

```
490 0 OUTPUT ACTIVATE KruskalWallisTestforLikertDataOutput.  
490 0 M> OUTPUT ACTIVATE KruskalWallisTestforLikertDataOutput.  
491 0 TITLE 'Kruskal Wallis Test for Likert Data'.  
491 0 M> TITLE 'Kruskal Wallis Test for Likert Data'.
```

Kruskal Wallis Test for Likert Data

```

492 0
492 0 M>
493 0 GET DATA
493 0 M> GET DATA
494 0 /TYPE=TXT /FILE='D:\DATA ANALYSIS\M Survey and Likert Scale Analysis
\Kruskal Wallis Test for Likert Data\dataset.csv' /ENC
ODING='UTF8' /DELCASE=LINE /DELIMITERS=', ' /QUALIFIER='"'
494 0 M> /TYPE=TXT /FILE='D:\DATA ANALYSIS\M Survey and Likert Scale Analy
sis\Kruskal Wallis Test for Likert Data\dataset.csv' /
ENCODING='UTF8' /DELCASE=LINE /DELIMITERS=', ' /QUALIFIER='"'
495 0 /ARRANGEMENT=DELIMITED /FIRSTCASE=2
495 0 M> /ARRANGEMENT=DELIMITED /FIRSTCASE=2
496 0 /VARIABLES=
496 0 M> /VARIABLES=
497 0 school A8 sex A8 age F8.0 address A8 famsize A8 Pstatus A8 Medu F8.0
Fedu F8.0
497 0 M> school A8 sex A8 age F8.0 address A8 famsize A8 Pstatus A8 Medu F
8.0 Fedu F8.0
498 0 Mjob A16 Fjob A16 reason A16 guardian A16 traveltime F8.0 studytime
F8.0 failures F8.0
498 0 M> Mjob A16 Fjob A16 reason A16 guardian A16 traveltime F8.0 studyti
me F8.0 failures F8.0
499 0 schoolsup A8 famsup A8 paid A8 activities A8 nursery A8 higher A8 in
ternet A8 romantic A8
499 0 M> schoolsup A8 famsup A8 paid A8 activities A8 nursery A8 higher A8
internet A8 romantic A8
500 0 famrel F8.0 freetime F8.0 goout F8.0 Dalc F8.0 Walc F8.0 health F8.0
absences F8.0 G1 F8.0 G2 F8.0 G3 F8.0.
500 0 M> famrel F8.0 freetime F8.0 goout F8.0 Dalc F8.0 Walc F8.0 health F
8.0 absences F8.0 G1 F8.0 G2 F8.0 G3 F8.0.
501 0 DATASET NAME KruskalWallisTestforLikertDataData.
501 0 M> DATASET NAME KruskalWallisTestforLikertDataData.
502 0 COMPUTE subject_id=$CASENUM.
502 0 M> COMPUTE subject_id=$CASENUM.
503 0 COMPUTE Dalc_R=6-Dalc.
503 0 M> COMPUTE Dalc_R=6-Dalc.
504 0 COMPUTE Walc_R=6-Walc.
504 0 M> COMPUTE Walc_R=6-Walc.

```

Kruskal Wallis Test for Likert Data

```
505 0 COMPUTE scale_score=MEAN.6(famrel,freetime,goout,Dalc_R,Walc_R,health).
505 0 M> COMPUTE scale_score=MEAN.6(famrel,freetime,goout,Dalc_R,Walc_R,health).
506 0 RECODE sex ('F'=1) ('M'=2) INTO sex_code.
506 0 M> RECODE sex ('F'=1) ('M'=2) INTO sex_code.
507 0 RECODE school ('GP'=1) ('MS'=2) INTO school_code.
507 0 M> RECODE school ('GP'=1) ('MS'=2) INTO school_code.
508 0 RECODE higher internet ('no'=0) ('yes'=1) INTO higher_code internet_code.
508 0 M> RECODE higher internet ('no'=0) ('yes'=1) INTO higher_code internet_code.
509 0 EXECUTE.
509 0 M> EXECUTE.
510 0
510 0 M>
511 0 * BEGIN METHOD-SPECIFIC SPSS WORKFLOW.
511 0 M> * BEGIN METHOD-SPECIFIC SPSS WORKFLOW.
512 0 TITLE 'Kruskal Wallis Test for Likert Data'.
512 0 M> TITLE 'Kruskal Wallis Test for Likert Data'.
```

Kruskal Wallis Test for Likert Data

```
513 0 SUBTITLE 'Family-relationship response across maternal-job groups'.  
513 0 M> SUBTITLE 'Family-relationship response across maternal-job groups'
```

.

