```
DESCRIPTIVES VARIABLES=psqi gpa
  /STATISTICS=MEAN STDDEV MIN MAX.
```

Descriptives

E:\clients\Sleep Quality.sav

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Pittsburgh Sleep Quality Index (PSQI)	100	.9	14.9	7.548	2.9174
Grade Point Average (GPA)	100	2.28	4.00	3.3085	.36931
Valid N (listwise)	100				

```
FREQUENCIES VARIABLES=gender major caffeine
  /ORDER=ANALYSIS.
```

Frequencies

Statistics

		Gender	Study Major	Caffeine Consumption Level
N	Valid	100	100	100
	Missing	0	0	0

Frequency Table

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	48	48.0	48.0	48.0
	Female	52	52.0	52.0	100.0
	Total	100	100.0	100.0	

Study Major

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.01	1	1.0	1.0	1.0
	1.03	1	1.0	1.0	2.0
	1.04	1	1.0	1.0	3.0
	1.04	1	1.0	1.0	4.0
	1.05	1	1.0	1.0	5.0
	1.09	1	1.0	1.0	6.0
	1.11	1	1.0	1.0	7.0
	1.14	1	1.0	1.0	8.0
	1.14	1	1.0	1.0	9.0
	1.15	1	1.0	1.0	10.0
	1.15	1	1.0	1.0	11.0
	1.16	1	1.0	1.0	12.0
	1.22	1	1.0	1.0	13.0
	1.29	1	1.0	1.0	14.0
	1.32	1	1.0	1.0	15.0
	1.32	1	1.0	1.0	16.0
	1.36	1	1.0	1.0	17.0
	1.36	1	1.0	1.0	18.0
	1.38	1	1.0	1.0	19.0
	1.41	1	1.0	1.0	20.0
	1.43	1	1.0	1.0	21.0
	1.43	1	1.0	1.0	22.0
	1.46	1	1.0	1.0	23.0
	1.51	1	1.0	1.0	24.0
	1.51	1	1.0	1.0	25.0
	1.52	1	1.0	1.0	26.0
	1.53	1	1.0	1.0	27.0
	1.56	1	1.0	1.0	28.0
	1.59	1	1.0	1.0	29.0
	1.61	1	1.0	1.0	30.0
	1.64	1	1.0	1.0	31.0
	1.68	1	1.0	1.0	32.0
	1.68	1	1.0	1.0	33.0
	1.68	1	1.0	1.0	34.0
	1.69	1	1.0	1.0	35.0

Study Major

	Frequency	Percent	Valid Percent	Cumulative Percent
1.70	1	1.0	1.0	36.0
1.73	1	1.0	1.0	37.0
1.74	1	1.0	1.0	38.0
1.78	1	1.0	1.0	39.0
1.78	1	1.0	1.0	40.0
1.79	1	1.0	1.0	41.0
1.81	1	1.0	1.0	42.0
1.84	1	1.0	1.0	43.0
2.02	1	1.0	1.0	44.0
2.02	1	1.0	1.0	45.0
2.04	1	1.0	1.0	46.0
2.07	1	1.0	1.0	47.0
2.11	1	1.0	1.0	48.0
2.18	1	1.0	1.0	49.0
2.22	1	1.0	1.0	50.0
2.23	1	1.0	1.0	51.0
2.29	1	1.0	1.0	52.0
2.31	1	1.0	1.0	53.0
2.31	1	1.0	1.0	54.0
2.33	1	1.0	1.0	55.0
2.35	1	1.0	1.0	56.0
2.39	1	1.0	1.0	57.0
2.40	1	1.0	1.0	58.0
2.41	1	1.0	1.0	59.0
2.42	1	1.0	1.0	60.0
2.43	1	1.0	1.0	61.0
2.45	1	1.0	1.0	62.0
2.45	1	1.0	1.0	63.0
2.47	1	1.0	1.0	64.0
2.56	1	1.0	1.0	65.0
2.58	1	1.0	1.0	66.0
2.59	1	1.0	1.0	67.0
2.62	1	1.0	1.0	68.0
2.68	1	1.0	1.0	69.0
2.71	1	1.0	1.0	70.0

