

Host

Notes

Output Created		12-JUL-2026 11:23:07
Comments		
Input	Active Dataset	RSquaredData
	Filter	<none>
	Weight	<none>
	Split File	<none>
Syntax		HOST COMMAND=[if not exist "D:\DATA ANALYSIS\H Regression Tests and Models\Regression ANOVA Table\SPSS_Output" mkdir "D:\DATA ANALYSIS\H Regression Tests and Models\Regression ANOVA Table\SPSS_Output"].
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.10

Host

Notes

Output Created		12-JUL-2026 11:23:07
Comments		
Input	Active Dataset	RSquaredData
	Filter	<none>
	Weight	<none>
	Split File	<none>
Syntax		HOST COMMAND=["if not exist "D:\DATA ANALYSIS\H Regression Tests and Models\Regression ANOVA Table\SPSS_Output\sav" mkdir "D:\DATA ANALYSIS\H Regression Tests and Models\Regression ANOVA Table\SPSS_Output\sav"...
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.07

Host

Notes

Output Created		12-JUL-2026 11:23:07
Comments		
Input	Active Dataset	RSquaredData
	Filter	<none>
	Weight	<none>
	Split File	<none>
Syntax		HOST COMMAND=["if not exist "D:\DATA ANALYSIS\H Regression Tests and Models\Regression ANOVA Table\SPSS_Output\spv" mkdir "D:\DATA ANALYSIS\H Regression Tests and Models\Regression ANOVA Table\SPSS_Output\spv"...
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.05

Host

Notes

Output Created		12-JUL-2026 11:23:07
Comments		
Input	Active Dataset	RSquaredData
	Filter	<none>
	Weight	<none>
	Split File	<none>
Syntax		HOST COMMAND=["if not exist "D:\DATA ANALYSIS\H Regression Tests and Models\Regression ANOVA Table\SPSS_Output\pdf" mkdir "D:\DATA ANALYSIS\H Regression Tests and Models\Regression ANOVA Table\SPSS_Output\pdf""].
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.04

Host

Notes

Output Created		12-JUL-2026 11:23:07
Comments		
Input	Active Dataset	RSquaredData
	Filter	<none>
	Weight	<none>
	Split File	<none>
Syntax		HOST COMMAND=["del /Q "D:\DATA ANALYSIS\H Regression Tests and Models\Regression ANOVA Table\SPSS_Output\sav*.sav" 2>nul"].
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.04

Host

Notes

Output Created		12-JUL-2026 11:23:07
Comments		
Input	Active Dataset	RSquaredData
	Filter	<none>
	Weight	<none>
	Split File	<none>
Syntax		HOST COMMAND=['del /Q "D:\DATA ANALYSIS\H Regression Tests and Models\Regression ANOVA Table\SPSS_Output\spv*. spv" 2>nul'].
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.05

Host

Notes

Output Created		12-JUL-2026 11:23:07
Comments		
Input	Active Dataset	RSquaredData
	Filter	<none>
	Weight	<none>
	Split File	<none>
Syntax		HOST COMMAND=['del /Q "D:\DATA ANALYSIS\H Regression Tests and Models\Regression ANOVA Table\SPSS_Output\pdf*. pdf" 2>nul'].
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.04

Regression ANOVA Table

Regression ANOVA Table
Import dataset.csv

Regression ANOVA Table

Regression ANOVA Table
Descriptive statistics and correlations

Descriptives

Notes

Output Created		12-JUL-2026 11:23:08
Comments		
Input	Data	D:\DATA ANALYSIS\H Regression Tests and Models\Regression ANOVA Table\SPSS_Output\sav\regression_anova_table_analysis_data.sav
	Active Dataset	RegressionANOVATableData
	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=G3 G1 G2 studytime failures absences /STATISTICS=MEAN STDDEV MIN MAX.
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.01

[RegressionANOVATableData] D:\DATA ANALYSIS\H Regression Tests and Models\Regression ANOVA Table\SPSS_Output\sav\regression_anova_table_analysis_data.sav

