```
Your license will expire in 23 days.
GET
FILE='C:\Users\jcf2d\Data_Analysis_Basics_with_SPSS\data\child_care.sav'.
DATASET NAME DataSet1 WINDOW=FRONT.
USE ALL.
COMPUTE filter_$=(StudyYear = 2010 | StudyYear = 2018).
VARIABLE LABELS filter_$ 'StudyYear = 2010 | StudyYear = 2018 (FILTER)'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMATS filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.
T-TEST GROUPS=StudyYear(2010 2018)
/MISSING=ANALYSIS
/VARIABLES=MCPreschool
/ES DISPLAY(TRUE)
/CRITERIA=CI(.95).
```

T-Test

Notes

Output Created		08-JUN-2023 11:26:47
Comments		
Input	Data	C:\Users\jcf2d\Data_Analysis_Basics_with_SPSS\data\child_care.sav
	Active Dataset	DataSet1
	Filter	StudyYear = 2010 | StudyYear = 2018 ...
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	267
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.

Notes

Syntax		T-TEST GROUPS=StudyYear(2010 2018) /MISSING=ANALYSIS /VARIABLES=MCPreschool /ES DISPLAY(TRUE)...
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.02

[DataSet1] C:\Users\jcf2d\Data_Analysis_Basics_with_SPSS\data\child_care.sav

Group Statistics

	StudyYear	N	Mean	Std. Deviation	Std. Error Mean
MCPreschool	2010	134	122.1493	39.89827	3.44669
	2018	133	146.3158	53.15392	4.60903

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
MCPreschool	Equal variances assumed	1.955	.163	-4.203	265
	Equal variances not assumed			-4.199	244.903

Independent Samples Test

		t-test for Equality of Means			
		Significance			
		One-Sided p	Two-Sided p	Mean Difference	Std. Error Difference
MCPreschool	Equal variances assumed	<.001	<.001	-24.16654	5.74920
	Equal variances not assumed	<.001	<.001	-24.16654	5.75524

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
MCPreschool	Equal variances assumed	-35.48646	-12.84661
	Equal variances not assumed	-35.50262	-12.83045

Independent Samples Effect Sizes

				95% Confidence Interval	
		Standardizer[a]	Point Estimate	Lower	Upper
MCPreschool	Cohen's d	46.97104	-.514	-.758	-.270
	Hedges' correction	47.10450	-.513	-.756	-.269
	Glass's delta	53.15392	-.455	-.700	-.208

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 group.

```
FILTER OFF.
USE ALL.
EXECUTE.
UNIANOVA MCPreschool WITH StudyYear
/METHOD=SSTYPE(3)
/INTERCEPT=INCLUDE
/EMMEANS=TABLES(OVERALL) WITH(StudyYear=MEAN)
/CRITERIA=ALPHA(0.05)
/DESIGN=StudyYear.
```

Univariate Analysis of Variance

Notes

Output Created		08-JUN-2023 11:30:43
Comments		
Input	Data	C:\Users\jcf2d\Data_Analysis_Basics_with_SPSS\data\child_care.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	1469
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 model.
Syntax		UNIANOVA MCPreschool WITH StudyYear /METHOD=SSTYPE(3) /INTERCEPT=INCLUDE /EMMEANS=TABLES (OVERALL) WITH (StudyYear=MEAN) /CRITERIA=ALPHA(0.05) /DESIGN=StudyYear.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.02

Tests of Between-Subjects Effects

Dependent Variable: MCPreschool

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	100945.616[a]	1	100945.616	49.425	<.001
Intercept	96596.701	1	96596.701	47.295	<.001
StudyYear	100945.616	1	100945.616	49.425	<.001
Error	2722531.262	1333	2042.409		
Total	26348734.948	1335			
Corrected Total	2823476.877	1334			

a. R Squared = .036 (Adjusted R Squared = .035)

Estimated Marginal Means

Grand Mean

Dependent Variable: MCPreschool

Mean	Std. Error	95% Confidence Interval	
		Lower Bound	Upper Bound
132.748[a]	1.237	130.321	135.174

a. Covariates appearing in the model are evaluated at the following values: StudyYear = 2013.49.

```
REGRESSION
/MISSING LISTWISE
/STATISTICS COEFF OUTS CI(95) R ANOVA
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT MCPreschool
/METHOD=ENTER StudyYear
/SCATTERPLOT=(*SDRESID ,MCPreschool).
```

Regression

Notes

Output Created		08-JUN-2023 11:31:52
Comments		
Input	Data	C:\Users\jcf2d\Data_Analysis_Basics_with_SPSS\data\child_care.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	1469
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.

Notes

Syntax		REGRESSION /MISSING LISTWISE /STATISTICS COEFF OUTS CI(95) R ANOVA /CRITERIA=PIN(.05) POUT(.10) /NOORIGIN /DEPENDENT MCPreschool /METHOD=ENTER StudyYear /SCATTERPLOT= (*SDRESID , MCPreschool).
Resources	Processor Time	00:00:03.16
	Elapsed Time	00:00:01.40
	Memory Required	3248 bytes
	Additional Memory Required for Residual Plots	224 bytes

Variables Entered/Removed[a]

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

a. Dependent Variable: MCPreschool

b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.189[a]	.036	.035	45.19302

a. Predictors: (Constant), StudyYear

b. Dependent Variable: MCPreschool

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	100945.616	1	100945.616	49.425	<.001[b]
	Residual	2722531.262	1333	2042.409		
	Total	2823476.877	1334			

a. Dependent Variable: MCPreschool

b. Predictors: (Constant), StudyYear

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence ...
		B	Std. Error	Beta			Lower Bound
1	(Constant)	-5963.015	867.074		-6.877	<.001	-7663.993
	StudyYear	3.027	.431	.189	7.030	<.001	2.183

Coefficients[a]

Model		95.0% Confidence ...
		Upper Bound
1	(Constant)	-4262.037
	StudyYear	3.872

