

```
1477 0 OUTPUT ACTIVATE KaiserMeyerOlkinTestOutput.  
1477 0 M> OUTPUT ACTIVATE KaiserMeyerOlkinTestOutput.  
1478 0 TITLE 'Kaiser-Meyer-Olkin Sampling Adequacy'.  
1478 0 M> TITLE 'Kaiser-Meyer-Olkin Sampling Adequacy'.
```

Kaiser-Meyer-Olkin Sampling Adequacy

```

1479 0
1479 0 M>
1480 0 GET DATA
1480 0 M> GET DATA
1481 0 /TYPE=TXT /FILE='D:\DATA ANALYSIS\L Validity Factor Analysis and Scale Testing\Kaiser Meyer Olkin Test\dataset.csv' /ENCOD
      ING='UTF8' /DELCASE=LINE /DELIMITERS=', ' /QUALIFIER='''
1481 0 M> /TYPE=TXT /FILE='D:\DATA ANALYSIS\L Validity Factor Analysis and Scale Testing\Kaiser Meyer Olkin Test\dataset.csv' /EN
      CODING='UTF8' /DELCASE=LINE /DELIMITERS=', ' /QUALIFIER='''
1482 0 /ARRANGEMENT=DELIMITED /FIRSTCASE=2
1482 0 M> /ARRANGEMENT=DELIMITED /FIRSTCASE=2
1483 0 /VARIABLES=
1483 0 M> /VARIABLES=
1484 0 school A8 sex A8 age F8.0 address A8 famsize A8 Pstatus A8 Medu F8.0
      Fedu F8.0
1484 0 M> school A8 sex A8 age F8.0 address A8 famsize A8 Pstatus A8 Medu F
      8.0 Fedu F8.0
1485 0 Mjob A16 Fjob A16 reason A16 guardian A16 traveltime F8.0 studytime
      F8.0 failures F8.0
1485 0 M> Mjob A16 Fjob A16 reason A16 guardian A16 traveltime F8.0 studyti
      me F8.0 failures F8.0
1486 0 schoolsup A8 famsup A8 paid A8 activities A8 nursery A8 higher A8 in
      ternet A8 romantic A8
1486 0 M> schoolsup A8 famsup A8 paid A8 activities A8 nursery A8 higher A8
      internet A8 romantic A8
1487 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.
1487 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.
1488 0 DATASET NAME KaiserMeyerOlkinTestData.
1488 0 M> DATASET NAME KaiserMeyerOlkinTestData.
1489 0 COMPUTE subject_id=$CASENUM.
1489 0 M> COMPUTE subject_id=$CASENUM.
1490 0 COMPUTE Dalc_R=6-Dalc.
1490 0 M> COMPUTE Dalc_R=6-Dalc.
1491 0 COMPUTE Walc_R=6-Walc.
1491 0 M> COMPUTE Walc_R=6-Walc.

```

Kaiser-Meyer-Olkin Sampling Adequacy

```
1492  0  RECODE schoolsup famsup paid activities higher internet ('no'=0) ('yes'=1)
1492  0 M> RECODE schoolsup famsup paid activities higher internet ('no'=0) ('yes'=1)
1493  0  INTO schoolsup_b famsup_b paid_b activities_b higher_b internet_b.
1493  0 M> INTO schoolsup_b famsup_b paid_b activities_b higher_b internet_b
.
1494  0  EXECUTE.
1494  0 M> EXECUTE.
1495  0
1495  0 M>
1496  0  * BEGIN METHOD-SPECIFIC SPSS WORKFLOW.
1496  0 M> * BEGIN METHOD-SPECIFIC SPSS WORKFLOW.
1497  0  TITLE 'Kaiser Meyer Olkin Test'.
1497  0 M> TITLE 'Kaiser Meyer Olkin Test'.
```

Kaiser Meyer Olkin Test

```
1498 0 SUBTITLE 'Overall and item measure of sampling adequacy'.  
1498 0 M> SUBTITLE 'Overall and item measure of sampling adequacy'.
```

