

Your temporary usage period for IBM SPSS Statistics will expire in 3484 days.

```
* =====.
* Frequency Distribution - SPSS Syntax SAFE v2.
* Project folder:
* D:\DATA ANALYSIS\A Basic Descriptive Statistics Guides\Frequency Distributio
n
*
* IMPORTANT:
* 1. Run the Python workflow first so this file exists:
*   D:\DATA ANALYSIS\A Basic Descriptive Statistics Guides\Frequency Distribu
tion\Python_Output\clean_data\frequency_distribution_clean_data_for_spss.csv
*
* 2. The SPSS output folder must already exist before running this syntax:
*   D:\DATA ANALYSIS\A Basic Descriptive Statistics Guides\Frequency Distribu
tion\Python_Output\pdf
*
* 3. SPSS usually will NOT create missing Windows folders automatically.
*   This syntax saves BOTH the editable SPSS Viewer output and the PDF output
.
* =====.
```

```
SET PRINTBACK=ON.
SET MPRINT=ON.
SET TVARS=NAMES.
  49  0 M> SET TVARS=NAMES.
SET TNUMBERS=VALUES.
  50  0 M> SET TNUMBERS=VALUES.
SET UNICODE=ON.
  51  0 M> SET UNICODE=ON.

  52  0 M>
TITLE "Frequency Distribution: SPSS Output".
  53  0 M> TITLE "Frequency Distribution: SPSS Output".
```

Frequency Distribution: SPSS Output

```
54 0 M>
* -----.
55 0 M> * -----.
* 1. Import the clean SPSS-ready CSV generated by Python.
56 0 M> * 1. Import the clean SPSS-ready CSV generated by Python.
* -----.
57 0 M> * -----.

58 0 M>
GET DATA
59 0 M> GET DATA
  /TYPE=TXT
60 0 M>   /TYPE=TXT
  /FILE="D:\DATA ANALYSIS\A Basic Descriptive Statistics Guides\Frequency Dist
  ribution\Python_Output\clean_data\frequency_distribution_clean_data_for_spss.c
  sv"
61 0 M>   /FILE="D:\DATA ANALYSIS\A Basic Descriptive Statistics Guides\Fr
  equency Distribution\Python_Output\clean_data\frequenc
  y_distribution_clean_data_for_spss.csv"
  /ENCODING="UTF8"
62 0 M>   /ENCODING="UTF8"
  /DELCASE=LINE
63 0 M>   /DELCASE=LINE
  /DELIMITERS=", "
64 0 M>   /DELIMITERS=", "
  /QUALIFIER=' '
65 0 M>   /QUALIFIER=' '
  /ARRANGEMENT=DELIMITED
66 0 M>   /ARRANGEMENT=DELIMITED
  /FIRSTCASE=2
67 0 M>   /FIRSTCASE=2
  /IMPORTCASE=ALL
68 0 M>   /IMPORTCASE=ALL
  /VARIABLES=
69 0 M>   /VARIABLES=
  school A20
70 0 M>     school A20
  sex A20
71 0 M>     sex A20
```

Frequency Distribution: SPSS Output

```
age F8.0
72  0 M>      age F8.0
address A20
73  0 M>      address A20
famsize A30
74  0 M>      famsize A30
Pstatus A20
75  0 M>      Pstatus A20
Medu F8.0
76  0 M>      Medu F8.0
Fedu F8.0
77  0 M>      Fedu F8.0
Mjob A30
78  0 M>      Mjob A30
Fjob A30
79  0 M>      Fjob A30
reason A30
80  0 M>      reason A30
guardian A30
81  0 M>      guardian A30
traveltime F8.0
82  0 M>      traveltime F8.0
studytime F8.0
83  0 M>      studytime F8.0
failures F8.0
84  0 M>      failures F8.0
schoolsup A20
85  0 M>      schoolsup A20
famsup A20
86  0 M>      famsup A20
paid A20
87  0 M>      paid A20
activities A20
88  0 M>      activities A20
nursery A20
89  0 M>      nursery A20
higher A20
90  0 M>      higher A20
internet A20
```

Frequency Distribution: SPSS Output

```
91  0 M>      internet A20
      romantic A20
92  0 M>      romantic A20
      famrel F8.0
93  0 M>      famrel F8.0
      freetime F8.0
94  0 M>      freetime F8.0
      goout F8.0
95  0 M>      goout F8.0
      Dalc F8.0
96  0 M>      Dalc F8.0
      Walc F8.0
97  0 M>      Walc F8.0
      health F8.0
98  0 M>      health F8.0
      absences F8.0
99  0 M>      absences F8.0
      G1 F8.0
100 0 M>      G1 F8.0
      G2 F8.0
101 0 M>      G2 F8.0
      G3 F8.0
102 0 M>      G3 F8.0
      studytime_group A30
103 0 M>      studytime_group A30
      failure_group A30
104 0 M>      failure_group A30
      absences_group A30
105 0 M>      absences_group A30
      g3_grade_group A30
106 0 M>      g3_grade_group A30
      age_group A30.
107 0 M>      age_group A30.
EXECUTE.
108 0 M> EXECUTE.

109 0 M>
DATASET NAME FrequencyDistribution WINDOW=FRONT.
110 0 M> DATASET NAME FrequencyDistribution WINDOW=FRONT.
```

Frequency Distribution: SPSS Output

```
111 0 M>
* -----
112 0 M> * -----
* 2. Variable labels.
113 0 M> * 2. Variable labels.
* -----
114 0 M> * -----

115 0 M>
VARIABLE LABELS
116 0 M> VARIABLE LABELS
    school "Student school"
117 0 M>    school "Student school"
    sex "Student sex"
118 0 M>    sex "Student sex"
    age "Student age"
119 0 M>    age "Student age"
    address "Student address type"
120 0 M>    address "Student address type"
    famsize "Family size"
121 0 M>    famsize "Family size"
    Pstatus "Parent cohabitation status"
122 0 M>    Pstatus "Parent cohabitation status"
    Medu "Mother education level"
123 0 M>    Medu "Mother education level"
    Fedu "Father education level"
124 0 M>    Fedu "Father education level"
    Mjob "Mother job"
125 0 M>    Mjob "Mother job"
    Fjob "Father job"
126 0 M>    Fjob "Father job"
    reason "Reason for choosing school"
127 0 M>    reason "Reason for choosing school"
    guardian "Student guardian"
128 0 M>    guardian "Student guardian"
    traveltime "Travel time category"
129 0 M>    traveltime "Travel time category"
    studytime "Weekly study time category"
```

Frequency Distribution: SPSS Output

130 0 M> studytime "Weekly study time category"
failures "Number of past class failures"
131 0 M> failures "Number of past class failures"
schoolsup "Extra educational school support"
132 0 M> schoolsup "Extra educational school support"
famsup "Family educational support"
133 0 M> famsup "Family educational support"
paid "Extra paid classes"
134 0 M> paid "Extra paid classes"
activities "Extra-curricular activities"
135 0 M> activities "Extra-curricular activities"
nursery "Attended nursery school"
136 0 M> nursery "Attended nursery school"
higher "Wants to take higher education"
137 0 M> higher "Wants to take higher education"
internet "Internet access at home"
138 0 M> internet "Internet access at home"
romantic "Romantic relationship"
139 0 M> romantic "Romantic relationship"
famrel "Family relationship quality"
140 0 M> famrel "Family relationship quality"
freetime "Free time after school"
141 0 M> freetime "Free time after school"
goout "Going out with friends"
142 0 M> goout "Going out with friends"
Dalc "Workday alcohol consumption"
143 0 M> Dalc "Workday alcohol consumption"
Walc "Weekend alcohol consumption"
144 0 M> Walc "Weekend alcohol consumption"
health "Current health status"
145 0 M> health "Current health status"
absences "Number of school absences"
146 0 M> absences "Number of school absences"
G1 "First-period grade"
147 0 M> G1 "First-period grade"
G2 "Second-period grade"
148 0 M> G2 "Second-period grade"
G3 "Final grade"
149 0 M> G3 "Final grade"

Frequency Distribution: SPSS Output

```
studytime_group "Study-time frequency group"
150 0 M> studytime_group "Study-time frequency group"
failure_group "Past-failure frequency group"
151 0 M> failure_group "Past-failure frequency group"
absences_group "Absences frequency group"
152 0 M> absences_group "Absences frequency group"
g3_grade_group "G3 final-grade frequency group"
153 0 M> g3_grade_group "G3 final-grade frequency group"
age_group "Age frequency group".
154 0 M> age_group "Age frequency group".

155 0 M>
VALUE LABELS
156 0 M> VALUE LABELS
traveltime
157 0 M> traveltime
1 "<15 min"
158 0 M> 1 "<15 min"
2 "15 to 30 min"
159 0 M> 2 "15 to 30 min"
3 "30 min to 1 hour"
160 0 M> 3 "30 min to 1 hour"
4 ">1 hour"
161 0 M> 4 ">1 hour"
studytime
162 0 M> studytime

>Warning # 4492 in column 3. Text: studytime
>The (ADD) VALUE LABELS command included a symbol other than a value where a
>value (either numeric or string) was expected. For compatibility with
>previous systems, a parenthesized value would have been acceptable. All valu
e
>labels up to the next slash will be ignored.
1 "<2 hours"
163 0 M> 1 "<2 hours"
2 "2 to 5 hours"
164 0 M> 2 "2 to 5 hours"
3 "5 to 10 hours"
165 0 M> 3 "5 to 10 hours"
```

Frequency Distribution: SPSS Output

```
4 ">10 hours"
166 0 M>      4 ">10 hours"
failures
167 0 M>      failures
0 "0 failures"
168 0 M>      0 "0 failures"
1 "1 failure"
169 0 M>      1 "1 failure"
2 "2 failures"
170 0 M>      2 "2 failures"
3 "3 failures"
171 0 M>      3 "3 failures"
4 "4 failures"
172 0 M>      4 "4 failures"
famrel
173 0 M>      famrel
1 "Very bad"
174 0 M>      1 "Very bad"
2 "Bad"
175 0 M>      2 "Bad"
3 "Average"
176 0 M>      3 "Average"
4 "Good"
177 0 M>      4 "Good"
5 "Excellent"
178 0 M>      5 "Excellent"
freetime
179 0 M>      freetime
1 "Very low"
180 0 M>      1 "Very low"
2 "Low"
181 0 M>      2 "Low"
3 "Average"
182 0 M>      3 "Average"
4 "High"
183 0 M>      4 "High"
5 "Very high"
184 0 M>      5 "Very high"
goout
```

Frequency Distribution: SPSS Output

```
185  0 M>    goout
      1 "Very low"
186  0 M>      1 "Very low"
      2 "Low"
187  0 M>      2 "Low"
      3 "Average"
188  0 M>      3 "Average"
      4 "High"
189  0 M>      4 "High"
      5 "Very high"
190  0 M>      5 "Very high"
     Dalc
191  0 M>    Dalc
      1 "Very low"
192  0 M>      1 "Very low"
      2 "Low"
193  0 M>      2 "Low"
      3 "Average"
194  0 M>      3 "Average"
      4 "High"
195  0 M>      4 "High"
      5 "Very high"
196  0 M>      5 "Very high"
     Walc
197  0 M>    Walc
      1 "Very low"
198  0 M>      1 "Very low"
      2 "Low"
199  0 M>      2 "Low"
      3 "Average"
200  0 M>      3 "Average"
      4 "High"
201  0 M>      4 "High"
      5 "Very high"
202  0 M>      5 "Very high"
     health
203  0 M>    health
      1 "Very bad"
204  0 M>      1 "Very bad"
```

Frequency Distribution: SPSS Output

```
2 "Bad"
205 0 M>      2 "Bad"
3 "Average"
206 0 M>      3 "Average"
4 "Good"
207 0 M>      4 "Good"
5 "Very good".
208 0 M>      5 "Very good".

209 0 M>
FORMATS age Medu Fedu traveltime studytime failures famrel freetime goout Dalc
Walc health absences G1 G2 G3 (F8.0).
210 0 M> FORMATS age Medu Fedu traveltime studytime failures famrel freetim
e goout Dalc Walc health absences G1 G2 G3 (F8.0).

211 0 M>
* -----.
212 0 M> * -----.
* 3. Dataset overview.
213 0 M> * 3. Dataset overview.
* -----.
214 0 M> * -----.

215 0 M>
TITLE "Frequency Distribution: Dataset Overview".
216 0 M> TITLE "Frequency Distribution: Dataset Overview".
```

Frequency Distribution: Dataset Overview

```

217  0 M>
DESCRIPTIVES VARIABLES=age Medu Fedu traveltime studytime failures famrel free
time goout Dalc Walc health absences G1 G2 G3
218  0 M>  DESCRIPTIVES VARIABLES=age Medu Fedu traveltime studytime failures
famrel freetime goout Dalc Walc health absences G1 G2
          G3
        /STATISTICS=MEAN STDDEV MIN MAX.
219  0 M>    /STATISTICS=MEAN STDDEV MIN MAX.

```

Descriptives

[FrequencyDistribution]

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
age	649	15	22	16.74	1.218
Medu	649	0	4	2.51	1.135
Fedu	649	0	4	2.31	1.100
traveltime	649	1	4	1.57	.749
studytime	649	1	4	1.93	.830
failures	649	0	3	.22	.593
famrel	649	1	5	3.93	.956
freetime	649	1	5	3.18	1.051
goout	649	1	5	3.18	1.176
Dalc	649	1	5	1.50	.925
Walc	649	1	5	2.28	1.284
health	649	1	5	3.54	1.446
absences	649	0	32	3.66	4.641
G1	649	0	19	11.40	2.745
G2	649	0	19	11.57	2.914
G3	649	0	19	11.91	3.231
Valid N (listwise)	649				

```

220  0 M>
* -----.
221  0 M> * -----.
* 4. Main frequency tables for categorical variables.
222  0 M> * 4. Main frequency tables for categorical variables.

```

Frequency Distribution: Dataset Overview

* These tables provide count, percent, valid percent and cumulative percent

.
223 0 M> * These tables provide count, percent, valid percent and cumulative percent.

* -----.

224 0 M> * -----.

225 0 M>

TITLE "Frequency Tables: Main Categorical Variables".

226 0 M> TITLE "Frequency Tables: Main Categorical Variables".

Frequency Tables: Main Categorical Variables

```

227  0 M>
FREQUENCIES VARIABLES=
228  0 M>  FREQUENCIES VARIABLES=
        school sex address famsize Pstatus Mjob Fjob reason guardian
229  0 M>    school sex address famsize Pstatus Mjob Fjob reason guardian
        schoolsup famsup paid activities nursery higher internet romantic
230  0 M>    schoolsup famsup paid activities nursery higher internet romanti
c
        /FORMAT=AVALUE TABLE
231  0 M>    /FORMAT=AVALUE TABLE
        /BARCHART FREQ
232  0 M>    /BARCHART FREQ
        /ORDER=ANALYSIS.
233  0 M>    /ORDER=ANALYSIS.

```

Frequencies

Warnings

An invalid option keyword on the FORMAT subcommand.
Found: TABLE

Statistics

		school	sex	address	famsize	Pstatus	Mjob	Fjob
N	Valid	649	649	649	649	649	649	649
	Missing	0	0	0	0	0	0	0

Statistics

		reason	guardian	schoolsup	famsup	paid	activities	nursery
N	Valid	649	649	649	649	649	649	649
	Missing	0	0	0	0	0	0	0

Statistics

		higher	internet	romantic
N	Valid	649	649	649
	Missing	0	0	0

Frequency Table

Frequency Tables: Main Categorical Variables

school

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	GP	423	65.2	65.2	65.2
	MS	226	34.8	34.8	100.0
	Total	649	100.0	100.0	

sex

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	383	59.0	59.0	59.0
	Male	266	41.0	41.0	100.0
	Total	649	100.0	100.0	

address

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rural	197	30.4	30.4	30.4
	Urban	452	69.6	69.6	100.0
	Total	649	100.0	100.0	

famsize

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Greater than 3	457	70.4	70.4	70.4
	Less or equal to 3	192	29.6	29.6	100.0
	Total	649	100.0	100.0	

Pstatus

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Apart	80	12.3	12.3	12.3
	Together	569	87.7	87.7	100.0
	Total	649	100.0	100.0	

Frequency Tables: Main Categorical Variables

Mjob

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	at_home	135	20.8	20.8	20.8
	health	48	7.4	7.4	28.2
	other	258	39.8	39.8	68.0
	services	136	21.0	21.0	88.9
	teacher	72	11.1	11.1	100.0
	Total	649	100.0	100.0	

Fjob

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	at_home	42	6.5	6.5	6.5
	health	23	3.5	3.5	10.0
	other	367	56.5	56.5	66.6
	services	181	27.9	27.9	94.5
	teacher	36	5.5	5.5	100.0
	Total	649	100.0	100.0	

reason

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	course	285	43.9	43.9	43.9
	home	149	23.0	23.0	66.9
	other	72	11.1	11.1	78.0
	reputation	143	22.0	22.0	100.0
	Total	649	100.0	100.0	

Frequency Tables: Main Categorical Variables

guardian

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	father	153	23.6	23.6	23.6
	mother	455	70.1	70.1	93.7
	other	41	6.3	6.3	100.0
	Total	649	100.0	100.0	

schoolsup

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	581	89.5	89.5	89.5
	Yes	68	10.5	10.5	100.0
	Total	649	100.0	100.0	

famsup

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	251	38.7	38.7	38.7
	Yes	398	61.3	61.3	100.0
	Total	649	100.0	100.0	

paid

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	610	94.0	94.0	94.0
	Yes	39	6.0	6.0	100.0
	Total	649	100.0	100.0	

activities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	334	51.5	51.5	51.5
	Yes	315	48.5	48.5	100.0
	Total	649	100.0	100.0	

Frequency Tables: Main Categorical Variables

nursery

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	128	19.7	19.7	19.7
	Yes	521	80.3	80.3	100.0
	Total	649	100.0	100.0	

higher

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	69	10.6	10.6	10.6
	Yes	580	89.4	89.4	100.0
	Total	649	100.0	100.0	

internet

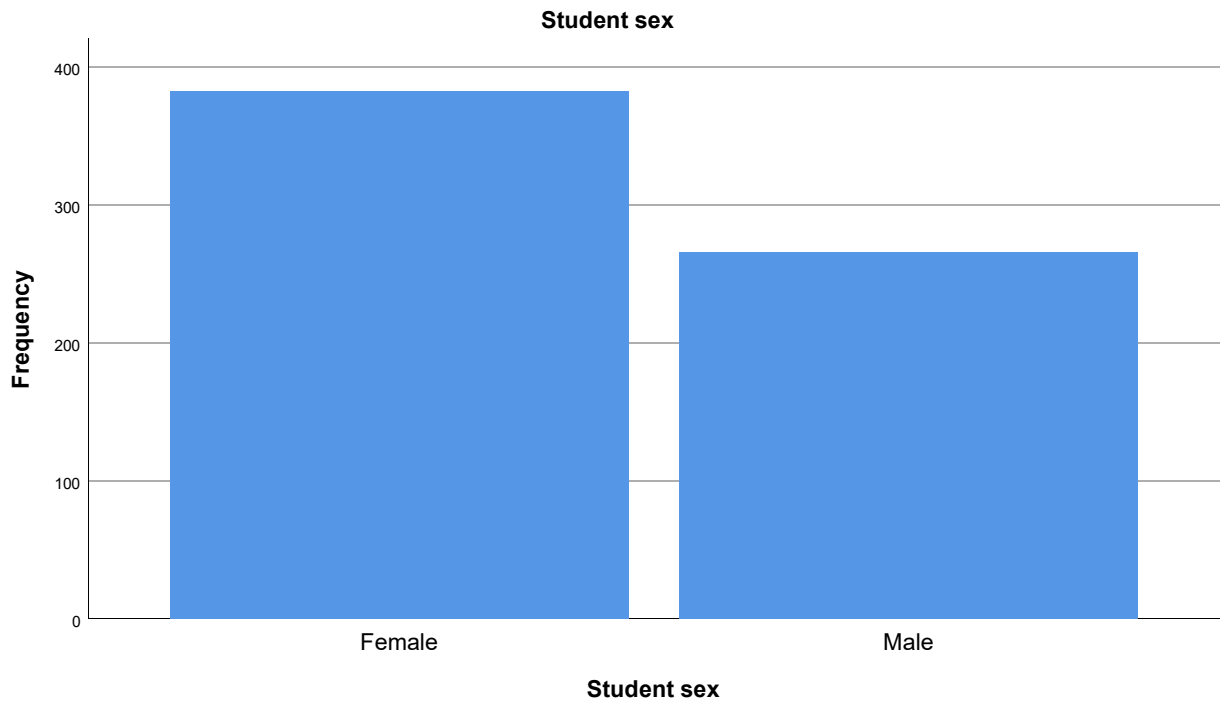
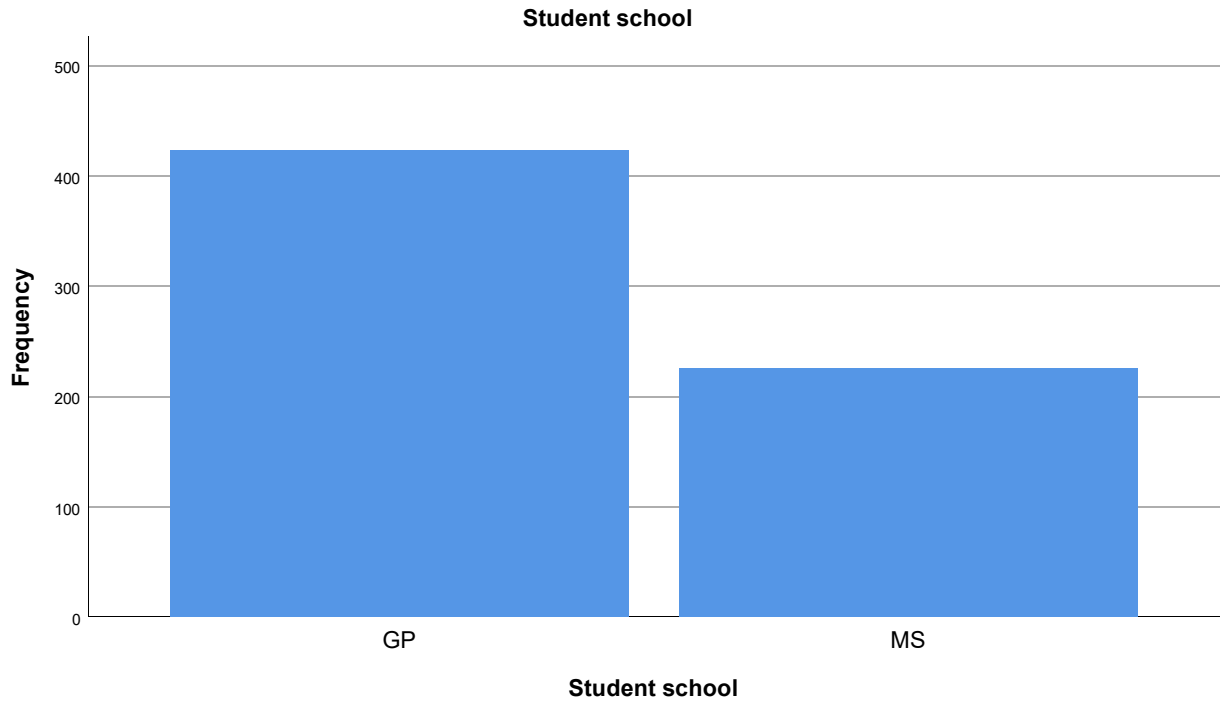
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	151	23.3	23.3	23.3
	Yes	498	76.7	76.7	100.0
	Total	649	100.0	100.0	

