

**Two-way Anova Lab
(Significant Interaction: Equal Sample Sizes)**

The SPSS data set may be downloaded from:

www.mtsu.edu/~dkfuller/psy629/labs/retail2.sav.

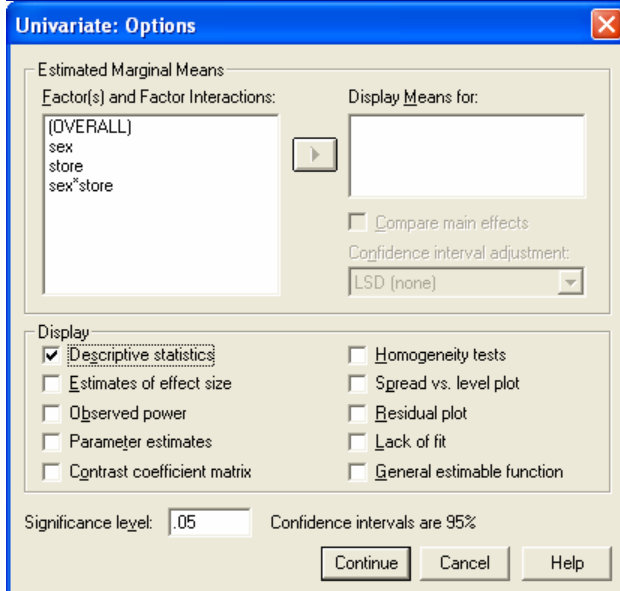
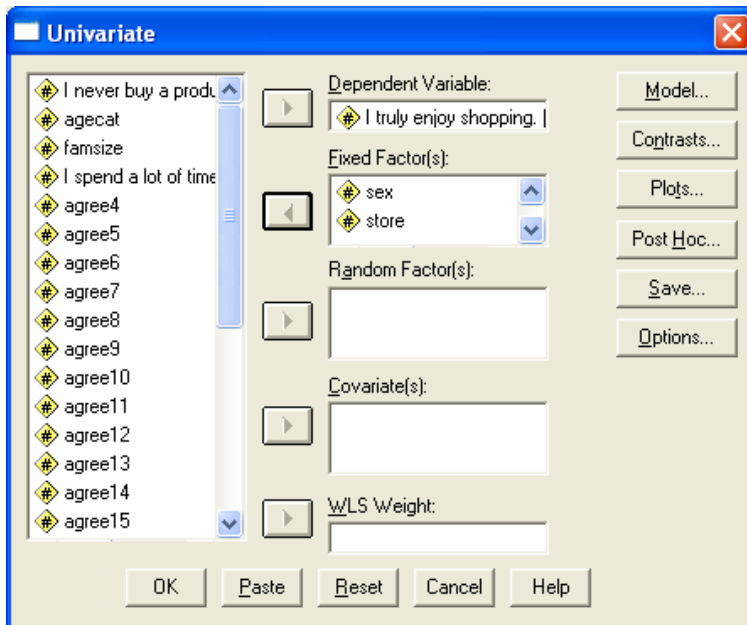
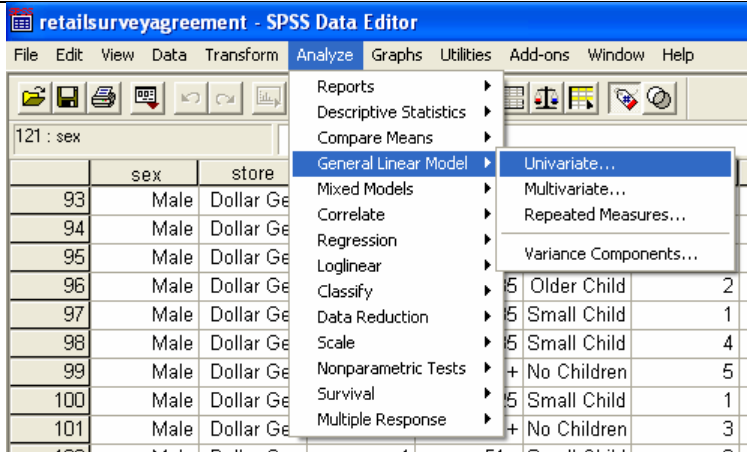
A marketing researcher contacted individuals leaving four different stores. The researcher recorded each person's sex and asked them to indicate their level of agreement with the statement 'I truly enjoy shopping.' Their responses are given below.

