

Weighted Kappa

Weighted Kappa
Import and test-specific preparation

Dataset Name

Notes

Output Created		16-JUL-2026 14:43:31
Comments		
Input	Data	D:\DATA ANALYSIS\Chi Square and Categorical Data Tests\Weighted Kappa\dataset.csv
	Filter	<none>
	Weight	<none>
	Split File	<none>
Syntax		DATASET NAME WeightedKappaData.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.01

Warnings

The active dataset will replace the existing dataset named
WeightedKappaData.

school into school_n

Old Value	New Value	Value	Label
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GP	1	GP
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MS	2	MS
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reason into reason_n

Old Value	New Value	Value	Label
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course	1	course
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home	2	home
------	---	------

other	3	other
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reputation	4	reputation
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guardian into guardian_n

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Old Value	New Value	Value	Label
father	1	father	
mother	2	mother	
other	3	other	

Weighted ordinal kappa

>Warning # 2004 on line 10851. Command name: SUBTITLE

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

Weighted ordinal kappa
Distance-sensitive G1-versus-G3 agreement; verified linear a

Crosstabs

Notes

Output Created		16-JUL-2026 14:43:32
Comments		
Input	Data	D:\DATA ANALYSIS\Chi Square and Categorical Data Tests\Weighted Kappa\dataset.csv
	Active Dataset	WeightedKappaData
	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 for each table are based on all the cases with valid data in the specified range(s) for all variables in each table.
Syntax		CROSSTABS /TABLES=grade1 BY grade3 /FORMAT=AVALUE TABLES /STATISTICS=KAPPA /CELLS=COUNT ROW COLUMN /COUNT ROUND CELL.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.01
	Dimensions Requested	2
	Cells Available	524245

[WeightedKappaData]

Weighted ordinal kappa
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Case Processing Summary

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
G1 ordinal grade band * G3 ordinal grade band	649	100.0%	0	0.0%	649	100.0%

G1 ordinal grade band * G3 ordinal grade band Crosstabulation

			G3 ordinal grade band	
			Low below 10	Medium 10-13
G1 ordinal grade band	Low below 10	Count	88	69
		% within G1 ordinal grade band	56.1%	43.9%
		% within G3 ordinal grade band	88.0%	19.4%
	Medium 10-13	Count	12	267
		% within G1 ordinal grade band	3.5%	78.5%
		% within G3 ordinal grade band	12.0%	75.2%
	High 14-16	Count	0	19
		% within G1 ordinal grade band	0.0%	14.8%
		% within G3 ordinal grade band	0.0%	5.4%
	Very high 17+	Count	0	0
		% within G1 ordinal grade band	0.0%	0.0%
		% within G3 ordinal grade band	0.0%	0.0%
Total		Count	100	355
		% within G1 ordinal grade band	15.4%	54.7%
		% within G3 ordinal grade band	100.0%	100.0%

Weighted ordinal kappa
Distance-sensitive G1-versus-G3 agreement; verified linear a

G1 ordinal grade band * G3 ordinal grade band Crosstabulation

			G3 ordinal grade band	
			High 14-16	Very high 17+
G1 ordinal grade band	Low below 10	Count	0	0
		% within G1 ordinal grade band	0.0%	0.0%
		% within G3 ordinal grade band	0.0%	0.0%
	Medium 10-13	Count	60	1
		% within G1 ordinal grade band	17.6%	0.3%
		% within G3 ordinal grade band	40.5%	2.2%
	High 14-16	Count	86	23
		% within G1 ordinal grade band	67.2%	18.0%
		% within G3 ordinal grade band	58.1%	50.0%
	Very high 17+	Count	2	22
		% within G1 ordinal grade band	8.3%	91.7%
		% within G3 ordinal grade band	1.4%	47.8%
Total		Count	148	46
		% within G1 ordinal grade band	22.8%	7.1%
		% within G3 ordinal grade band	100.0%	100.0%

Weighted ordinal kappa
Distance-sensitive G1-versus-G3 agreement; verified linear a