romantic

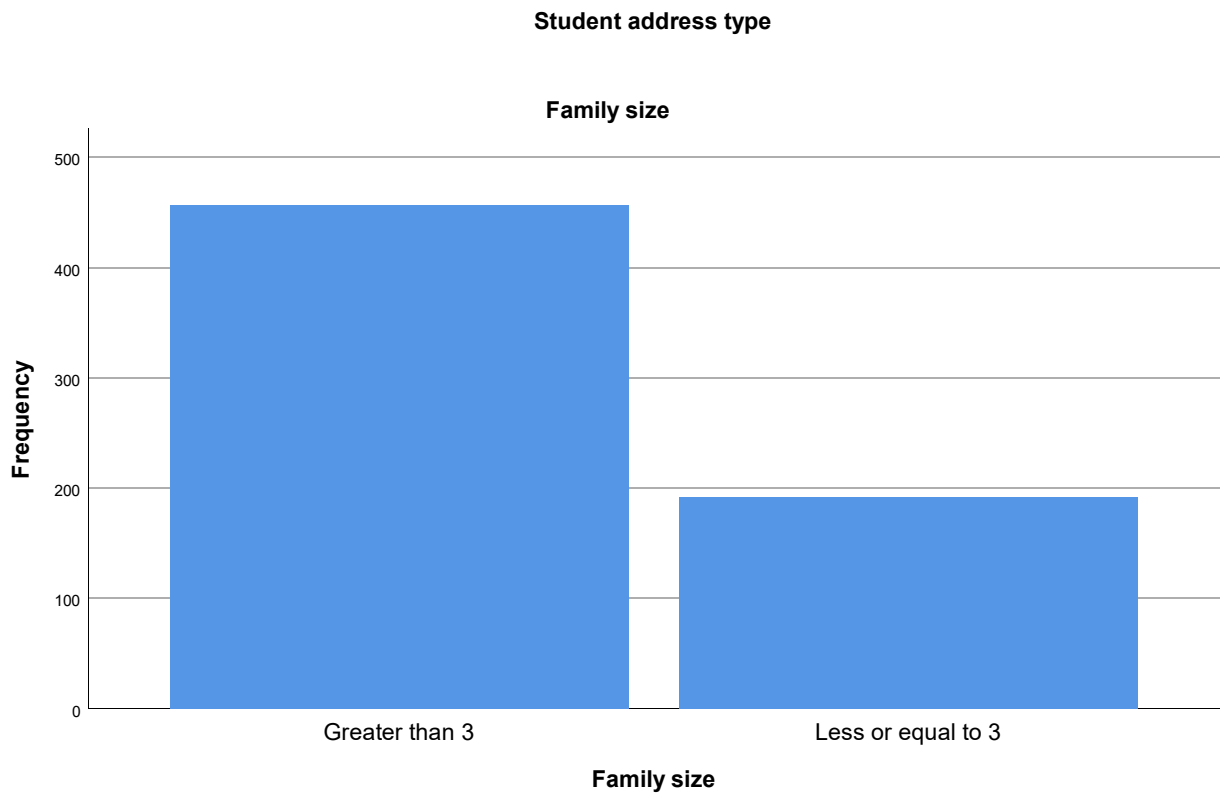
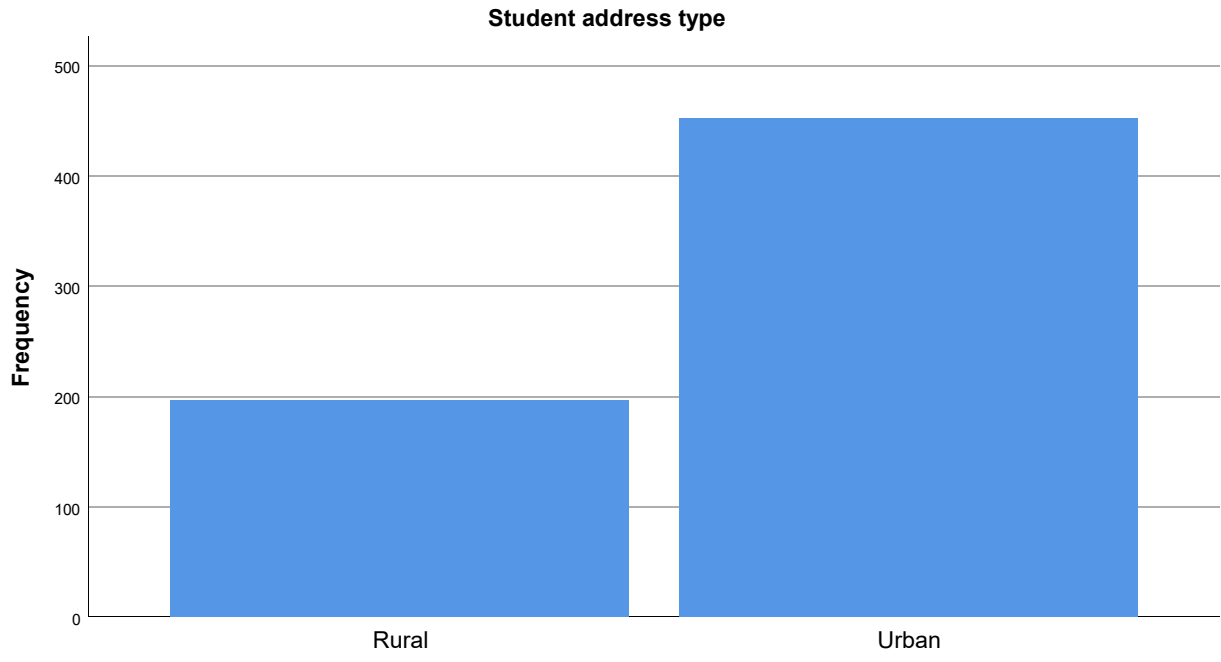
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	410	63.2	63.2	63.2
	Yes	239	36.8	36.8	100.0
	Total	649	100.0	100.0	

Bar Chart

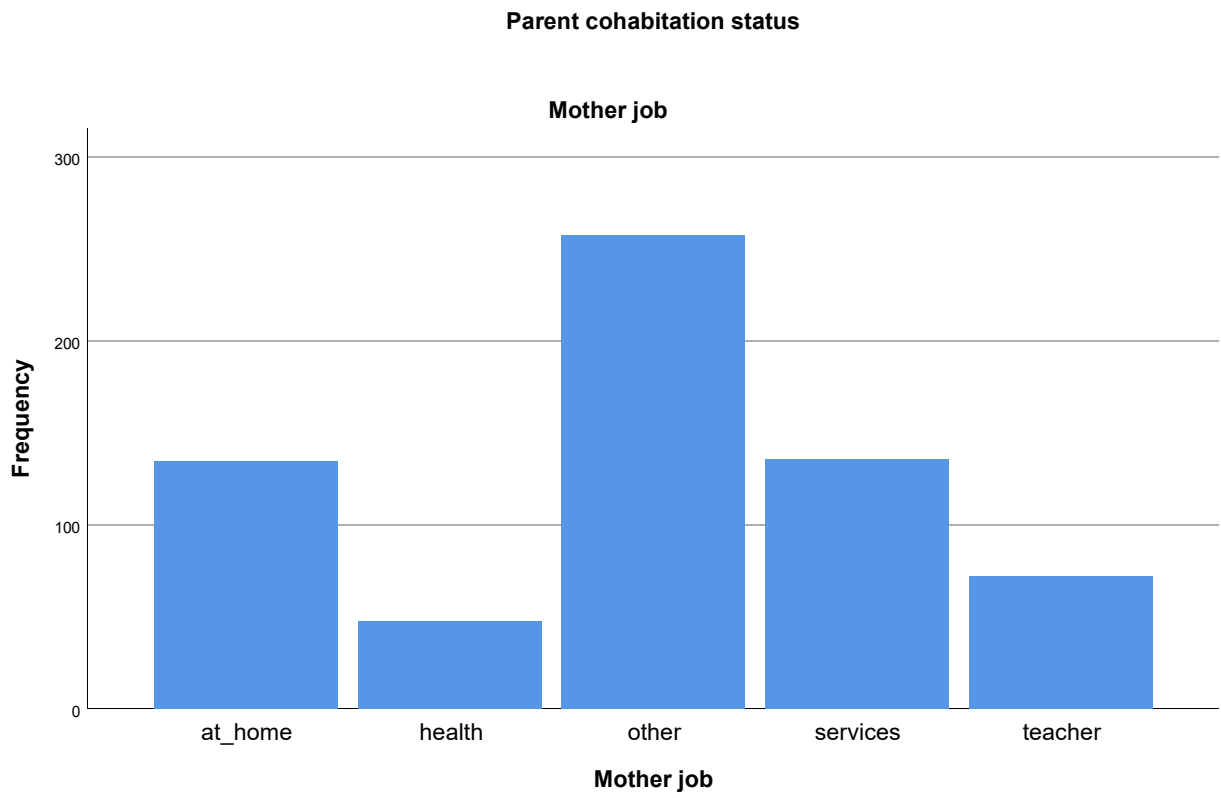
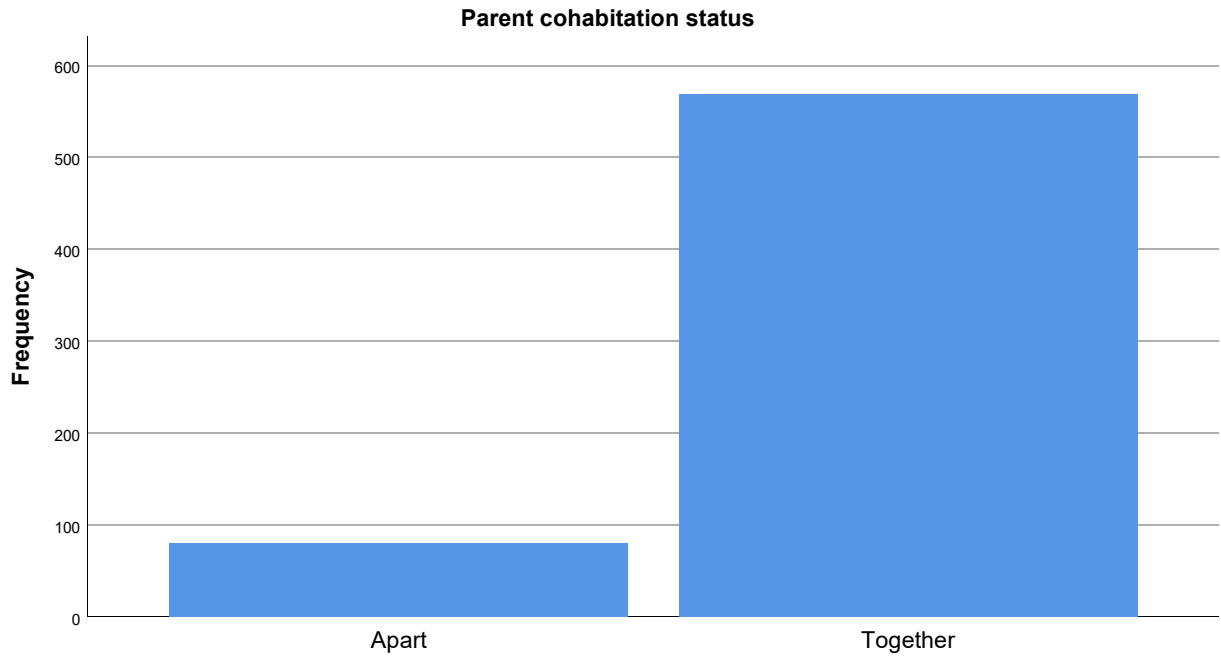
Frequency Tables: Main Categorical Variables



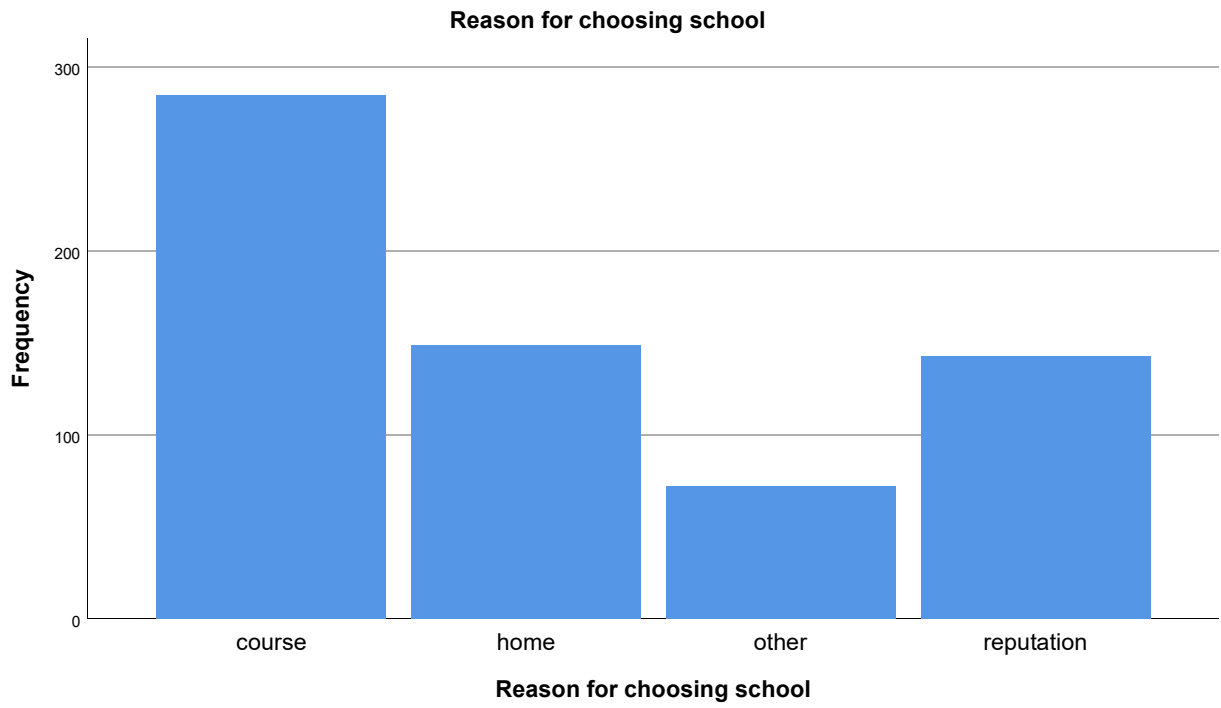
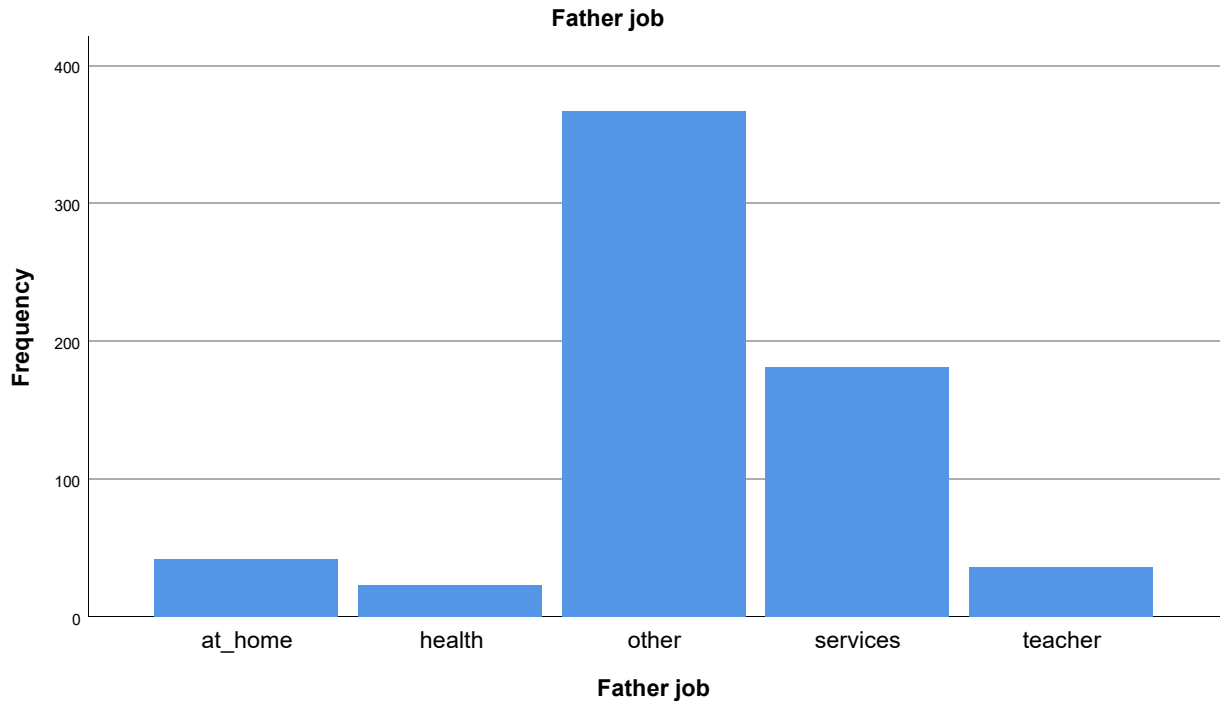
Frequency Tables: Main Categorical Variables



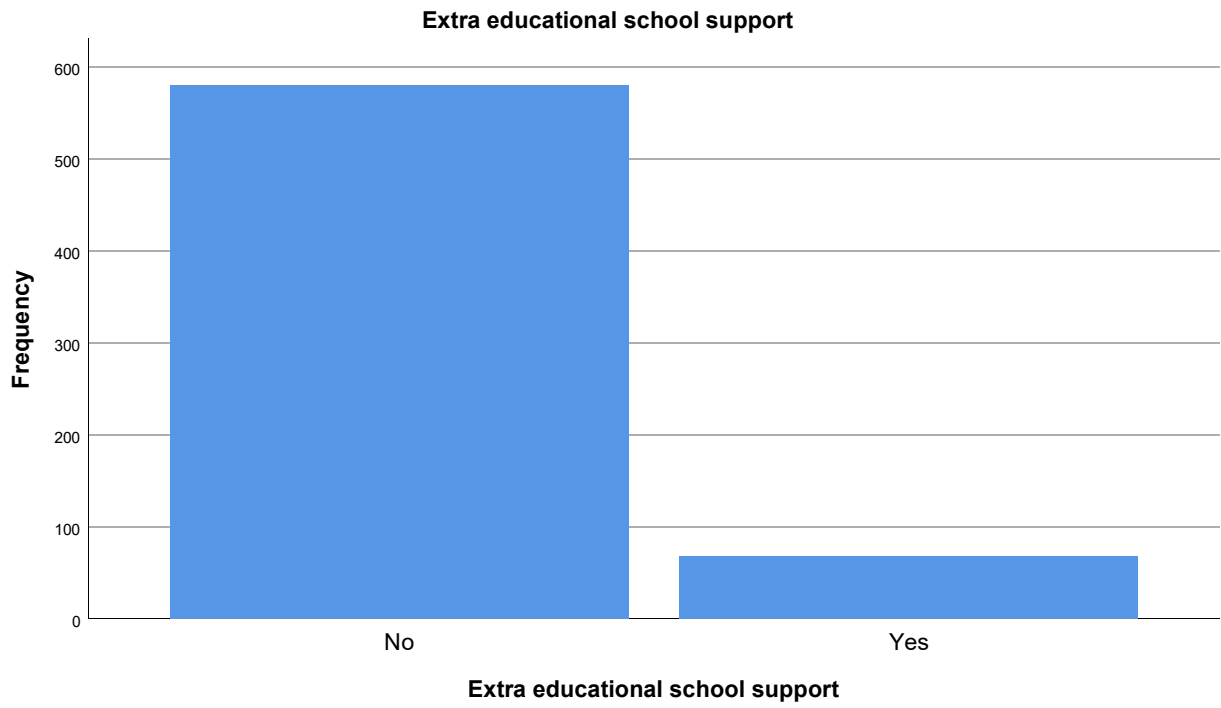
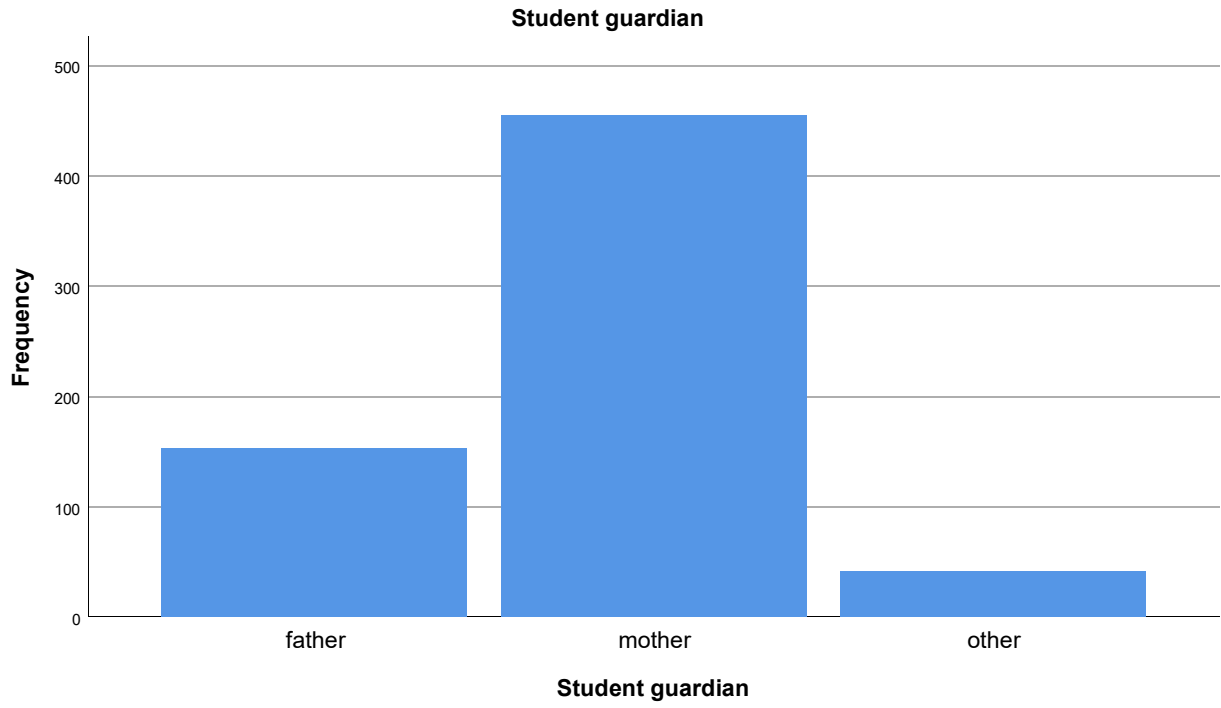
Frequency Tables: Main Categorical Variables