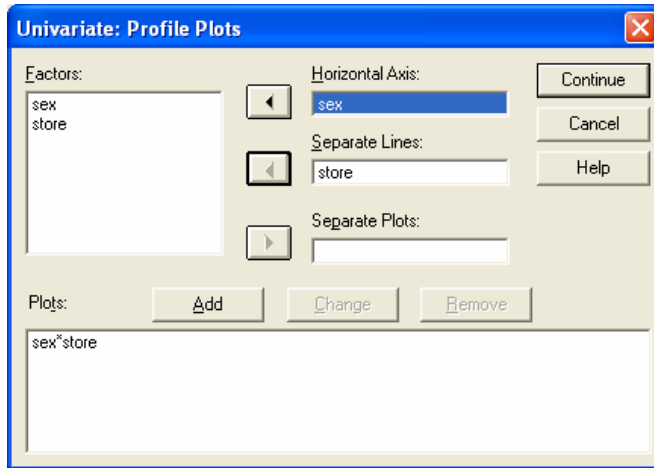
I truly enjoy shopping. (1 = Strongly Disagree, 5 = Strongly Agree)							
1 = Target		2 = Kmart		3 = Wal-Mart		4 = Dollar General	
1=Male	2=Female	1=Male	2=Female	1=Male	2=Female	1=Male	2=Female
1	1	1	3	2	3	2	5
1	1	1	3	2	5	3	5
1	1	1	4	2	5	3	5
1	2	1	4	3	5	3	5
2	2	2	4	3	5	3	5
2	2	2	4	3	5	4	2
2	3	2	5	3	5	4	3
2	3	2	5	3	4	4	5
1	3	2	5	4	5	4	5
1	3	2	5	4	5	4	5
1	4	3	5	4	4	4	5
1	4	3	5	4	5	4	2
2	4	3	5	4	5	4	5
2	4	3	5	4	5	5	5
3	5	4	5	4	5	5	5

The data should be entered in three columns in the SPSS data file.

<i>Sex</i>	<i>Store</i>	<i>Agree3</i>
Male	Wal-Mart	2
Male	Kmart	4
...		
Female	Target	1
Female	Dollar General	2
...		

What is the relationship of store type and sex to level of agreement?





Univariate Analysis of Variance

Between-Subjects Factors

		Value Label	N
sex	1	Male	60
	2	Female	60
store	1	Target	30
	2	Kmart	30
	3	Wal-Mart	30
	4	Dollar General	30

Descriptive Statistics

Dependent Variable: I truly enjoy shopping.

sex	store	Mean	Std. Deviation	N
Male	Target	1.53	.640	15
	Kmart	2.13	.915	15
	Wal-Mart	3.27	.799	15
	Dollar General	3.73	.799	15
	Total	2.67	1.174	60
Female	Target	2.80	1.265	15
	Kmart	4.47	.743	15
	Wal-Mart	4.73	.594	15
	Dollar General	4.47	1.125	15
	Total	4.12	1.223	60
Total	Target	2.17	1.177	30
	Kmart	3.30	1.442	30
	Wal-Mart	4.00	1.017	30
	Dollar General	4.10	1.029	30
	Total	3.39	1.398	120