Regression ANOVA Table
Descriptive statistics and correlations

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Final grade outcome	649	.00	19.00	11.9060	3.23066
First period grade predictor	649	.00	19.00	11.3991	2.74527
Second period grade predictor	649	.00	19.00	11.5701	2.91364
Weekly study time predictor	649	1.00	4.00	1.9307	.82951
Past class failures predictor	649	.00	3.00	.2219	.59324
School absences predictor	649	.00	32.00	3.6595	4.64076
Valid N (listwise)	649				

Correlations

Notes

Output Created		12-JUL-2026 11:23:08
Comments		
Input	Data	D:\DATA ANALYSIS\H Regression Tests and Models\Regression ANOVA Table\SPSS_Output\sav\l egression_anova_table_a nalysis_data.sav
	Active Dataset	RegressionANOVATableD ata
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649

Regression ANOVA Table
Descriptive statistics and correlations

Notes

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=G3 G1 G2 studytime failures absences /PRINT=TWOTAIL NOSIG /MISSING=PAIRWISE.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.02

Correlations

		Final grade outcome	First period grade predictor	Second period grade predictor
Final grade outcome	Pearson Correlation	1	.826**	.919**
	Sig. (2-tailed)		.000	.000
	N	649	649	649
First period grade predictor	Pearson Correlation	.826**	1	.865**
	Sig. (2-tailed)	.000		.000
	N	649	649	649
Second period grade predictor	Pearson Correlation	.919**	.865**	1
	Sig. (2-tailed)	.000	.000	
	N	649	649	649
Weekly study time predictor	Pearson Correlation	.250**	.261**	.240**
	Sig. (2-tailed)	.000	.000	.000
	N	649	649	649
Past class failures predictor	Pearson Correlation	-.393**	-.384**	-.386**
	Sig. (2-tailed)	.000	.000	.000
	N	649	649	649

Regression ANOVA Table
Descriptive statistics and correlations

Correlations

		Weekly study time predictor	Past class failures predictor	School absences predictor
Final grade outcome	Pearson Correlation	.250**	-.393**	-.091*
	Sig. (2-tailed)	.000	.000	.020
	N	649	649	649
First period grade predictor	Pearson Correlation	.261**	-.384**	-.147**
	Sig. (2-tailed)	.000	.000	.000
	N	649	649	649
Second period grade predictor	Pearson Correlation	.240**	-.386**	-.125**
	Sig. (2-tailed)	.000	.000	.001
	N	649	649	649
Weekly study time predictor	Pearson Correlation	1	-.147**	-.118**
	Sig. (2-tailed)		.000	.003
	N	649	649	649
Past class failures predictor	Pearson Correlation	-.147**	1	.123**
	Sig. (2-tailed)	.000		.002
	N	649	649	649

Correlations

		Final grade outcome	First period grade predictor	Second period grade predictor
School absences predictor	Pearson Correlation	-.091*	-.147**	-.125**
	Sig. (2-tailed)	.020	.000	.001
	N	649	649	649

Correlations

		Weekly study time predictor	Past class failures predictor	School absences predictor
School absences predictor	Pearson Correlation	-.118**	.123**	1
	Sig. (2-tailed)	.003	.002	
	N	649	649	649

Regression ANOVA Table
Descriptive statistics and correlations

- ** . Correlation is significant at the 0.01 level (2-tailed).
* . Correlation is significant at the 0.05 level (2-tailed).

Regression ANOVA Table

Regression ANOVA Table
OLS model and overall ANOVA F test

Regression

Notes

Output Created		12-JUL-2026 11:23:08
Comments		
Input	Data	D:\DATA ANALYSIS\H Regression Tests and Models\Regression ANOVA Table\SPSS_Output\sav\r egression_anova_table_a nalysis_data.sav
	Active Dataset	RegressionANOVATableD ata
	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 CHANGE CI(95) COLLIN TOL /CRITERIA=PIN(.05) POUT(.10) /NOORIGIN /DEPENDENT G3 /METHOD=ENTER G1 G2 studytime failures absences /SAVE PRED(mdI_pred) RESID(mdI_resid) ZPRED (mdI_zpred) ZRESID...
Resources	Processor Time	00:00:00.06
	Elapsed Time	00:00:00.06