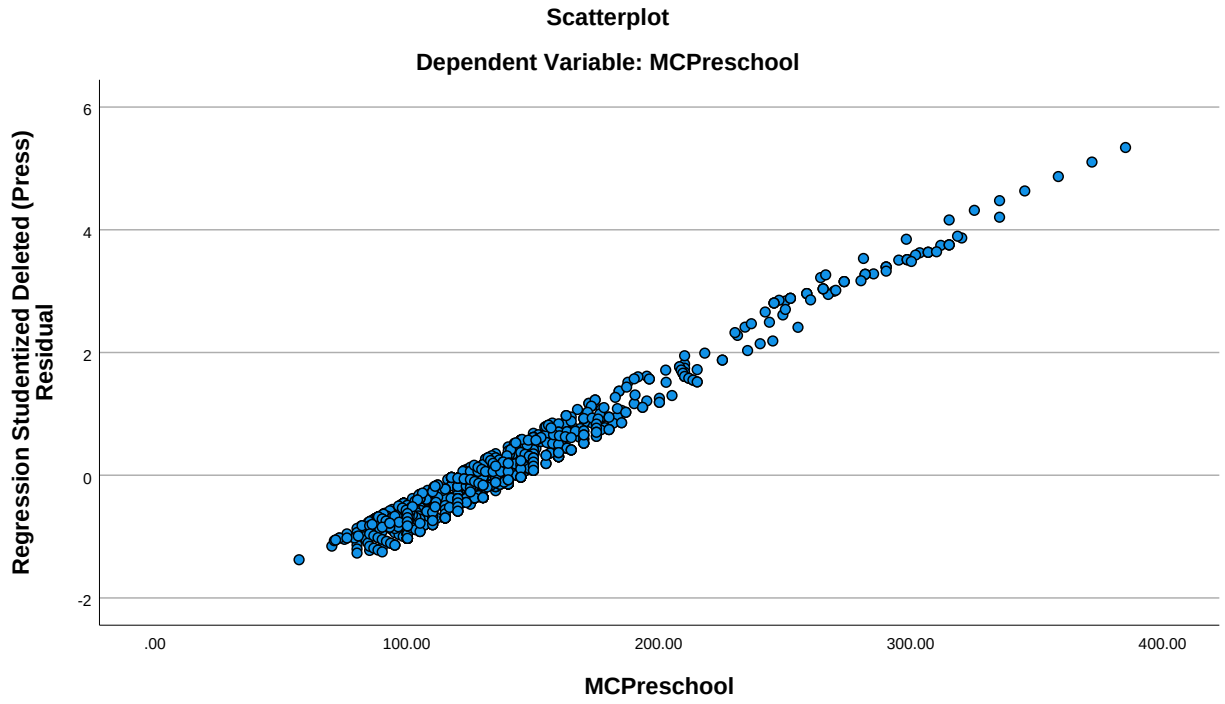
a. Dependent Variable: MCPreschool

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	119.1523	146.3995	132.7476	8.69893	1335
Std. Predicted Value	-1.563	1.569	.000	1.000	1335
Standard Error of Predicted Value	1.255	2.302	1.708	.378	1335
Adjusted Predicted Value	118.7725	146.5462	132.7476	8.69926	1335
Residual	-62.15234	238.60051	.00000	45.17608	1335
Std. Residual	-1.375	5.280	.000	1.000	1335
Stud. Residual	-1.377	5.286	.000	1.000	1335
Deleted Residual	-62.31311	239.22137	-.00003	45.24539	1335
Stud. Deleted Residual	-1.378	5.341	.001	1.003	1335
Mahal. Distance	.029	2.463	.999	.880	1335
Cook's Distance	.000	.036	.001	.002	1335
Centered Leverage Value	.000	.002	.001	.001	1335

a. Dependent Variable: MCPreschool

Charts




```
MIXED MCPreschool BY StudyYear
/CRITERIA=DFMETHOD(SATTERTHWAITE) CIN(95) MXITER(100) MXSTEP(10) SCORING(1)
SINGULAR(0.000000000001) HCONVERGE(0.00000001, RELATIVE) LCONVERGE(0, ABSOLUTE)
PCONVERGE(0,
ABSOLUTE)
/FIXED=StudyYear | SSTYPE(3)
/METHOD=REML
/PRINT=G SOLUTION.
```

Mixed Model Analysis

Notes

Output Created		08-JUN-2023 11:33:55
Comments		
Input	Data	C:\Users\jcf2d\Data_Analysis_Basics_with_SPSS\data\child_care.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	1469
Missing Value Handling	Definition of Missing	User-defined missing values are treated as valid data.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.
Weight Handling		not applicable
Syntax		MIXED MCPreschool BY StudyYear /CRITERIA=DFMETHOD (SATTERTHWAITE) CIN (95) MXITER(100) MXSTEP(10) SCORING(1) SINGULAR (0.000000000001) HCONVERGE (0.00000001, RELATIVE) LCONVERGE(0, ABSOLUTE) PCONVERGE(0, ABSOLUTE) /FIXED=StudyYear | SSTYPE(3) /METHOD=REML /PRINT=G SOLUTION.
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.03

Model Dimension[a]

		Number of Levels	Number of Parameters
Fixed Effects	Intercept	1	1
	StudyYear	10	9
Residual			1
Total		11	11

a. Dependent Variable: MCPreschool.

Information Criteria[a]

-2 Restricted Log Likelihood	13916.099049
Akaike's Information Criterion (AIC)	13918.099049
Hurvich and Tsai's Criterion (AICC)	13918.102073
Bozdogan's Criterion (CAIC)	13924.288217
Schwarz's Bayesian Criterion (BIC)	13923.288217

The information criteria are displayed in smaller-is-better form.

a. Dependent Variable: MCPreschool.