Study Major

	Frequency	Percent	Valid Percent	Cumulative Percent
2.81	1	1.0	1.0	71.0
2.87	1	1.0	1.0	72.0
2.93	1	1.0	1.0	73.0
2.99	1	1.0	1.0	74.0
3.00	1	1.0	1.0	75.0
3.05	1	1.0	1.0	76.0
3.15	1	1.0	1.0	77.0
3.15	1	1.0	1.0	78.0
3.22	1	1.0	1.0	79.0
3.33	1	1.0	1.0	80.0
3.34	1	1.0	1.0	81.0
3.34	1	1.0	1.0	82.0
3.45	1	1.0	1.0	83.0
3.49	1	1.0	1.0	84.0
3.52	1	1.0	1.0	85.0
3.53	1	1.0	1.0	86.0
3.60	1	1.0	1.0	87.0
3.60	1	1.0	1.0	88.0
3.71	1	1.0	1.0	89.0
3.71	1	1.0	1.0	90.0
3.75	1	1.0	1.0	91.0
3.78	1	1.0	1.0	92.0
3.79	1	1.0	1.0	93.0
3.81	1	1.0	1.0	94.0
3.81	1	1.0	1.0	95.0
3.86	1	1.0	1.0	96.0
3.89	1	1.0	1.0	97.0
3.91	1	1.0	1.0	98.0
3.92	1	1.0	1.0	99.0
3.95	1	1.0	1.0	100.0
Total	100	100.0	100.0	

Caffeine Consumption Level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	1	1.0	1.0	1.0
	1.02	1	1.0	1.0	2.0
	1.03	1	1.0	1.0	3.0
	1.13	1	1.0	1.0	4.0
	1.13	1	1.0	1.0	5.0
	1.19	1	1.0	1.0	6.0
	1.19	1	1.0	1.0	7.0
	1.26	1	1.0	1.0	8.0
	1.28	1	1.0	1.0	9.0
	1.32	1	1.0	1.0	10.0
	1.35	1	1.0	1.0	11.0
	1.44	1	1.0	1.0	12.0
	1.44	1	1.0	1.0	13.0
	1.47	1	1.0	1.0	14.0
	1.47	1	1.0	1.0	15.0
	1.50	1	1.0	1.0	16.0
	1.55	1	1.0	1.0	17.0
	1.56	1	1.0	1.0	18.0
	1.63	1	1.0	1.0	19.0
	1.68	1	1.0	1.0	20.0
	1.75	1	1.0	1.0	21.0
	1.76	1	1.0	1.0	22.0
	1.80	1	1.0	1.0	23.0
	1.82	1	1.0	1.0	24.0
	1.84	1	1.0	1.0	25.0
	1.93	1	1.0	1.0	26.0
	1.94	1	1.0	1.0	27.0
	1.95	1	1.0	1.0	28.0
	1.99	1	1.0	1.0	29.0
	2.10	1	1.0	1.0	30.0
	2.12	1	1.0	1.0	31.0
	2.15	1	1.0	1.0	32.0
	2.15	1	1.0	1.0	33.0
	2.15	1	1.0	1.0	34.0
	2.18	1	1.0	1.0	35.0

Caffeine Consumption Level

	Frequency	Percent	Valid Percent	Cumulative Percent
2.21	1	1.0	1.0	36.0
2.22	1	1.0	1.0	37.0
2.27	1	1.0	1.0	38.0
2.32	1	1.0	1.0	39.0
2.33	1	1.0	1.0	40.0
2.33	1	1.0	1.0	41.0
2.38	1	1.0	1.0	42.0
2.38	1	1.0	1.0	43.0
2.39	1	1.0	1.0	44.0
2.43	1	1.0	1.0	45.0
2.46	1	1.0	1.0	46.0
2.46	1	1.0	1.0	47.0
2.51	1	1.0	1.0	48.0
2.52	1	1.0	1.0	49.0
2.53	1	1.0	1.0	50.0
2.54	1	1.0	1.0	51.0
2.58	1	1.0	1.0	52.0
2.59	1	1.0	1.0	53.0
2.59	1	1.0	1.0	54.0
2.60	1	1.0	1.0	55.0
2.62	1	1.0	1.0	56.0
2.68	1	1.0	1.0	57.0
2.75	1	1.0	1.0	58.0
2.76	1	1.0	1.0	59.0
2.85	1	1.0	1.0	60.0
2.86	1	1.0	1.0	61.0
2.86	1	1.0	1.0	62.0
2.88	1	1.0	1.0	63.0
2.93	1	1.0	1.0	64.0
2.93	1	1.0	1.0	65.0
2.96	1	1.0	1.0	66.0
2.97	1	1.0	1.0	67.0
3.01	1	1.0	1.0	68.0
3.04	1	1.0	1.0	69.0
3.05	1	1.0	1.0	70.0

