

```
553 0 OUTPUT ACTIVATE LikertItemvsLikertScaleOutput.  
553 0 M> OUTPUT ACTIVATE LikertItemvsLikertScaleOutput.  
554 0 TITLE 'Likert Item vs Likert Scale'.  
554 0 M> TITLE 'Likert Item vs Likert Scale'.
```

Likert Item vs Likert Scale

```

555 0
555 0 M>
556 0 GET DATA
556 0 M> GET DATA
557 0 /TYPE=TXT /FILE='D:\DATA ANALYSIS\M Survey and Likert Scale Analysis
\Likert Item vs Likert Scale\dataset.csv' /ENCODING='U
      TF8' /DELCASE=LINE /DELIMITERS=', ' /QUALIFIER='"'
557 0 M> /TYPE=TXT /FILE='D:\DATA ANALYSIS\M Survey and Likert Scale Analy
sis\Likert Item vs Likert Scale\dataset.csv' /ENCODING
      ='UTF8' /DELCASE=LINE /DELIMITERS=', ' /QUALIFIER='"'
558 0 /ARRANGEMENT=DELIMITED /FIRSTCASE=2
558 0 M> /ARRANGEMENT=DELIMITED /FIRSTCASE=2
559 0 /VARIABLES=
559 0 M> /VARIABLES=
560 0 school A8 sex A8 age F8.0 address A8 famsize A8 Pstatus A8 Medu F8.0
Fedu F8.0
560 0 M> school A8 sex A8 age F8.0 address A8 famsize A8 Pstatus A8 Medu F
8.0 Fedu F8.0
561 0 Mjob A16 Fjob A16 reason A16 guardian A16 traveltime F8.0 studytime
F8.0 failures F8.0
561 0 M> Mjob A16 Fjob A16 reason A16 guardian A16 traveltime F8.0 studyti
me F8.0 failures F8.0
562 0 schoolsup A8 famsup A8 paid A8 activities A8 nursery A8 higher A8 in
ternet A8 romantic A8
562 0 M> schoolsup A8 famsup A8 paid A8 activities A8 nursery A8 higher A8
internet A8 romantic A8
563 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.
563 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.
564 0 DATASET NAME LikertItemvsLikertScaleData.
564 0 M> DATASET NAME LikertItemvsLikertScaleData.
565 0 COMPUTE subject_id=$CASENUM.
565 0 M> COMPUTE subject_id=$CASENUM.
566 0 COMPUTE Dalc_R=6-Dalc.
566 0 M> COMPUTE Dalc_R=6-Dalc.
567 0 COMPUTE Walc_R=6-Walc.
567 0 M> COMPUTE Walc_R=6-Walc.

```

Likert Item vs Likert Scale

```
568 0 COMPUTE scale_score=MEAN.6(famrel,freetime,goout,Dalc_R,Walc_R,health).
568 0 M> COMPUTE scale_score=MEAN.6(famrel,freetime,goout,Dalc_R,Walc_R,health).
569 0 RECODE sex ('F'=1) ('M'=2) INTO sex_code.
569 0 M> RECODE sex ('F'=1) ('M'=2) INTO sex_code.
570 0 RECODE school ('GP'=1) ('MS'=2) INTO school_code.
570 0 M> RECODE school ('GP'=1) ('MS'=2) INTO school_code.
571 0 RECODE higher internet ('no'=0) ('yes'=1) INTO higher_code internet_code.
571 0 M> RECODE higher internet ('no'=0) ('yes'=1) INTO higher_code internet_code.
572 0 EXECUTE.
572 0 M> EXECUTE.
573 0
573 0 M>
574 0 * BEGIN METHOD-SPECIFIC SPSS WORKFLOW.
574 0 M> * BEGIN METHOD-SPECIFIC SPSS WORKFLOW.
575 0 TITLE 'Likert Item vs Likert Scale'.
575 0 M> TITLE 'Likert Item vs Likert Scale'.
```

Likert Item vs Likert Scale

```
576 0 SUBTITLE 'Single famrel item contrasted with the aligned six-item mean scale'.
```

```
576 0 M> SUBTITLE 'Single famrel item contrasted with the aligned six-item mean scale'.
```

```
>Warning # 2004 on line 576. Command name: SUBTITLE
```