Coefficients of Determination

Pseudo-R Square Measures	Marginal	.036
	Conditional	.036

Fixed Effects

Type III Tests of Fixed Effects[a]

Source	Numerator df	Denominator df	F	Sig.
Intercept	1	1325.000	11454.025	.000
StudyYear	9	1325.000	5.459	<.001

a. Dependent Variable: MCPreschool.

Estimates of Fixed Effects[a]

Parameter	Estimate	Std. Error	df	t	Sig.	95% ... Lower Bound
Intercept	146.316	3.931	1325	37.225	<.001	138.605
[StudyYear=2009]	-27.241	5.548	1325	-4.910	<.001	-38.125
[StudyYear=2010]	-24.167	5.548	1325	-4.356	<.001	-35.051
[StudyYear=2011]	-21.092	5.548	1325	-3.802	<.001	-31.976
[StudyYear=2012]	-18.017	5.548	1325	-3.247	.001	-28.902
[StudyYear=2013]	-15.104	5.548	1325	-2.722	.007	-25.989
[StudyYear=2014]	-11.882	5.559	1325	-2.138	.033	-22.787
[StudyYear=2015]	-8.947	5.559	1325	-1.610	.108	-19.852
[StudyYear=2016]	-5.965	5.559	1325	-1.073	.283	-16.869
[StudyYear=2017]	-2.983	5.559	1325	-.537	.592	-13.887
[StudyYear=2018]	0[b]	0	.	.	.	.

Estimates of Fixed Effects[a]

Parameter	95% ... Upper Bound
Intercept	154.027
[StudyYear=2009]	-16.357
[StudyYear=2010]	-13.282
[StudyYear=2011]	-10.208
[StudyYear=2012]	-7.133
[StudyYear=2013]	-4.220
[StudyYear=2014]	-.978
[StudyYear=2015]	1.957
[StudyYear=2016]	4.940
[StudyYear=2017]	7.922
[StudyYear=2018]	.

a. Dependent Variable: MCPreschool.

b. This parameter is set to zero because it is redundant.

Covariance Parameters

Estimates of Covariance Parameters[a]

Parameter	Estimate	Std. Error
Residual	2054.736	79.829

a. Dependent Variable: MCPreschool.

```
MIXED MCPreschool BY StudyYear
/CRITERIA=DFMETHOD(SATTERTHWAITE) CIN(95) MXITER(100) MXSTEP(10) SCORING(1)
SINGULAR(0.000000000001) HCONVERGE(0.00000001, RELATIVE) LCONVERGE(0, ABSOLUTE)
PCONVERGE(0,
ABSOLUTE)
/FIXED=StudyYear | SSTYPE(3)
/METHOD=REML
/PRINT=G SOLUTION TESTCOV
/RANDOM=INTERCEPT | SUBJECT(County_Name) COVTYPE(VC).
```

Mixed Model Analysis

Notes

Output Created		08-JUN-2023 11:35:25
Comments		
Input	Data	C:\Users\jcf2d\Data_Analysis_Basics_with_SPSS\data\child_care.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	1469
Missing Value Handling	Definition of Missing	User-defined missing values are treated as valid data.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.
Weight Handling		not applicable

Notes

Syntax		MIXED MCPreschool BY StudyYear /CRITERIA=DFMETHOD (SATTERTHWAITE) CIN (95) MXITER(100) MXSTEP(10) SCORING(1) SINGULAR (0.000000000001) HCONVERGE (0.00000001, RELATIVE) LCONVERGE(0, ABSOLUTE) PCONVERGE(0, ABSOLUTE) /FIXED=StudyYear | SSTYPE(3) /METHOD=REML /PRINT=G SOLUTION TESTCOV /RANDOM=INTERCEPT | SUBJECT(County_Name) COVTYPE(VC).
Resources	Processor Time	00:00:00.08
	Elapsed Time	00:00:00.10

Model Dimension[a]

		Number of Levels	Covariance Structure	Number of Parameters	Subject Variables
Fixed Effects	Intercept	1		1	
	StudyYear	10		9	
Random Effects	Intercept[b]	1	Variance Components	1	County_Name
Residual				1	
Total		12		12	

a. Dependent Variable: MCPreschool.

b. As of version 11.5, the syntax rules for the RANDOM subcommand have changed. Your command syntax may yield results that differ from those produced by prior versions. If you are using version 11 syntax, please consult the current syntax reference guide for more information.

Information Criteria[a]

-2 Restricted Log Likelihood	10248.910108
Akaike's Information Criterion (AIC)	10252.910108
Hurvich and Tsai's Criterion (AICC)	10252.919185
Bozdogan's Criterion (CAIC)	10265.288444
Schwarz's Bayesian Criterion (BIC)	10263.288444

The information criteria are displayed in smaller-is-better form.

a. Dependent Variable: MCPreschool.

Coefficients of Determination

Pseudo-R Square Measures	Marginal	.035
	Conditional	.965

Fixed Effects

Type III Tests of Fixed Effects[a]

Source	Numerator df	Denominator df	F	Sig.
Intercept	1	133.007	1191.848	<.001
StudyYear	9	1192.232	151.121	<.001

a. Dependent Variable: MCPreschool.

Estimates of Fixed Effects[a]

Parameter	Estimate	Std. Error	df	t	Sig.	95% ... Lower Bound
Intercept	146.264	3.910	142.119	37.411	<.001	138.535
[StudyYear=2009]	-27.189	1.051	1192.238	-25.878	<.001	-29.250
[StudyYear=2010]	-24.114	1.051	1192.238	-22.952	<.001	-26.176
[StudyYear=2011]	-21.040	1.051	1192.238	-20.025	<.001	-23.101
[StudyYear=2012]	-17.965	1.051	1192.238	-17.099	<.001	-20.026
[StudyYear=2013]	-15.052	1.051	1192.238	-14.326	<.001	-17.114
[StudyYear=2014]	-11.882	1.052	1192.225	-11.292	<.001	-13.947
[StudyYear=2015]	-8.947	1.052	1192.225	-8.503	<.001	-11.012
[StudyYear=2016]	-5.965	1.052	1192.225	-5.669	<.001	-8.029
[StudyYear=2017]	-2.983	1.052	1192.225	-2.834	.005	-5.047
[StudyYear=2018]	0[b]	0	.	.	.	.

