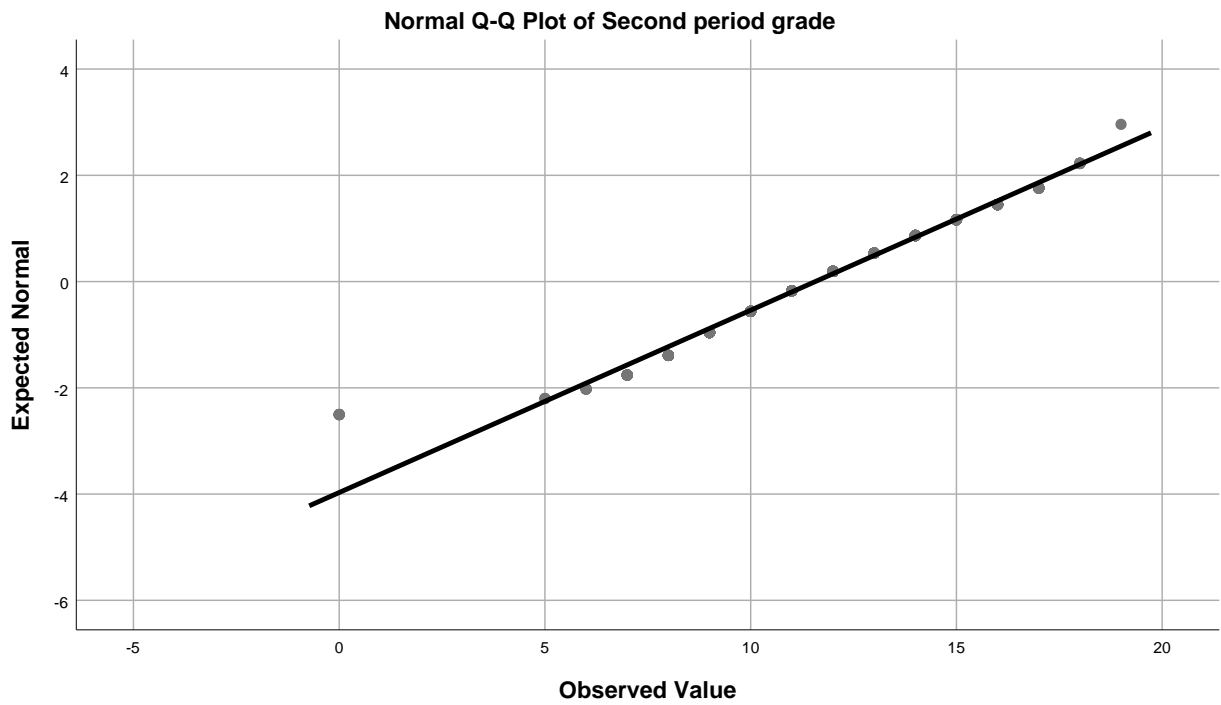


Correlation in SPSS - Distribution and Normality Context
Histograms, normal Q-Q plots, and descriptive output for key

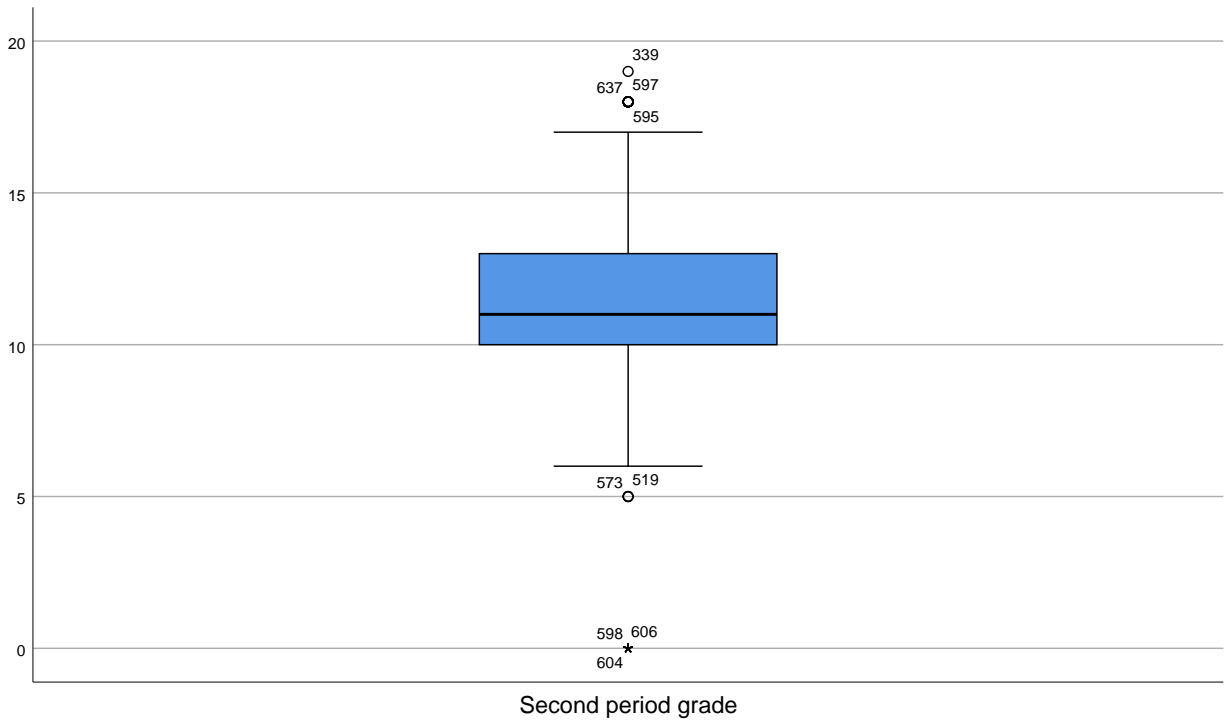
Second period grade



Correlation in SPSS - Distribution and Normality Context
Histograms, normal Q-Q plots, and descriptive output for key