Caffeine Consumption Level

	Frequency	Percent	Valid Percent	Cumulative Percent
3.06	1	1.0	1.0	71.0
3.10	1	1.0	1.0	72.0
3.11	1	1.0	1.0	73.0
3.12	1	1.0	1.0	74.0
3.12	1	1.0	1.0	75.0
3.17	1	1.0	1.0	76.0
3.20	1	1.0	1.0	77.0
3.20	1	1.0	1.0	78.0
3.26	1	1.0	1.0	79.0
3.28	1	1.0	1.0	80.0
3.44	1	1.0	1.0	81.0
3.47	1	1.0	1.0	82.0
3.47	1	1.0	1.0	83.0
3.52	1	1.0	1.0	84.0
3.52	1	1.0	1.0	85.0
3.56	1	1.0	1.0	86.0
3.61	1	1.0	1.0	87.0
3.65	1	1.0	1.0	88.0
3.80	1	1.0	1.0	89.0
3.82	1	1.0	1.0	90.0
3.82	1	1.0	1.0	91.0
3.84	1	1.0	1.0	92.0
3.85	1	1.0	1.0	93.0
3.86	1	1.0	1.0	94.0
3.87	1	1.0	1.0	95.0
3.87	1	1.0	1.0	96.0
3.91	1	1.0	1.0	97.0
3.92	1	1.0	1.0	98.0
3.93	1	1.0	1.0	99.0
3.99	1	1.0	1.0	100.0
Total	100	100.0	100.0	

Correlations

Correlations

		Gender	Study Major	Pittsburgh Sleep Quality Index (PSQI)
Gender	Pearson Correlation	1	-.038	.010
	Sig. (2-tailed)		.705	.924
	N	100	100	100
Study Major	Pearson Correlation	-.038	1	.188
	Sig. (2-tailed)	.705		.060
	N	100	100	100
Pittsburgh Sleep Quality Index (PSQI)	Pearson Correlation	.010	.188	1
	Sig. (2-tailed)	.924	.060	
	N	100	100	100
Caffeine Consumption Level	Pearson Correlation	.017	-.091	-.089
	Sig. (2-tailed)	.868	.365	.380
	N	100	100	100
Grade Point Average (GPA)	Pearson Correlation	-.009	-.164	-.595[**]
	Sig. (2-tailed)	.926	.103	.000
	N	100	100	100

Correlations

		Caffeine Consumption Level	Grade Point Average (GPA)
Gender	Pearson Correlation	.017	-.009
	Sig. (2-tailed)	.868	.926
	N	100	100
Study Major	Pearson Correlation	-.091	-.164
	Sig. (2-tailed)	.365	.103
	N	100	100
Pittsburgh Sleep Quality Index (PSQI)	Pearson Correlation	-.089	-.595[**]
	Sig. (2-tailed)	.380	.000
	N	100	100
Caffeine Consumption Level	Pearson Correlation	1	.007
	Sig. (2-tailed)		.945
	N	100	100
Grade Point Average (GPA)	Pearson Correlation	.007	1
	Sig. (2-tailed)	.945	
	N	100	100

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Study Major, Gender[b]	.	Enter

a. Dependent Variable: Grade Point Average (GPA)

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.165[a]	.027	.007	.36799	.027	1.355	2

Model Summary

Model	Change Statistics	
	df2	Sig. F Change
1	97	.263

a. Predictors: (Constant), Study Major, Gender

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.367	2	.183	1.355	.263[b]
	Residual	13.135	97	.135		
	Total	13.502	99			

a. Dependent Variable: Grade Point Average (GPA)

b. Predictors: (Constant), Study Major, Gender

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.468	.109		31.866	.000
	Gender	-.012	.074	-.016	-.156	.876
	Study Major	-.067	.041	-.165	-1.643	.104

a. Dependent Variable: Grade Point Average (GPA)

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Study Major, Gender[b]	.	Enter
2	Pittsburgh Sleep Quality Index (PSQI)[b]	.	Enter

a. Dependent Variable: Grade Point Average (GPA)

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.165[a]	.027	.007	.36799	.027	1.355	2
2	.598[b]	.357	.337	.30066	.330	49.311	1

