

Steel-Dwass-Critchlow-Fligner Test

Steel-Dwass-Critchlow-Fligner Test
Test-specific data preparation and execution

>Warning # 4492 on line 14209 in column 42. Text: internet_bin
>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.

Steel-Dwass all-pairs rank comparisons

>Warning # 2004 on line 14213. Command name: SUBTITLE

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

Steel-Dwass all-pairs rank comparisons
Independently reranked G3 reason pairs with DSCF familywise

NPar Tests

Notes

Output Created		16-JUL-2026 16:51:39
Comments		
Input	Data	D:\DATA ANALYSIS\J Nonparametric Tests\Steel Dwass Test\dataset.csv
	Active Dataset	SteelDwassTestData
	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 test are based on all cases with valid data for the variable (s) used in that test.
Syntax		NPAR TESTS /K-W=G3 BY reason_n(1,4) /STATISTICS=DESCRIPT IVES QUARTILES.
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.03
	Number of Cases Allowed ^a	449389

a. Based on availability of workspace memory.

[SteelDwassTestData]

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Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum	Percentiles	
						25th	50th (Median)
G3	649	11.91	3.231	0	19	10.00	12.00
reason_n	649	2.11	1.192	1	4	1.00	2.00

Descriptive Statistics

	Percentiles
	75th
G3	14.00
reason_n	3.00

Kruskal-Wallis Test

Ranks

	reason_n	N	Mean Rank
G3	course	285	296.42
	home	149	345.73
	other	72	269.17
	reputation	143	388.48
	Total	649	

Test Statistics^{a,b}

G3	
Kruskal-Wallis H	31.625
df	3
Asymp. Sig.	.000

a. Kruskal Wallis Test

b. Grouping Variable: reason_n

RANK

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Comments		
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	Active Dataset	SteelDwassTestData
	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	All non-missing data are used.
Syntax		RANK VARIABLES=G3 (A) /RANK INTO sd_omnibus_rank /TIES=MEAN.
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.04
Variables Created or Modified	sd_omnibus_rank	Rank of G3

Created Variables^a

Source Variable	Function	New Variable	Label
G3 ^b	Rank	sd_omnibus_rank	Rank of G3

a. Mean rank of tied values is used for ties.

b. Ranks are in ascending order.

Means

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Notes

Output Created		16-JUL-2026 16:51:40
Comments		
Input	Data	D:\DATA ANALYSIS\J Nonparametric Tests\Steel Dwass Test\dataset.csv
	Active Dataset	SteelDwassTestData
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Missing Value Handling	Definition of Missing	For each dependent variable in a table, user- defined missing values for the dependent and all grouping variables are treated as missing.
	Cases Used	Cases used for each table have no missing values in any independent variable, and not all dependent variables have missing values.
Syntax		MEANS TABLES=sd_omnibus_ran k BY reason_n /CELLS=COUNT MEAN SUM STDDEV.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.03

Case Processing Summary

	Included		Cases Excluded		Total	
	N	Percent	N	Percent	N	Percent
Rank of G3 * reason_n	649	100.0%	0	0.0%	649	100.0%

Steel-Dwass all-pairs rank comparisons
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Report

Rank of G3

reason_n	N	Mean	Sum	Std. Deviation
course	285	296.41754	84479.000	187.196349
home	149	345.72819	51513.500	170.716698
other	72	269.16667	19380.000	188.166562
reputation	143	388.47902	55552.500	180.217864
Total	649	325.00000	210925.000	186.292414

Graph

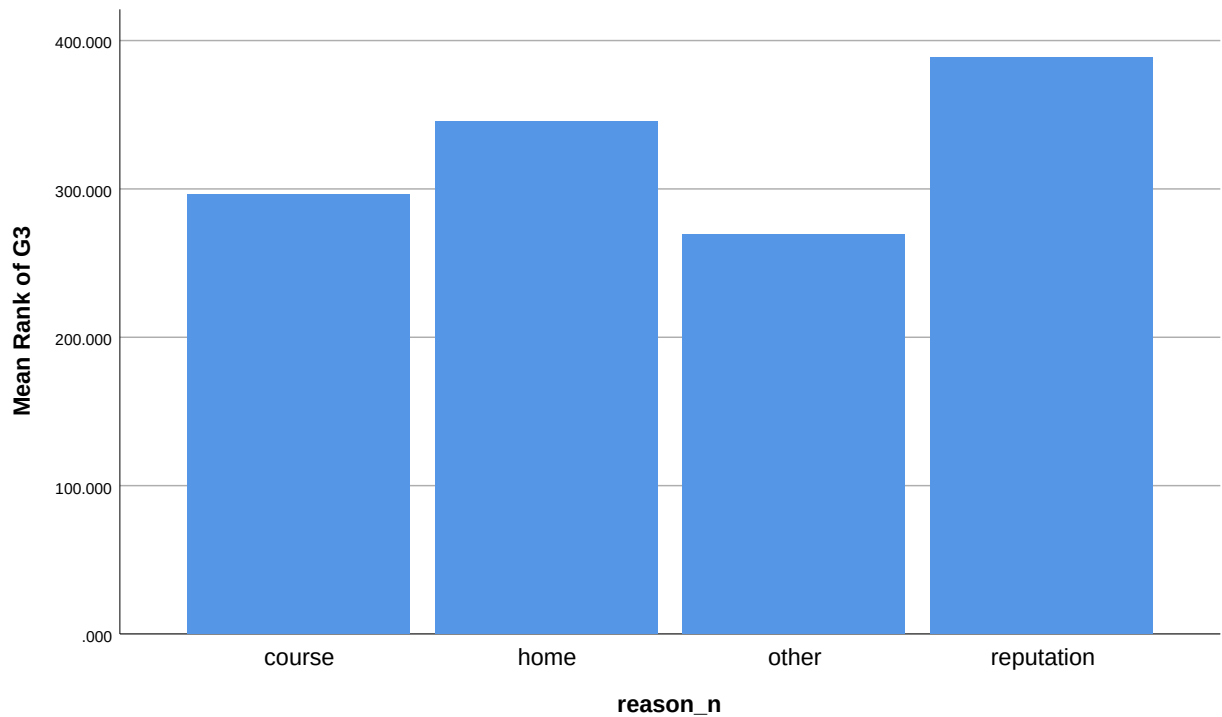
Notes

Output Created		16-JUL-2026 16:51:40
Comments		
Input	Data	D:\DATA ANALYSIS\J Nonparametric Tests\Steel Dwass Test\dataset.csv
	Active Dataset	SteelDwassTestData
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Syntax		GRAPH /BAR(GROUPED) =MEAN (sd_omnibus_rank) BY reason_n.
Resources	Processor Time	00:00:00.62
	Elapsed Time	00:00:00.79

>Warning # 17848

>The requested bar chart type cannot be drawn with the provided data. Instead
,
>Graphics will attempt to draw a simple bar chart.

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STEEL-DWASS-CRITCHLOW-FLIGNER TEST

Formula: $DSCF_{ij} = \sqrt{2} |z_{ij}|$ from pairwise pooled Wilcoxon ranks; p uses the studentized range.

Variables: G3, reason

comparisons = 6

maximum_dscf = 6.717191572198059

minimum_p_value = 1.2110356508943099e-05

Cross-check status: pass

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