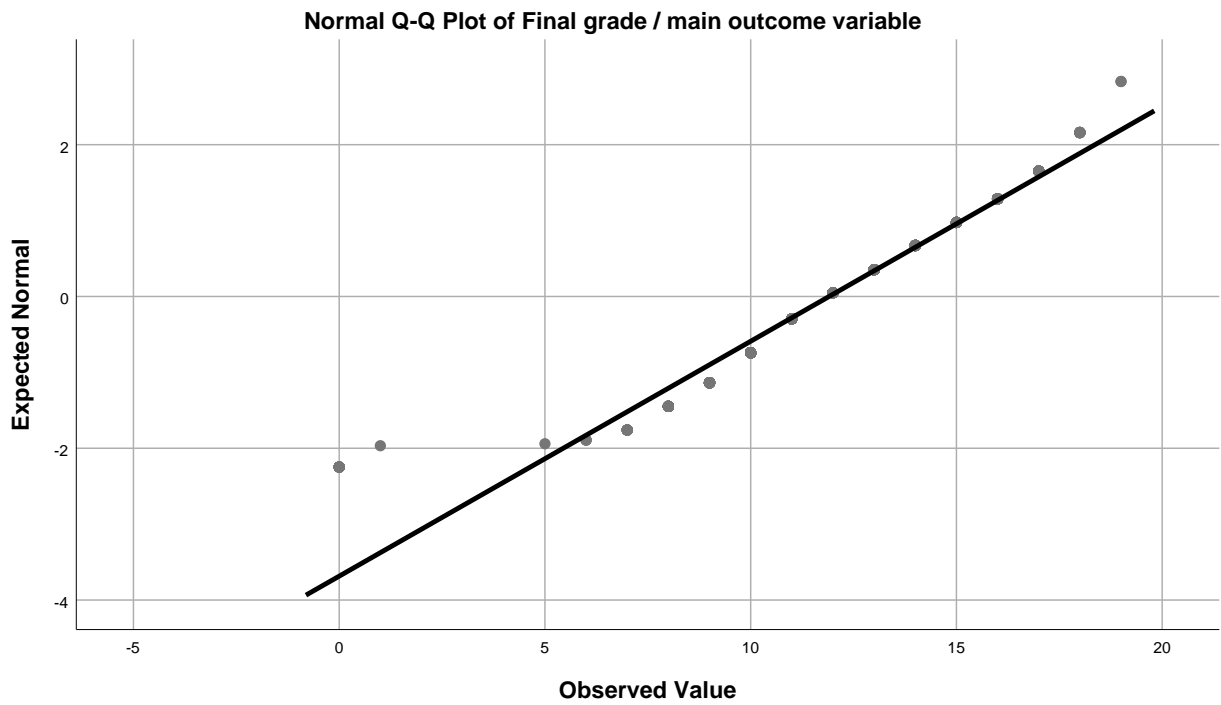
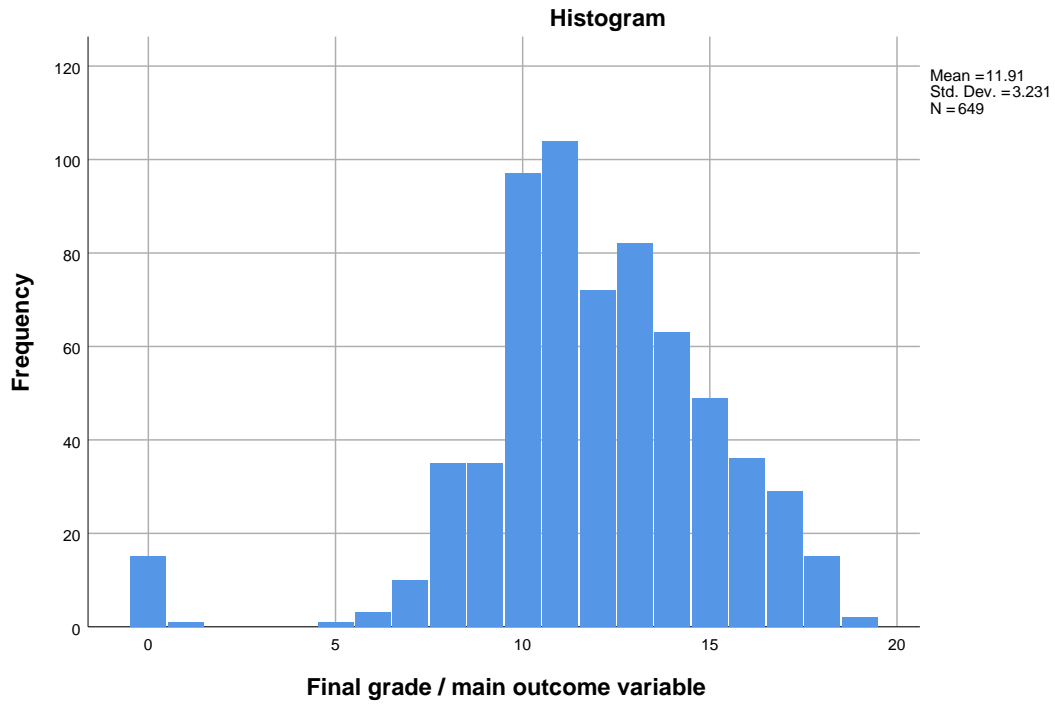


Correlation in SPSS - Distribution and Normality Context
Histograms, normal Q-Q plots, and descriptive output for key