Kaiser Meyer Olkin Test
Overall and item measure of sampling adequacy

```

1499  0  FACTOR /VARIABLES=G1 G2 G3 famrel freetime goout /MISSING=LISTWISE /A
NALYSIS=G1 G2 G3 famrel freetime goout
1499  0 M>  FACTOR /VARIABLES=G1 G2 G3 famrel freetime goout /MISSING=LISTWISE
 /ANALYSIS=G1 G2 G3 famrel freetime goout
1500  0  /PRINT=INITIAL EXTRACTION KMO CORRELATION /PLOT=EIGEN
1500  0 M>  /PRINT=INITIAL EXTRACTION KMO CORRELATION /PLOT=EIGEN
1501  0  /CRITERIA=FACTORS(2) ITERATE(500) /EXTRACTION=PAF /ROTATION=NOROTATE
 /METHOD=CORRELATION.
1501  0 M>  /CRITERIA=FACTORS(2) ITERATE(500) /EXTRACTION=PAF /ROTATION=NOROT
ATE /METHOD=CORRELATION.

```

Factor Analysis

Notes

Output Created		18-JUL-2026 10:56:34
Comments		
Input	Data	D:\DATA ANALYSIS\L Validity Factor Analysis and Scale Testing\Kaiser Meyer Olkin Test\dataset. csv
	Active Dataset	KaiserMeyerOlkinTestDat a
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Missing Value Handling	Definition of Missing	MISSING=EXCLUDE: User-defined missing values are treated as missing.
	Cases Used	LISTWISE: Statistics are based on cases with no missing values for any variable used.

Kaiser Meyer Olkin Test
Overall and item measure of sampling adequacy

Notes

Syntax		FACTOR /VARIABLES=G1 G2 G3 famrel freetime goout /MISSING=LISTWISE /ANALYSIS=G1 G2 G3 famrel freetime goout /PRINT=INITIAL EXTRACTION KMO CORRELATION /PLOT=EIGEN /CRITERIA=FACTORS(2) ITERATE(500) /EXTRACTION=PAF /ROTATION=NOROTATE /METHOD=CORRELATIO N.
Resources	Processor Time	00:00:00.34
	Elapsed Time	00:00:00.35
	Maximum Memory Required	5704 (5.570K) bytes

[KaiserMeyerOlkinTestData]

Correlation Matrix

		G1	G2	G3	famrel	freetime	goout
Correlation	G1	1.000	.865	.826	.049	-.094	-.074
	G2	.865	1.000	.919	.090	-.107	-.079
	G3	.826	.919	1.000	.063	-.123	-.088
	famrel	.049	.090	.063	1.000	.129	.090
	freetime	-.094	-.107	-.123	.129	1.000	.346
	goout	-.074	-.079	-.088	.090	.346	1.000

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.732
Bartlett's Test of Sphericity	Approx. Chi-Square	2220.632
	df	15
	Sig.	.000

Kaiser Meyer Olkin Test
Overall and item measure of sampling adequacy

Communalities

	Initial	Extraction
G1	.755	.775
G2	.880	.966
G3	.849	.878
famrel	.034	.045
freetime	.140	.474
goout	.125	.252