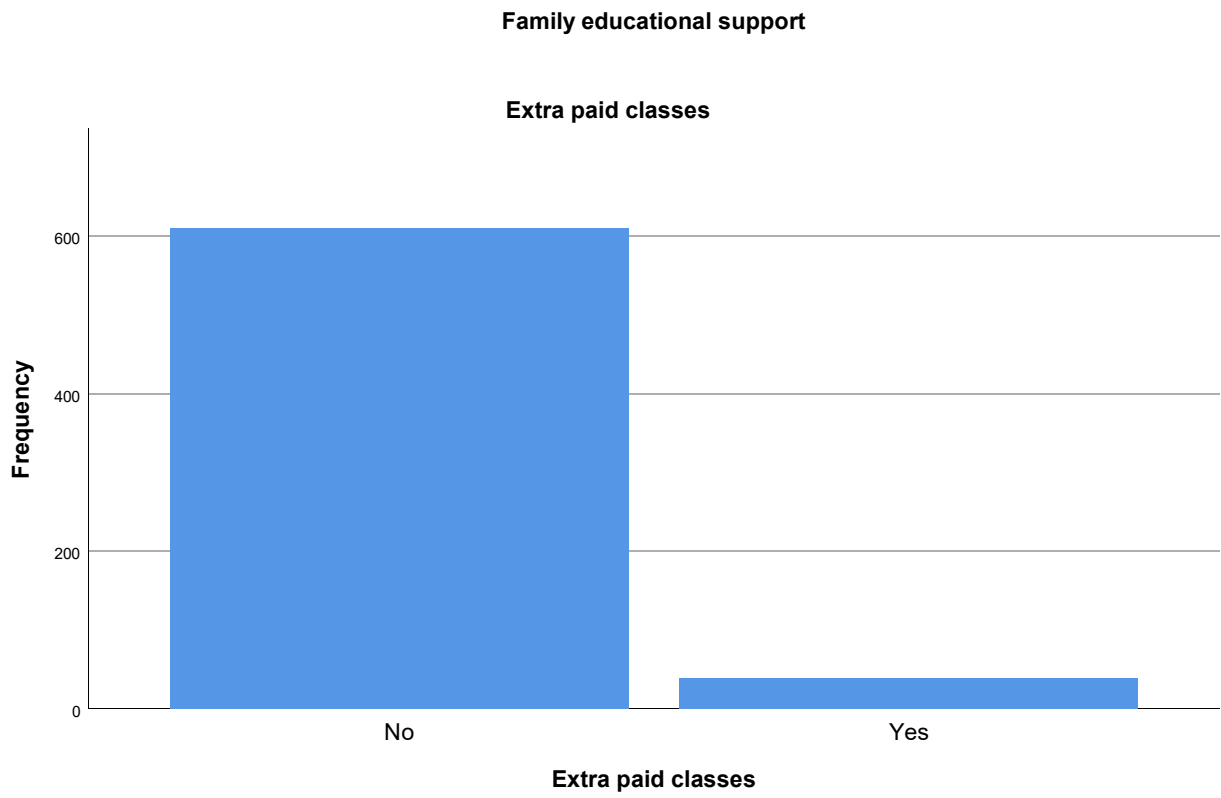
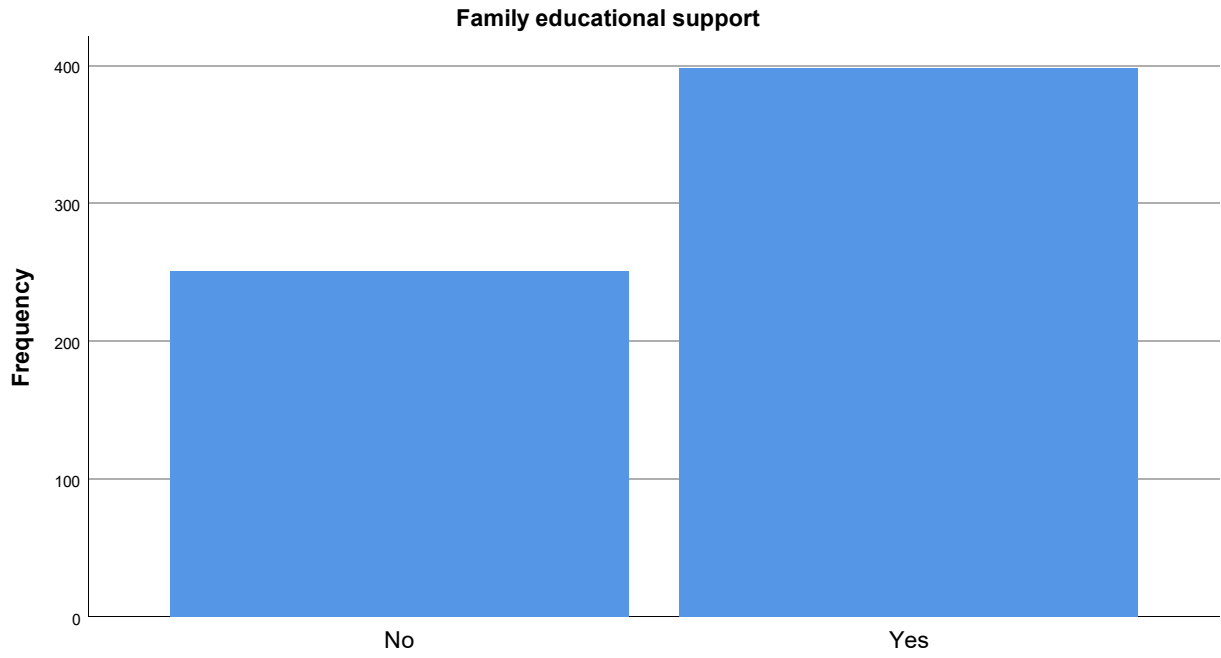
Frequency Tables: Main Categorical Variables



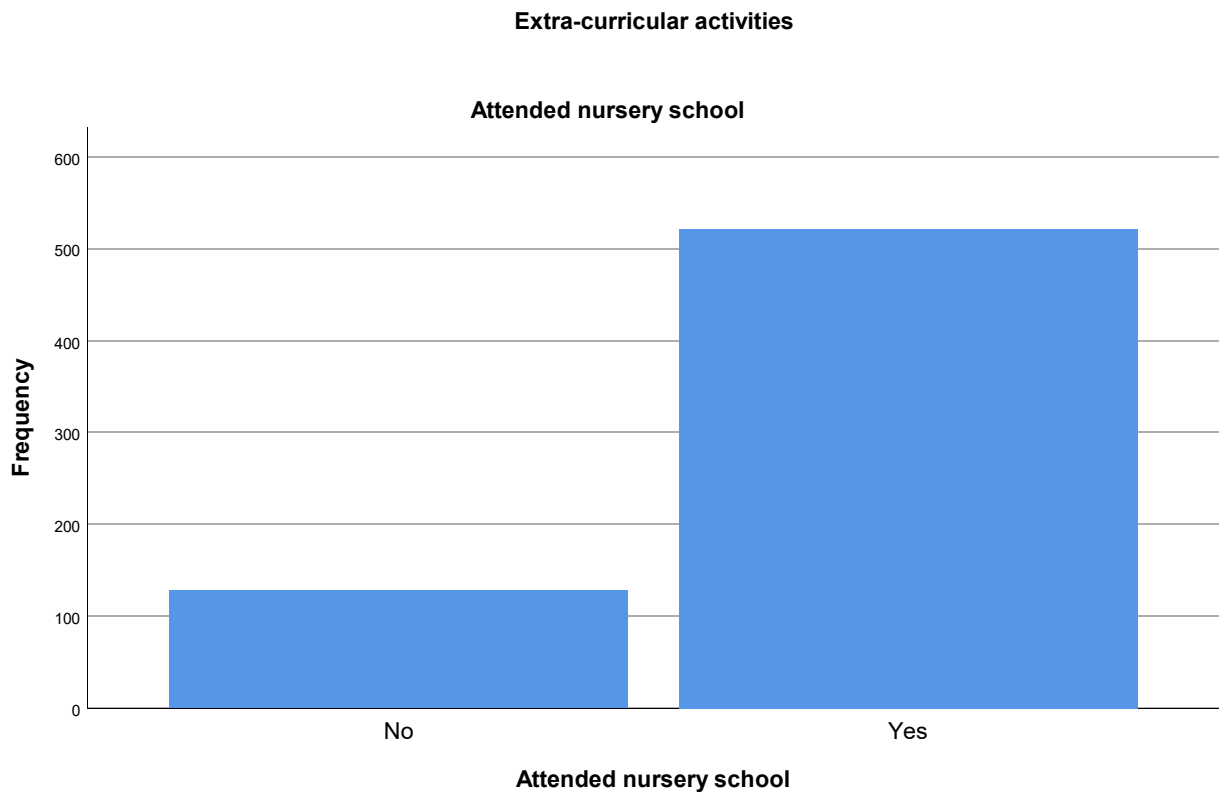
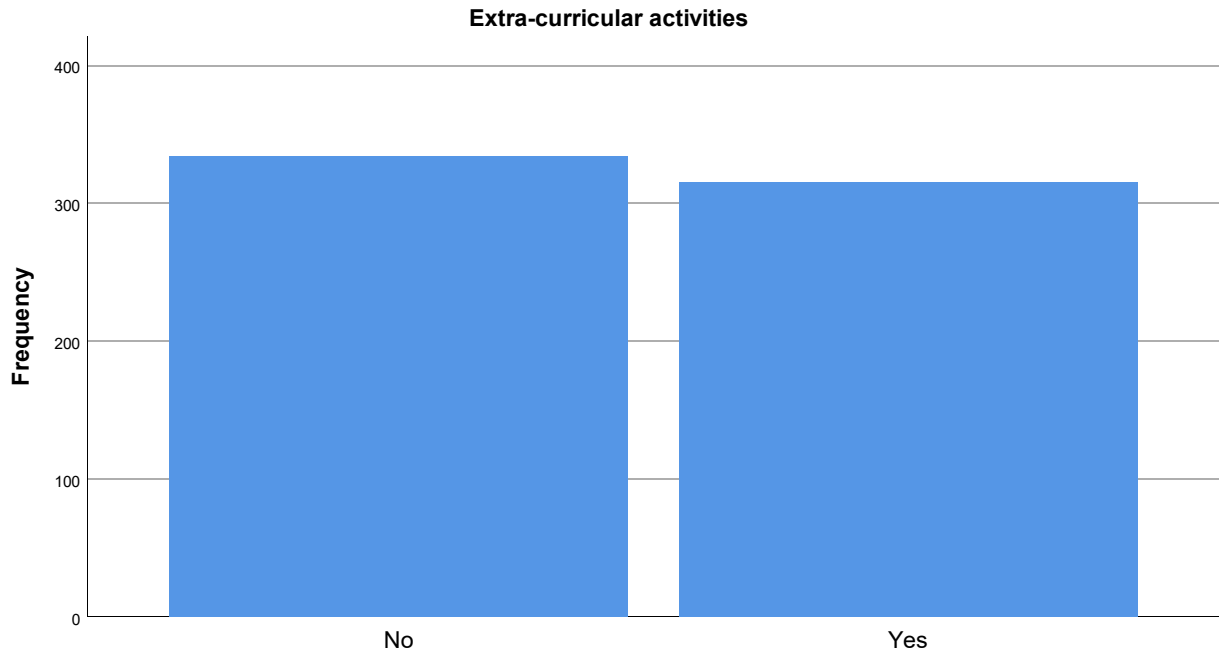
Frequency Tables: Main Categorical Variables



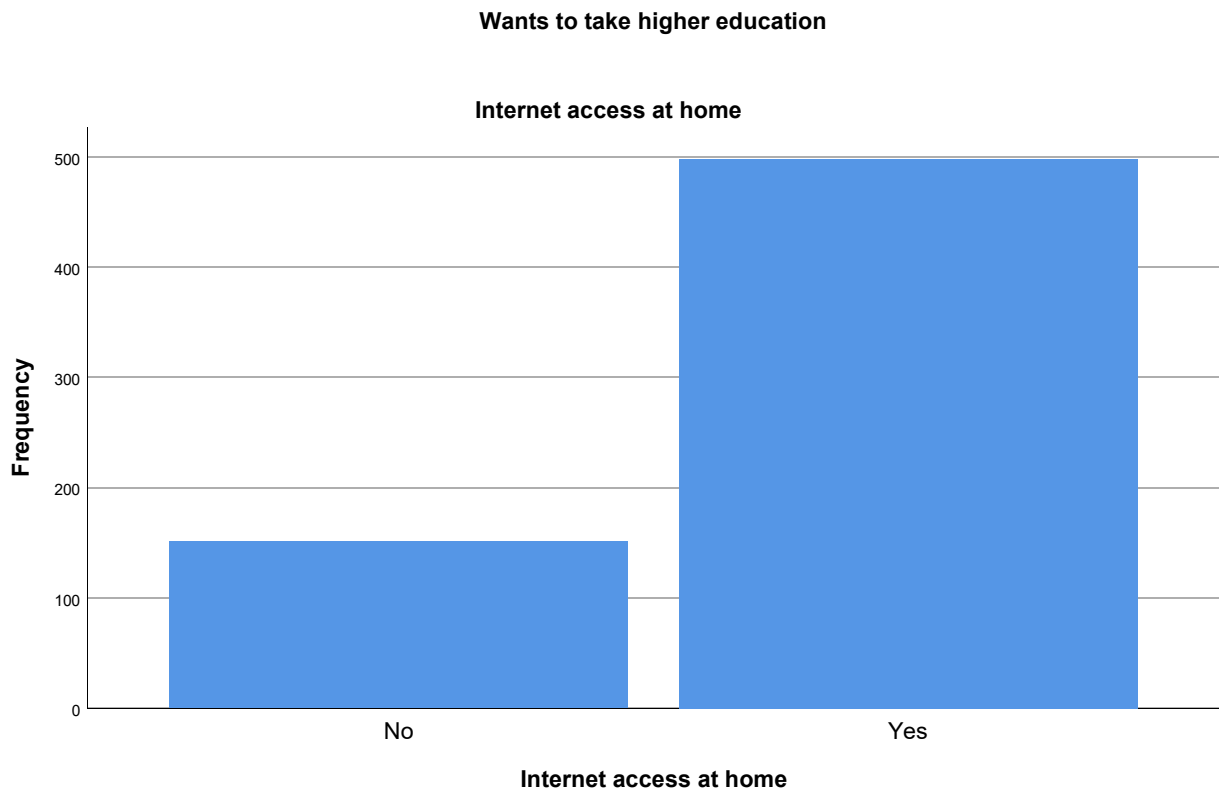
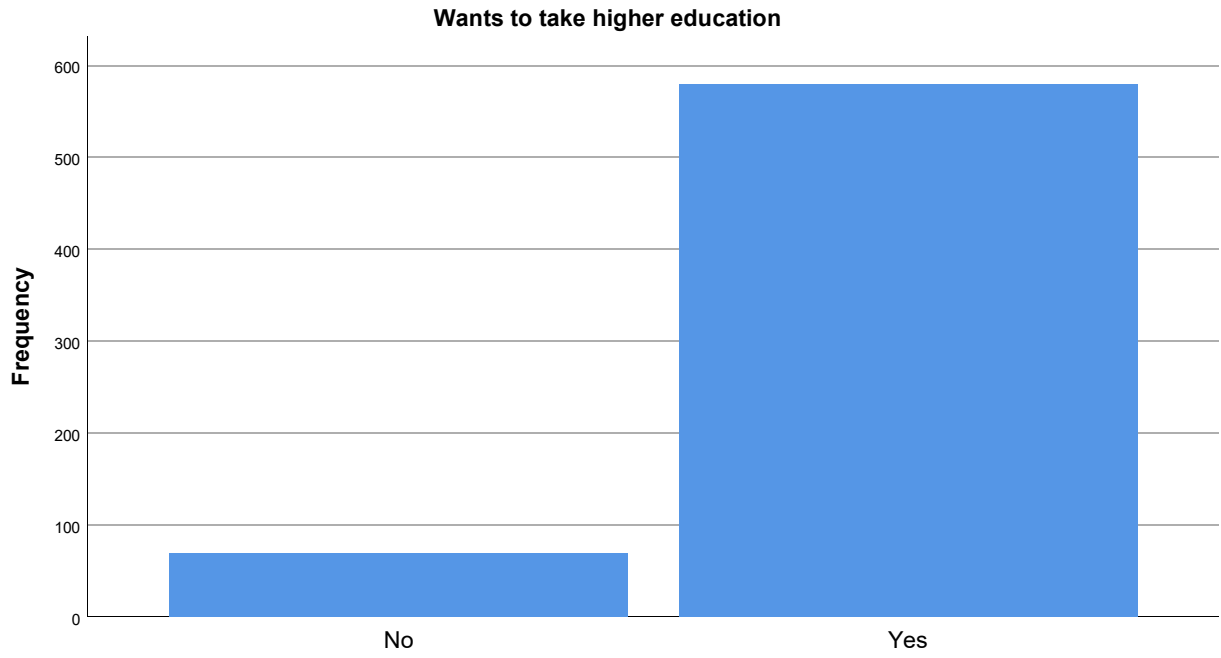
Frequency Tables: Main Categorical Variables



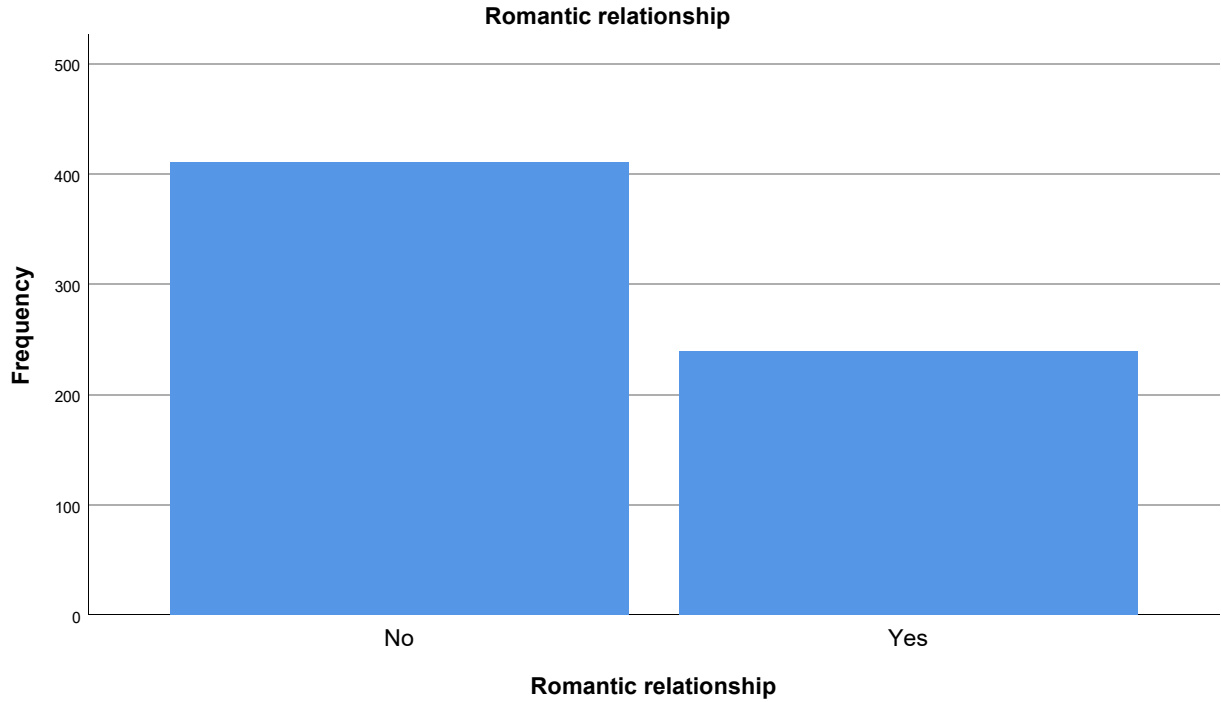
Frequency Tables: Main Categorical Variables



Frequency Tables: Main Categorical Variables



Frequency Tables: Main Categorical Variables



```
234 0 M>
* -----
235 0 M> * -----
* 5. Ordered frequency tables for grouped variables.
236 0 M> * 5. Ordered frequency tables for grouped variables.
* Cumulative percentage is most meaningful here because categories are orde
red.
237 0 M> * Cumulative percentage is most meaningful here because categor
ies are ordered.
* -----
238 0 M> * -----

239 0 M>
TITLE "Frequency Tables: Ordered Groups".
240 0 M> TITLE "Frequency Tables: Ordered Groups".
```

Frequency Tables: Ordered Groups

```

241  0 M>
FREQUENCIES VARIABLES=
242  0 M>  FREQUENCIES VARIABLES=
      age_group studytime_group failure_group absences_group g3_grade_group
243  0 M>   age_group studytime_group failure_group absences_group g3_grade_
group
      /FORMAT=AVALUE TABLE
244  0 M>   /FORMAT=AVALUE TABLE
      /BARCHART FREQ
245  0 M>   /BARCHART FREQ
      /ORDER=ANALYSIS.
246  0 M>   /ORDER=ANALYSIS.