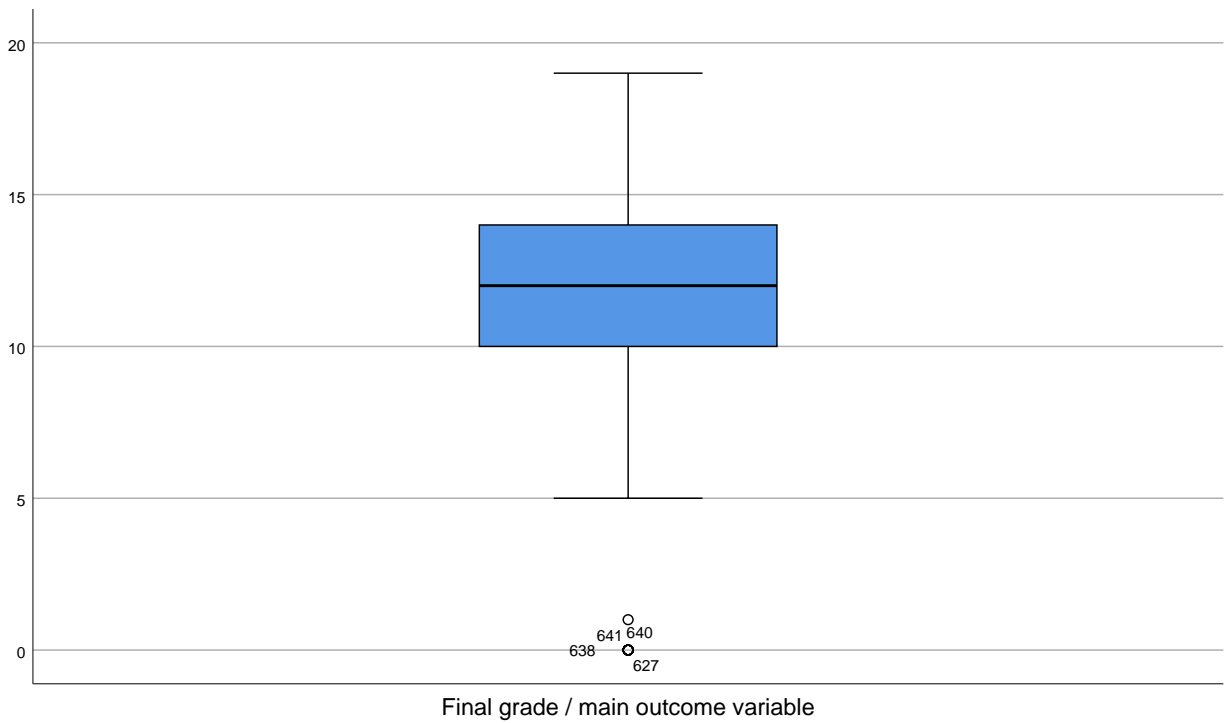
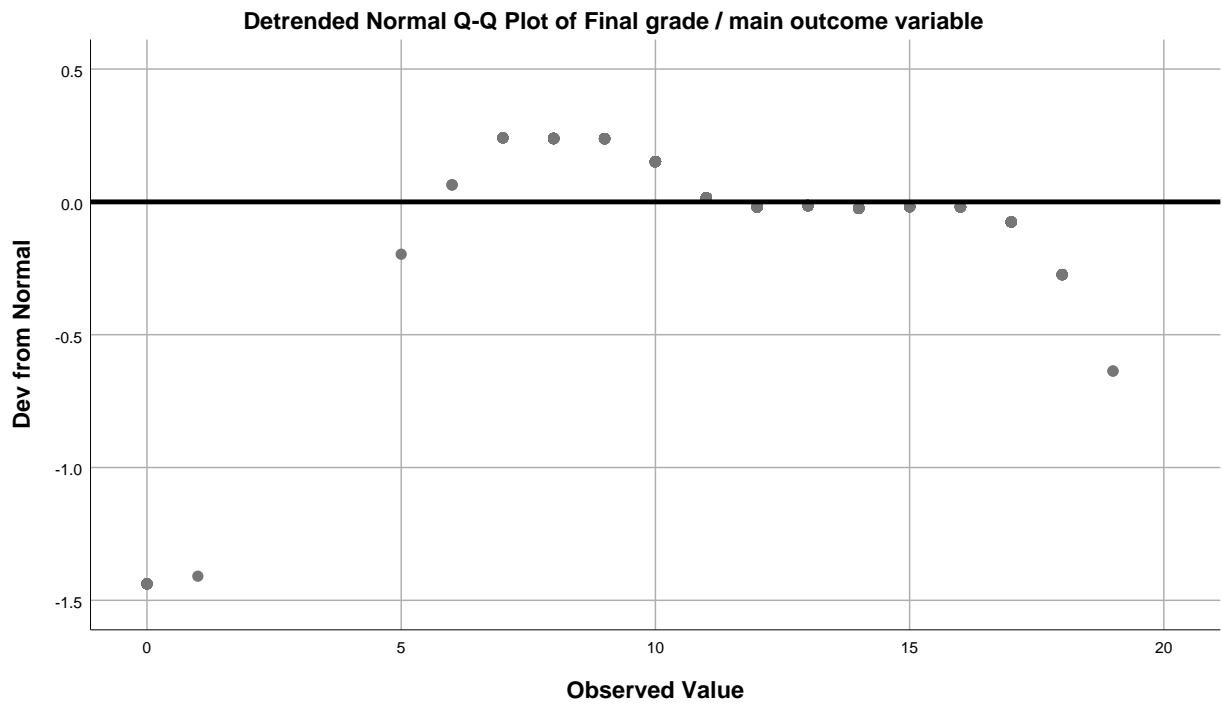