Regression ANOVA Table
OLS model and overall ANOVA F test

Notes

	Memory Required	6048 bytes
	Additional Memory Required for Residual Plots	0 bytes
Variables Created or Modified	mdl_pred	Unstandardized Predicted Value
	mdl_resid	Unstandardized Residual
	mdl_zpred	Standardized Predicted Value
	mdl_zresid	Standardized Residual

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	School absences predictor, Weekly study time predictor, Past class failures predictor, Second period grade predictor, First period grade predictor ^b	.	Enter

a. Dependent Variable: Final grade outcome

b. All requested variables entered.

Regression ANOVA Table
OLS model and overall ANOVA F test

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.922 ^a	.851	.849	1.25372	.851	731.966	5

Model Summary^b

Model	Change Statistics	
	df2	Sig. F Change
1	643	.000

a. Predictors: (Constant), School absences predictor, Weekly study time predictor, Past class failures predictor, Second period grade predictor, First period grade predictor

b. Dependent Variable: Final grade outcome

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5752.587	5	1150.517	731.966	.000 ^b
	Residual	1010.679	643	1.572		
	Total	6763.267	648			

a. Dependent Variable: Final grade outcome

b. Predictors: (Constant), School absences predictor, Weekly study time predictor, Past class failures predictor, Second period grade predictor, First period grade predictor

Regression ANOVA Table
OLS model and overall ANOVA F test

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.155	.259		-.600	.549
	First period grade predictor	.139	.036	.119	3.849	.000
	Second period grade predictor	.886	.034	.799	26.107	.000
	Weekly study time predictor	.097	.062	.025	1.564	.118
	Past class failures predictor	-.218	.091	-.040	-2.402	.017
	School absences predictor	.023	.011	.034	2.165	.031

Coefficients^a

Model		95.0% Confidence Interval for B		Collinearity Statistics	
		Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	-.663	.353		
	First period grade predictor	.068	.211	.245	4.078
	Second period grade predictor	.819	.952	.248	4.028
	Weekly study time predictor	-.025	.218	.923	1.084
	Past class failures predictor	-.397	-.040	.835	1.198
	School absences predictor	.002	.045	.967	1.034

a. Dependent Variable: Final grade outcome

Regression ANOVA Table
OLS model and overall ANOVA F test

Collinearity Diagnostics^a

Model	Dimension	Eigenvalue	Condition Index	(Constant)	Variance Proportions	
					First period grade predictor	Second period grade predictor
1	1	4.371	1.000	.00	.00	.00
	2	.920	2.180	.00	.00	.00
	3	.562	2.788	.00	.00	.00
	4	.112	6.250	.01	.01	.02
	5	.027	12.747	.97	.05	.09
	6	.008	23.890	.01	.94	.90

Collinearity Diagnostics^a

Model	Dimension	Variance Proportions		
		Weekly study time predictor	Past class failures predictor	School absences predictor
1	1	.01	.01	.02
	2	.00	.69	.03
	3	.01	.12	.88
	4	.95	.00	.02
	5	.03	.18	.05
	6	.00	.00	.00

a. Dependent Variable: Final grade outcome

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	.2810	19.5703	11.9060	2.97950	649
Residual	-9.07158	5.80683	.00000	1.24888	649
Std. Predicted Value	-3.902	2.572	.000	1.000	649
Std. Residual	-7.236	4.632	.000	.996	649

a. Dependent Variable: Final grade outcome

Regression ANOVA Table

Regression ANOVA Table
Residual diagnostics

Explore

Notes

Output Created		12-JUL-2026 11:23:09
Comments		
Input	Data	D:\DATA ANALYSIS\H Regression Tests and Models\Regression ANOVA Table\SPSS_Output\sav\r egression_anova_table_a nalysis_data.sav
	Active Dataset	RegressionANOVATableD ata
	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 for dependent variables are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any dependent variable or factor used.
Syntax		EXAMINE VARIABLES=mdl_resid /PLOT BOXPLOT HISTOGRAM NPLOT /STATISTICS DESCRIPTIVES /CINTERVAL 95 /MISSING LISTWISE /NOTOTAL.
Resources	Processor Time	00:00:02.13
	Elapsed Time	00:00:01.92