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

Likert Item vs Likert Scale
Single famrel item contrasted with the aligned six-item mean

```
577  0  FREQUENCIES VARIABLES=famrel scale_score /STATISTICS=MEAN MEDIAN STDD
EV MINIMUM MAXIMUM /BARChart FREQ.
```

```
577  0 M> FREQUENCIES VARIABLES=famrel scale_score /STATISTICS=MEAN MEDIAN S
TDDEV MINIMUM MAXIMUM /BARChart FREQ.
```

Frequencies

Notes

Output Created		18-JUL-2026 13:21:21
Comments		
Input	Data	D:\DATA ANALYSIS\IM Survey and Likert Scale Analysis\Likert Item vs Likert Scale\dataset.csv
	Active Dataset	LikertItemvsLikertScaleData
	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=famrel scale_score /STATISTICS=MEAN MEDIAN STDDEV MINIMUM MAXIMUM /BARChart FREQ.
Resources	Processor Time	00:00:02.03
	Elapsed Time	00:00:01.06

[LikertItemvsLikertScaleData]

Likert Item vs Likert Scale
Single famrel item contrasted with the aligned six-item mean

Statistics

		famrel	scale_score
N	Valid	649	649
	Missing	0	0
Mean		3.93	3.6749
Median		4.00	3.6667
Std. Deviation		.956	.49493
Minimum		1	2.00
Maximum		5	4.83

Frequency Table

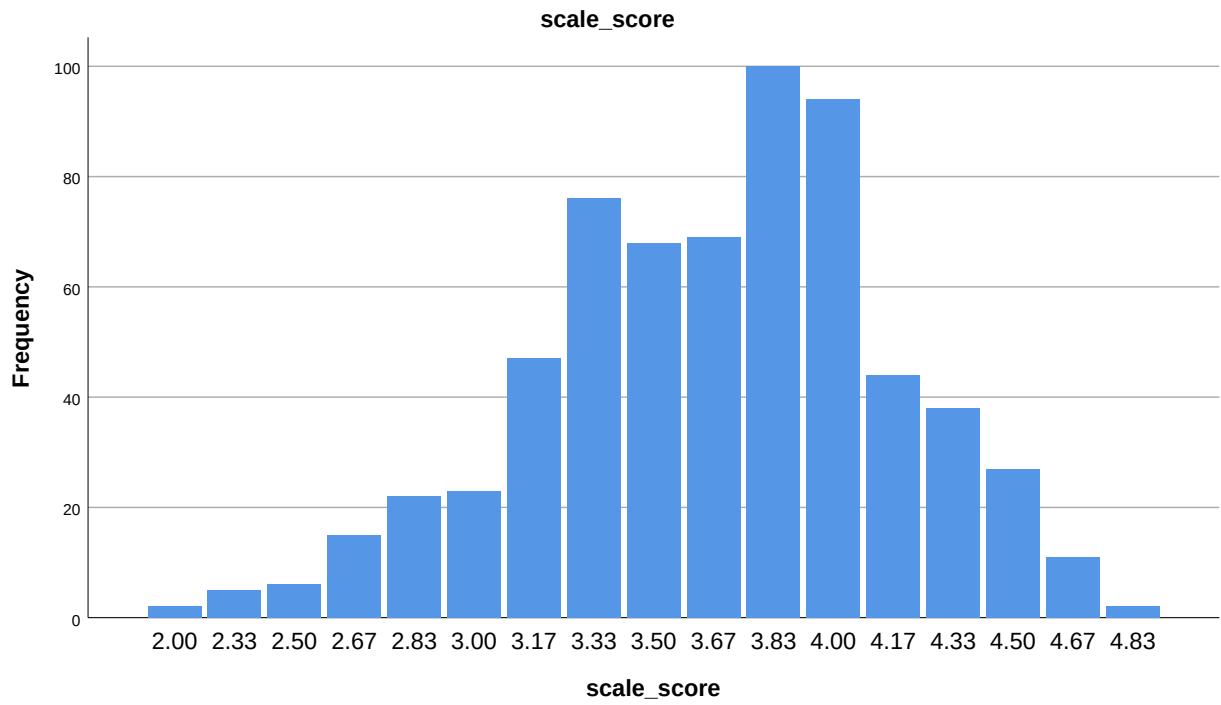
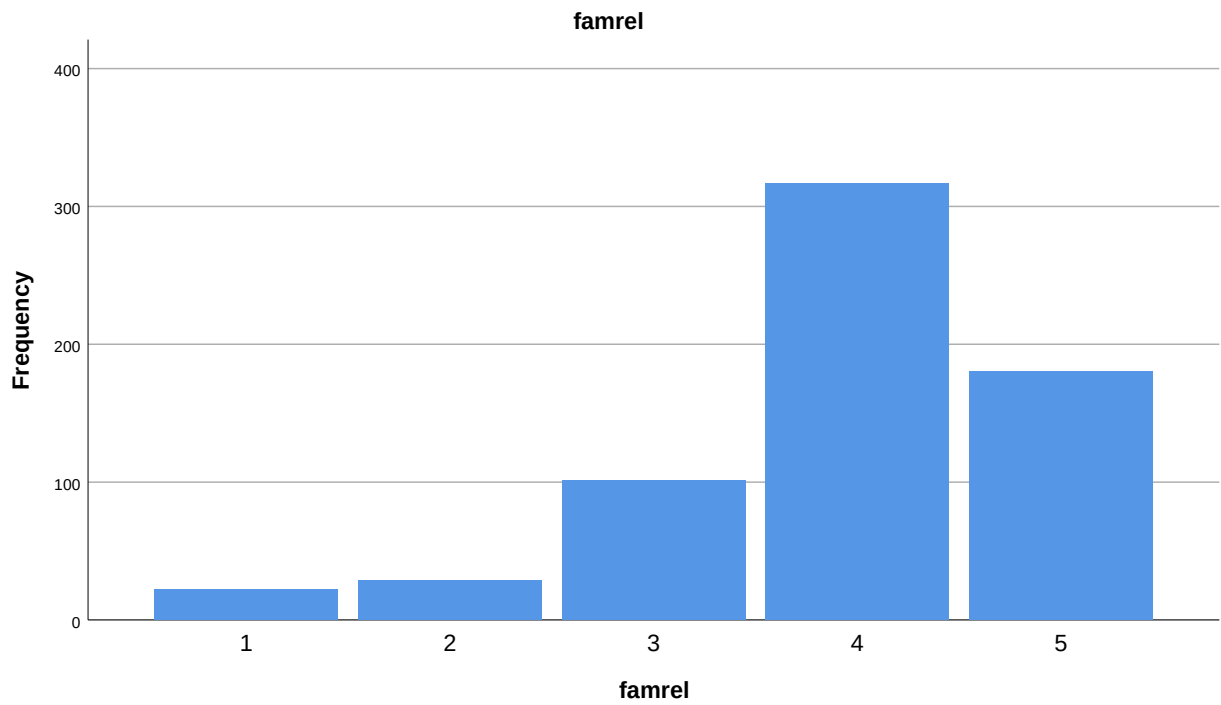
		famrel			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	22	3.4	3.4	3.4
	2	29	4.5	4.5	7.9
	3	101	15.6	15.6	23.4
	4	317	48.8	48.8	72.3
	5	180	27.7	27.7	100.0
	Total	649	100.0	100.0	