Final grade / main outcome variable

Correlation in SPSS - Distribution and Normality Context
Histograms, normal Q-Q plots, and descriptive output for key



Correlation in SPSS - Distribution and Normality Context
Histograms, normal Q-Q plots, and descriptive output for key



Correlation in SPSS - Pearson Correlation Matrix

Correlation in SPSS - Pearson Correlation Matrix
Two-tailed Pearson correlations among all numeric variables

Correlations

Correlations

		Student age	Mother education level	Father education level
Student age	Pearson Correlation	1	-.108	-.121
	Sig. (2-tailed)		.006	.002
	N	649	649	649
Mother education level	Pearson Correlation	-.108	1	.647
	Sig. (2-tailed)	.006		.000
	N	649	649	649
Father education level	Pearson Correlation	-.121	.647	1
	Sig. (2-tailed)	.002	.000	
	N	649	649	649
Home to school travel time	Pearson Correlation	.034	-.265	-.208
	Sig. (2-tailed)	.380	.000	.000
	N	649	649	649
Weekly study time	Pearson Correlation	-.008	.097	.050
	Sig. (2-tailed)	.831	.013	.200
	N	649	649	649
Number of past class failures	Pearson Correlation	.320	-.172	-.166
	Sig. (2-tailed)	.000	.000	.000
	N	649	649	649
Family relationship quality	Pearson Correlation	-.021	.024	.020
	Sig. (2-tailed)	.601	.535	.606
	N	649	649	649
Free time after school	Pearson Correlation	-.005	-.020	.007
	Sig. (2-tailed)	.901	.617	.862
	N	649	649	649
Going out with friends	Pearson Correlation	.113	.010	.028
	Sig. (2-tailed)	.004	.808	.481
	N	649	649	649

Correlation in SPSS - Pearson Correlation Matrix
Two-tailed Pearson correlations among all numeric variables

Correlations

		Home to school travel time	Weekly study time	Number of past class failures
Student age	Pearson Correlation	.034	-.008	.320
	Sig. (2-tailed)	.380	.831	.000
	N	649	649	649
Mother education level	Pearson Correlation	-.265	.097	-.172
	Sig. (2-tailed)	.000	.013	.000
	N	649	649	649
Father education level	Pearson Correlation	-.208	.050	-.166
	Sig. (2-tailed)	.000	.200	.000
	N	649	649	649
Home to school travel time	Pearson Correlation	1	-.063	.098
	Sig. (2-tailed)		.108	.013
	N	649	649	649
Weekly study time	Pearson Correlation	-.063	1	-.147
	Sig. (2-tailed)	.108		.000
	N	649	649	649
Number of past class failures	Pearson Correlation	.098	-.147	1
	Sig. (2-tailed)	.013	.000	
	N	649	649	649
Family relationship quality	Pearson Correlation	-.010	-.004	-.063
	Sig. (2-tailed)	.809	.916	.111
	N	649	649	649
Free time after school	Pearson Correlation	.001	-.069	.109
	Sig. (2-tailed)	.981	.080	.005
	N	649	649	649
Going out with friends	Pearson Correlation	.057	-.075	.045
	Sig. (2-tailed)	.144	.055	.251
	N	649	649	649

Correlation in SPSS - Pearson Correlation Matrix
Two-tailed Pearson correlations among all numeric variables

Correlations

		Family relationship quality	Free time after school	Going out with friends
Student age	Pearson Correlation	-.021	-.005	.113
	Sig. (2-tailed)	.601	.901	.004
	N	649	649	649
Mother education level	Pearson Correlation	.024	-.020	.010
	Sig. (2-tailed)	.535	.617	.808
	N	649	649	649
Father education level	Pearson Correlation	.020	.007	.028
	Sig. (2-tailed)	.606	.862	.481
	N	649	649	649
Home to school travel time	Pearson Correlation	-.010	.001	.057
	Sig. (2-tailed)	.809	.981	.144
	N	649	649	649
Weekly study time	Pearson Correlation	-.004	-.069	-.075
	Sig. (2-tailed)	.916	.080	.055
	N	649	649	649
Number of past class failures	Pearson Correlation	-.063	.109	.045
	Sig. (2-tailed)	.111	.005	.251
	N	649	649	649
Family relationship quality	Pearson Correlation	1	.129	.090
	Sig. (2-tailed)		.001	.022
	N	649	649	649
Free time after school	Pearson Correlation	.129	1	.346
	Sig. (2-tailed)	.001		.000
	N	649	649	649
Going out with friends	Pearson Correlation	.090	.346	1
	Sig. (2-tailed)	.022	.000	
	N	649	649	649

Correlation in SPSS - Pearson Correlation Matrix
Two-tailed Pearson correlations among all numeric variables

Correlations

		Workday alcohol consumption	Weekend alcohol consumption	Current health status
Student age	Pearson Correlation	.135	.086	-.009
	Sig. (2-tailed)	.001	.028	.824
	N	649	649	649
Mother education level	Pearson Correlation	-.007	-.020	.005
	Sig. (2-tailed)	.858	.615	.907
	N	649	649	649
Father education level	Pearson Correlation	.000	.038	.045
	Sig. (2-tailed)	.999	.328	.253
	N	649	649	649
Home to school travel time	Pearson Correlation	.093	.057	-.048
	Sig. (2-tailed)	.018	.147	.220
	N	649	649	649
Weekly study time	Pearson Correlation	-.138	-.215	-.056
	Sig. (2-tailed)	.000	.000	.151
	N	649	649	649
Number of past class failures	Pearson Correlation	.106	.082	.036
	Sig. (2-tailed)	.007	.036	.365
	N	649	649	649
Family relationship quality	Pearson Correlation	-.076	-.094	.110
	Sig. (2-tailed)	.054	.017	.005
	N	649	649	649
Free time after school	Pearson Correlation	.110	.120	.085
	Sig. (2-tailed)	.005	.002	.031
	N	649	649	649
Going out with friends	Pearson Correlation	.245	.389	-.016
	Sig. (2-tailed)	.000	.000	.689
	N	649	649	649