Regression ANOVA Table
Residual diagnostics

Case Processing Summary

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Unstandardized Residual	649	100.0%	0	0.0%	649	100.0%

Descriptives

		Statistic	Std. Error
Unstandardized Residual	Mean	.0000000	.04902266
	95% Confidence Interval for Mean	Lower Bound	-.0962624
		Upper Bound	.0962624
	5% Trimmed Mean	.0694870	
	Median	-.0796204	
	Variance	1.560	
	Std. Deviation	1.24887559	
	Minimum	-9.07158	
	Maximum	5.80683	
	Range	14.87841	
	Interquartile Range	1.09849	
	Skewness	-2.844	.096
	Kurtosis	18.545	.192

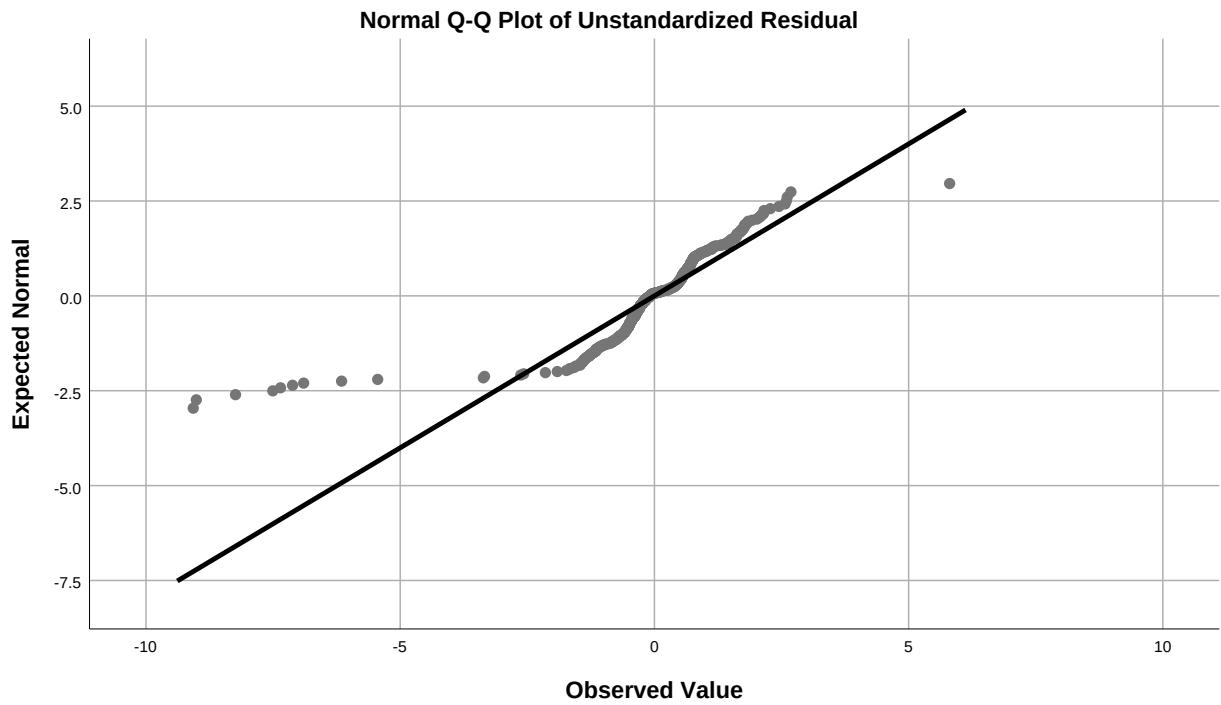
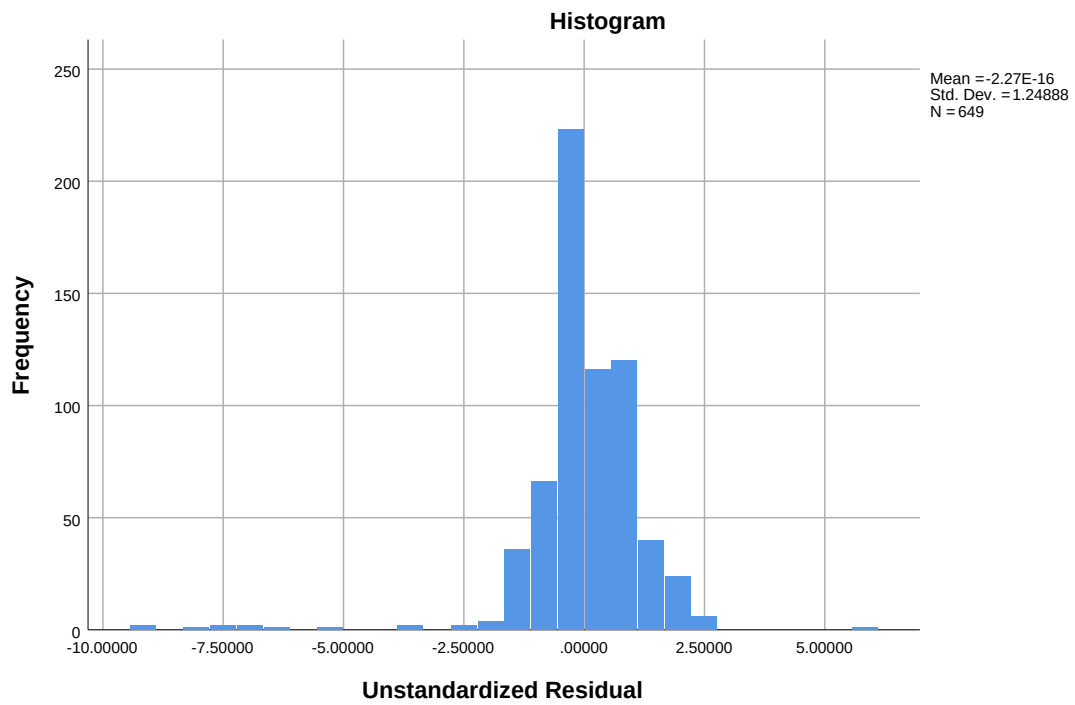
Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Unstandardized Residual	.154	649	.000	.757	649	.000