Model Summary

Model	Change Statistics	
	df2	Sig. F Change
1	97	.263
2	96	.000

a. Predictors: (Constant), Study Major, Gender

b. Predictors: (Constant), Study Major, Gender, Pittsburgh Sleep Quality Index (PSQI)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.367	2	.183	1.355	.263[b]
	Residual	13.135	97	.135		
	Total	13.502	99			
2	Regression	4.824	3	1.608	17.790	.000[c]
	Residual	8.678	96	.090		
	Total	13.502	99			

a. Dependent Variable: Grade Point Average (GPA)

b. Predictors: (Constant), Study Major, Gender

c. Predictors: (Constant), Study Major, Gender, Pittsburgh Sleep Quality Index (PSQI)

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	3.468	.109		31.866	.000
	Gender	-.012	.074	-.016	-.156	.876
	Study Major	-.067	.041	-.165	-1.643	.104
2	(Constant)	3.920	.110		35.711	.000
	Gender	-.004	.060	-.006	-.071	.944
	Study Major	-.022	.034	-.054	-.648	.518
	Pittsburgh Sleep Quality Index (PSQI)	-.074	.011	-.585	-7.022	.000

a. Dependent Variable: Grade Point Average (GPA)

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
1	Pittsburgh Sleep Quality Index (PSQI)	-.585[b]	-7.022	.000	-.583	.964

a. Dependent Variable: Grade Point Average (GPA)

b. Predictors in the Model: (Constant), Study Major, Gender

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Study Major, Gender[b]	.	Enter
2	Pittsburgh Sleep Quality Index (PSQI)[b]	.	Enter
3	Caffeine Consumption Level[b]	.	Enter

a. Dependent Variable: Grade Point Average (GPA)

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1
					Change Statistics		
1	.165[a]	.027	.007	.36799	.027	1.355	2
2	.598[b]	.357	.337	.30066	.330	49.311	1
3	.600[c]	.360	.333	.30164	.003	.374	1

Model Summary

Model	df2	Sig. F Change
	Change Statistics	
1	97	.263
2	96	.000
3	95	.542

a. Predictors: (Constant), Study Major, Gender

b. Predictors: (Constant), Study Major, Gender, Pittsburgh Sleep Quality Index (PSQI)

c. Predictors: (Constant), Study Major, Gender, Pittsburgh Sleep Quality Index (PSQI), Caffeine Consumption Level

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.367	2	.183	1.355	.263[b]
	Residual	13.135	97	.135		
	Total	13.502	99			
2	Regression	4.824	3	1.608	17.790	.000[c]
	Residual	8.678	96	.090		
	Total	13.502	99			
3	Regression	4.858	4	1.215	13.349	.000[d]
	Residual	8.644	95	.091		
	Total	13.502	99			

a. Dependent Variable: Grade Point Average (GPA)

b. Predictors: (Constant), Study Major, Gender

c. Predictors: (Constant), Study Major, Gender, Pittsburgh Sleep Quality Index (PSQI)

d. Predictors: (Constant), Study Major, Gender, Pittsburgh Sleep Quality Index (PSQI), Caffeine Consumption Level

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.468	.109		31.866	.000
	Gender	-.012	.074	-.016	-.156	.876
	Study Major	-.067	.041	-.165	-1.643	.104
2	(Constant)	3.920	.110		35.711	.000
	Gender	-.004	.060	-.006	-.071	.944
	Study Major	-.022	.034	-.054	-.648	.518
	Pittsburgh Sleep Quality Index (PSQI)	-.074	.011	-.585	-7.022	.000
3	(Constant)	3.983	.151		26.393	.000
	Gender	-.004	.060	-.005	-.061	.951
	Study Major	-.024	.034	-.058	-.690	.492
	Pittsburgh Sleep Quality Index (PSQI)	-.075	.011	-.589	-7.025	.000
	Caffeine Consumption Level	-.022	.036	-.051	-.611	.542

a. Dependent Variable: Grade Point Average (GPA)

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
1	Pittsburgh Sleep Quality Index (PSQI)	-.585[b]	-7.022	.000	-.583	.964
	Caffeine Consumption Level	-.008[b]	-.078	.938	-.008	.991
2	Caffeine Consumption Level	-.051[c]	-.611	.542	-.063	.986

a. Dependent Variable: Grade Point Average (GPA)

b. Predictors in the Model: (Constant), Study Major, Gender

c. Predictors in the Model: (Constant), Study Major, Gender, Pittsburgh Sleep Quality Index (PSQI)

```
GRAPH
 /SCATTERPLOT(BIVAR)=psqi WITH gpa
 /MISSING=LISTWISE.
```

Graph

R^2 Linear = 0.354

$y=3.88-0.08*x$