

G Goodness-of-Fit Test

G Goodness-of-Fit Test

Import and test-specific preparation

Dataset Name

Notes

Output Created		16-JUL-2026 14:42:09
Comments		
Input	Data	D:\DATA ANALYSIS\Chi Square and Categorical Data Tests\G Test\dataset.csv
	Filter	<none>
	Weight	<none>
	Split File	<none>
Syntax		DATASET NAME GTestData.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.01

Warnings

The active dataset will replace the existing dataset named
GTestData.

school into school_n

Old Value	New Value	Value	Label
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GP	1	GP
MS	2	MS

reason into reason_n

Old Value	New Value	Value	Label
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course	1	course
home	2	home
other	3	other
reputation	4	reputation

guardian into guardian_n

G Goodness-of-Fit Test
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Old Value	New Value	Value Label
father	1	father
mother	2	mother
other	3	other

G goodness-of-fit analysis

>Warning # 2004 on line 8798. Command name: SUBTITLE

>The subtitle given exceeds 60 characters in length. The first 60 characters
>will be used.

G goodness-of-fit analysis
Likelihood-ratio departure from equal reason probabilities;

NPar Tests

Notes

Output Created		16-JUL-2026 14:42:10
Comments		
Input	Data	D:\DATA ANALYSIS\ Chi Square and Categorical Data Tests\G Test\dataset.csv
	Active Dataset	GTestData
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Syntax		NPARTESTS /CHISQUARE=reason_n (1,4) /EXPECTED=EQUAL.
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.01
	Number of Cases Allowed ^a	786432

a. Based on availability of workspace memory.

[GTestData]

Chi-Square Test

Frequencies

		reason_n		
	Category	Observed N	Expected N	Residual
1	course	285	162.3	122.8
2	home	149	162.3	-13.3
3	other	72	162.3	-90.3
4	reputation	143	162.3	-19.3
Total		649		

G goodness-of-fit analysis
Likelihood-ratio departure from equal reason probabilities;

Test Statistics

	reason_n
Chi-Square	146.433 ^a
df	3
Asymp. Sig.	.000

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 162.3.

Frequencies

Notes

Output Created		16-JUL-2026 14:42:10
Comments		
Input	Data	D:\DATA ANALYSIS\I Chi Square and Categorical Data Tests\G Test\dataset.csv
	Active Dataset	GTestData
	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.
Syntax		FREQUENCIES VARIABLES=reason_n /BARCHART FREQ /ORDER=ANALYSIS.

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Notes

Resources	Processor Time	00:00:00.31
	Elapsed Time	00:00:00.27

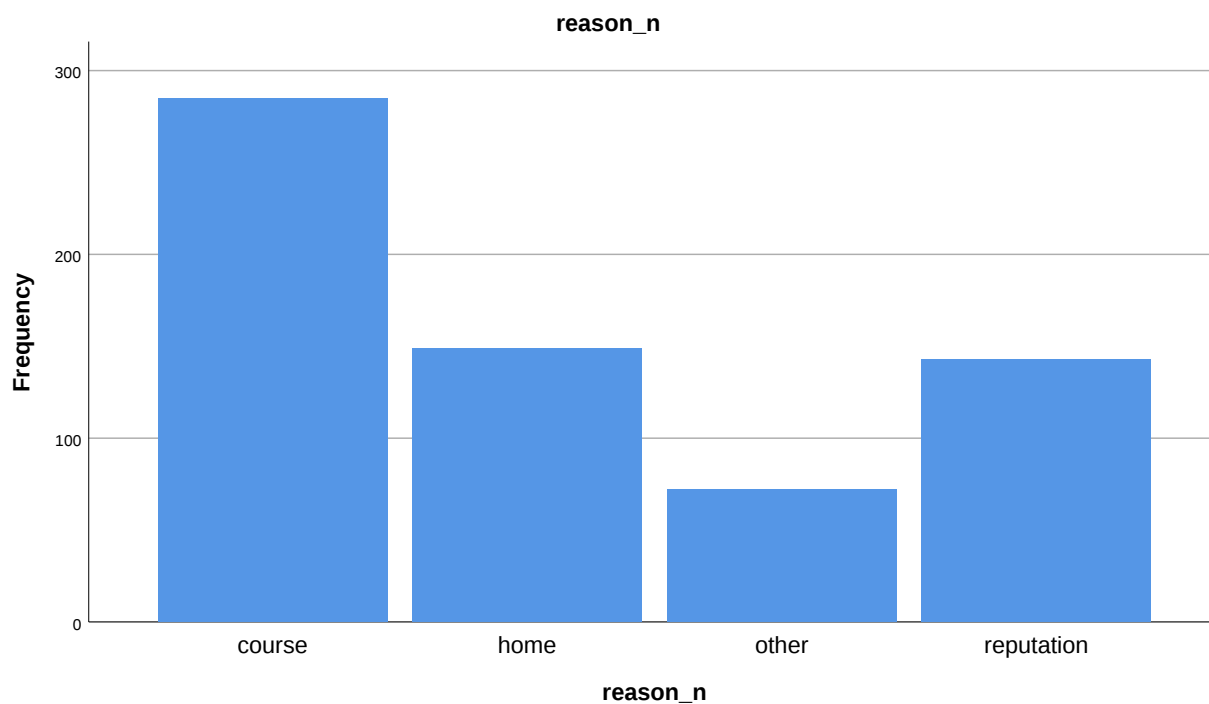
Statistics

reason_n

N	Valid	649
	Missing	0

reason_n

		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	



G goodness-of-fit analysis
Likelihood-ratio departure from equal reason probabilities;

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G GOODNESS-OF-FIT TEST
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Formula:  $G^2 = 2 \sum_j O_j \ln(O_j/E_j)$ 
Variables: reason
degrees_of_freedom = 3
maximum_absolute_signed_root = 17.919541569753875
p_value = 1.0360142426607893e-30
statistic = 142.60673176923228
Cross-check status: pass
=====
=====
```