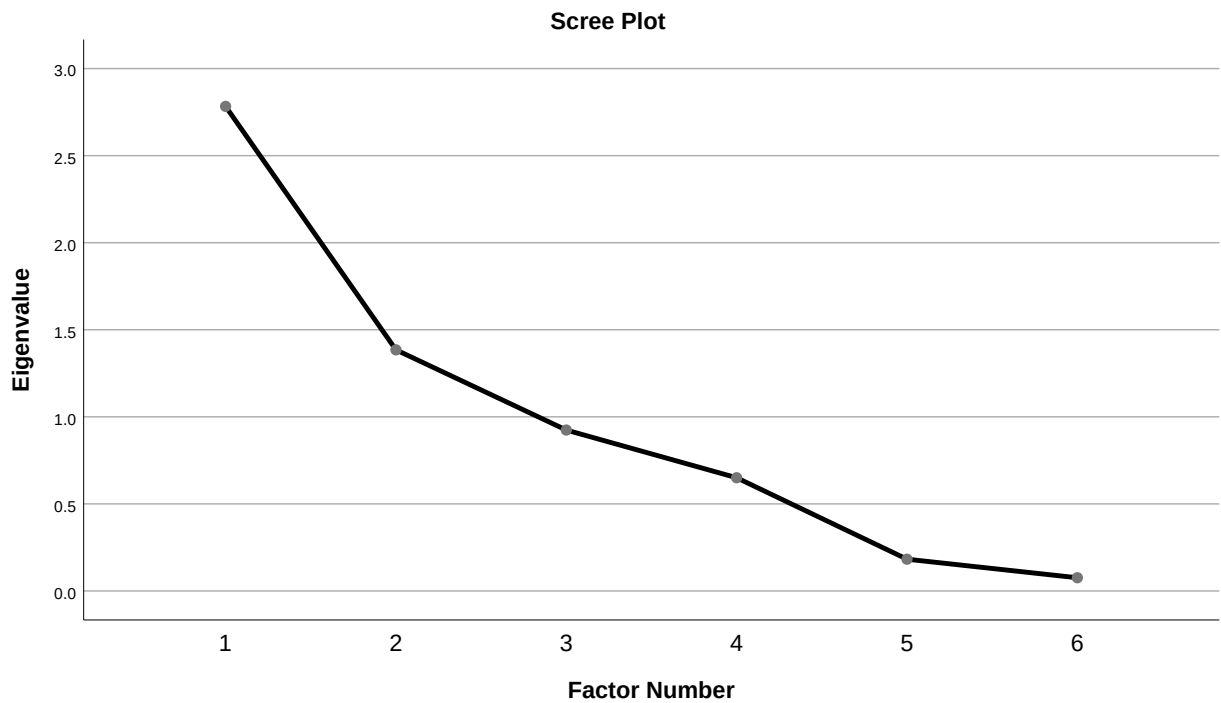
Extraction Method: Principal Axis Factoring.

Total Variance Explained

Factor	Total	Initial Eigenvalues		Extraction Sums of Squared Loadings		
		% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.783	46.381	46.381	2.650	44.166	44.166
2	1.385	23.080	69.461	.740	12.337	56.503
3	.924	15.402	84.863			
4	.650	10.835	95.698			
5	.182	3.038	98.736			
6	.076	1.264	100.000			

Extraction Method: Principal Axis Factoring.

Kaiser Meyer Olkin Test
Overall and item measure of sampling adequacy



Factor Matrix^a

	Factor	
	1	2
G1	.879	.053
G2	.980	.070
G3	.936	.033
famrel	.061	.204
freetime	-.153	.671
goout	-.114	.489

Extraction Method: Principal Axis Factoring.

a. 2 factors extracted. 41 iterations required.

```
1502  0  ECHO 'KMO compares squared zero-order and partial correlations'.
1502  0 M> ECHO 'KMO compares squared zero-order and partial correlations'.
KMO compares squared zero-order and partial correlations
```


Kaiser Meyer Olkin Test
Overall and item measure of sampling adequacy

1503 0 DESCRIPTIVES VARIABLES=G1 G2 G3 famrel freetime goout /STATISTICS=MEAN STDDEV MIN MAX.

1503 0 M> DESCRIPTIVES VARIABLES=G1 G2 G3 famrel freetime goout /STATISTICS=MEAN STDDEV MIN MAX.

Descriptives

Notes

Output Created		18-JUL-2026 10:56:34
Comments		
Input	Data	D:\DATA ANALYSIS\L Validity Factor Analysis and Scale Testing\Kaiser Meyer Olkin Test\dataset. csv
	Active Dataset	KaiserMeyerOlkinTestDat a
	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		DESCRIPTIVES VARIABLES=G1 G2 G3 famrel freetime goout /STATISTICS=MEAN STDDEV MIN MAX.
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.06