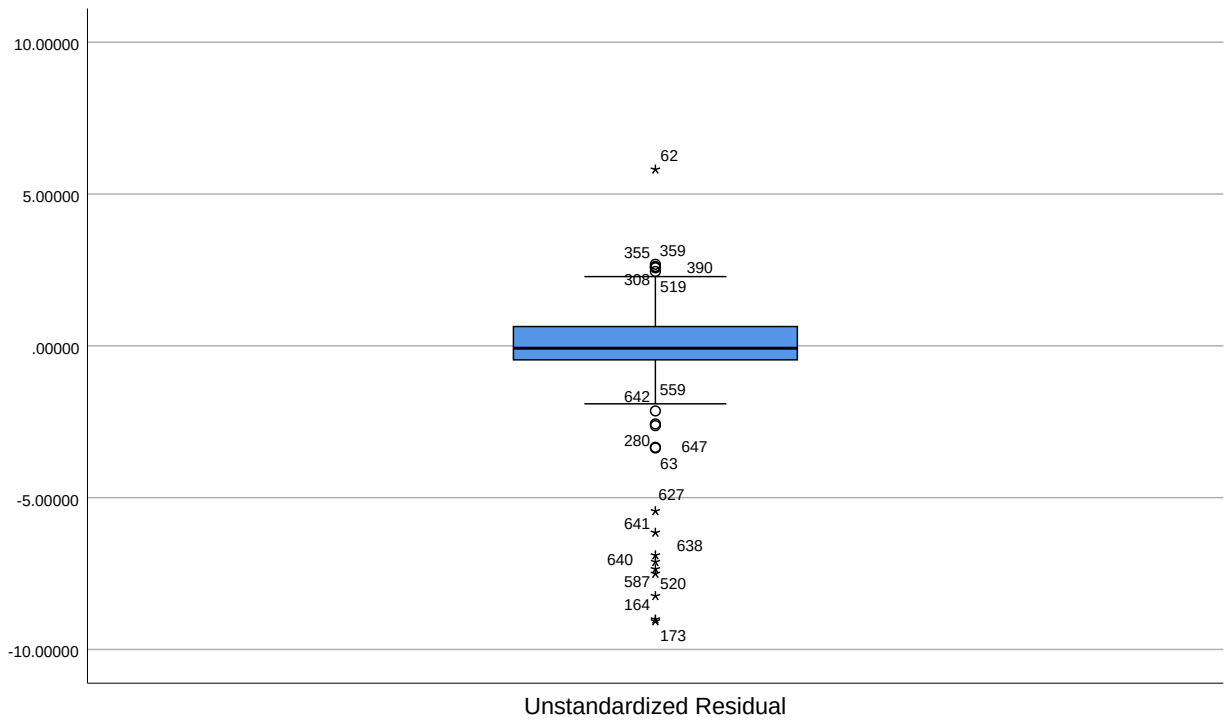
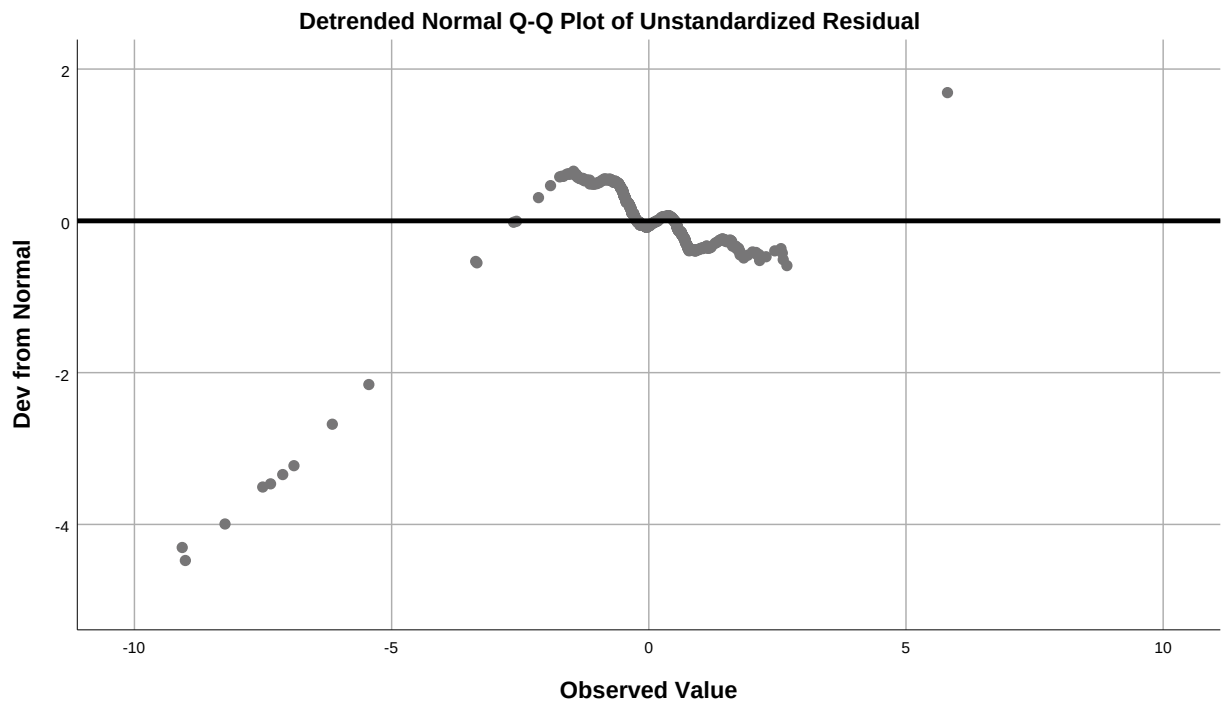
a. Lilliefors Significance Correction

