Task One: T-Test

Testing for Gender Difference in Results

Notes

Output Created		06-NOV-2024 12:06:50
Comments		
Input	Active Dataset	DataSet1
	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 analysis are based on the cases with no missing or out-of-range data for any variable in the analysis.
Syntax		T-TEST GROUPS=Gender(1 2) /MISSING=ANALYSIS /VARIABLES=Result /ES DISPLAY(TRUE) /CRITERIA=CI(.95).
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.16

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Result	Male	266	57.030075187969930	16.603450357317605	1.018022858525714

	Female	383	61.279373368146220	15.621765177158550	.798234911879843

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig.	t	df						
Result	Equal variances assumed	.003	.957	-3.321	647						
	Equal variances not assumed			-3.285	547.464						

Independent Samples Effect Sizes

		Standardizer[a]	Point Estimate	95% Confidence Interval	
				Lower	Upper
Result	Cohen's d	16.031116692006910	-.265	-.422	-.108
	Hedges' correction	16.049729870513467	-.265	-.422	-.108
	Glass's delta	15.621765177158550	-.272	-.429	-.114

a. The denominator used in estimating the effect sizes.

Cohen's d uses the pooled standard deviation.

Hedges' correction uses the pooled standard deviation, plus a correction factor.

Glass's delta uses the sample standard deviation of the control (i.e., the second) group.

Testing for Relationship Impact on Results

Notes

Output Created		06-NOV-2024 12:07:50
Comments		
Input	Active Dataset	DataSet1
	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 analysis are based on the cases with no missing or out-of-range data for any variable in the analysis.
Syntax		T-TEST GROUPS=Relationship('Yes' 'No') /MISSING=ANALYSIS /VARIABLES=Result /ES DISPLAY(TRUE) /CRITERIA=CI(.95).
Resources	Processor Time	00:00:00.05
	Elapsed Time	00:00:00.13

Group Statistics

	Relationship	N	Mean	Std. Deviation	Std. Error Mean
Result	In romantic relationship	239	57.615062761506270	17.803854951990218	1.151635640803759
	Not in romantic relationship	410	60.658536585365844	15.020132790732093	.7417914851506 54

Independent Samples Test

Levene's Test for Equality of Variances	t-test for Equality of Means						

		F	Sig.	t	df						
Result	Equal variances assumed	3.825	.051	-2.323	647						
	Equal variances not assumed			-2.222	433.076						

Independent Samples Effect Sizes

				95% Confidence Interval	
		Standardizer[a]	Point Estimate	Lower	Upper
Result	Cohen's d	16.100187721313368	-.189	-.349	-.029
	Hedges' correction	16.118881095817670	-.189	-.348	-.029
	Glass's delta	15.020132790732093	-.203	-.363	-.042

a. The denominator used in estimating the effect sizes.

Cohen's d uses the pooled standard deviation.

Hedges' correction uses the pooled standard deviation, plus a correction factor.

Glass's delta uses the sample standard deviation of the control (i.e., the second) group.

Task 2: Regression Analysis

Correlation Matrix for Quantitative Variables

Notes

Output Created		06-NOV-2024 12:09:24
Comments		
Input	Active Dataset	DataSet1
	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=Result Age Lectures Tutorials /PRINT=TWOTAIL NOSIG FULL /MISSING=PAIRWISE.
Resources	Processor Time	00:00:00.06
	Elapsed Time	00:00:00.35

Correlations

		Result	Age	Lectures	Tutorials
Result	Pearson Correlation	1	-.107**	-.092*	-.084*
	Sig. (2-tailed)		.006	.019	.032
	N	649	649	649	649
Age	Pearson Correlation	-.107**	1	.152**	.147**
	Sig. (2-tailed)	.006		.000	.000
	N	649	649	649	649
Lectures	Pearson Correlation	-.092*	.152**	1	.946**
	Sig. (2-tailed)	.019	.000		.000
	N	649	649	649	649
Tutorials	Pearson Correlation	-.084*	.147**	.946**	1
	Sig. (2-tailed)	.032	.000	.000	
	N	649	649	649	649

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

*. Correlation is significant at the 0.05 level (2-tailed).

Simple Regressions

Impact of Age on Results

Notes

Output Created		06-NOV-2024 12:10:48
Comments		
Input	Active Dataset	DataSet1
	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 cases with no missing values for any variable used.
Syntax		REGRESSION /MISSING LISTWISE /STATISTICS COEFF OUTS R ANOVA /CRITERIA=PIN(.05) POUT(.10) TOLERANCE(.0001) /NOORIGIN /DEPENDENT Result /METHOD=ENTER Age.
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.06
	Memory Required	2608 bytes
	Additional Memory Required for Residual Plots	0 bytes

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Age[b]	.	Enter

a. Dependent Variable: Result

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.107[a]	.011	.010	16.074553158071590

a. Predictors: (Constant), Age

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1932.180	1	1932.180	7.478	.006[b]
	Residual	167179.145	647	258.391		
	Total	169111.325	648			

a. Dependent Variable: Result

b. Predictors: (Constant), Age

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	86.145	9.751		8.835	.000
	Age	-1.419	.519	-.107	-2.735	.006

a. Dependent Variable: Result

Impact of Lectures on Results

Notes

Output Created		06-NOV-2024 12:11:12
Comments		
Input	Active Dataset	DataSet1
	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 cases with no missing values for any variable used.
Syntax		REGRESSION /MISSING LISTWISE /STATISTICS COEFF OUTS R ANOVA /CRITERIA=PIN(.05) POUT(.10) TOLERANCE(.0001) /NOORIGIN /DEPENDENT Result /METHOD=ENTER Lectures.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.03
	Memory Required	2608 bytes
	Additional Memory Required for Residual Plots	0 bytes

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method

1	Lectures[b]	.	Enter

a. Dependent Variable: Result

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.092[a]	.008	.007	16.09894239924 8340

a. Predictors: (Constant), Lectures

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1424.488	1	1424.488	5.496	.019[b]
	Residual	167686.837	647	259.176		
	Total	169111.325	648			

a. Dependent Variable: Result

b. Predictors: (Constant), Lectures

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	60.704	.804		75.488	.000
	Lectures	-.319	.136	-.092	-2.344	.019

a. Dependent Variable: Result

Impact of Tutorials on Results

Notes

Output Created		06-NOV-2024 12:12:25
Comments		
Input	Active Dataset	DataSet1
	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 cases with no missing values for any variable used.
Syntax		REGRESSION /MISSING LISTWISE /STATISTICS COEFF OUTS R ANOVA /CRITERIA=PIN(.05) POUT(.10) TOLERANCE(.0001) /NOORIGIN /DEPENDENT Result /METHOD=ENTER Tutorials.
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.04
	Memory Required	2608 bytes
	Additional Memory Required for Residual Plots	0 bytes

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Tutorials[b]	.	Enter

a. Dependent Variable: Result

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.084[a]	.007	.006	16.10979080264 7140

a. Predictors: (Constant), Tutorials

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1198.417	1	1198.417	4.618	.032[b]
	Residual	167912.908	647	259.525		
	Total	169111.325	648			

a. Dependent Variable: Result

b. Predictors: (Constant), Tutorials

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	61.227	1.009		60.697	.000
	Tutorials	-.545	.254	-.084	-2.149	.032

a. Dependent Variable: Result