Kaiser Meyer Olkin Test
Overall and item measure of sampling adequacy

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
G1	649	0	19	11.40	2.745
G2	649	0	19	11.57	2.914
G3	649	0	19	11.91	3.231
famrel	649	1	5	3.93	.956
freetime	649	1	5	3.18	1.051
goout	649	1	5	3.18	1.176
Valid N (listwise)	649				

```

1504 0 * END METHOD-SPECIFIC SPSS WORKFLOW.
1504 0 M> * END METHOD-SPECIFIC SPSS WORKFLOW.
1505 0
1505 0 M>
1506 0 SAVE OUTFILE='D:\DATA ANALYSIS\L Validity Factor Analysis and Scale T
esting\Kaiser Meyer Olkin Test\SPSS_Output\sav\kaiser-
meyer-olkin-test_spss_ready_data.sav' /COMPRESSED.
1506 0 M> SAVE OUTFILE='D:\DATA ANALYSIS\L Validity Factor Analysis and Scal
e Testing\Kaiser Meyer Olkin Test\SPSS_Output\sav\kais
er-meyer-olkin-test_spss_ready_data.sav' /COMPRESSED.
1507 0
1507 0 M>
1508 0 ECHO '=====
====='.
1508 0 M> ECHO '=====
====='.
=====
1509 0 ECHO 'KAISER-MEYER-OLKIN SAMPLING ADEQUACY'.
1509 0 M> ECHO 'KAISER-MEYER-OLKIN SAMPLING ADEQUACY'.
KAISER-MEYER-OLKIN SAMPLING ADEQUACY
1510 0 ECHO 'Design: Overall and item-level common-variance adequacy based o
n correlations versus partial correlations.'.
1510 0 M> ECHO 'Design: Overall and item-level common-variance adequacy base
d on correlations versus partial correlations.'.
Design: Overall and item-level common-variance adequacy based on correlations
versus partial correlations.

```

Kaiser Meyer Olkin Test
Overall and item measure of sampling adequacy

```
1511 0 ECHO 'Null hypothesis: The squared partial correlations are not smaller than the squared zero-order correlations.'.
1511 0 M> ECHO 'Null hypothesis: The squared partial correlations are not smaller than the squared zero-order correlations.'.
Null hypothesis: The squared partial correlations are not smaller than the squared zero-order correlations.
1512 0 ECHO 'Formula: KMO=sum r_ij^2/[sum r_ij^2+sum p_ij^2].'.
1512 0 M> ECHO 'Formula: KMO=sum r_ij^2/[sum r_ij^2+sum p_ij^2].'.
Formula: KMO=sum r_ij^2/[sum r_ij^2+sum p_ij^2].
1513 0 ECHO 'Variables: G1, G2, G3, famrel, freetime, goout'.
1513 0 M> ECHO 'Variables: G1, G2, G3, famrel, freetime, goout'.
Variables: G1, G2, G3, famrel, freetime, goout
1514 0 ECHO 'Rows analyzed: 649'.
1514 0 M> ECHO 'Rows analyzed: 649'.
Rows analyzed: 649
1515 0 ECHO 'maximum_item_kmo = 0.8496197982847344'.
1515 0 M> ECHO 'maximum_item_kmo = 0.8496197982847344'.
maximum_item_kmo = 0.8496197982847344
1516 0 ECHO 'minimum_item_kmo = 0.5672563543432276'.
1516 0 M> ECHO 'minimum_item_kmo = 0.5672563543432276'.
minimum_item_kmo = 0.5672563543432276
1517 0 ECHO 'n_cases = 649'.
1517 0 M> ECHO 'n_cases = 649'.
n_cases = 649
1518 0 ECHO 'overall_kmo = 0.7319770330640147'.
1518 0 M> ECHO 'overall_kmo = 0.7319770330640147'.
overall_kmo = 0.7319770330640147
1519 0 ECHO 'variables = 6'.
1519 0 M> ECHO 'variables = 6'.
variables = 6
1520 0 ECHO 'Cross-check status: pass'.
1520 0 M> ECHO 'Cross-check status: pass'.
Cross-check status: pass
1521 0 ECHO '=====
====='.
1521 0 M> ECHO '=====
====='.
=====
1522 0
```

Kaiser Meyer Olkin Test
Overall and item measure of sampling adequacy

```
1522  0 M>
1523  0  OUTPUT SAVE OUTFILE='D:\DATA ANALYSIS\L Validity Factor Analysis and
Scale Testing\Kaiser Meyer Olkin Test\SPSS_Output\spv\
      kaiser-meyer-olkin-test_spss_output.spv'.
1523  0 M>  OUTPUT SAVE OUTFILE='D:\DATA ANALYSIS\L Validity Factor Analysis a
nd Scale Testing\Kaiser Meyer Olkin Test\SPSS_Output\s
      pv\kaiser-meyer-olkin-test_spss_output.spv'.
1524  0  OUTPUT EXPORT /CONTENTS EXPORT=ALL LAYERS=PRINTSETTING MODELVIEWS=PRI
NTSETTING
1524  0 M>  OUTPUT EXPORT /CONTENTS EXPORT=ALL LAYERS=PRINTSETTING MODELVIEWS=
PRINTSETTING
```