```

Frequencies

Warnings

An invalid option keyword on the FORMAT subcommand.
Found: TABLE

Statistics

		age_group	studytime_group p	failure_group	absences_group p	g3_grade_group p
N	Valid	649	649	649	649	649
	Missing	0	0	0	0	0

Frequency Table

age_group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	15 or below	112	17.3	17.3	17.3
	16	177	27.3	27.3	44.5
	17	179	27.6	27.6	72.1
	18	140	21.6	21.6	93.7
	19 or above	41	6.3	6.3	100.0
	Total	649	100.0	100.0	

Frequency Tables: Ordered Groups

studytime_group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<2 hours	212	32.7	32.7	32.7
	>10 hours	35	5.4	5.4	38.1
	2 to 5 hours	305	47.0	47.0	85.1
	5 to 10 hours	97	14.9	14.9	100.0
	Total	649	100.0	100.0	

failure_group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 failures	549	84.6	84.6	84.6
	1 failure	70	10.8	10.8	95.4
	2 failures	16	2.5	2.5	97.8
	3+ failures	14	2.2	2.2	100.0
	Total	649	100.0	100.0	

absences_group

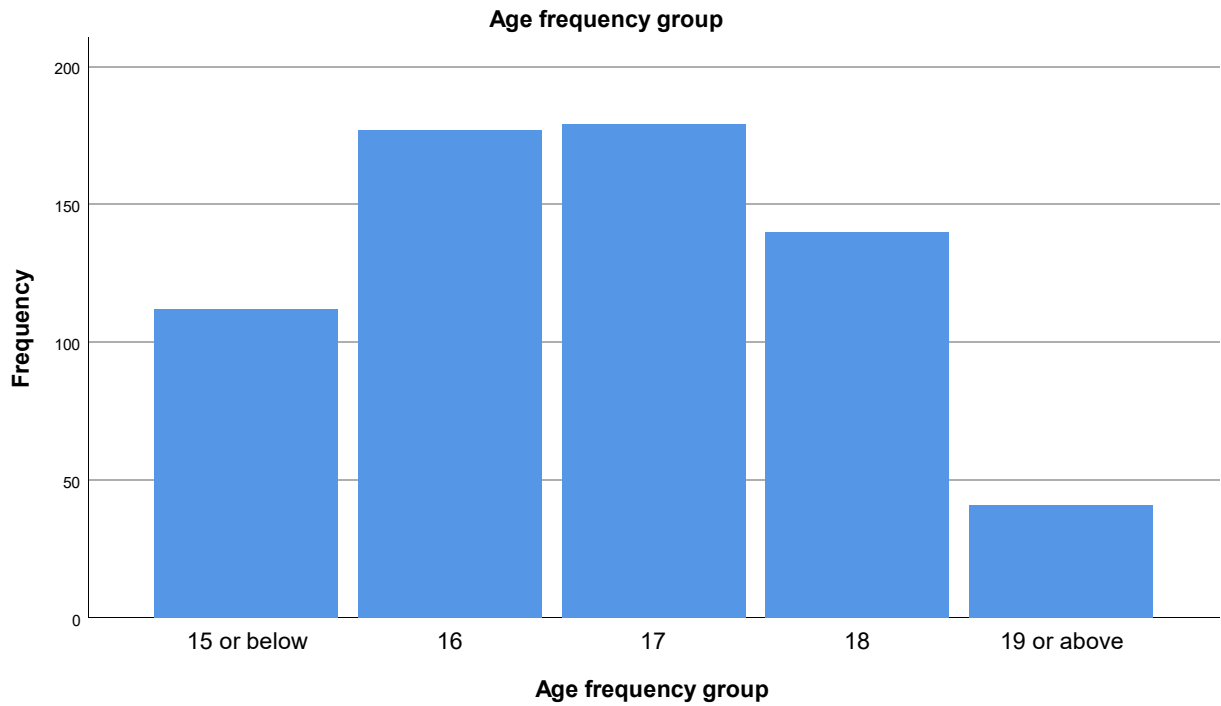
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 absences	244	37.6	37.6	37.6
	1 to 3 absences	129	19.9	19.9	57.5
	4 to 7 absences	157	24.2	24.2	81.7
	8+ absences	119	18.3	18.3	100.0
	Total	649	100.0	100.0	

Frequency Tables: Ordered Groups

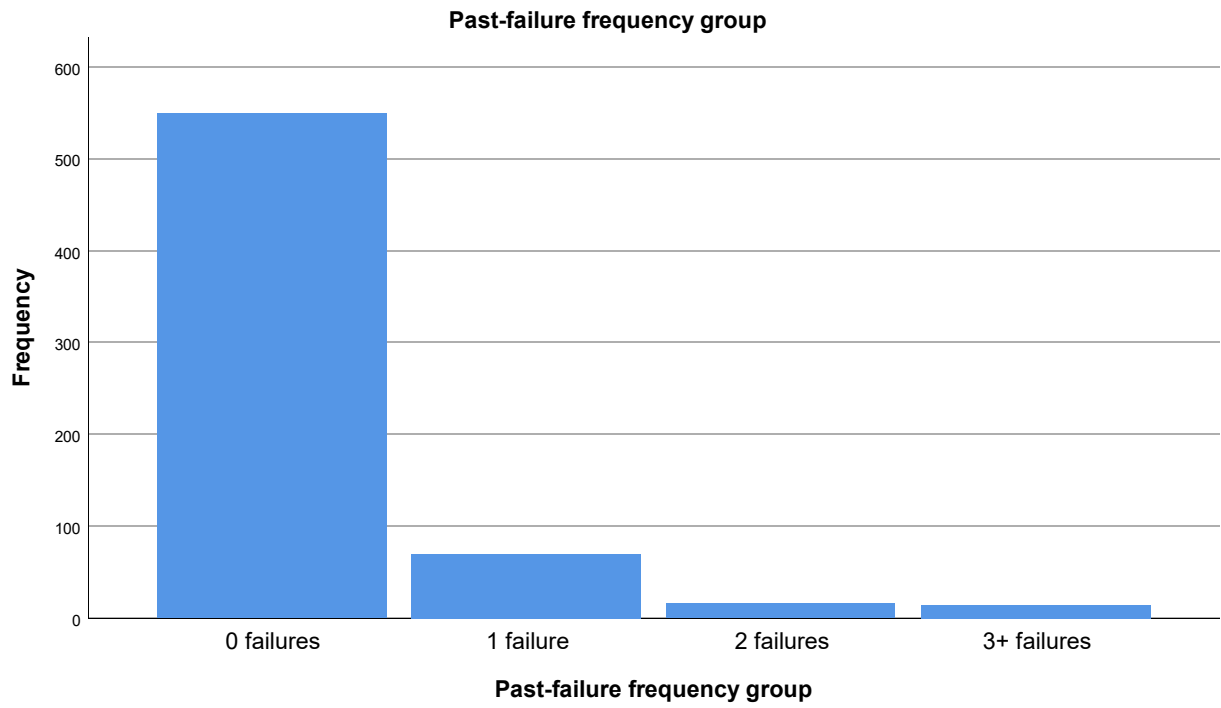
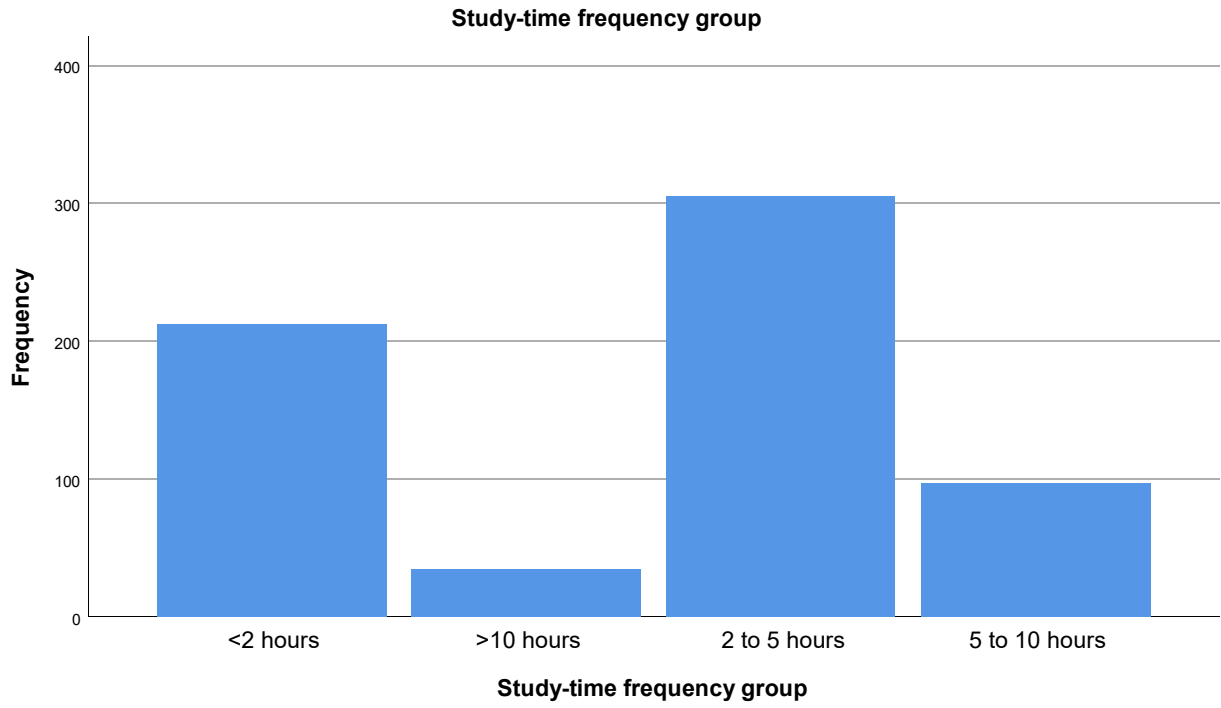
g3_grade_group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 to 5	17	2.6	2.6	2.6
	10 to 13	355	54.7	54.7	57.3
	14 to 16	148	22.8	22.8	80.1
	17 to 20	46	7.1	7.1	87.2
	6 to 9	83	12.8	12.8	100.0
	Total	649	100.0	100.0	

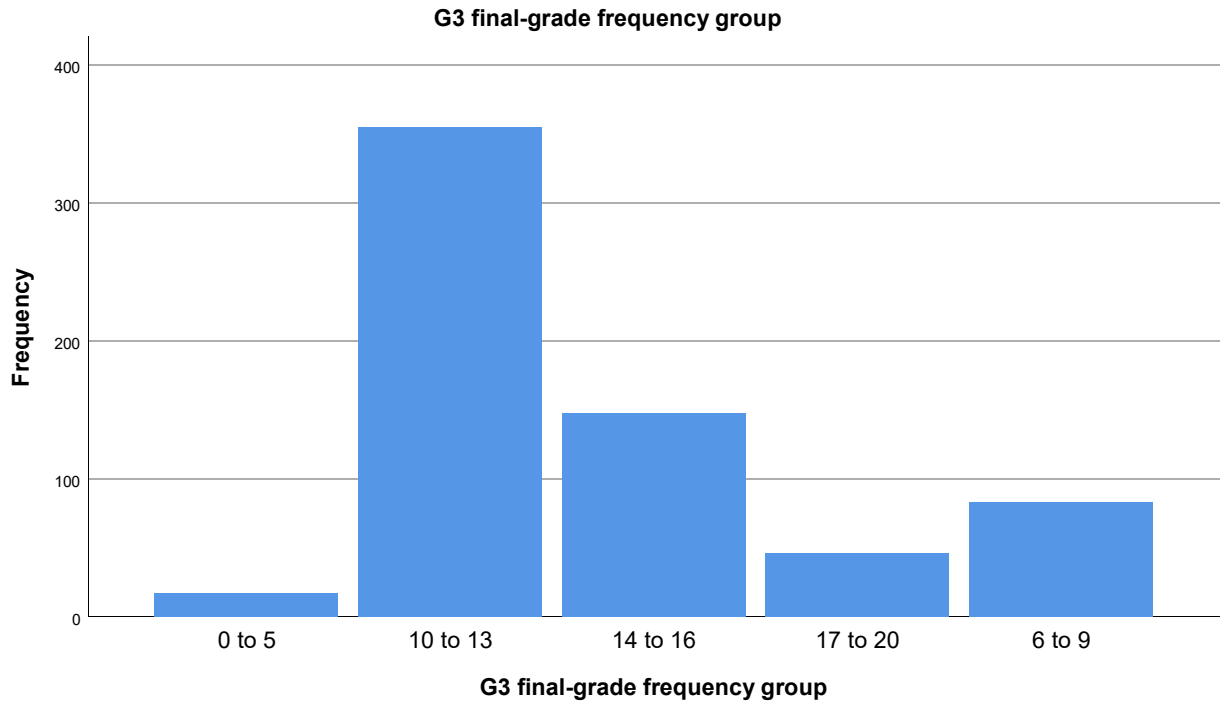
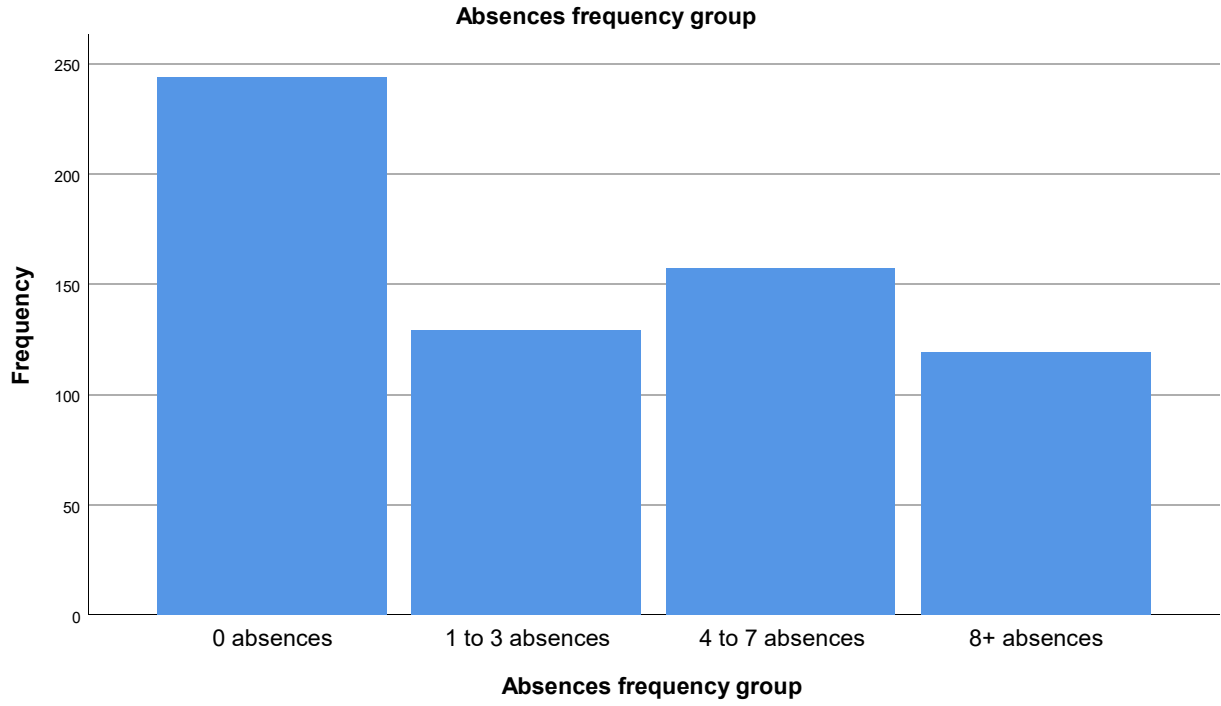
Bar Chart



Frequency Tables: Ordered Groups



Frequency Tables: Ordered Groups



247 0 M>

* -----

Frequency Tables: Ordered Groups

```
248  0 M> * -----.  
* 6. Frequency tables for ordinal/numeric category variables.  
249  0 M> * 6. Frequency tables for ordinal/numeric category variables.  
* -----.  
250  0 M> * -----.  
  
251  0 M>  
TITLE "Frequency Tables: Ordinal Numeric Variables".  
252  0 M> TITLE "Frequency Tables: Ordinal Numeric Variables".
```

Frequency Tables: Ordinal Numeric Variables

```

253  0 M>
FREQUENCIES VARIABLES=
254  0 M>  FREQUENCIES VARIABLES=
      age travelttime studytime failures famrel freetime goout Dalc Walc health G1
G2 G3 absences
255  0 M>   age travelttime studytime failures famrel freetime goout Dalc Wal
c health G1 G2 G3 absences
      /FORMAT=AVALUE TABLE
256  0 M>   /FORMAT=AVALUE TABLE
      /STATISTICS=MEAN MEDIAN MODE STDDEV MINIMUM MAXIMUM
257  0 M>   /STATISTICS=MEAN MEDIAN MODE STDDEV MINIMUM MAXIMUM
      /HISTOGRAM NORMAL
258  0 M>   /HISTOGRAM NORMAL
      /ORDER=ANALYSIS.
259  0 M>   /ORDER=ANALYSIS.

```

Frequencies

Warnings

An invalid option keyword on the FORMAT subcommand.
 Found: TABLE

Statistics

		age	travelttime	studytime	failures	famrel	freetime	goout
N	Valid	649	649	649	649	649	649	649
	Missing	0	0	0	0	0	0	0
Mean		16.74	1.57	1.93	.22	3.93	3.18	3.18
Median		17.00	1.00	2.00	.00	4.00	3.00	3.00
Mode		17	1	2	0	4	3	3
Std. Deviation		1.218	.749	.830	.593	.956	1.051	1.176
Minimum		15	1	1	0	1	1	1
Maximum		22	4	4	3	5	5	5

Frequency Tables: Ordinal Numeric Variables

Statistics

		Dalc	Walc	health	G1	G2	G3	absences
N	Valid	649	649	649	649	649	649	649
	Missing	0	0	0	0	0	0	0
Mean		1.50	2.28	3.54	11.40	11.57	11.91	3.66
Median		1.00	2.00	4.00	11.00	11.00	12.00	2.00
Mode		1	1	5	10	11	11	0
Std. Deviation		.925	1.284	1.446	2.745	2.914	3.231	4.641
Minimum		1	1	1	0	0	0	0
Maximum		5	5	5	19	19	19	32

Frequency Table

age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	15	112	17.3	17.3	17.3
	16	177	27.3	27.3	44.5
	17	179	27.6	27.6	72.1
	18	140	21.6	21.6	93.7
	19	32	4.9	4.9	98.6
	20	6	.9	.9	99.5
	21	2	.3	.3	99.8
	22	1	.2	.2	100.0
	Total	649	100.0	100.0	

traveltime

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	366	56.4	56.4	56.4
	2	213	32.8	32.8	89.2
	3	54	8.3	8.3	97.5
	4	16	2.5	2.5	100.0
	Total	649	100.0	100.0	

Frequency Tables: Ordinal Numeric Variables

studytime

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	212	32.7	32.7	32.7
	2	305	47.0	47.0	79.7
	3	97	14.9	14.9	94.6
	4	35	5.4	5.4	100.0
	Total	649	100.0	100.0	

failures

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	549	84.6	84.6	84.6
	1	70	10.8	10.8	95.4
	2	16	2.5	2.5	97.8
	3	14	2.2	2.2	100.0
	Total	649	100.0	100.0	

famrel

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	22	3.4	3.4	3.4
	2	29	4.5	4.5	7.9
	3	101	15.6	15.6	23.4
	4	317	48.8	48.8	72.3
	5	180	27.7	27.7	100.0
	Total	649	100.0	100.0	

Frequency Tables: Ordinal Numeric Variables

freetime

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	45	6.9	6.9	6.9
	2	107	16.5	16.5	23.4
	3	251	38.7	38.7	62.1
	4	178	27.4	27.4	89.5
	5	68	10.5	10.5	100.0
	Total	649	100.0	100.0	

goout

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	48	7.4	7.4	7.4
	2	145	22.3	22.3	29.7
	3	205	31.6	31.6	61.3
	4	141	21.7	21.7	83.1
	5	110	16.9	16.9	100.0
	Total	649	100.0	100.0	

Dalc

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	451	69.5	69.5	69.5
	2	121	18.6	18.6	88.1
	3	43	6.6	6.6	94.8
	4	17	2.6	2.6	97.4
	5	17	2.6	2.6	100.0
	Total	649	100.0	100.0	

Frequency Tables: Ordinal Numeric Variables

Walc

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	247	38.1	38.1	38.1
	2	150	23.1	23.1	61.2
	3	120	18.5	18.5	79.7
	4	87	13.4	13.4	93.1
	5	45	6.9	6.9	100.0
	Total	649	100.0	100.0	

health

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	90	13.9	13.9	13.9
	2	78	12.0	12.0	25.9
	3	124	19.1	19.1	45.0
	4	108	16.6	16.6	61.6
	5	249	38.4	38.4	100.0
	Total	649	100.0	100.0	

Frequency Tables: Ordinal Numeric Variables

G1

		Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	0	1	.2	.2	.2	
	4	2	.3	.3	.5	
	5	5	.8	.8	1.2	
	6	9	1.4	1.4	2.6	
	7	33	5.1	5.1	7.7	
	8	42	6.5	6.5	14.2	
	9	65	10.0	10.0	24.2	
	10	95	14.6	14.6	38.8	
	11	91	14.0	14.0	52.9	
	12	82	12.6	12.6	65.5	
	13	72	11.1	11.1	76.6	
	14	71	10.9	10.9	87.5	
	15	35	5.4	5.4	92.9	
	16	22	3.4	3.4	96.3	
	17	16	2.5	2.5	98.8	
	18	7	1.1	1.1	99.8	
	19	1	.2	.2	100.0	
	Total		649	100.0	100.0	

Frequency Tables: Ordinal Numeric Variables

G2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	7	1.1	1.1	1.1
	5	3	.5	.5	1.5
	6	7	1.1	1.1	2.6
	7	16	2.5	2.5	5.1
	8	40	6.2	6.2	11.2
	9	72	11.1	11.1	22.3
	10	83	12.8	12.8	35.1
	11	103	15.9	15.9	51.0
	12	86	13.3	13.3	64.3
	13	80	12.3	12.3	76.6
	14	54	8.3	8.3	84.9
	15	38	5.9	5.9	90.8
	16	25	3.9	3.9	94.6
	17	20	3.1	3.1	97.7
	18	14	2.2	2.2	99.8
	19	1	.2	.2	100.0
	Total	649	100.0	100.0	

Frequency Tables: Ordinal Numeric Variables

G3

		Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	0	15	2.3	2.3	2.3	
	1	1	.2	.2	2.5	
	5	1	.2	.2	2.6	
	6	3	.5	.5	3.1	
	7	10	1.5	1.5	4.6	
	8	35	5.4	5.4	10.0	
	9	35	5.4	5.4	15.4	
	10	97	14.9	14.9	30.4	
	11	104	16.0	16.0	46.4	
	12	72	11.1	11.1	57.5	
	13	82	12.6	12.6	70.1	
	14	63	9.7	9.7	79.8	
	15	49	7.6	7.6	87.4	
	16	36	5.5	5.5	92.9	
	17	29	4.5	4.5	97.4	
	18	15	2.3	2.3	99.7	
	19	2	.3	.3	100.0	
	Total		649	100.0	100.0	