Estimates of Fixed Effects[a]

Parameter	95% ... Upper Bound
Intercept	153.992
[StudyYear=2009]	-25.128
[StudyYear=2010]	-22.053
[StudyYear=2011]	-18.978
[StudyYear=2012]	-15.904
[StudyYear=2013]	-12.991
[StudyYear=2014]	-9.818
[StudyYear=2015]	-6.883
[StudyYear=2016]	-3.900
[StudyYear=2017]	-.918
[StudyYear=2018]	.

a. Dependent Variable: MCPreschool.

b. This parameter is set to zero because it is redundant.

Covariance Parameters

Estimates of Covariance Parameters[a]

Parameter		Estimate	Std. Error	Wald Z	Sig.	95% ... Lower Bound
Residual		73.629	3.016	24.415	<.001	67.949
Intercept [subject = County_Name]	Variance	1973.891	242.957	8.124	<.001	1550.788

Estimates of Covariance Parameters[a]

Parameter		95% ... Upper Bound
Residual		79.783
Intercept [subject = County_Name]	Variance	2512.428

a. Dependent Variable: MCPreschool.

Random Effect Covariance Structure (G)[a]

	Intercept | County_Name
Intercept | County_Name	1973.891

Variance Components

a. Dependent Variable: MCPreschool.

```
MIXED MCPreschool WITH StudyYear
/CRITERIA=DFMETHOD(SATTERTHWAITE) CIN(95) MXITER(100) MXSTEP(10) SCORING(1)
SINGULAR(0.000000000001) HCONVERGE(0.00000001, RELATIVE) LCONVERGE(0, ABSOLUTE)
PCONVERGE(0,
ABSOLUTE)
/FIXED=StudyYear | SSTYPE(3)
/METHOD=REML
/PRINT=G SOLUTION TESTCOV
/RANDOM=INTERCEPT | SUBJECT(County_Name) COVTYPE(VC).
```

Mixed Model Analysis

Notes

Output Created		08-JUN-2023 11:38:08
Comments		
Input	Data	C:\Users\jcf2d\Data_Analysis_Basics_with_SPSS\data\child_care.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	1469
Missing Value Handling	Definition of Missing	User-defined missing values are treated as valid data.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.
Weight Handling		not applicable
Syntax		MIXED MCPreschool WITH StudyYear /CRITERIA=DFMETHOD (SATTERTHWAITE) CIN (95) MXITER(100) MXSTEP(10) SCORING(1) SINGULAR (0.000000000001) HCONVERGE (0.00000001, RELATIVE) LCONVERGE(0, ABSOLUTE) PCONVERGE(0, ABSOLUTE) /FIXED=StudyYear | SSTYPE(3) /METHOD=REML /PRINT=G SOLUTION TESTCOV /RANDOM=INTERCEPT | SUBJECT(County_Name) COVTYPE(VC).
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.03

Model Dimension[a]

		Number of Levels	Covariance Structure	Number of Parameters	Subject Variables
Fixed Effects	Intercept	1		1	
	StudyYear	1		1	
Random Effects	Intercept[b]	1	Variance Components	1	County_Name
Residual				1	
Total		3		4	

a. Dependent Variable: MCPreschool.

b. As of version 11.5, the syntax rules for the RANDOM subcommand have changed. Your command syntax may yield results that differ from those produced by prior versions. If you are using version 11 syntax, please consult the current syntax reference guide for more information.

Information Criteria[a]

-2 Restricted Log Likelihood	10265.614337
Akaike's Information Criterion (AIC)	10269.614337
Hurvich and Tsai's Criterion (AICC)	10269.623360
Bozdogan's Criterion (CAIC)	10282.004712
Schwarz's Bayesian Criterion (BIC)	10280.004712

The information criteria are displayed in smaller-is-better form.

a. Dependent Variable: MCPreschool.

Coefficients of Determination

Pseudo-R Square Measures	Marginal	.035
	Conditional	.966

Fixed Effects

Type III Tests of Fixed Effects[a]

Source	Numerator df	Denominator df	F	Sig.
Intercept	1	1203.363	1309.077	<.001
StudyYear	1	1202.050	1368.895	<.001

a. Dependent Variable: MCPreschool.

Estimates of Fixed Effects[a]

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Intercept	-5947.101	164.370	1203.363	-36.181	<.001	-6269.584	-5624.617
StudyYear	3.020	.082	1202.050	36.999	<.001	2.859	3.180

a. Dependent Variable: MCPreschool.

Covariance Parameters

Estimates of Covariance Parameters[a]

Parameter		Estimate	Std. Error	Wald Z	Sig.	95% ... Lower Bound
Residual		73.151	2.984	24.515	<.001	67.531
Intercept [subject = County_Name]	Variance	1973.786	241.139	8.185	<.001	1553.489

Estimates of Covariance Parameters[a]

Parameter		95% ... Upper Bound
Residual		79.240
Intercept [subject = County_Name]	Variance	2507.794

a. Dependent Variable: MCPreschool.