Correlation in SPSS - Pearson Correlation Matrix
Two-tailed Pearson correlations among all numeric variables

Correlations

		School absences	First period grade	Second period grade
Student age	Pearson Correlation	.150	-.174	-.107
	Sig. (2-tailed)	.000	.000	.006
	N	649	649	649
Mother education level	Pearson Correlation	-.009	.260	.264
	Sig. (2-tailed)	.827	.000	.000
	N	649	649	649
Father education level	Pearson Correlation	.030	.218	.225
	Sig. (2-tailed)	.448	.000	.000
	N	649	649	649
Home to school travel time	Pearson Correlation	-.008	-.154	-.154
	Sig. (2-tailed)	.836	.000	.000
	N	649	649	649
Weekly study time	Pearson Correlation	-.118	.261	.240
	Sig. (2-tailed)	.003	.000	.000
	N	649	649	649
Number of past class failures	Pearson Correlation	.123	-.384	-.386
	Sig. (2-tailed)	.002	.000	.000
	N	649	649	649
Family relationship quality	Pearson Correlation	-.090	.049	.090
	Sig. (2-tailed)	.023	.214	.022
	N	649	649	649
Free time after school	Pearson Correlation	-.019	-.094	-.107
	Sig. (2-tailed)	.634	.016	.007
	N	649	649	649
Going out with friends	Pearson Correlation	.085	-.074	-.079
	Sig. (2-tailed)	.030	.059	.043
	N	649	649	649

Correlation in SPSS - Pearson Correlation Matrix
Two-tailed Pearson correlations among all numeric variables

Correlations

		Final grade / main outcome variable
Student age	Pearson Correlation	-.107
	Sig. (2-tailed)	.007
	N	649
Mother education level	Pearson Correlation	.240
	Sig. (2-tailed)	.000
	N	649
Father education level	Pearson Correlation	.212
	Sig. (2-tailed)	.000
	N	649
Home to school travel time	Pearson Correlation	-.127
	Sig. (2-tailed)	.001
	N	649
Weekly study time	Pearson Correlation	.250
	Sig. (2-tailed)	.000
	N	649
Number of past class failures	Pearson Correlation	-.393
	Sig. (2-tailed)	.000
	N	649
Family relationship quality	Pearson Correlation	.063
	Sig. (2-tailed)	.107
	N	649
Free time after school	Pearson Correlation	-.123
	Sig. (2-tailed)	.002
	N	649
Going out with friends	Pearson Correlation	-.088
	Sig. (2-tailed)	.026
	N	649

Correlation in SPSS - Pearson Correlation Matrix
Two-tailed Pearson correlations among all numeric variables

Correlations

		Student age	Mother education level	Father education level
Workday alcohol consumption	Pearson Correlation	.135	-.007	.000
	Sig. (2-tailed)	.001	.858	.999
	N	649	649	649
Weekend alcohol consumption	Pearson Correlation	.086	-.020	.038
	Sig. (2-tailed)	.028	.615	.328
	N	649	649	649
Current health status	Pearson Correlation	-.009	.005	.045
	Sig. (2-tailed)	.824	.907	.253
	N	649	649	649
School absences	Pearson Correlation	.150	-.009	.030
	Sig. (2-tailed)	.000	.827	.448
	N	649	649	649
First period grade	Pearson Correlation	-.174	.260	.218
	Sig. (2-tailed)	.000	.000	.000
	N	649	649	649
Second period grade	Pearson Correlation	-.107	.264	.225
	Sig. (2-tailed)	.006	.000	.000
	N	649	649	649
Final grade / main outcome variable	Pearson Correlation	-.107	.240	.212
	Sig. (2-tailed)	.007	.000	.000
	N	649	649	649

Correlation in SPSS - Pearson Correlation Matrix
Two-tailed Pearson correlations among all numeric variables

Correlations

		Home to school travel time	Weekly study time	Number of past class failures
Workday alcohol consumption	Pearson Correlation	.093	-.138	.106
	Sig. (2-tailed)	.018	.000	.007
	N	649	649	649
Weekend alcohol consumption	Pearson Correlation	.057	-.215	.082
	Sig. (2-tailed)	.147	.000	.036
	N	649	649	649
Current health status	Pearson Correlation	-.048	-.056	.036
	Sig. (2-tailed)	.220	.151	.365
	N	649	649	649
School absences	Pearson Correlation	-.008	-.118	.123
	Sig. (2-tailed)	.836	.003	.002
	N	649	649	649
First period grade	Pearson Correlation	-.154	.261	-.384
	Sig. (2-tailed)	.000	.000	.000
	N	649	649	649
Second period grade	Pearson Correlation	-.154	.240	-.386
	Sig. (2-tailed)	.000	.000	.000
	N	649	649	649
Final grade / main outcome variable	Pearson Correlation	-.127	.250	-.393
	Sig. (2-tailed)	.001	.000	.000
	N	649	649	649

Correlation in SPSS - Pearson Correlation Matrix
Two-tailed Pearson correlations among all numeric variables