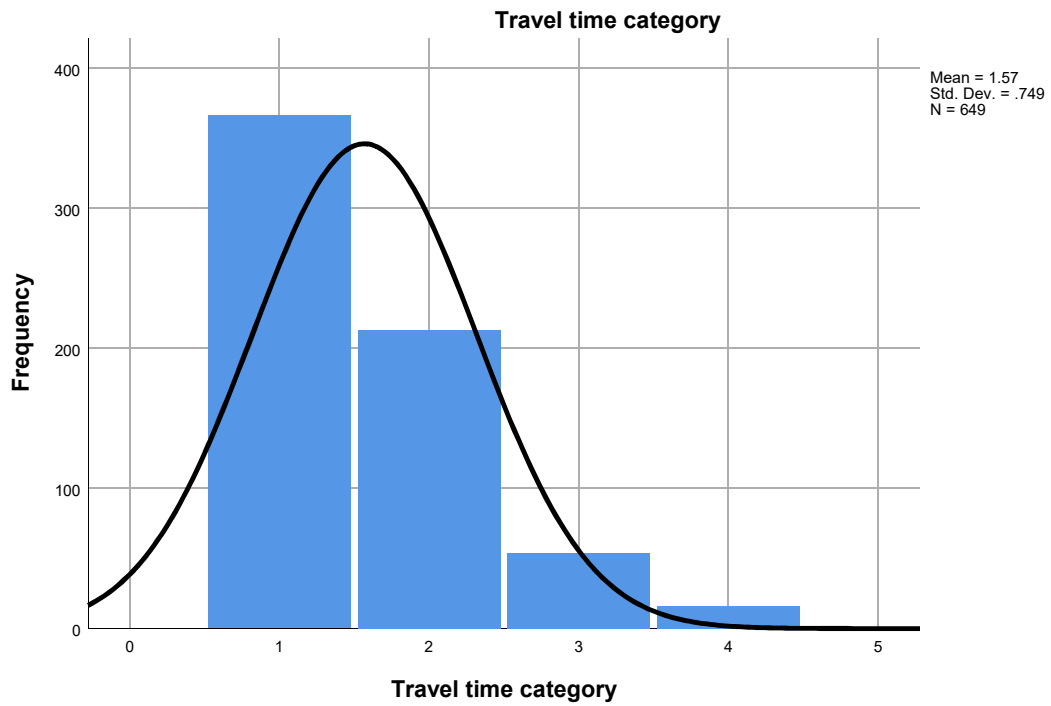
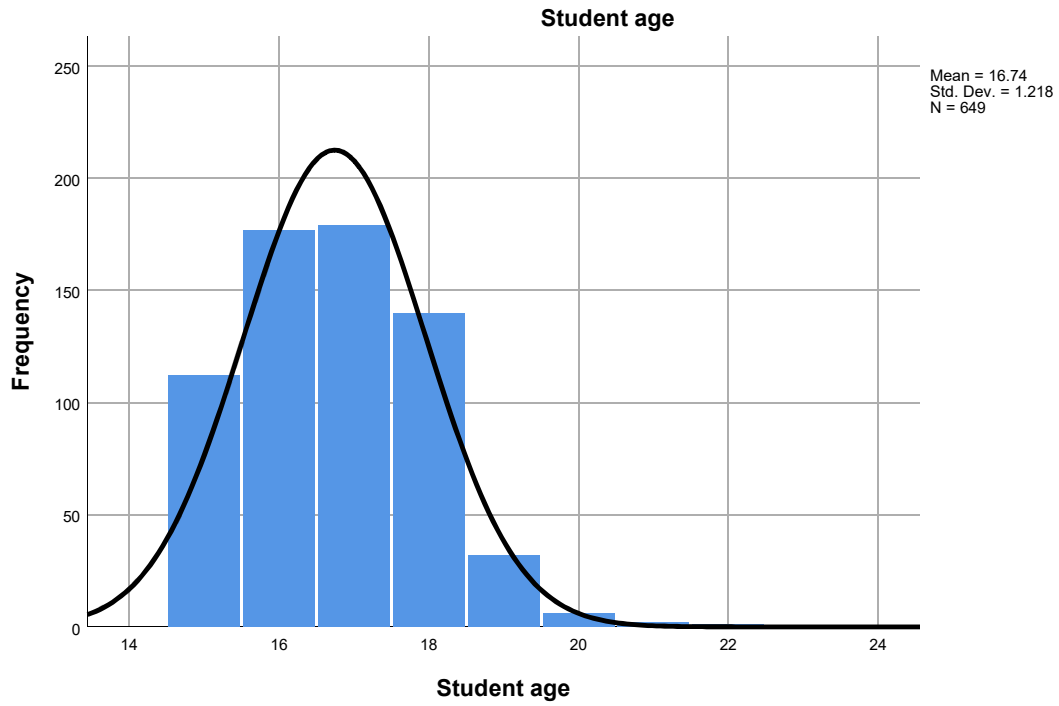
Frequency Tables: Ordinal Numeric Variables

absences

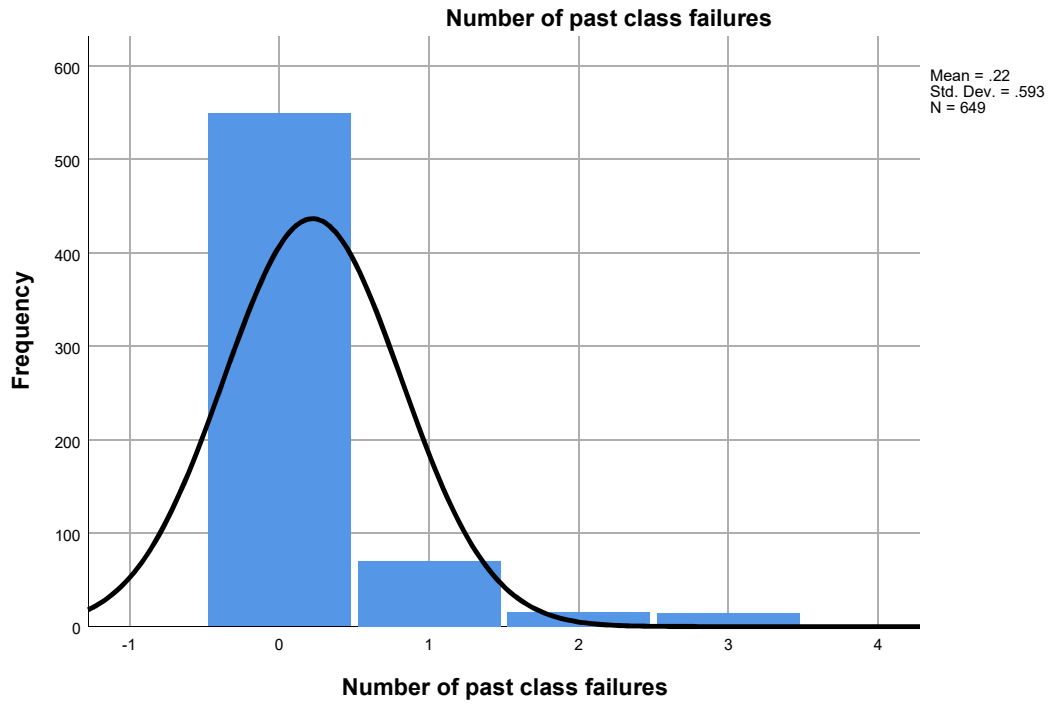
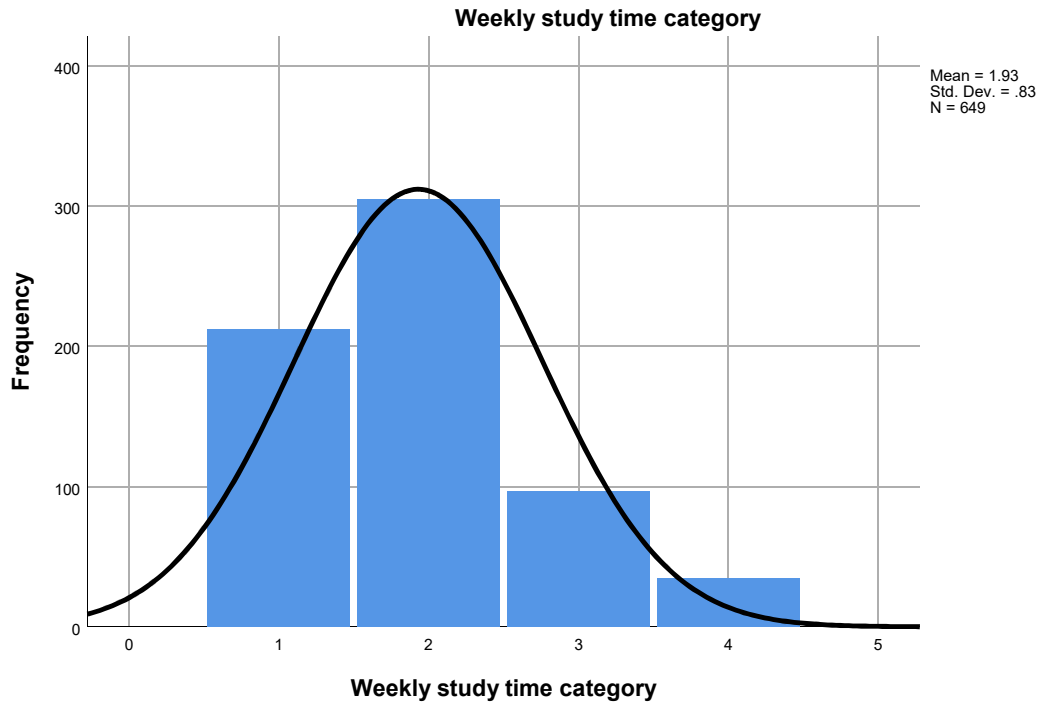
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	244	37.6	37.6	37.6
	1	12	1.8	1.8	39.4
	2	110	16.9	16.9	56.4
	3	7	1.1	1.1	57.5
	4	93	14.3	14.3	71.8
	5	12	1.8	1.8	73.7
	6	49	7.6	7.6	81.2
	7	3	.5	.5	81.7
	8	42	6.5	6.5	88.1
	9	7	1.1	1.1	89.2
	10	21	3.2	3.2	92.4
	11	5	.8	.8	93.2
	12	12	1.8	1.8	95.1
	13	1	.2	.2	95.2
	14	8	1.2	1.2	96.5
	15	2	.3	.3	96.8
	16	10	1.5	1.5	98.3
	18	3	.5	.5	98.8
	21	2	.3	.3	99.1
	22	2	.3	.3	99.4
24	1	.2	.2	99.5	
26	1	.2	.2	99.7	
30	1	.2	.2	99.8	
32	1	.2	.2	100.0	
	Total	649	100.0	100.0	

Histogram

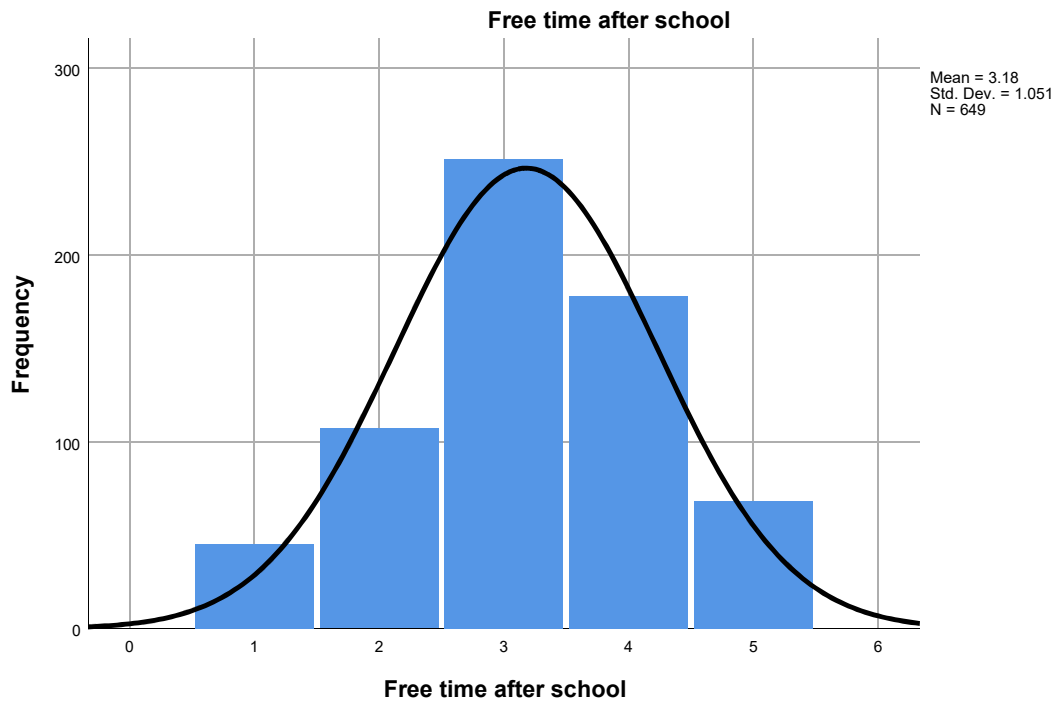
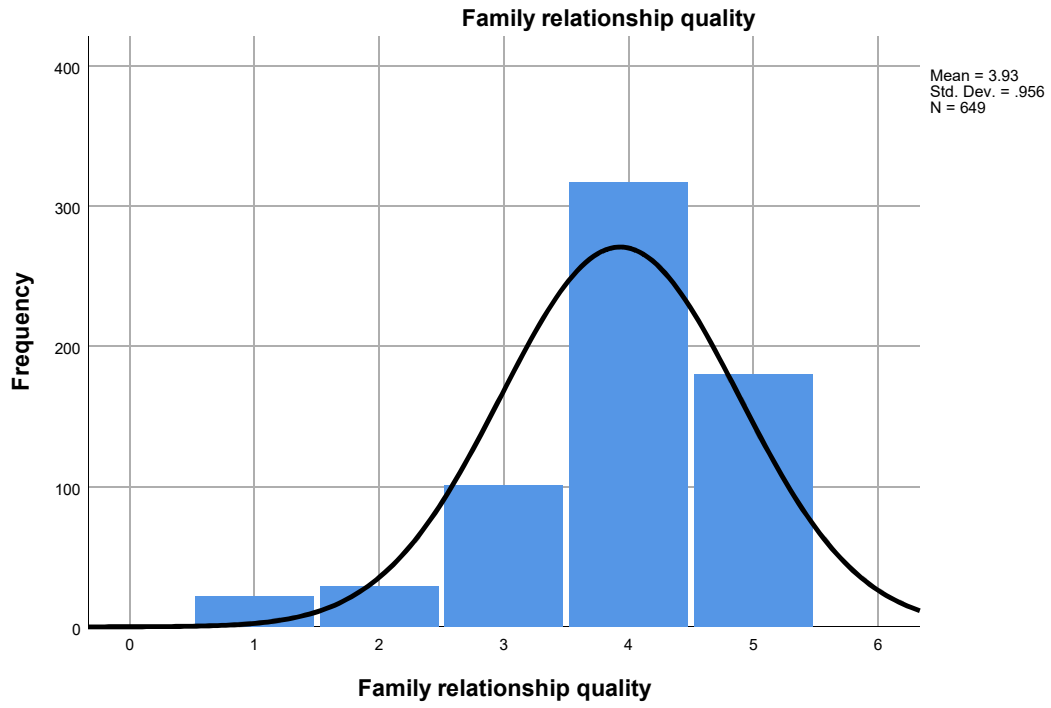
Frequency Tables: Ordinal Numeric Variables



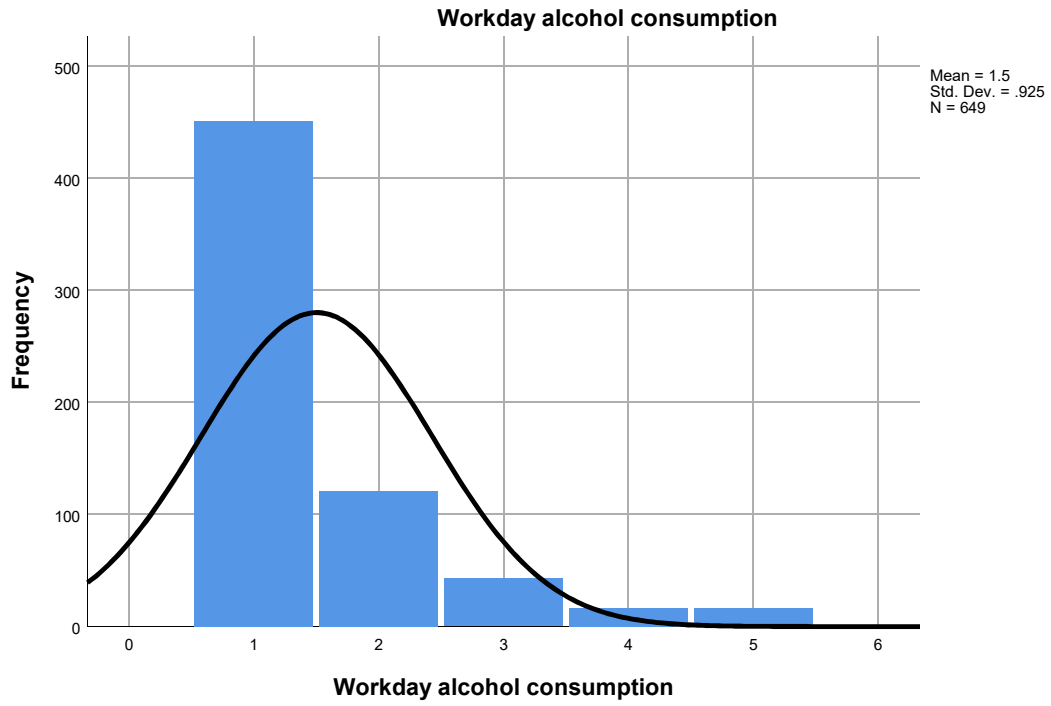
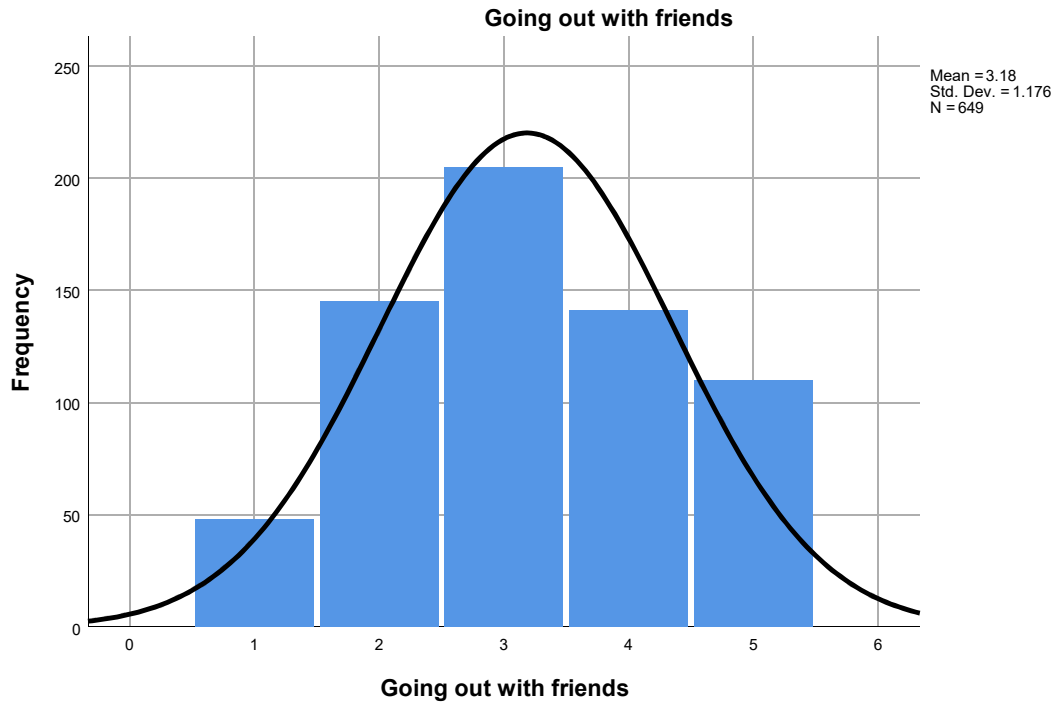
Frequency Tables: Ordinal Numeric Variables



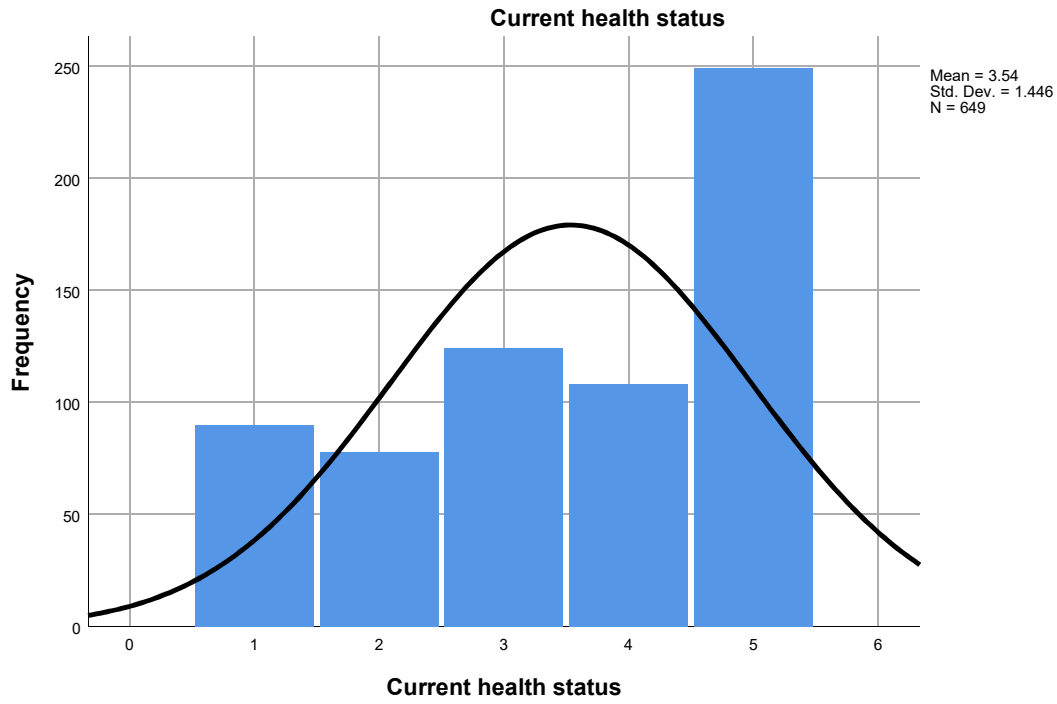
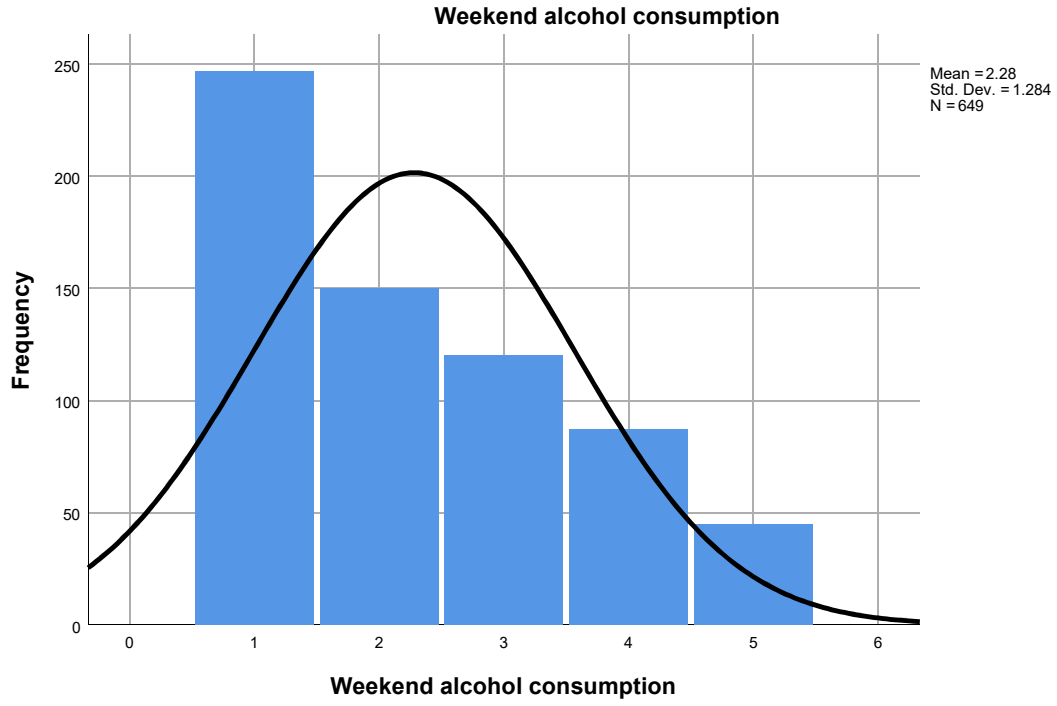
Frequency Tables: Ordinal Numeric Variables