Likert Item vs Likert Scale
Single famrel item contrasted with the aligned six-item mean

		scale_score			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	2	.3	.3	.3
	2.33	5	.8	.8	1.1
	2.50	6	.9	.9	2.0
	2.67	15	2.3	2.3	4.3
	2.83	22	3.4	3.4	7.7
	3.00	23	3.5	3.5	11.2
	3.17	47	7.2	7.2	18.5
	3.33	76	11.7	11.7	30.2
	3.50	68	10.5	10.5	40.7
	3.67	69	10.6	10.6	51.3
	3.83	100	15.4	15.4	66.7
	4.00	94	14.5	14.5	81.2
	4.17	44	6.8	6.8	88.0
	4.33	38	5.9	5.9	93.8
	4.50	27	4.2	4.2	98.0
	4.67	11	1.7	1.7	99.7
	4.83	2	.3	.3	100.0
	Total	649	100.0	100.0	

Bar Chart

Likert Item vs Likert Scale
Single famrel item contrasted with the aligned six-item mean



Likert Item vs Likert Scale
Single famrel item contrasted with the aligned six-item mean

```
578 0 RELIABILITY /VARIABLES=famrel freetime goout Dalc_R Walc_R health /SCALE('Six item scale') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE CORR.
578 0 M> RELIABILITY /VARIABLES=famrel freetime goout Dalc_R Walc_R health /SCALE('Six item scale') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE CORR.
```

Reliability

Notes

Output Created		18-JUL-2026 13:21:22
Comments		
Input	Data	D:\DATA ANALYSIS\ISM Survey and Likert Scale Analysis\Likert Item vs Likert Scale\dataset.csv
	Active Dataset	LikertItemvsLikertScaleData
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
	Matrix Input	D:\DATA ANALYSIS\ISM Survey and Likert Scale Analysis\Likert Item vs Likert Scale\likert_item_vs_likert_scale_spss_syntax.sps
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 for all variables in the procedure.