Random Effect Covariance Structure (G)[a]

	Intercept | County_Name
Intercept | County_Name	1973.786

Variance Components

a. Dependent Variable: MCPreschool.

```
* Chart Builder.
GGRAPH
/GRAPHDATASET NAME="graphdataset" VARIABLES=StudyYear
MEAN(MCPreschool)[name="MEAN_MCPreschool"]
MISSING=LISTWISE REPORTMISSING=NO
/GRAPHSPEC SOURCE=INLINE.
BEGIN GPL
SOURCE: s=userSource(id("graphdataset"))
DATA: StudyYear=col(source(s), name("StudyYear"))
```

```
DATA: MEAN_MCPreschool=col(source(s), name("MEAN_MCPreschool"))
GUIDE: axis(dim(1), label("StudyYear"))
GUIDE: axis(dim(2), label("Mean MCPreschool"))
GUIDE: text.title(label("Simple Line Mean of MCPreschool by StudyYear"))
ELEMENT: line(position(StudyYear*MEAN_MCPreschool), missing.wings())
END GPL.
```

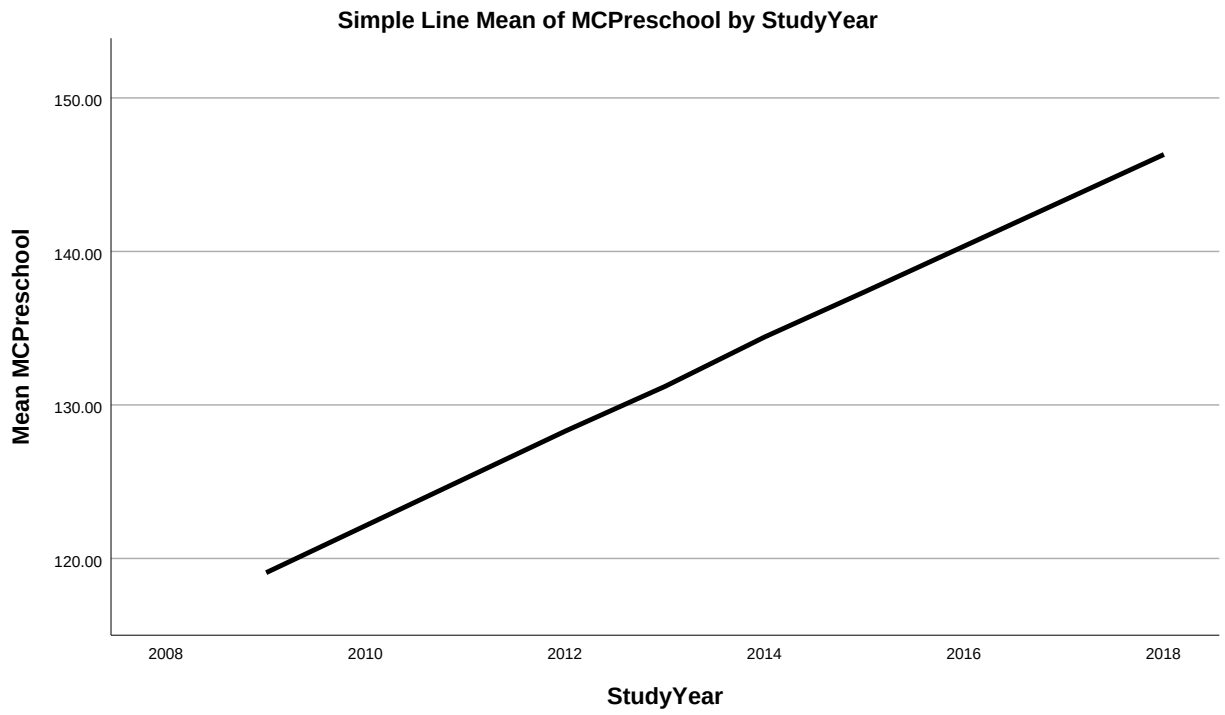
GGraph

Notes

Output Created		08-JUN-2023 12:49:53
Comments		
Input	Data	C:\Users\jcf2d\Data_Analysis_Basics_with_SPSS\data\child_care.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	1469

Notes

Syntax		GGRAPH /GRAPHDATASET NAME="graphdataset" VARIABLES=StudyYear MEAN(MCPreschool) [name=" MEAN_MCPreschool"] MISSING=LISTWISE REPORTMISSING=NO /GRAPHSPEC SOURCE=INLINE. BEGIN GPL SOURCE: s=userSource (id("graphdataset")) DATA: StudyYear=col (source(s), name ("StudyYear")) DATA: MEAN_MCPreschool=col (source(s), name ("MEAN_MCPreschool")) GUIDE: axis(dim(1), label ("StudyYear")) GUIDE: axis(dim(2), label ("Mean MCPreschool")) GUIDE: text.title(label ("Simple Line Mean of MCPreschool by StudyYear")) ELEMENT: line(position (StudyYear*MEAN_MCPre school), missing.wings()) END GPL.
Resources	Processor Time	00:00:00.91
	Elapsed Time	00:00:00.30




```
* Chart Builder.
GGRAPH
/GRAPHDATASET NAME="graphdataset" VARIABLES=StudyYear[LEVEL=ORDINAL]
MEAN(MCPreschool)[name="MEAN_MCPreschool"] MISSING=LISTWISE REPORTMISSING=NO
/GRAPHSPEC SOURCE=INLINE.
BEGIN GPL
SOURCE: s=userSource(id("graphdataset"))
DATA: StudyYear=col(source(s), name("StudyYear"), unit.category())
DATA: MEAN_MCPreschool=col(source(s), name("MEAN_MCPreschool"))
GUIDE: axis(dim(1), label("StudyYear"))
GUIDE: axis(dim(2), label("Mean MCPreschool"))
GUIDE: text.title(label("Simple Line Mean of MCPreschool by StudyYear"))
SCALE: linear(dim(2), include(0))
ELEMENT: line(position(StudyYear*MEAN_MCPreschool), missing.wings())
END GPL.
```