Unstandardized Residual

Regression ANOVA Table
Residual diagnostics



Regression ANOVA Table
Residual diagnostics



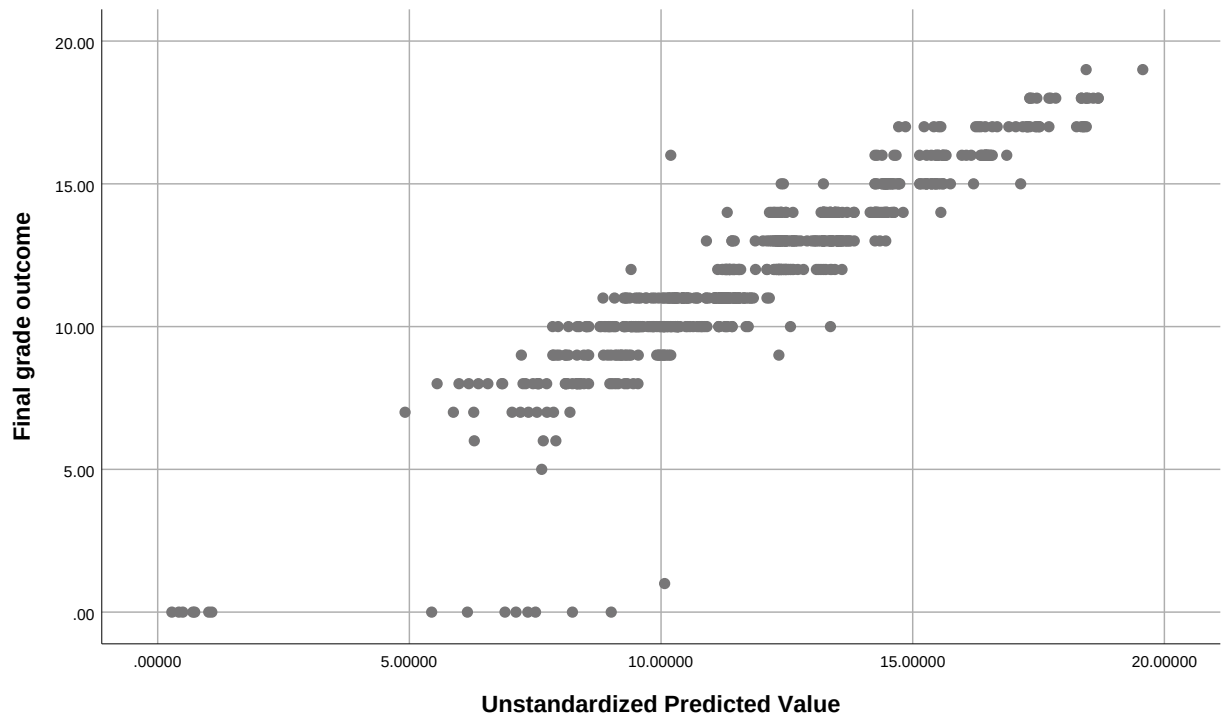
Regression ANOVA Table
Residual diagnostics

Graph

Notes

Output Created		12-JUL-2026 11:23:11
Comments		
Input	Data	D:\DATA ANALYSIS\H Regression Tests and Models\Regression ANOVA Table\SPSS_Output\sav\r egression_anova_table_a nalysis_data.sav
	Active Dataset	RegressionANOVATableD ata
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Syntax		GRAPH /SCATTERPLOT(BIVAR) =mdl_pred WITH G3 /MISSING=LISTWISE.
Resources	Processor Time	00:00:00.47
	Elapsed Time	00:00:00.56