G1 ordinal grade band * G3 ordinal grade band Crosstabulation

			Total
G1 ordinal grade band	Low below 10	Count	157
		% within G1 ordinal grade band	100.0%
		% within G3 ordinal grade band	24.2%
	Medium 10-13	Count	340
		% within G1 ordinal grade band	100.0%
		% within G3 ordinal grade band	52.4%
	High 14-16	Count	128
		% within G1 ordinal grade band	100.0%
		% within G3 ordinal grade band	19.7%
	Very high 17+	Count	24
		% within G1 ordinal grade band	100.0%
		% within G3 ordinal grade band	3.7%
Total		Count	649
		% within G1 ordinal grade band	100.0%
		% within G3 ordinal grade band	100.0%

Symmetric Measures

		Value	Asymptotic Standard Error ^a	Approximate T ^b	Approximate Significance
Measure of Agreement	Kappa	.544	.028	21.233	.000
N of Valid Cases		649			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

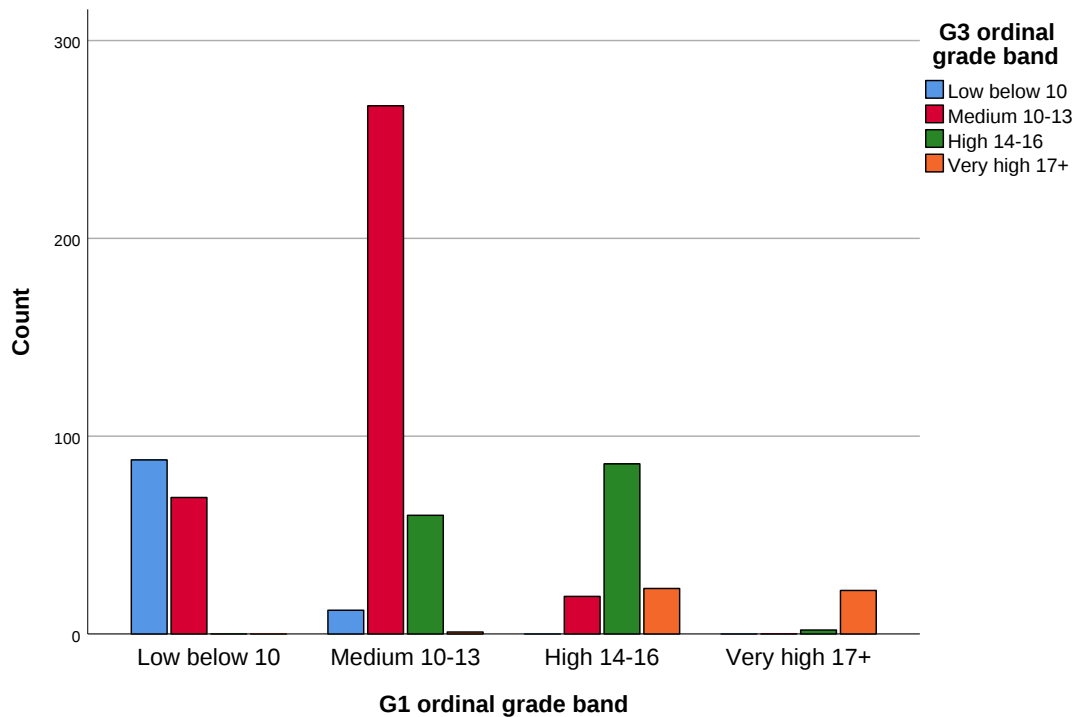
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Graph

Notes

Output Created		16-JUL-2026 14:43:32
Comments		
Input	Data	D:\DATA ANALYSIS\I Chi Square and Categorical Data Tests\Weighted Kappa\dataset.csv
	Active Dataset	WeightedKappaData
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Syntax		GRAPH /BAR(GROUPED) =COUNT BY grade1 BY grade3.
Resources	Processor Time	00:00:00.41
	Elapsed Time	00:00:00.40

Weighted ordinal kappa
Distance-sensitive G1-versus-G3 agreement; verified linear a



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WEIGHTED KAPPA
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Formula: kappa_w = 1 - [sum_ij w_ij p_ij]/[sum_ij w_ij p_i+ p_+j]
Variables: G1 grade band, G3 grade band
linear_weighted_kappa = 0.6473984072889338
quadratic_expected_disagreement = 0.13778510075289996
quadratic_observed_disagreement = 0.032357473035439135
quadratic_weighted_kappa = 0.7651598550305657
Cross-check status: pass
=====
=====
```