Correlations

		Family relationship quality	Free time after school	Going out with friends
Workday alcohol consumption	Pearson Correlation	-.076	.110	.245
	Sig. (2-tailed)	.054	.005	.000
	N	649	649	649
Weekend alcohol consumption	Pearson Correlation	-.094	.120	.389
	Sig. (2-tailed)	.017	.002	.000
	N	649	649	649
Current health status	Pearson Correlation	.110	.085	-.016
	Sig. (2-tailed)	.005	.031	.689
	N	649	649	649
School absences	Pearson Correlation	-.090	-.019	.085
	Sig. (2-tailed)	.023	.634	.030
	N	649	649	649
First period grade	Pearson Correlation	.049	-.094	-.074
	Sig. (2-tailed)	.214	.016	.059
	N	649	649	649
Second period grade	Pearson Correlation	.090	-.107	-.079
	Sig. (2-tailed)	.022	.007	.043
	N	649	649	649
Final grade / main outcome variable	Pearson Correlation	.063	-.123	-.088
	Sig. (2-tailed)	.107	.002	.026
	N	649	649	649

Correlation in SPSS - Pearson Correlation Matrix
Two-tailed Pearson correlations among all numeric variables

Correlations

		Workday alcohol consumption	Weekend alcohol consumption	Current health status
Workday alcohol consumption	Pearson Correlation	1	.617	.059
	Sig. (2-tailed)		.000	.133
	N	649	649	649
Weekend alcohol consumption	Pearson Correlation	.617	1	.115
	Sig. (2-tailed)	.000		.003
	N	649	649	649
Current health status	Pearson Correlation	.059	.115	1
	Sig. (2-tailed)	.133	.003	
	N	649	649	649
School absences	Pearson Correlation	.173	.156	-.030
	Sig. (2-tailed)	.000	.000	.442
	N	649	649	649
First period grade	Pearson Correlation	-.195	-.156	-.052
	Sig. (2-tailed)	.000	.000	.189
	N	649	649	649
Second period grade	Pearson Correlation	-.189	-.165	-.082
	Sig. (2-tailed)	.000	.000	.036
	N	649	649	649
Final grade / main outcome variable	Pearson Correlation	-.205	-.177	-.099
	Sig. (2-tailed)	.000	.000	.012
	N	649	649	649

Correlation in SPSS - Pearson Correlation Matrix
Two-tailed Pearson correlations among all numeric variables

Correlations

		School absences	First period grade	Second period grade
Workday alcohol consumption	Pearson Correlation	.173	-.195	-.189
	Sig. (2-tailed)	.000	.000	.000
	N	649	649	649
Weekend alcohol consumption	Pearson Correlation	.156	-.156	-.165
	Sig. (2-tailed)	.000	.000	.000
	N	649	649	649
Current health status	Pearson Correlation	-.030	-.052	-.082
	Sig. (2-tailed)	.442	.189	.036
	N	649	649	649
School absences	Pearson Correlation	1	-.147	-.125
	Sig. (2-tailed)		.000	.001
	N	649	649	649
First period grade	Pearson Correlation	-.147	1	.865
	Sig. (2-tailed)	.000		.000
	N	649	649	649
Second period grade	Pearson Correlation	-.125	.865	1
	Sig. (2-tailed)	.001	.000	
	N	649	649	649
Final grade / main outcome variable	Pearson Correlation	-.091	.826	.919
	Sig. (2-tailed)	.020	.000	.000
	N	649	649	649

Correlation in SPSS - Pearson Correlation Matrix
Two-tailed Pearson correlations among all numeric variables

Correlations

		Final grade / main outcome variable
Workday alcohol consumption	Pearson Correlation	-.205
	Sig. (2-tailed)	.000
	N	649
Weekend alcohol consumption	Pearson Correlation	-.177
	Sig. (2-tailed)	.000
	N	649
Current health status	Pearson Correlation	-.099
	Sig. (2-tailed)	.012
	N	649
School absences	Pearson Correlation	-.091
	Sig. (2-tailed)	.020
	N	649
First period grade	Pearson Correlation	.826
	Sig. (2-tailed)	.000
	N	649
Second period grade	Pearson Correlation	.919
	Sig. (2-tailed)	.000
	N	649
Final grade / main outcome variable	Pearson Correlation	1
	Sig. (2-tailed)	
	N	649

Correlation in SPSS - Focused Academic Grade Correlations

```
>Warning # 2004.  Command name: SUBTITLE  
>The subtitle given exceeds 60 characters in length.  The first 60 characters  
>will be used.
```

Correlation in SPSS - Focused Academic Grade Correlations
 Correlation among G1, G2, and G3 for direct academic perform

Correlations

Descriptive Statistics

	Mean	Std. Deviation	N
First period grade	11.40	2.745	649
Second period grade	11.57	2.914	649
Final grade / main outcome variable	11.91	3.231	649

Correlations

		First period grade	Second period grade	Final grade / main outcome variable
First period grade	Pearson Correlation	1	.865	.826
	Sig. (2-tailed)		.000	.000
	N	649	649	649
Second period grade	Pearson Correlation	.865	1	.919
	Sig. (2-tailed)	.000		.000
	N	649	649	649
Final grade / main outcome variable	Pearson Correlation	.826	.919	1
	Sig. (2-tailed)	.000	.000	
	N	649	649	649

Correlation in SPSS - Spearman Rank Correlation Context

```
>Warning # 2004.  Command name: SUBTITLE  
>The subtitle given exceeds 60 characters in length.  The first 60 characters  
>will be used.
```

Correlation in SPSS - Spearman Rank Correlation Context
 Nonparametric rank correlation among key ordinal and grade v

Nonparametric Correlations

Correlations

			Weekly study time	Number of past class failures
Spearman's rho	Weekly study time	Correlation Coefficient	1.000	-.160
		Sig. (2-tailed)	.	.000
		N	649	649
	Number of past class failures	Correlation Coefficient	-.160	1.000
		Sig. (2-tailed)	.000	.
		N	649	649
	School absences	Correlation Coefficient	-.117	.121
		Sig. (2-tailed)	.003	.002
		N	649	649
	First period grade	Correlation Coefficient	.271	-.432
		Sig. (2-tailed)	.000	.000
		N	649	649
	Second period grade	Correlation Coefficient	.259	-.436
		Sig. (2-tailed)	.000	.000
		N	649	649
	Final grade / main outcome variable	Correlation Coefficient	.275	-.448
		Sig. (2-tailed)	.000	.000
		N	649	649