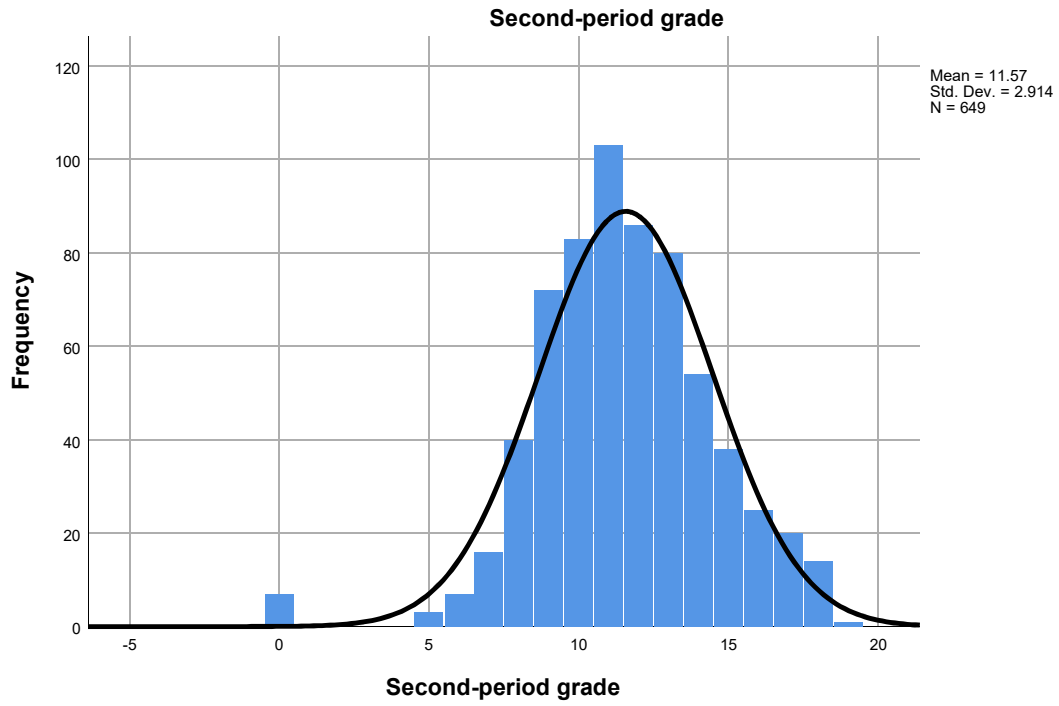
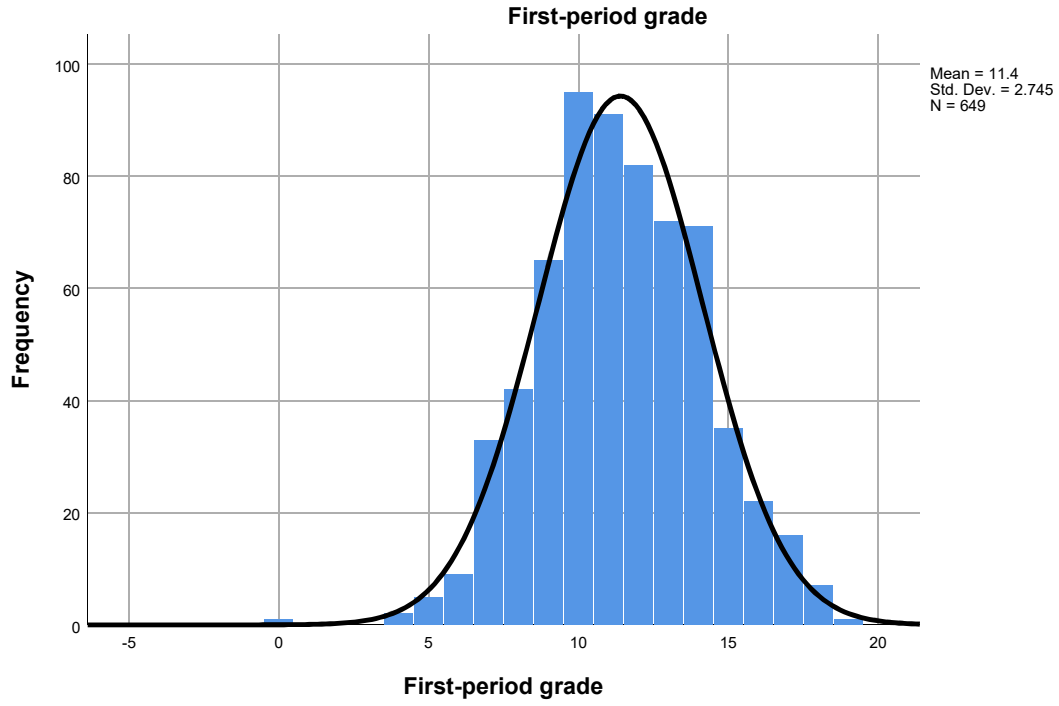
Frequency Tables: Ordinal Numeric Variables



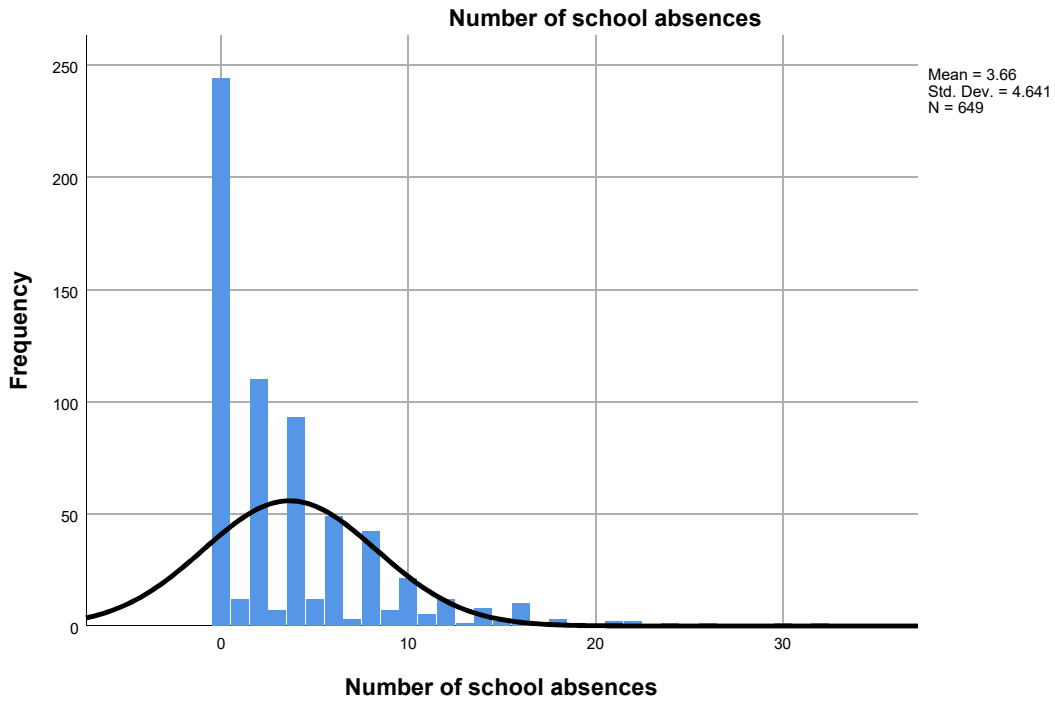
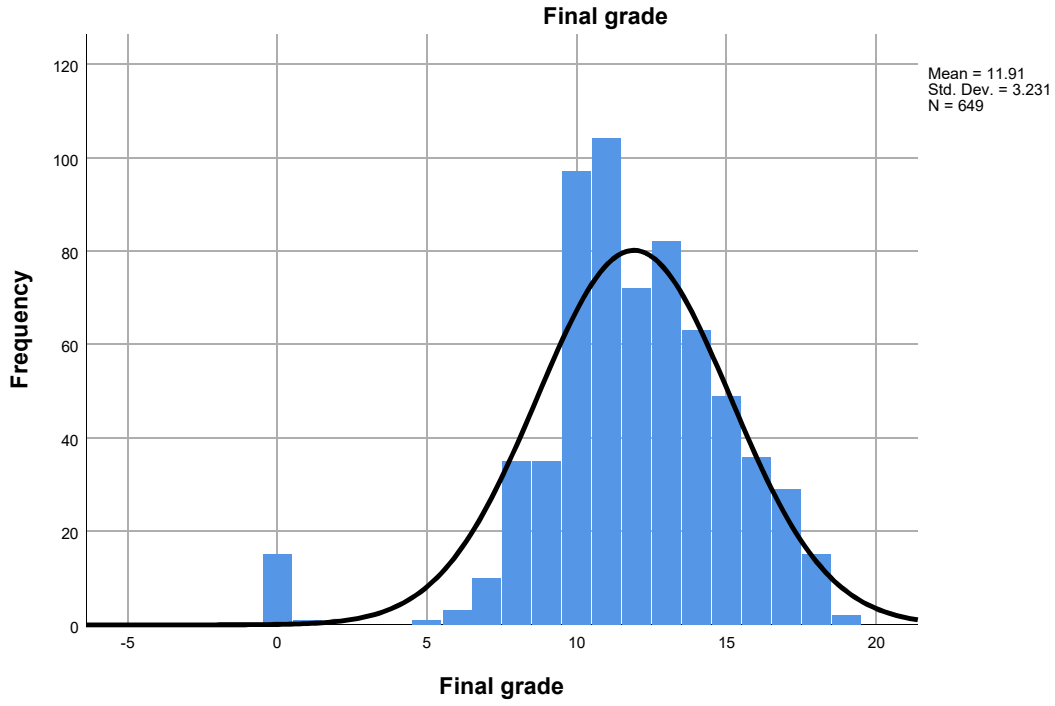
Frequency Tables: Ordinal Numeric Variables



Frequency Tables: Ordinal Numeric Variables



Frequency Tables: Ordinal Numeric Variables



260 0 M>

* -----

Frequency Tables: Ordinal Numeric Variables

```
261  0 M> * -----.  
* 7. Key frequency tables used in the charts.  
262  0 M> * 7. Key frequency tables used in the charts.  
* -----.  
263  0 M> * -----.  
  
264  0 M>  
TITLE "Key Chart Frequencies: School".  
265  0 M> TITLE "Key Chart Frequencies: School".
```

Key Chart Frequencies: School

```
266 0 M>
FREQUENCIES VARIABLES=school
267 0 M> FREQUENCIES VARIABLES=school
      /FORMAT=AVALUE TABLE
268 0 M>      /FORMAT=AVALUE TABLE
      /BARCHART FREQ
269 0 M>      /BARCHART FREQ
      /ORDER=ANALYSIS.
270 0 M>      /ORDER=ANALYSIS.
```

Frequencies

Warnings

An invalid option keyword on the FORMAT subcommand.
Found: TABLE

Statistics

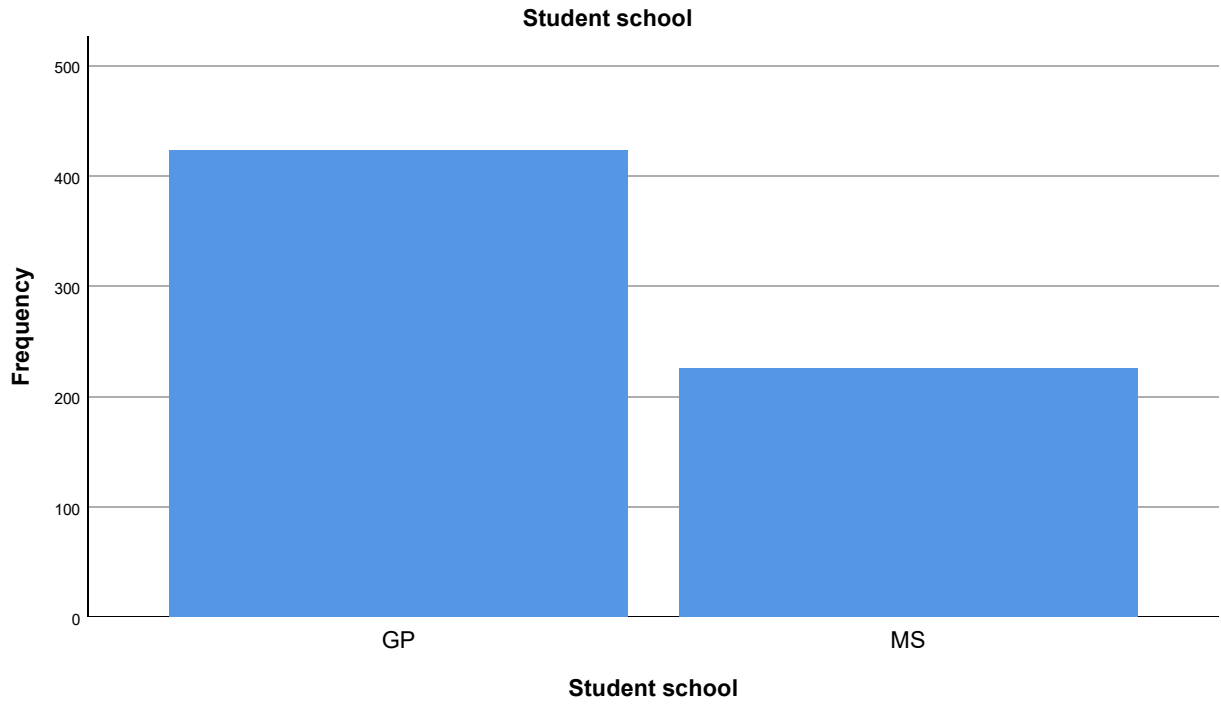
school

N	Valid	649
	Missing	0

school

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	GP	423	65.2	65.2	65.2
	MS	226	34.8	34.8	100.0
	Total	649	100.0	100.0	

Key Chart Frequencies: School



```
271 0 M>  
TITLE "Key Chart Frequencies: Sex".  
272 0 M> TITLE "Key Chart Frequencies: Sex".
```

Key Chart Frequencies: Sex

```
273 0 M>  
FREQUENCIES VARIABLES=sex  
274 0 M> FREQUENCIES VARIABLES=sex  
      /FORMAT=AVALUE TABLE  
275 0 M>      /FORMAT=AVALUE TABLE  
      /BARCHART FREQ  
276 0 M>      /BARCHART FREQ  
      /ORDER=ANALYSIS.  
277 0 M>      /ORDER=ANALYSIS.
```

Frequencies

Warnings

An invalid option keyword on the FORMAT subcommand.
Found: TABLE

Statistics

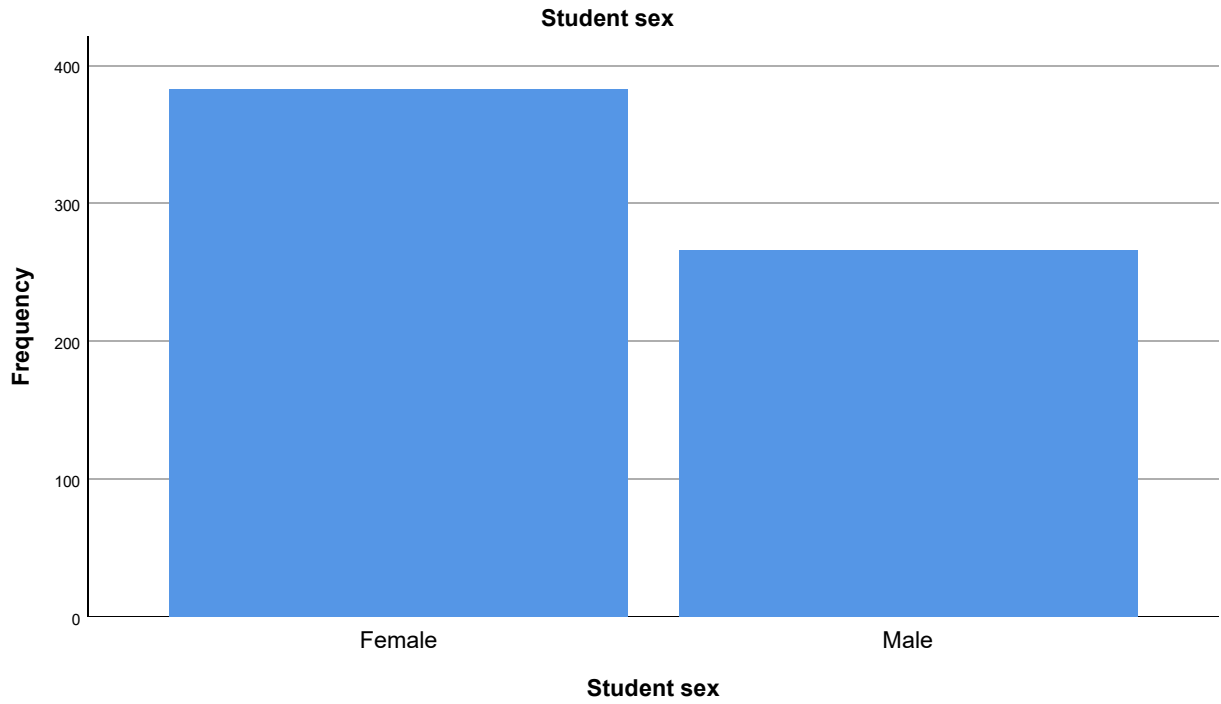
sex

N	Valid	649
	Missing	0

sex

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	383	59.0	59.0	59.0
	Male	266	41.0	41.0	100.0
	Total	649	100.0	100.0	

Key Chart Frequencies: Sex



278 0 M>

TITLE "Key Chart Frequencies: Higher Education".

279 0 M> TITLE "Key Chart Frequencies: Higher Education".

Key Chart Frequencies: Higher Education

```
280  0 M>
FREQUENCIES VARIABLES=higher
281  0 M>  FREQUENCIES VARIABLES=higher
        /FORMAT=AVALUE TABLE
282  0 M>    /FORMAT=AVALUE TABLE
        /BARCHART FREQ
283  0 M>    /BARCHART FREQ
        /ORDER=ANALYSIS.
284  0 M>    /ORDER=ANALYSIS.
```

Frequencies

Warnings

An invalid option keyword on the FORMAT subcommand.
Found: TABLE

Statistics

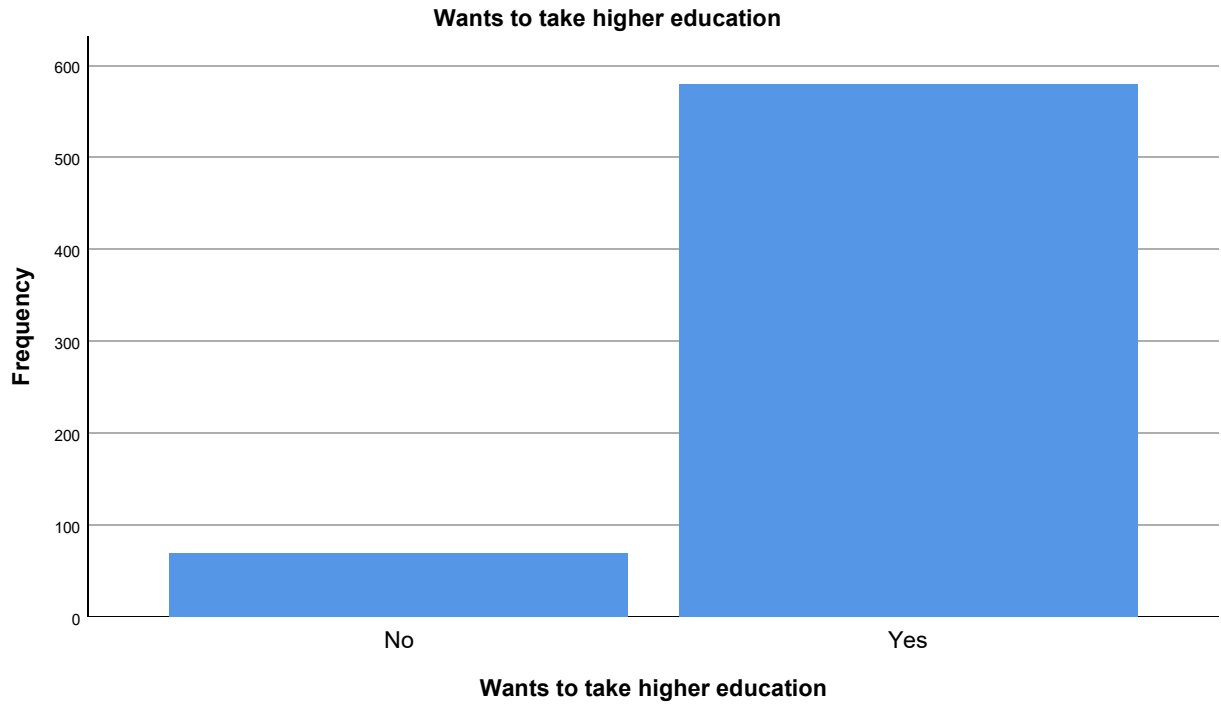
higher

N	Valid	649
	Missing	0

higher

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	69	10.6	10.6	10.6
	Yes	580	89.4	89.4	100.0
	Total	649	100.0	100.0	

Key Chart Frequencies: Higher Education



285 0 M>

TITLE "Key Chart Frequencies: Internet Access".