Kruskal Wallis Test for Likert Data
Family-relationship response across maternal-job groups

```
514  0  AUTORECODE VARIABLES=Mjob /INTO Mjob_code /PRINT.
514  0 M> AUTORECODE VARIABLES=Mjob /INTO Mjob_code /PRINT.
```

Mjob into Mjob_code

Old Value	New Value	Value Label
at_home	1	at_home
health	2	health
other	3	other
services	4	services
teacher	5	teacher

```
515  0  NPAR TESTS /K-W=famrel BY Mjob_code(1 5) /MISSING ANALYSIS.
515  0 M> NPAR TESTS /K-W=famrel BY Mjob_code(1 5) /MISSING ANALYSIS.
```

NPar Tests

Notes

Output Created		18-JUL-2026 13:21:17
Comments		
Input	Data	D:\DATA ANALYSIS\MSurvey and Likert Scale Analysis\Kruskal Wallis Test for Likert Data\dataset.csv
	Active Dataset	KruskalWallisTestforLikert DataData
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649

Kruskal Wallis Test for Likert Data
Family-relationship response across maternal-job groups

Notes

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=famrel BY Mjob_code (1 5) /MISSING ...
Resources	Processor Time	00:00:00.06
	Elapsed Time	00:00:00.05
	Number of Cases Allowed ^a	449389

a. Based on availability of workspace memory.

[KruskalWallisTestforLikertDataData]

Kruskal-Wallis Test

Ranks

	Mjob_code	N	Mean Rank
famrel	at_home	135	316.82
	health	48	301.04
	other	258	326.23
	services	136	340.53
	teacher	72	322.56
	Total	649	

Kruskal Wallis Test for Likert Data

Family-relationship response across maternal-job groups

Test Statistics^{a,b}

	famrel
Kruskal-Wallis H	2.327
df	4
Asymp. Sig.	.676

a. Kruskal Wallis Test

b. Grouping Variable: Mjob_code

```
516 0 MEANS TABLES=famrel BY Mjob /CELLS=COUNT MEAN MEDIAN STDDEV MIN MAX.
516 0 M> MEANS TABLES=famrel BY Mjob /CELLS=COUNT MEAN MEDIAN STDDEV MIN MA
X.
```

Means

Notes

Output Created		18-JUL-2026 13:21:17
Comments		
Input	Data	D:\DATA ANALYSIS\MSurvey and Likert Scale Analysis\Kruskal Wallis Test for Likert Data\dataset.csv
	Active Dataset	KruskalWallisTestforLikert DataData
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649

Kruskal Wallis Test for Likert Data
Family-relationship response across maternal-job groups

Notes

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=famrel BY Mjob /CELLS=COUNT MEAN MEDIAN STDDEV MIN MAX.
Resources	Processor Time	00:00:00.06
	Elapsed Time	00:00:00.05

Case Processing Summary

	Included		Cases Excluded		Total	
	N	Percent	N	Percent	N	Percent
famrel * Mjob	649	100.0%	0	0.0%	649	100.0%

Report

famrel

Mjob	N	Mean	Median	Std. Deviation	Minimum	Maximum
at_home	135	3.91	4.00	.902	1	5
health	48	3.83	4.00	.930	2	5
other	258	3.92	4.00	.995	1	5
services	136	4.00	4.00	.958	1	5
teacher	72	3.93	4.00	.939	1	5
Total	649	3.93	4.00	.956	1	5

517 0 ECHO 'The native rank test pools all five maternal-job groups and applies tie correction'.

Kruskal Wallis Test for Likert Data
Family-relationship response across maternal-job groups

```
517 0 M> ECHO 'The native rank test pools all five maternal-job groups and
applies tie correction'.
The native rank test pools all five maternal-job groups and applies tie correc
tion
518 0 * END METHOD-SPECIFIC SPSS WORKFLOW.
518 0 M> * END METHOD-SPECIFIC SPSS WORKFLOW.
519 0
519 0 M>
520 0 SAVE OUTFILE='D:\DATA ANALYSIS\M Survey and Likert Scale Analysis\Kru
skal Wallis Test for Likert Data\SPSS_Output\sav\krusk
al-wallis-test-for-likert-data_spss_ready_data.sav' /COMPRESSED.
520 0 M> SAVE OUTFILE='D:\DATA ANALYSIS\M Survey and Likert Scale Analysis\
Kruskal Wallis Test for Likert Data\SPSS_Output\sav\kr
uskal-wallis-test-for-likert-data_spss_ready_data.sav' /COMPRES
SED.
521 0
521 0 M>
522 0 ECHO '=====
====='.
522 0 M> ECHO '=====
====='.
=====
523 0 ECHO 'KRUSKAL WALLIS TEST FOR LIKERT DATA'.
523 0 M> ECHO 'KRUSKAL WALLIS TEST FOR LIKERT DATA'.
KRUSKAL WALLIS TEST FOR LIKERT DATA
524 0 ECHO 'Method type: hypothesis_test'.
524 0 M> ECHO 'Method type: hypothesis_test'.
Method type: hypothesis_test
525 0 ECHO 'Design: Independent-group comparison of the ordered family-rela
tionship response across maternal-job categories.'.
525 0 M> ECHO 'Design: Independent-group comparison of the ordered family-r
elationship response across maternal-job categories.'.
Design: Independent-group comparison of the ordered family-relationship respon
se across maternal-job categories.
526 0 ECHO 'Inference scope: H0: all maternal-job groups have the same fami
ly-relationship response distribution.'.
526 0 M> ECHO 'Inference scope: H0: all maternal-job groups have the same f
amily-relationship response distribution.'.
```