Correlation in SPSS - Spearman Rank Correlation Context
 Nonparametric rank correlation among key ordinal and grade v

Correlations

			School absences	First period grade
Spearman's rho	Weekly study time	Correlation Coefficient	-.117	.271
		Sig. (2-tailed)	.003	.000
		N	649	649
	Number of past class failures	Correlation Coefficient	.121	-.432
		Sig. (2-tailed)	.002	.000
		N	649	649
	School absences	Correlation Coefficient	1.000	-.170
		Sig. (2-tailed)	.	.000
		N	649	649
	First period grade	Correlation Coefficient	-.170	1.000
		Sig. (2-tailed)	.000	.
		N	649	649
	Second period grade	Correlation Coefficient	-.164	.893
		Sig. (2-tailed)	.000	.000
		N	649	649
	Final grade / main outcome variable	Correlation Coefficient	-.159	.883
		Sig. (2-tailed)	.000	.000
		N	649	649

Correlation in SPSS - Spearman Rank Correlation Context
 Nonparametric rank correlation among key ordinal and grade v

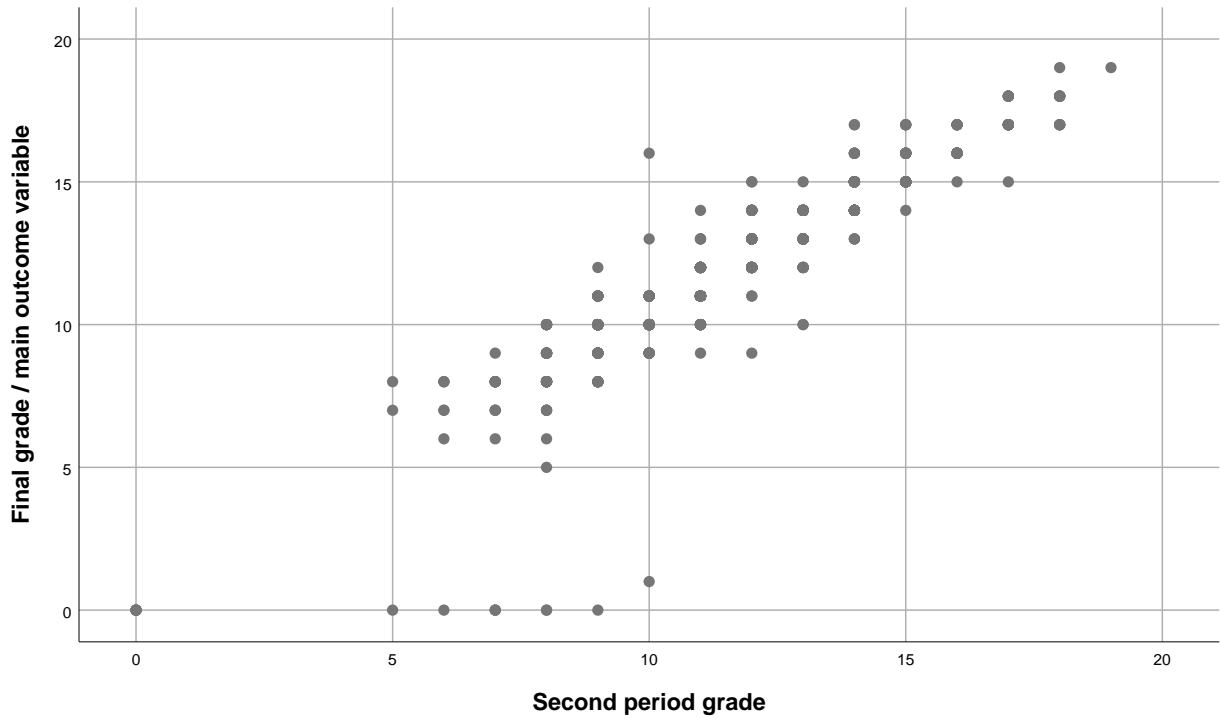
Correlations

			Second period grade	Final grade / main outcome variable
Spearman's rho	Weekly study time	Correlation Coefficient	.259	.275
		Sig. (2-tailed)	.000	.000
		N	649	649
	Number of past class failures	Correlation Coefficient	-.436	-.448
		Sig. (2-tailed)	.000	.000
		N	649	649
	School absences	Correlation Coefficient	-.164	-.159
		Sig. (2-tailed)	.000	.000
		N	649	649
	First period grade	Correlation Coefficient	.893	.883
		Sig. (2-tailed)	.000	.000
		N	649	649
	Second period grade	Correlation Coefficient	1.000	.944
		Sig. (2-tailed)	.	.000
		N	649	649
	Final grade / main outcome variable	Correlation Coefficient	.944	1.000
		Sig. (2-tailed)	.000	.
		N	649	649

Correlation in SPSS - Scatterplot: G2 and G3

Correlation in SPSS - Scatterplot: G2 and G3
Visual check of the strongest expected grade relationship