Likert Item vs Likert Scale
Single famrel item contrasted with the aligned six-item mean

Notes

Syntax		RELIABILITY /VARIABLES=famrel freetime goout Dalc_R Walc_R health /SCALE (‘Six item scale’) ALL /MODEL=ALPHA /STATISTICS=DESCRIPT IVE SCALE CORR.
Resources	Processor Time	00:00:00.17
	Elapsed Time	00:00:00.10

Scale: Six item scale

Case Processing Summary

		N	%
Cases	Valid	649	100.0
	Excluded ^a	0	.0
	Total	649	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.112	.169	6

Likert Item vs Likert Scale
Single famrel item contrasted with the aligned six-item mean

Item Statistics

	Mean	Std. Deviation	N
famrel	3.9307	.95572	649
freetime	3.1803	1.05109	649
goout	3.1849	1.17577	649
Dalc_R	4.4977	.92483	649
Walc_R	3.7196	1.28438	649
health	3.5362	1.44626	649

Inter-Item Correlation Matrix

	famrel	freetime	goout	Dalc_R	Walc_R	health
famrel	1.000	.129	.090	.076	.094	.110
freetime	.129	1.000	.346	-.110	-.120	.085
goout	.090	.346	1.000	-.245	-.389	-.016
Dalc_R	.076	-.110	-.245	1.000	.617	-.059
Walc_R	.094	-.120	-.389	.617	1.000	-.115
health	.110	.085	-.016	-.059	-.115	1.000

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
22.0493	8.819	2.96960	6

```
579 0 CORRELATIONS /VARIABLES=famrel scale_score /PRINT=TWOTAIL NOSIG.
579 0 M> CORRELATIONS /VARIABLES=famrel scale_score /PRINT=TWOTAIL NOSIG.
```

Correlations

Likert Item vs Likert Scale
Single famrel item contrasted with the aligned six-item mean

Notes

Output Created		18-JUL-2026 13:21:22
Comments		
Input	Data	D:\DATA ANALYSIS\ISM Survey and Likert Scale Analysis\Likert Item vs Likert Scale\dataset.csv
	Active Dataset	LikertItemvsLikertScaleData
	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 pair of variables are based on all the cases with valid data for that pair.
Syntax		CORRELATIONS /VARIABLES=famrel scale_score /PRINT=TWOTAIL ...
Resources	Processor Time	00:00:00.06
	Elapsed Time	00:00:00.06

Correlations

		famrel	scale_score
famrel	Pearson Correlation	1	.520**
	Sig. (2-tailed)		.000
	N	649	649
scale_score	Pearson Correlation	.520**	1
	Sig. (2-tailed)	.000	
	N	649	649

** . Correlation is significant at the 0.01 level (2-tailed).

Likert Item vs Likert Scale
Single famrel item contrasted with the aligned six-item mean

```
580 0 ECHO 'The single item remains ordinal while the multi-item mean has f
iner score resolution'.
580 0 M> ECHO 'The single item remains ordinal while the multi-item mean ha
s finer score resolution'.
The single item remains ordinal while the multi-item mean has finer score reso
lution
581 0 * END METHOD-SPECIFIC SPSS WORKFLOW.
581 0 M> * END METHOD-SPECIFIC SPSS WORKFLOW.
582 0
582 0 M>
583 0 SAVE OUTFILE='D:\DATA ANALYSIS\M Survey and Likert Scale Analysis\Lik
ert Item vs Likert Scale\SPSS_Output\sav\likert-item-v
s-likert-scale_spss_ready_data.sav' /COMPRESSED.
583 0 M> SAVE OUTFILE='D:\DATA ANALYSIS\M Survey and Likert Scale Analysis\
Likert Item vs Likert Scale\SPSS_Output\sav\likert-ite
m-vs-likert-scale_spss_ready_data.sav' /COMPRESSED.

584 0
584 0 M>
585 0 ECHO '=====
====='.
585 0 M> ECHO '=====
====='.
=====
586 0 ECHO 'LIKERT ITEM VS LIKERT SCALE'.
586 0 M> ECHO 'LIKERT ITEM VS LIKERT SCALE'.
LIKERT ITEM VS LIKERT SCALE
587 0 ECHO 'Method type: measurement_comparison'.
587 0 M> ECHO 'Method type: measurement_comparison'.
Method type: measurement_comparison
588 0 ECHO 'Design: Side-by-side distinction between one ordinal item and a
six-item directionally aligned scale.'.
588 0 M> ECHO 'Design: Side-by-side distinction between one ordinal item an
d a six-item directionally aligned scale.'.
Design: Side-by-side distinction between one ordinal item and a six-item direc
tionally aligned scale.
589 0 ECHO 'Inference scope: No hypothesis test is required; the output con
trasts item-level and scale-level measurement summarie
s.'.
```