Regression ANOVA Table
Residual diagnostics



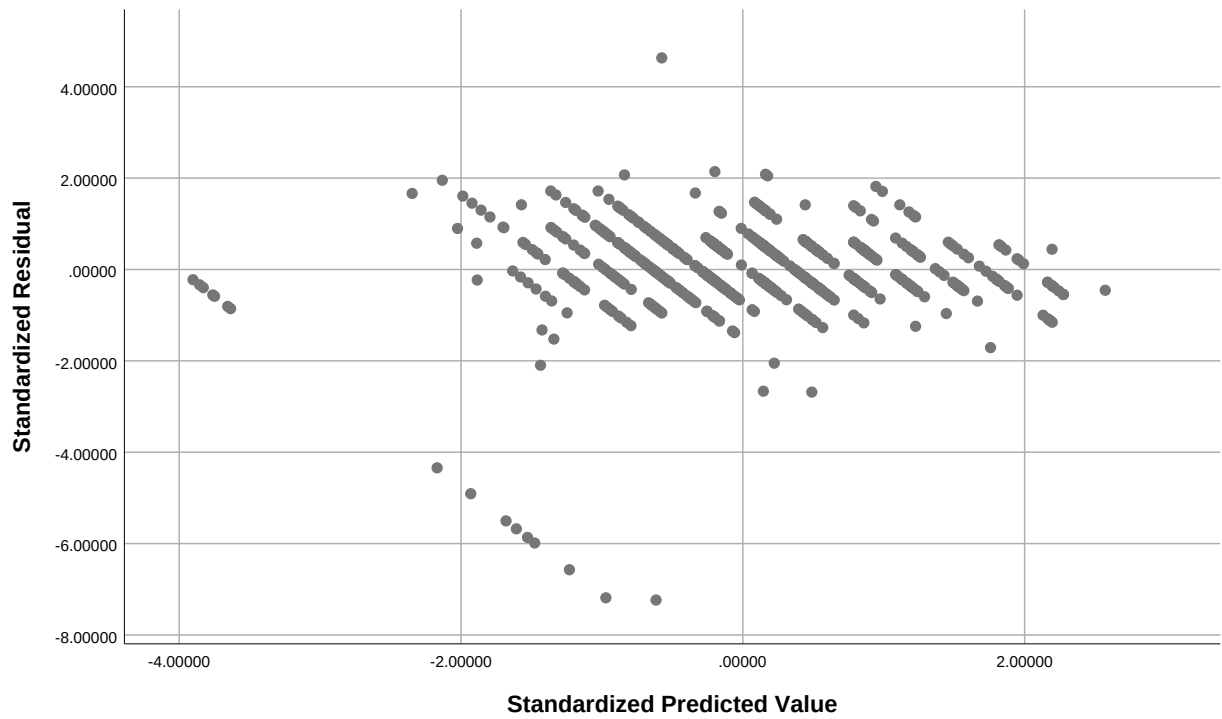
Graph

Regression ANOVA Table
Residual diagnostics

Notes

Output Created		12-JUL-2026 11:23:11
Comments		
Input	Data	D:\DATA ANALYSIS\H Regression Tests and Models\Regression ANOVA Table\SPSS_Output\sav\r egression_anova_table_a nalysis_data.sav
	Active Dataset	RegressionANOVATableD ata
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Syntax		GRAPH /SCATTERPLOT(BIVAR) =mdl_zpred WITH mdl_zresid /MISSING=LISTWISE.
Resources	Processor Time	00:00:00.45
	Elapsed Time	00:00:00.60

Regression ANOVA Table
Residual diagnostics



Graph

Regression ANOVA Table
Residual diagnostics

Notes

Output Created		12-JUL-2026 11:23:12
Comments		
Input	Data	D:\DATA ANALYSIS\H Regression Tests and Models\Regression ANOVA Table\SPSS_Output\sav\r egression_anova_table_a nalysis_data.sav
	Active Dataset	RegressionANOVATableD ata
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Syntax		GRAPH /HISTOGRAM(NORMAL) =mdl_resid.
Resources	Processor Time	00:00:00.44
	Elapsed Time	00:00:00.44

Regression ANOVA Table
Residual diagnostics