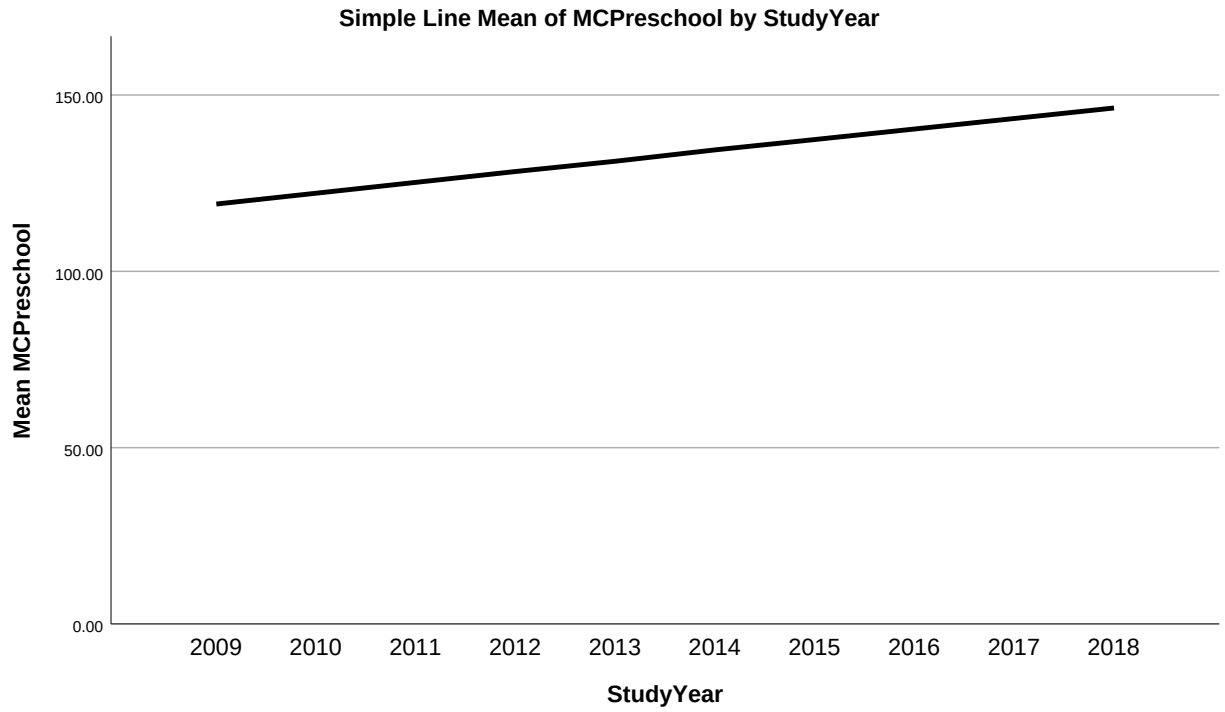
GGraph

Notes

Output Created		08-JUN-2023 12:50:35
Comments		
Input	Data	C:\Users\jcf2d\Data_Analysis_Basics_with_SPSS\data\child_care.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	1469
Syntax		GGRAPH /GRAPHDATASET NAME="graphdataset" VARIABLES=StudyYear [LEVEL=ORDINAL] MEAN(MCPreschool) [name="MEAN_MCPreschool"] MISSING=LISTWISE REPORTMISSING=NO /GRAPHSPEC SOURCE=INLINE. BEGIN GPL SOURCE: s=userSource (id("graphdataset")) DATA: StudyYear=col (source(s), name ("StudyYear"), unit.category()) DATA: MEAN_MCPreschool=col (source(s), name ("MEAN_MCPreschool")) GUIDE: axis(dim(1), label ("StudyYear")) GUIDE: axis(dim(2), label ("Mean MCPreschool")) GUIDE: text.title(label ("Simple Line Mean of MCPreschool by StudyYear")) SCALE: linear(dim(2), include(0)) ELEMENT: line(position (StudyYear*MEAN_MCPreschool), missing.wings()) END GPL.

Notes

Resources	Processor Time	00:00:00.16
	Elapsed Time	00:00:00.11




```
* Chart Builder.
GGRAPH
/GRAPHDATASET NAME="graphdataset" VARIABLES=StudyYear[LEVEL=ORDINAL]
MEAN(MCPreschool)[name="MEAN_MCPreschool"] MISSING=LISTWISE REPORTMISSING=NO
/GRAPHSPEC SOURCE=INLINE.
BEGIN GPL
SOURCE: s=userSource(id("graphdataset"))
DATA: StudyYear=col(source(s), name("StudyYear"), unit.category())
DATA: MEAN_MCPreschool=col(source(s), name("MEAN_MCPreschool"))
GUIDE: axis(dim(1), label("StudyYear"))
GUIDE: axis(dim(2), label("Mean MCPreschool"))
GUIDE: text.title(label("Simple Line Mean of MCPreschool by StudyYear"))
SCALE: linear(dim(2), include(0), origin(0))
ELEMENT: line(position(StudyYear*MEAN_MCPreschool), missing.wings())
END GPL.
```