Likert Item vs Likert Scale
Single famrel item contrasted with the aligned six-item mean

```
589 0 M> ECHO 'Inference scope: No hypothesis test is required; the output
contrasts item-level and scale-level measurement summaries.'.
Inference scope: No hypothesis test is required; the output contrasts item-level
and scale-level measurement summaries.
590 0 ECHO 'Formula: item=famrel; scale_i=mean(famrel,freetime,goout,6-Dalc
,6-Walc,health).'.
590 0 M> ECHO 'Formula: item=famrel; scale_i=mean(famrel,freetime,goout,6-D
alc,6-Walc,health).'.
Formula: item=famrel; scale_i=mean(famrel,freetime,goout,6-Dalc,6-Walc,health)
.
591 0 ECHO 'Variables: famrel, famrel, freetime, goout, Dalc, Walc, health'
.
591 0 M> ECHO 'Variables: famrel, famrel, freetime, goout, Dalc, Walc, heal
th'.
Variables: famrel, famrel, freetime, goout, Dalc, Walc, health
592 0 ECHO 'Rows analyzed: 649'.
592 0 M> ECHO 'Rows analyzed: 649'.
Rows analyzed: 649
593 0 ECHO 'item_mean = 3.930662557781202'.
593 0 M> ECHO 'item_mean = 3.930662557781202'.
item_mean = 3.930662557781202
594 0 ECHO 'item_median = 4.0'.
594 0 M> ECHO 'item_median = 4.0'.
item_median = 4.0
595 0 ECHO 'item_sd = 0.9557168913381863'.
595 0 M> ECHO 'item_sd = 0.9557168913381863'.
item_sd = 0.9557168913381863
596 0 ECHO 'item_total_correlation = 0.22659733045787755'.
596 0 M> ECHO 'item_total_correlation = 0.22659733045787755'.
item_total_correlation = 0.22659733045787755
597 0 ECHO 'scale_alpha = 0.1117626312468654'.
597 0 M> ECHO 'scale_alpha = 0.1117626312468654'.
scale_alpha = 0.1117626312468654
598 0 ECHO 'scale_mean = 3.674884437596302'.
598 0 M> ECHO 'scale_mean = 3.674884437596302'.
scale_mean = 3.674884437596302
599 0 ECHO 'scale_sd = 0.49493413588832214'.
599 0 M> ECHO 'scale_sd = 0.49493413588832214'.
```

Likert Item vs Likert Scale
Single famrel item contrasted with the aligned six-item mean

```
scale_sd = 0.49493413588832214
600 0 ECHO 'Cross-check status: pass'.
600 0 M> ECHO 'Cross-check status: pass'.
Cross-check status: pass
601 0 ECHO '=====
====='.
601 0 M> ECHO '=====
====='.
=====
602 0
602 0 M>
603 0 OUTPUT SAVE OUTFILE='D:\DATA ANALYSIS\M Survey and Likert Scale Analy
sis\Likert Item vs Likert Scale\SPSS_Output\spv\likert
-item-vs-likert-scale_spss_output.spv'.
603 0 M> OUTPUT SAVE OUTFILE='D:\DATA ANALYSIS\M Survey and Likert Scale An
alysis\Likert Item vs Likert Scale\SPSS_Output\spv\lik
ert-item-vs-likert-scale_spss_output.spv'.
604 0 OUTPUT EXPORT /CONTENTS EXPORT=ALL LAYERS=PRINTSETTING MODELVIEWS=PRI
NTSETTING
604 0 M> OUTPUT EXPORT /CONTENTS EXPORT=ALL LAYERS=PRINTSETTING MODELVIEWS=
PRINTSETTING
```