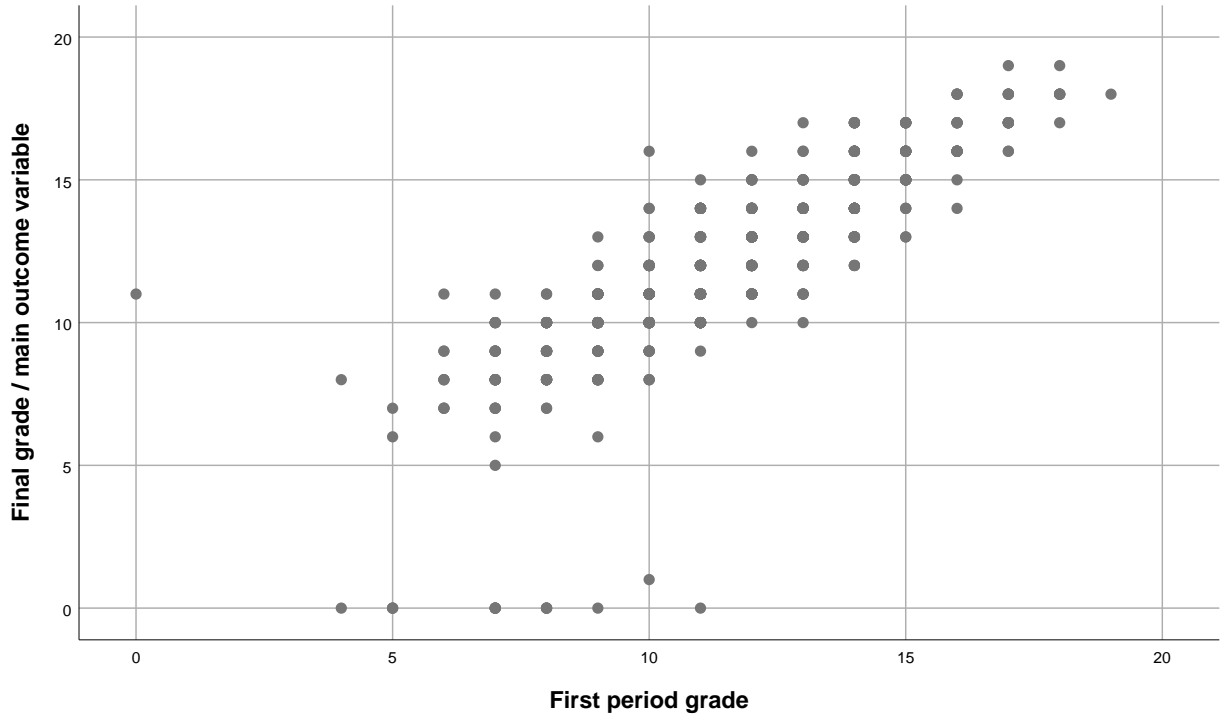
Graph



Correlation in SPSS - Scatterplot: G1 and G3

Correlation in SPSS - Scatterplot: G1 and G3
Visual check of earlier grade and final grade relationship

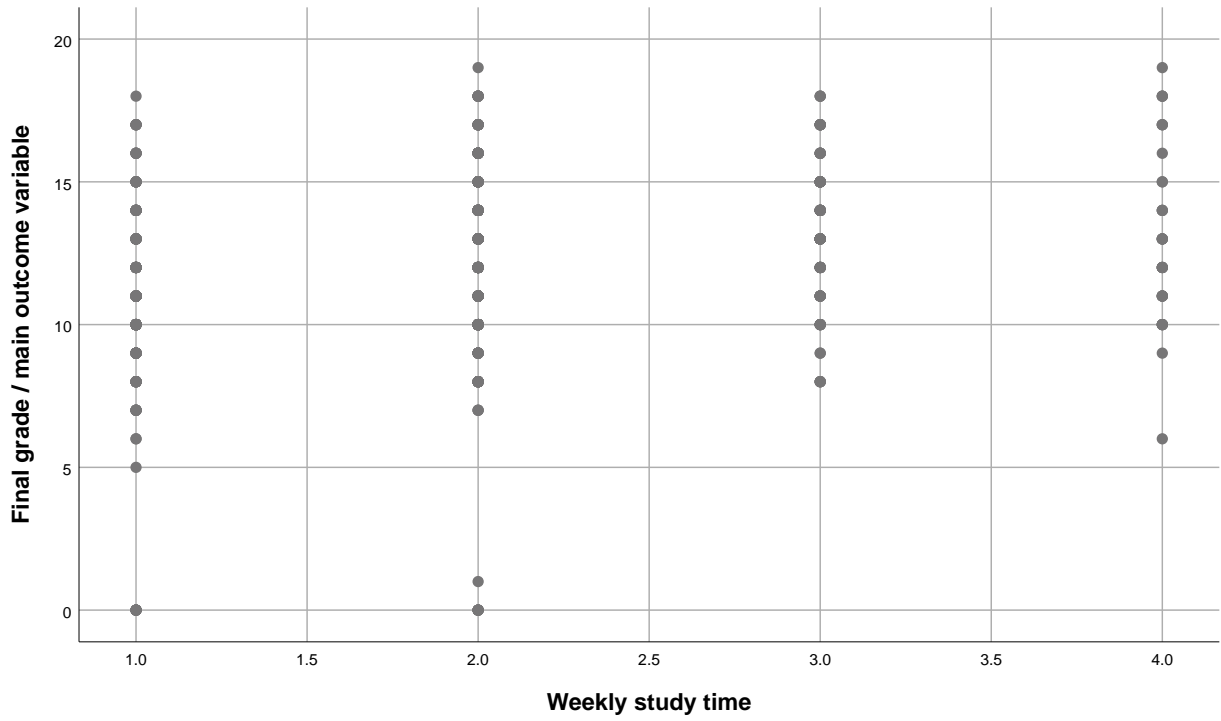
Graph



Correlation in SPSS - Scatterplot: Study Time and G3

Correlation in SPSS - Scatterplot: Study Time and G3
Visual check of study time and final grade relationship

Graph



Correlation in SPSS - Histogram of Final Grade

Correlation in SPSS - Histogram of Final Grade
Distribution of G3 before interpreting correlation output

Graph