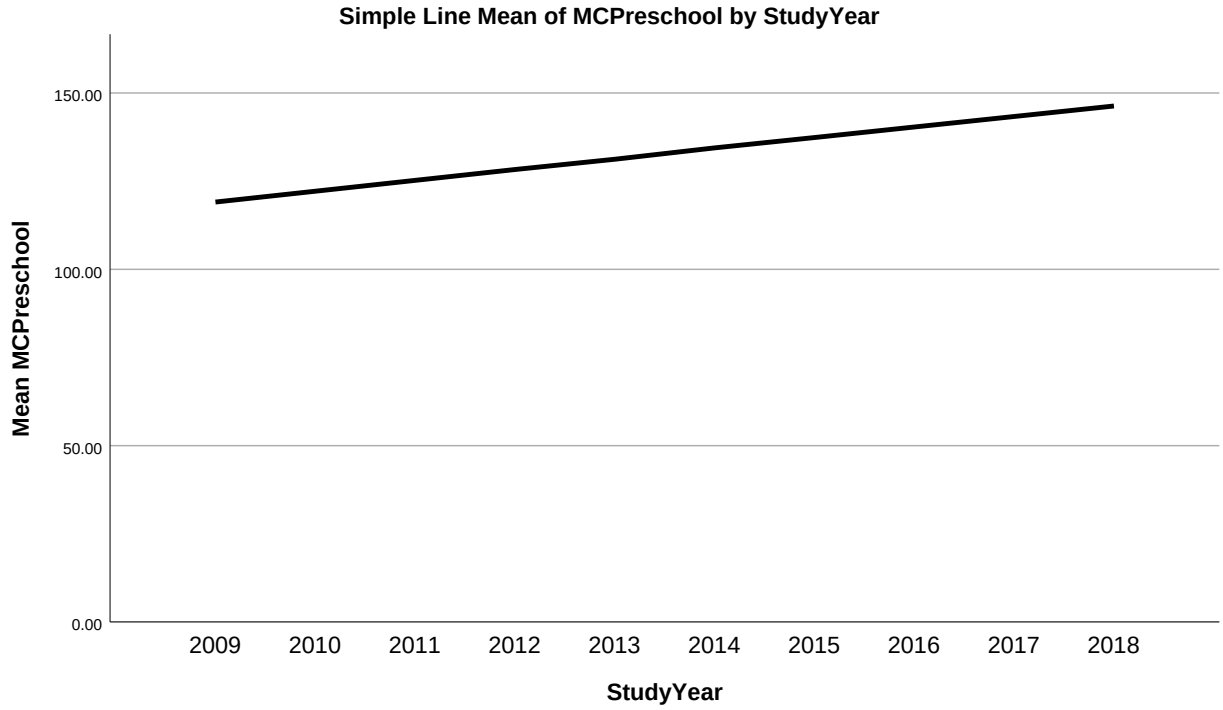
GGraph

Notes

Output Created		08-JUN-2023 12:51:29
Comments		
Input	Data	C:\Users\jcf2d\Data_Analysis_Basics_with_SPSS\data\child_care.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	1469
Syntax		GGRAPH /GRAPHDATASET NAME="graphdataset" VARIABLES=StudyYear [LEVEL=ORDINAL] MEAN(MCPreschool) [name="MEAN_MCPreschool"] MISSING=LISTWISE REPORTMISSING=NO /GRAPHSPEC SOURCE=INLINE. BEGIN GPL SOURCE: s=userSource (id("graphdataset")) DATA: StudyYear=col (source(s), name ("StudyYear"), unit.category()) DATA: MEAN_MCPreschool=col (source(s), name ("MEAN_MCPreschool")) GUIDE: axis(dim(1), label ("StudyYear")) GUIDE: axis(dim(2), label ("Mean MCPreschool")) GUIDE: text.title(label ("Simple Line Mean of MCPreschool by StudyYear")) SCALE: linear(dim(2), include(0), origin(0)) ELEMENT: line(position (StudyYear*MEAN_MCPreschool), missing.wings()) END GPL.

Notes

Resources	Processor Time	00:00:00.20
	Elapsed Time	00:00:00.12




```
* Chart Builder.
GGRAPH
/GRAPHDATASET NAME="graphdataset" VARIABLES=StudyYear MCPreschool County_Name
MISSING=LISTWISE
REPORTMISSING=NO
/GRAPHSPEC SOURCE=INLINE.
BEGIN GPL
SOURCE: s=userSource(id("graphdataset"))
DATA: StudyYear=col(source(s), name("StudyYear"))
DATA: MCPreschool=col(source(s), name("MCPreschool"))
DATA: County_Name=col(source(s), name("County_Name"), unit.category())
GUIDE: axis(dim(1), label("StudyYear"))
GUIDE: axis(dim(2), label("MCPreschool"))
GUIDE: legend(aesthetic(aesthetic.color.interior), label("County_Name"))
GUIDE: text.title(label("Multiple Line of MCPreschool by StudyYear by County_Name"))
ELEMENT: line(position(StudyYear*MCPreschool), color.interior(County_Name),
missing.wings())
END GPL.
```