Kruskal Wallis Test for Likert Data
Family-relationship response across maternal-job groups

Inference scope: H_0 : all maternal-job groups have the same family-relationship response distribution.

```
527 0 ECHO 'Formula:  $H = [12 / (N * (N + 1))] * \sum (R_j^2 / n_j) - 3 * (N + 1)$ , with tie correction;  $\epsilon^2 = (H - k + 1) / (N - k)$ .'
```

```
527 0 M> ECHO 'Formula:  $H = [12 / (N * (N + 1))] * \sum (R_j^2 / n_j) - 3 * (N + 1)$ , with tie correction;  $\epsilon^2 = (H - k + 1) / (N - k)$ .'
```

```
Formula:  $H = [12 / (N * (N + 1))] * \sum (R_j^2 / n_j) - 3 * (N + 1)$ , with tie correction;  $\epsilon^2 = (H - k + 1) / (N - k)$ .
```

```
528 0 ECHO 'Variables: Mjob, famrel'.
```

```
528 0 M> ECHO 'Variables: Mjob, famrel'.
```

Variables: Mjob, famrel

```
529 0 ECHO 'Rows analyzed: 649'.
```

```
529 0 M> ECHO 'Rows analyzed: 649'.
```

Rows analyzed: 649

```
530 0 ECHO 'df = 4'.
```

```
530 0 M> ECHO 'df = 4'.
```

df = 4

```
531 0 ECHO 'epsilon_squared = 0.0'.
```

```
531 0 M> ECHO 'epsilon_squared = 0.0'.
```

epsilon_squared = 0.0

```
532 0 ECHO 'groups = 5'.
```

```
532 0 M> ECHO 'groups = 5'.
```

groups = 5

```
533 0 ECHO 'kruskal_wallis_h = 2.327258644629535'.
```

```
533 0 M> ECHO 'kruskal_wallis_h = 2.327258644629535'.
```

kruskal_wallis_h = 2.327258644629535

```
534 0 ECHO 'n_cases = 649'.
```

```
534 0 M> ECHO 'n_cases = 649'.
```

n_cases = 649

```
535 0 ECHO 'p_value = 0.6758107019647428'.
```

```
535 0 M> ECHO 'p_value = 0.6758107019647428'.
```

p_value = 0.6758107019647428

```
536 0 ECHO 'Cross-check status: pass'.
```

```
536 0 M> ECHO 'Cross-check status: pass'.
```

Cross-check status: pass

```
537 0 ECHO '=====
====='
```

```
537 0 M> ECHO '=====
====='
```

Kruskal Wallis Test for Likert Data
Family-relationship response across maternal-job groups

```
=====
538  0
538  0 M>
539  0  OUTPUT SAVE OUTFILE='D:\DATA ANALYSIS\M Survey and Likert Scale Analy
sis\Kruskal Wallis Test for Likert Data\SPSS_Output\sp
      v\kruskal-wallis-test-for-likert-data_spss_output.spv'.
539  0 M>  OUTPUT SAVE OUTFILE='D:\DATA ANALYSIS\M Survey and Likert Scale An
alysis\Kruskal Wallis Test for Likert Data\SPSS_Output
      \spv\kruskal-wallis-test-for-likert-data_spss_output.spv'.
540  0  OUTPUT EXPORT /CONTENTS EXPORT=ALL LAYERS=PRINTSETTING MODELVIEWS=PRI
NTSETTING
540  0 M>  OUTPUT EXPORT /CONTENTS EXPORT=ALL LAYERS=PRINTSETTING MODELVIEWS=
PRINTSETTING
```