286 0 M> TITLE "Key Chart Frequencies: Internet Access".

Key Chart Frequencies: Internet Access

```
287 0 M>
FREQUENCIES VARIABLES=internet
288 0 M> FREQUENCIES VARIABLES=internet
      /FORMAT=AVALUE TABLE
289 0 M>      /FORMAT=AVALUE TABLE
      /BARCHART FREQ
290 0 M>      /BARCHART FREQ
      /ORDER=ANALYSIS.
291 0 M>      /ORDER=ANALYSIS.
```

Frequencies

Warnings

An invalid option keyword on the FORMAT subcommand.
Found: TABLE

Statistics

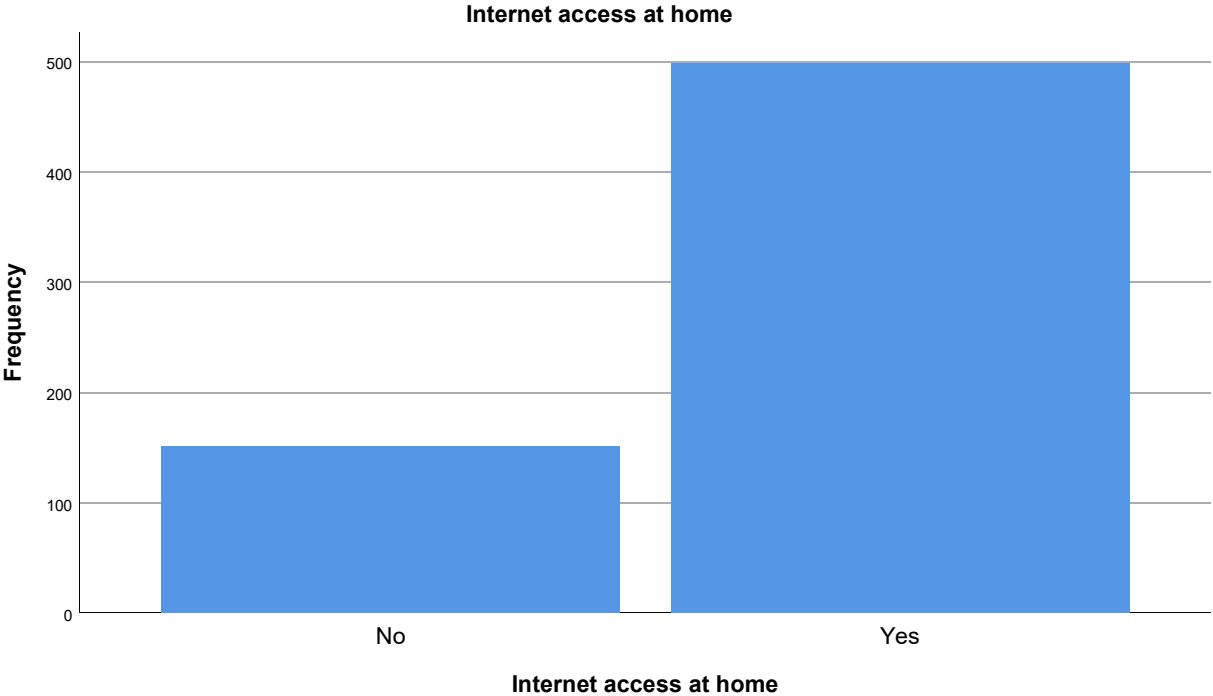
internet

N	Valid	649
	Missing	0

internet

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	151	23.3	23.3	23.3
	Yes	498	76.7	76.7	100.0
	Total	649	100.0	100.0	

Key Chart Frequencies: Internet Access



292 0 M>

TITLE "Key Chart Frequencies: Study Time".

293 0 M> TITLE "Key Chart Frequencies: Study Time".

Key Chart Frequencies: Study Time

```
294 0 M>
FREQUENCIES VARIABLES=studytime_group
295 0 M> FREQUENCIES VARIABLES=studytime_group
      /FORMAT=AVALUE TABLE
296 0 M>      /FORMAT=AVALUE TABLE
      /BARCHART FREQ
297 0 M>      /BARCHART FREQ
      /ORDER=ANALYSIS.
298 0 M>      /ORDER=ANALYSIS.
```

Frequencies

Warnings

An invalid option keyword on the FORMAT subcommand.
Found: TABLE

Statistics

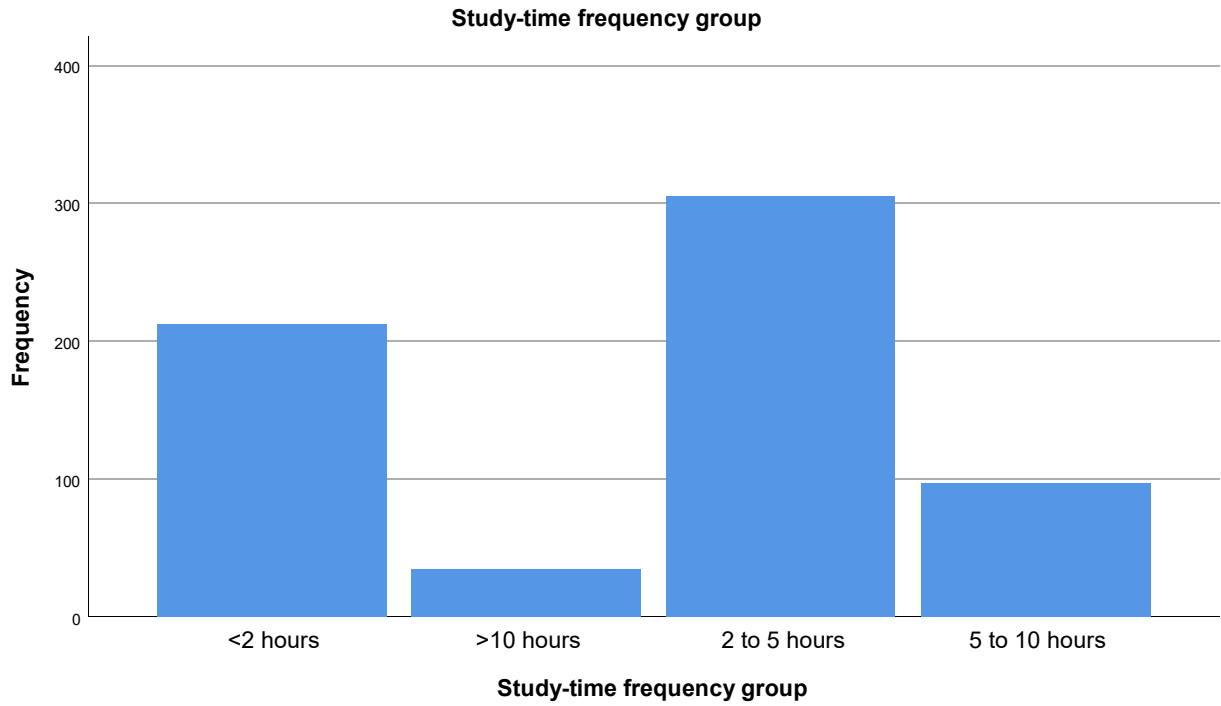
studytime_group

N	Valid	649
	Missing	0

studytime_group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<2 hours	212	32.7	32.7	32.7
	>10 hours	35	5.4	5.4	38.1
	2 to 5 hours	305	47.0	47.0	85.1
	5 to 10 hours	97	14.9	14.9	100.0
	Total	649	100.0	100.0	

Key Chart Frequencies: Study Time



299 0 M>

TITLE "Key Chart Frequencies: Past Failures".

300 0 M> TITLE "Key Chart Frequencies: Past Failures".

Key Chart Frequencies : Past Failures

```
301 0 M>  
FREQUENCIES VARIABLES=failure_group  
302 0 M> FREQUENCIES VARIABLES=failure_group  
/FORMAT=AVALUE TABLE  
303 0 M> /FORMAT=AVALUE TABLE  
/BARCHART FREQ  
304 0 M> /BARCHART FREQ  
/ORDER=ANALYSIS.  
305 0 M> /ORDER=ANALYSIS.
```

Frequencies

Warnings

An invalid option keyword on the FORMAT subcommand.
Found: TABLE

Statistics

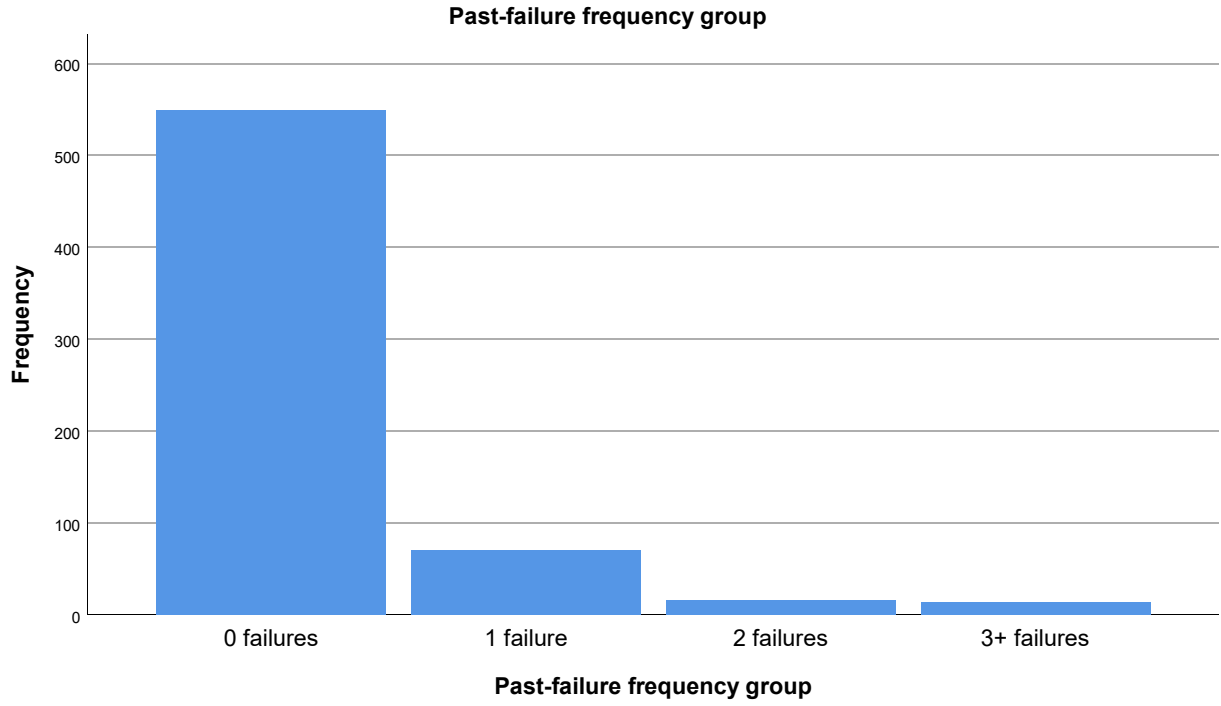
failure_group

N	Valid	649
	Missing	0

failure_group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 failures	549	84.6	84.6	84.6
	1 failure	70	10.8	10.8	95.4
	2 failures	16	2.5	2.5	97.8
	3+ failures	14	2.2	2.2	100.0
	Total	649	100.0	100.0	

Key Chart Frequencies : Past Failures



306 0 M>

TITLE "Key Chart Frequencies: Age Group".

307 0 M> TITLE "Key Chart Frequencies: Age Group".

Key Chart Frequencies : Age Group

```
308 0 M>  
FREQUENCIES VARIABLES=age_group  
309 0 M> FREQUENCIES VARIABLES=age_group  
/FORMAT=AVALUE TABLE  
310 0 M> /FORMAT=AVALUE TABLE  
/BARCHART FREQ  
311 0 M> /BARCHART FREQ  
/ORDER=ANALYSIS.  
312 0 M> /ORDER=ANALYSIS.
```

Frequencies

Warnings

An invalid option keyword on the FORMAT subcommand.
Found: TABLE

Statistics

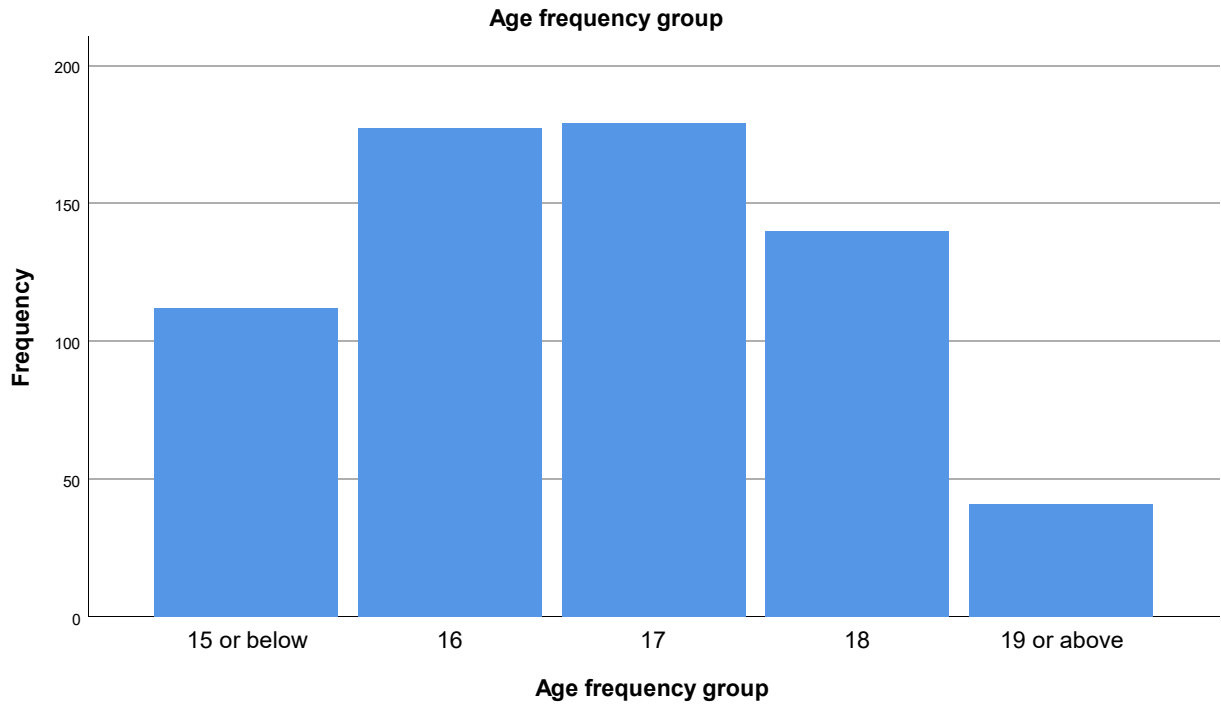
age_group

N	Valid	649
	Missing	0

age_group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	15 or below	112	17.3	17.3	17.3
	16	177	27.3	27.3	44.5
	17	179	27.6	27.6	72.1
	18	140	21.6	21.6	93.7
	19 or above	41	6.3	6.3	100.0
	Total	649	100.0	100.0	

Key Chart Frequencies : Age Group



313 0 M>

TITLE "Key Chart Frequencies: G3 Grade Group".

314 0 M> TITLE "Key Chart Frequencies: G3 Grade Group".

Key Chart Frequencies: G3 Grade Group

```
315 0 M>
FREQUENCIES VARIABLES=g3_grade_group
316 0 M> FREQUENCIES VARIABLES=g3_grade_group
      /FORMAT=AVALUE TABLE
317 0 M>      /FORMAT=AVALUE TABLE
      /BARCHART FREQ
318 0 M>      /BARCHART FREQ
      /ORDER=ANALYSIS.
319 0 M>      /ORDER=ANALYSIS.
```

Frequencies

Warnings

An invalid option keyword on the FORMAT subcommand.
Found: TABLE

Statistics

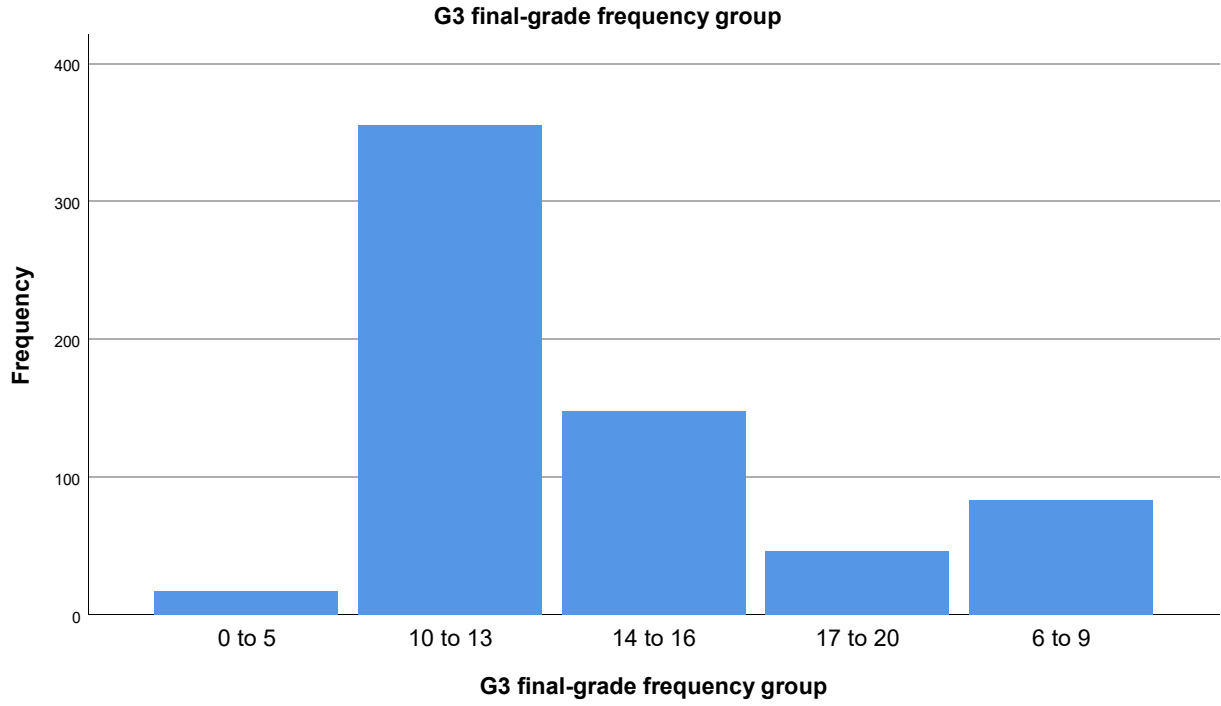
g3_grade_group

N	Valid	649
	Missing	0

g3_grade_group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 to 5	17	2.6	2.6	2.6
	10 to 13	355	54.7	54.7	57.3
	14 to 16	148	22.8	22.8	80.1
	17 to 20	46	7.1	7.1	87.2
	6 to 9	83	12.8	12.8	100.0
	Total	649	100.0	100.0	

Key Chart Frequencies: G3 Grade Group



320 0 M>

TITLE "Key Chart Frequencies: Absences Group".

321 0 M> TITLE "Key Chart Frequencies: Absences Group".

Key Chart Frequencies: Absences Group

```
322 0 M>  
FREQUENCIES VARIABLES=absences_group  
323 0 M> FREQUENCIES VARIABLES=absences_group  
/FORMAT=AVALUE TABLE  
324 0 M> /FORMAT=AVALUE TABLE  
/BARCHART FREQ  
325 0 M> /BARCHART FREQ  
/ORDER=ANALYSIS.  
326 0 M> /ORDER=ANALYSIS.
```

Frequencies

Warnings

An invalid option keyword on the FORMAT subcommand.
Found: TABLE

Statistics

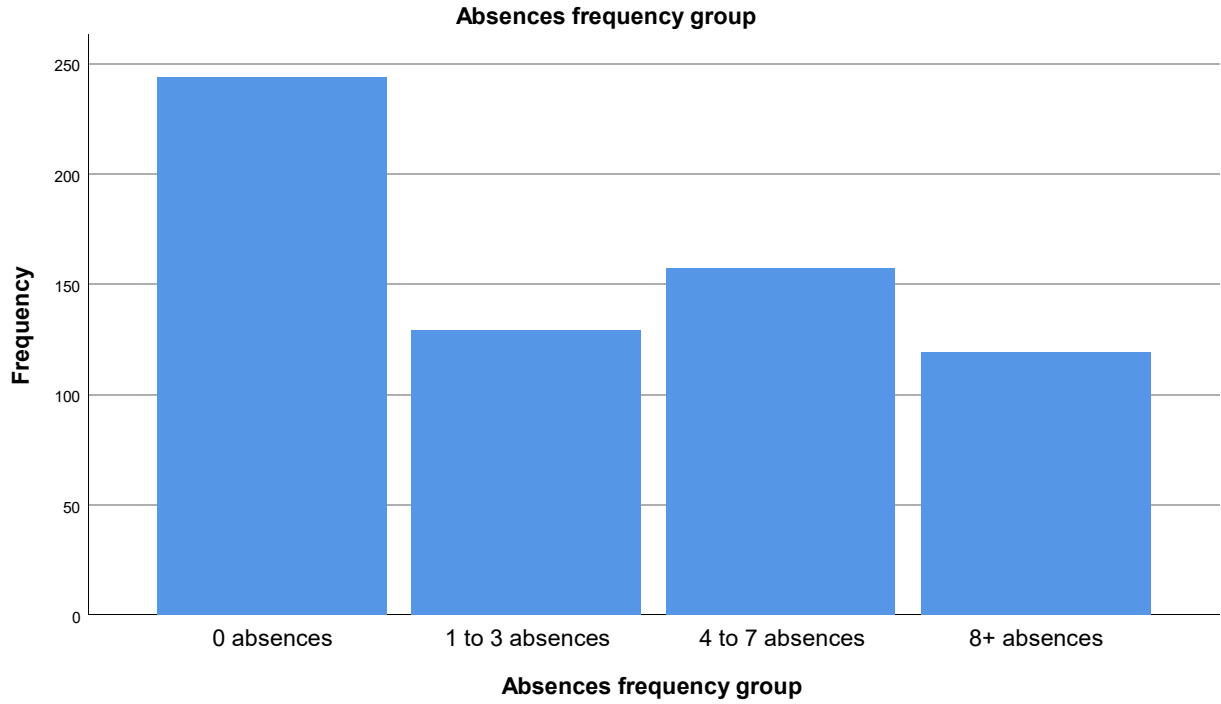
absences_group

N	Valid	649
	Missing	0

absences_group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 absences	244	37.6	37.6	37.6
	1 to 3 absences	129	19.9	19.9	57.5
	4 to 7 absences	157	24.2	24.2	81.7
	8+ absences	119	18.3	18.3	100.0
	Total	649	100.0	100.0	

Key Chart Frequencies: Absences Group



```
327 0 M>
* -----
328 0 M> * -----
* 8. Cross-tab frequency distributions.
329 0 M> * 8. Cross-tab frequency distributions.
* -----
330 0 M> * -----

331 0 M>
TITLE "Cross-tab Frequency: School by Sex".
332 0 M> TITLE "Cross-tab Frequency: School by Sex".
```

Cross-tab Frequency: School by Sex

```

333  0 M>
CROSSTABS
334  0 M>  CROSSTABS
        /TABLES=school BY sex
335  0 M>    /TABLES=school BY sex
        /FORMAT=AVALUE TABLES
336  0 M>    /FORMAT=AVALUE TABLES
        /CELLS=COUNT ROW COLUMN TOTAL
337  0 M>    /CELLS=COUNT ROW COLUMN TOTAL
        /COUNT ROUND CELL
338  0 M>    /COUNT ROUND CELL
        /BARCHART.
339  0 M>    /BARCHART.