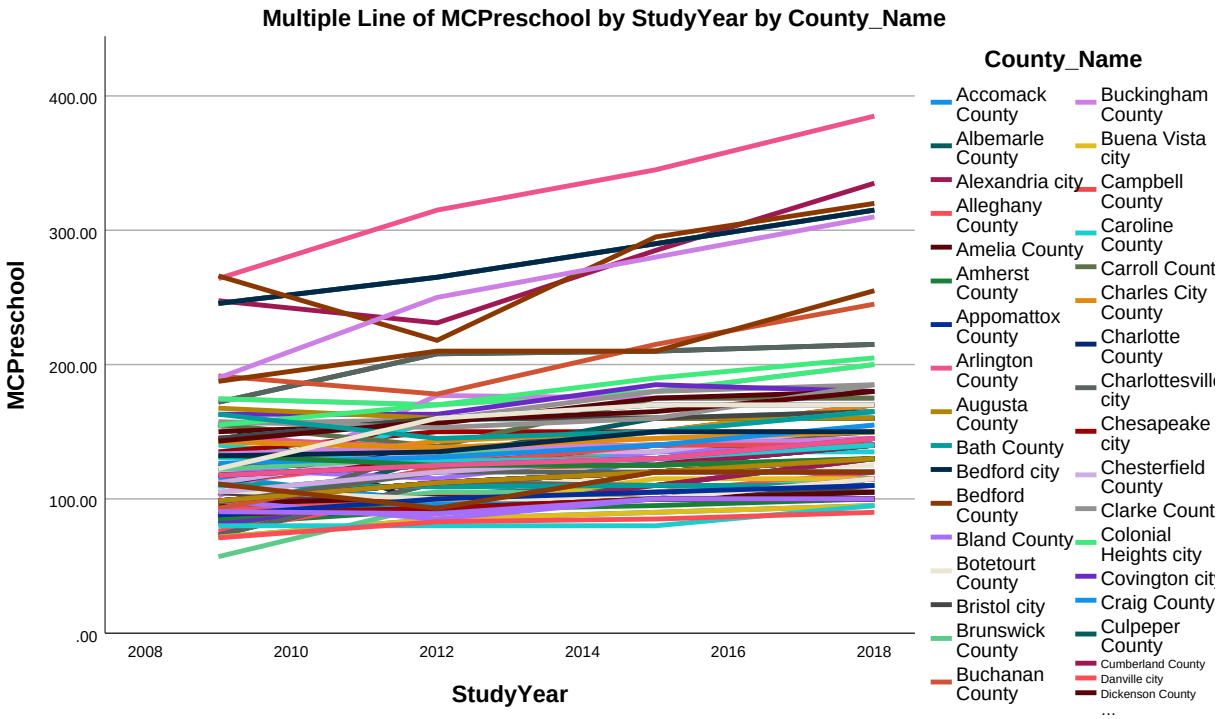
GGraph

Notes

Output Created		08-JUN-2023 12:55:26
Comments		
Input	Data	C:\Users\jcf2d\Data_Analysis_Basics_with_SPSS\data\child_care.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	1469

Notes

Syntax		GGRAPH /GRAPHDATASET NAME="graphdataset" VARIABLES=StudyYear MCPreschool County_Name MISSING=LISTWISE REPORTMISSING=NO /GRAPHSPEC SOURCE=INLINE. BEGIN GPL SOURCE: s=userSource (id("graphdataset")) DATA: StudyYear=col (source(s), name ("StudyYear")) DATA: MCPreschool=col (source(s), name ("MCPreschool")) DATA: County_Name=col (source(s), name ("County_Name"), unit. category()) GUIDE: axis(dim(1), label ("StudyYear")) GUIDE: axis(dim(2), label ("MCPreschool")) GUIDE: legend(aesthetic (aesthetic.color.interior), label("County_Name")) GUIDE: text.title(label ("Multiple Line of MCPreschool by StudyYear by County_Name")) ELEMENT: line(position (StudyYear*MCPreschool), color.interior (County_Name), missing. wings()) END GPL.
Resources	Processor Time	00:00:00.55
	Elapsed Time	00:00:00.15




```
MIXED MCPreschool WITH StudyYear
/CRITERIA=DFMETHOD(SATTERTHWAITE) CIN(95) MXITER(100) MXSTEP(10) SCORING(1)
SINGULAR(0.000000000001) HCONVERGE(0.00000001, RELATIVE) LCONVERGE(0, ABSOLUTE)
PCONVERGE(0,
ABSOLUTE)
/FIXED=StudyYear | SSTYPE(3)
/METHOD=REML
/PRINT=G SOLUTION TESTCOV
/RANDOM=INTERCEPT | SUBJECT(County_Name) COVTYPE(UNR).
```

Mixed Model Analysis

Notes

Output Created		08-JUN-2023 12:58:30
Comments		
Input	Data	C:\Users\jcf2d\Data_Analysis_Basics_with_SPSS\data\child_care.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	1469
Missing Value Handling	Definition of Missing	User-defined missing values are treated as valid data.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.
Weight Handling		not applicable
Syntax		MIXED MCPreschool WITH StudyYear /CRITERIA=DFMETHOD (SATTERTHWAITE) CIN (95) MXITER(100) MXSTEP(10) SCORING(1) SINGULAR (0.000000000001) HCONVERGE (0.00000001, RELATIVE) LCONVERGE(0, ABSOLUTE) PCONVERGE(0, ABSOLUTE) /FIXED=StudyYear | SSTYPE(3) /METHOD=REML /PRINT=G SOLUTION TESTCOV /RANDOM=INTERCEPT | SUBJECT(County_Name) COVTYPE(UNR).
Resources	Processor Time	00:00:00.05
	Elapsed Time	00:00:00.05

Warnings

The covariance structure for random effect with only one level will be changed to Identity.

Model Dimension[a]

		Number of Levels	Covariance Structure	Number of Parameters	Subject Variables
Fixed Effects	Intercept	1		1	
	StudyYear	1		1	
Random Effects	Intercept	1	Identity	1	County_Name
Residual				1	
Total		3		4	

a. Dependent Variable: MCPreschool.

Information Criteria[a]

-2 Restricted Log Likelihood	10265.614337
Akaike's Information Criterion (AIC)	10269.614337
Hurvich and Tsai's Criterion (AICC)	10269.623360
Bozdogan's Criterion (CAIC)	10282.004712
Schwarz's Bayesian Criterion (BIC)	10280.004712

The information criteria are displayed in smaller-is-better form.

a. Dependent Variable: MCPreschool.

Coefficients of Determination

Pseudo-R Square Measures	Marginal	.035
	Conditional	.966

Fixed Effects

Type III Tests of Fixed Effects[a]

Source	Numerator df	Denominator df	F	Sig.
Intercept	1	1203.363	1309.077	<.001
StudyYear	1	1202.050	1368.895	<.001

a. Dependent Variable: MCPreschool.

Estimates of Fixed Effects[a]

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Intercept	-5947.101	164.370	1203.363	-36.181	<.001	-6269.584	-5624.617
StudyYear	3.020	.082	1202.050	36.999	<.001	2.859	3.180

a. Dependent Variable: MCPreschool.

Covariance Parameters

Estimates of Covariance Parameters[a]

Parameter		Estimate	Std. Error	Wald Z	Sig.	95% ... Lower Bound
Residual		73.151	2.984	24.515	<.001	67.531
Intercept [subject = County_Name]	Variance	1973.786	241.139	8.185	<.001	1553.489

Estimates of Covariance Parameters[a]

Parameter		95% ... Upper Bound
Residual		79.240
Intercept [subject = County_Name]	Variance	2507.794

a. Dependent Variable: MCPreschool.

Random Effect Covariance Structure (G)[a]

	Intercept | County_Name
Intercept | County_Name	1973.786

Identity

a. Dependent Variable: MCPreschool.