```

Crosstabs

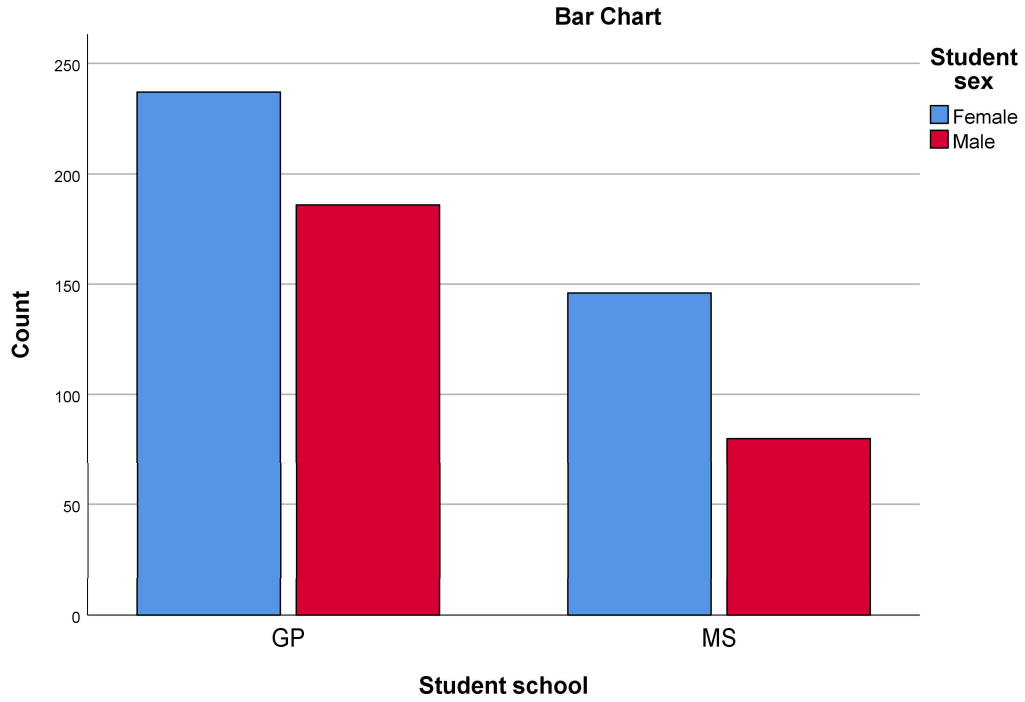
Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
school * sex	649	100.0%	0	0.0%	649	100.0%

school * sex Crosstabulation

			sex		Total
			Female	Male	
school	GP	Count	237	186	423
		% within school	56.0%	44.0%	100.0%
		% within sex	61.9%	69.9%	65.2%
		% of Total	36.5%	28.7%	65.2%
	MS	Count	146	80	226
		% within school	64.6%	35.4%	100.0%
		% within sex	38.1%	30.1%	34.8%
		% of Total	22.5%	12.3%	34.8%
Total	Count	383	266	649	
	% within school	59.0%	41.0%	100.0%	
	% within sex	100.0%	100.0%	100.0%	
	% of Total	59.0%	41.0%	100.0%	

Cross-tab Frequency: School by Sex



340 0 M>

TITLE "Cross-tab Frequency: Internet by Higher Education".

341 0 M> TITLE "Cross-tab Frequency: Internet by Higher Education".

Cross-tab Frequency: Internet by Higher Education

```

342  0 M>
CROSSTABS
343  0 M>  CROSSTABS
        /TABLES=internet BY higher
344  0 M>    /TABLES=internet BY higher
        /FORMAT=AVALUE TABLES
345  0 M>    /FORMAT=AVALUE TABLES
        /CELLS=COUNT ROW COLUMN TOTAL
346  0 M>    /CELLS=COUNT ROW COLUMN TOTAL
        /COUNT ROUND CELL
347  0 M>    /COUNT ROUND CELL
        /BARCHART.
348  0 M>    /BARCHART.

```

Crosstabs

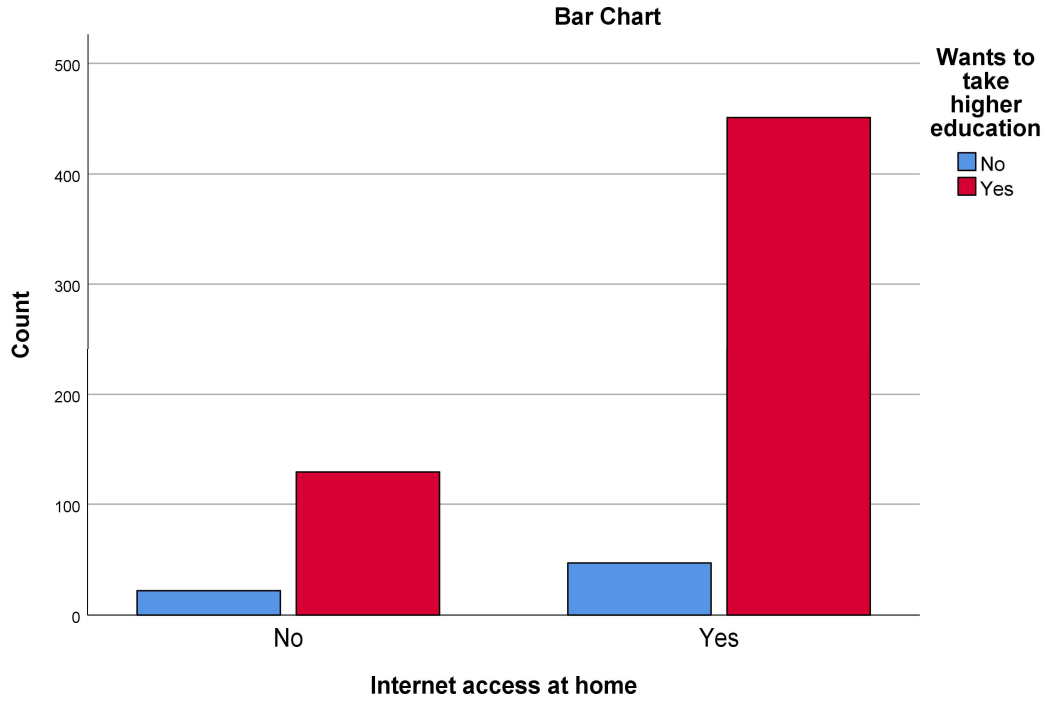
Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
internet * higher	649	100.0%	0	0.0%	649	100.0%

internet * higher Crosstabulation

			higher		Total
			No	Yes	
internet	No	Count	22	129	151
		% within internet	14.6%	85.4%	100.0%
		% within higher	31.9%	22.2%	23.3%
		% of Total	3.4%	19.9%	23.3%
	Yes	Count	47	451	498
		% within internet	9.4%	90.6%	100.0%
		% within higher	68.1%	77.8%	76.7%
		% of Total	7.2%	69.5%	76.7%
Total	Count	69	580	649	
	% within internet	10.6%	89.4%	100.0%	
	% within higher	100.0%	100.0%	100.0%	
	% of Total	10.6%	89.4%	100.0%	

Cross-tab Frequency: Internet by Higher Education



349 0 M>

TITLE "Cross-tab Frequency: Study Time by G3 Group".

350 0 M> TITLE "Cross-tab Frequency: Study Time by G3 Group".

Cross-tab Frequency: Study Time by G3 Group

```
351  0 M>
CROSSTABS
352  0 M>  CROSSTABS
         /TABLES=studytime_group BY g3_grade_group
353  0 M>    /TABLES=studytime_group BY g3_grade_group
         /FORMAT=AVALUE TABLES
354  0 M>    /FORMAT=AVALUE TABLES
         /CELLS=COUNT ROW COLUMN TOTAL
355  0 M>    /CELLS=COUNT ROW COLUMN TOTAL
         /COUNT ROUND CELL
356  0 M>    /COUNT ROUND CELL
         /BARCHART.
357  0 M>    /BARCHART.
```

Crosstabs

Case Processing Summary

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
studytime_group * g3_grade_group	649	100.0%	0	0.0%	649	100.0%

Cross-tab Frequency: Study Time by G3 Group

studytime_group * g3_grade_group Crosstabulation

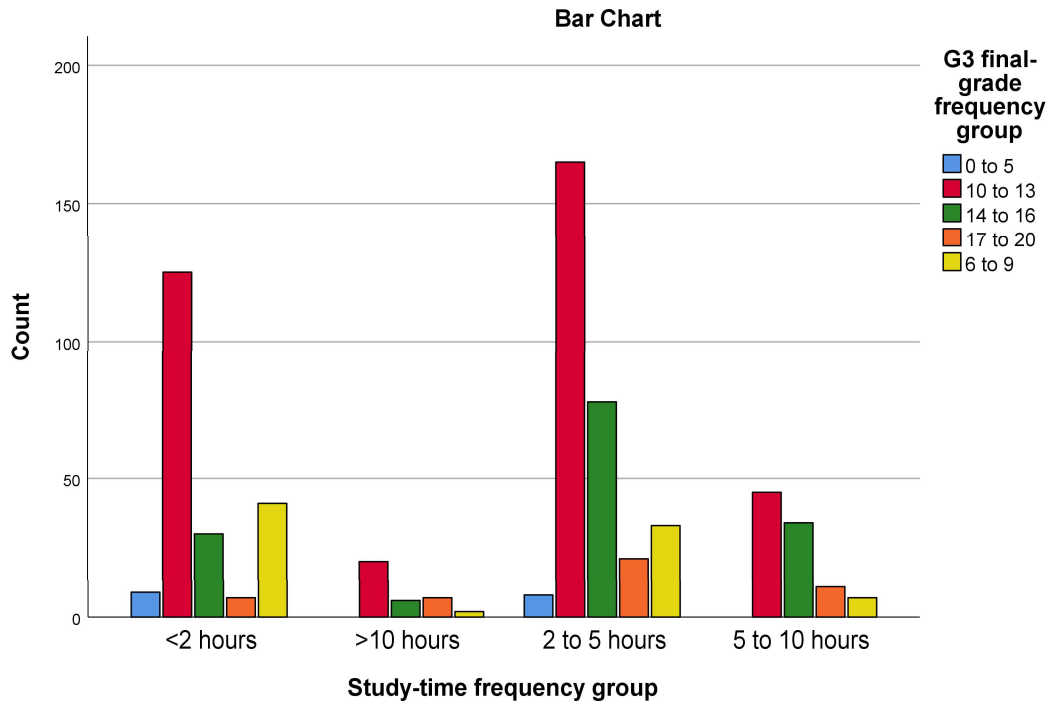
		g3_grade_group			
		0 to 5	10 to 13	14 to 16	
studytime_group	<2 hours	Count	9	125	30
		% within studytime_group	4.2%	59.0%	14.2%
		% within g3_grade_group	52.9%	35.2%	20.3%
		% of Total	1.4%	19.3%	4.6%
	>10 hours	Count	0	20	6
		% within studytime_group	0.0%	57.1%	17.1%
		% within g3_grade_group	0.0%	5.6%	4.1%
		% of Total	0.0%	3.1%	0.9%
	2 to 5 hours	Count	8	165	78
		% within studytime_group	2.6%	54.1%	25.6%
		% within g3_grade_group	47.1%	46.5%	52.7%
		% of Total	1.2%	25.4%	12.0%
	5 to 10 hours	Count	0	45	34
		% within studytime_group	0.0%	46.4%	35.1%
		% within g3_grade_group	0.0%	12.7%	23.0%
		% of Total	0.0%	6.9%	5.2%
Total	Count	17	355	148	
	% within studytime_group	2.6%	54.7%	22.8%	
	% within g3_grade_group	100.0%	100.0%	100.0%	
	% of Total	2.6%	54.7%	22.8%	

Cross-tab Frequency: Study Time by G3 Group

studytime_group * g3_grade_group Crosstabulation

		g3_grade_group		Total	
		17 to 20	6 to 9		
studytime_group	<2 hours	Count	7	41	212
		% within studytime_group	3.3%	19.3%	100.0%
		% within g3_grade_group	15.2%	49.4%	32.7%
		% of Total	1.1%	6.3%	32.7%
	>10 hours	Count	7	2	35
		% within studytime_group	20.0%	5.7%	100.0%
		% within g3_grade_group	15.2%	2.4%	5.4%
		% of Total	1.1%	0.3%	5.4%
	2 to 5 hours	Count	21	33	305
		% within studytime_group	6.9%	10.8%	100.0%
		% within g3_grade_group	45.7%	39.8%	47.0%
		% of Total	3.2%	5.1%	47.0%
	5 to 10 hours	Count	11	7	97
		% within studytime_group	11.3%	7.2%	100.0%
		% within g3_grade_group	23.9%	8.4%	14.9%
		% of Total	1.7%	1.1%	14.9%
Total	Count	46	83	649	
	% within studytime_group	7.1%	12.8%	100.0%	
	% within g3_grade_group	100.0%	100.0%	100.0%	
	% of Total	7.1%	12.8%	100.0%	

Cross-tab Frequency: Study Time by G3 Group



358 0 M>

TITLE "Cross-tab Frequency: School by G3 Group".

359 0 M> TITLE "Cross-tab Frequency: School by G3 Group".

Cross-tab Frequency: School by G3 Group

```

360 0 M>
CROSSTABS
361 0 M> CROSSTABS
      /TABLES=school BY g3_grade_group
362 0 M>      /TABLES=school BY g3_grade_group
      /FORMAT=AVALUE TABLES
363 0 M>      /FORMAT=AVALUE TABLES
      /CELLS=COUNT ROW COLUMN TOTAL
364 0 M>      /CELLS=COUNT ROW COLUMN TOTAL
      /COUNT ROUND CELL
365 0 M>      /COUNT ROUND CELL
      /BARCHART.
366 0 M>      /BARCHART.

```

Crosstabs

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
school * g3_grade_group	649	100.0%	0	0.0%	649	100.0%

school * g3_grade_group Crosstabulation

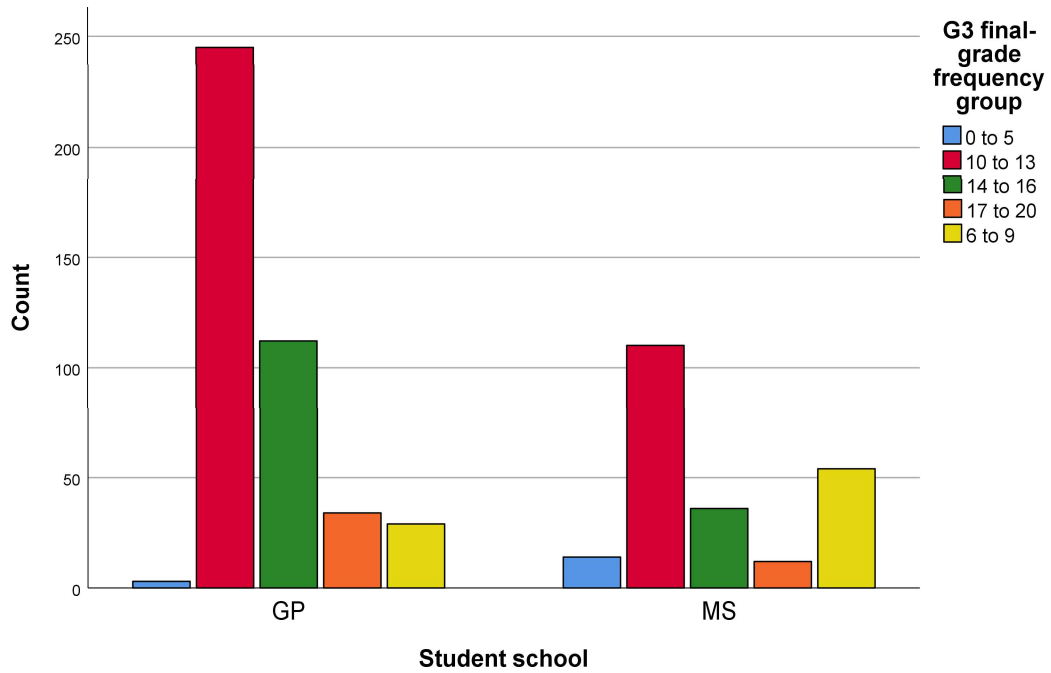
			g3_grade_group				
			0 to 5	10 to 13	14 to 16	17 to 20	6 to 9
school	GP	Count	3	245	112	34	29
		% within school	0.7%	57.9%	26.5%	8.0%	6.9%
		% within g3_grade_group	17.6%	69.0%	75.7%	73.9%	34.9%
		% of Total	0.5%	37.8%	17.3%	5.2%	4.5%
MS		Count	14	110	36	12	54
		% within school	6.2%	48.7%	15.9%	5.3%	23.9%
		% within g3_grade_group	82.4%	31.0%	24.3%	26.1%	65.1%
		% of Total	2.2%	16.9%	5.5%	1.8%	8.3%
Total		Count	17	355	148	46	83
		% within school	2.6%	54.7%	22.8%	7.1%	12.8%
		% within g3_grade_group	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	2.6%	54.7%	22.8%	7.1%	12.8%

Cross-tab Frequency: School by G3 Group

school * g3_grade_group Crosstabulation

			Total
school	GP	Count	423
		% within school	100.0%
		% within g3_grade_group	65.2%
		% of Total	65.2%
MS	MS	Count	226
		% within school	100.0%
		% within g3_grade_group	34.8%
		% of Total	34.8%
Total	Total	Count	649
		% within school	100.0%
		% within g3_grade_group	100.0%
		% of Total	100.0%

Bar Chart



367 0 M>

* -----

368 0 M>

* -----

Cross-tab Frequency: School by G3 Group

* 9. Clear reporting notes in SPSS output.

369 0 M> * 9. Clear reporting notes in SPSS output.

* -----.

370 0 M> * -----.

371 0 M>

TITLE "Frequency Distribution: Reporting Notes".

372 0 M> TITLE "Frequency Distribution: Reporting Notes".

Frequency Distribution: Reporting Notes

```
373 0 M>
ECHO "Frequency means the number of observations in each category.".
374 0 M> ECHO "Frequency means the number of observations in each category.
".
Frequency means the number of observations in each category.
ECHO "Percent means category frequency divided by total frequency multiplied b
y 100.".
375 0 M> ECHO "Percent means category frequency divided by total frequency
multiplied by 100.".
Percent means category frequency divided by total frequency multiplied by 100.
ECHO "Cumulative percent should mainly be interpreted for ordered categories s
uch as age group, study-time group, failure group, absences group and grade gr
oup.".
376 0 M> ECHO "Cumulative percent should mainly be interpreted for ordered
categories such as age group, study-time group, failur
e group, absences group and grade group.".
Cumulative percent should mainly be interpreted for ordered categories such as
age group, study-time group, failure group, absences
ECHO "For this dataset, school, sex, higher education intention, internet acce
ss, study time, past failures, age group, G3 grade group and absences group ar
e the main frequency-distribution outputs.".
377 0 M> ECHO "For this dataset, school, sex, higher education intention, i
nternet access, study time, past failures, age group,
G3 grade group and absences group are the main frequency-distri
bution outputs.".
For this dataset, school, sex, higher education intention, internet access, st
udy time, past failures, age group, G3 grade group and

378 0 M>
* -----.
379 0 M> * -----.
* 10. Save SPSS Viewer output and export PDF.
380 0 M> * 10. Save SPSS Viewer output and export PDF.
* The target folder must already exist:
381 0 M> * The target folder must already exist:
* D:\DATA ANALYSIS\A Basic Descriptive Statistics Guides\Frequency Distrib
ution\Python_Output\pdf
382 0 M> * D:\DATA ANALYSIS\A Basic Descriptive Statistics Guides\Frequ
ency Distribution\Python_Output\pdf
```

Frequency Distribution: Reporting Notes

```
* -----
383  0 M> * -----

384  0 M>
OUTPUT SAVE
385  0 M> OUTPUT SAVE
      OUTFILE="D:\DATA ANALYSIS\A Basic Descriptive Statistics Guides\Frequency Di
distribution\Python_Output\pdf\Frequency-Distribution-SPSS-Output.spv"
386  0 M>      OUTFILE="D:\DATA ANALYSIS\A Basic Descriptive Statistics Guides\F
Frequency Distribution\Python_Output\pdf\Frequency-Di
      tribution-SPSS-Output.spv"

      LOCK=NO.
387  0 M>      LOCK=NO.

388  0 M>
OUTPUT EXPORT
389  0 M> OUTPUT EXPORT
      /CONTENTS EXPORT=ALL LAYERS=PRINTSETTING MODELVIEWS=PRINTSETTING
390  0 M>      /CONTENTS EXPORT=ALL LAYERS=PRINTSETTING MODELVIEWS=PRINTSETTING
      /PDF DOCUMENTFILE="D:\DATA ANALYSIS\A Basic Descriptive Statistics Guides\Fr
equency Distribution\Python_Output\pdf\Frequency-Distribution-SPSS-Output.pdf"
391  0 M>      /PDF DOCUMENTFILE="D:\DATA ANALYSIS\A Basic Descriptive Statisti
cs Guides\Frequency Distribution\Python_Output\pdf\Fre
      quency-Distribution-SPSS-Output.pdf"

      /EMBEDBOOKMARKS=YES
392  0 M>      /EMBEDBOOKMARKS=YES
      /EMBEDFONTS=YES.
393  0 M>      /EMBEDFONTS=YES.
```

Output Export

Warnings

The name EMBEDBOOKMARKS is not a recognized subcommand.

Execution of this command stops.

```
394  0 M>
EXECUTE.
395  0 M> EXECUTE.
```