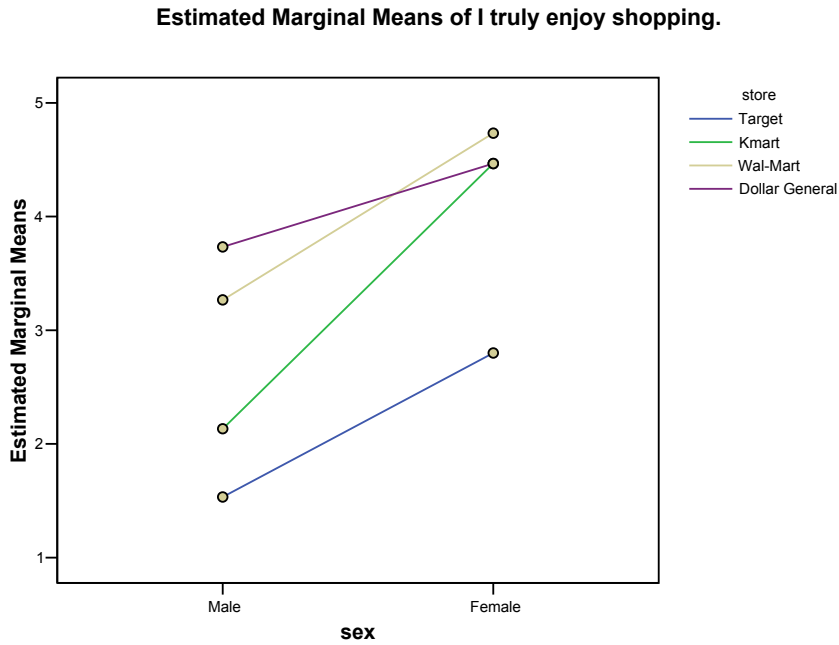
Tests of Between-Subjects Effects

Dependent Variable: I truly enjoy shopping.

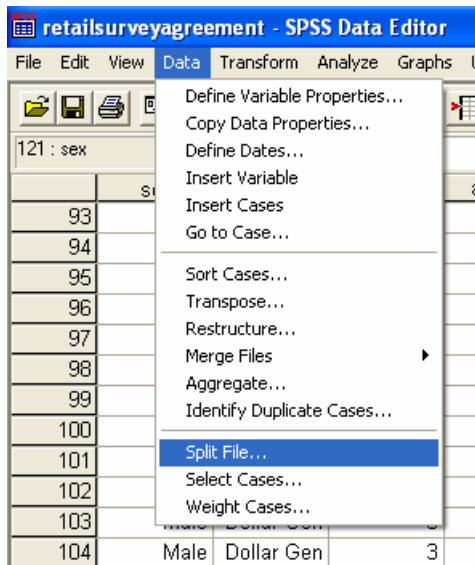
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	144.458 ^a	7	20.637	26.225	.000
Intercept	1380.408	1	1380.408	1754.225	.000
sex	63.075	1	63.075	80.156	.000
store	71.425	3	23.808	30.256	.000
sex * store	9.958	3	3.319	4.218	.007
Error	88.133	112	.787		
Total	1613.000	120			
Corrected Total	232.592	119			

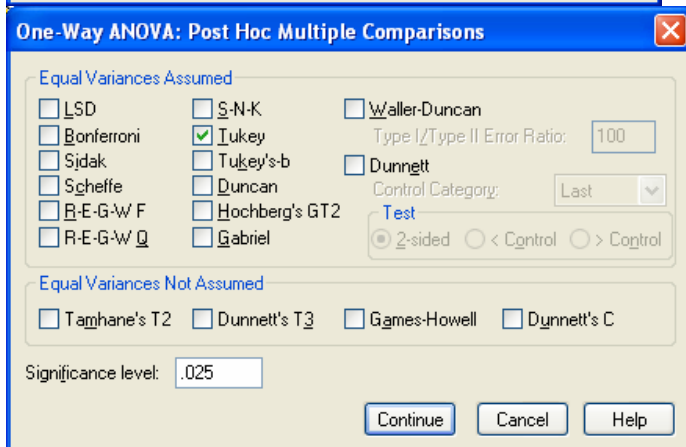
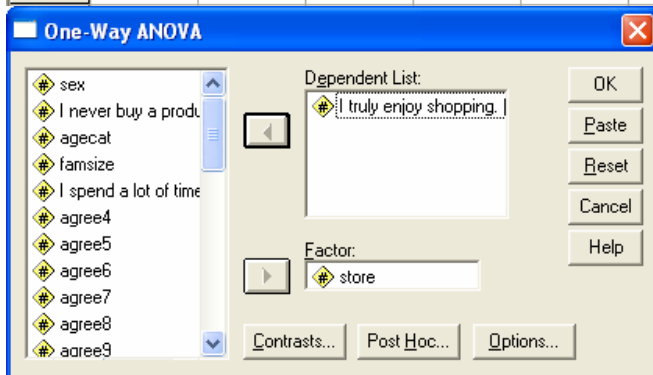
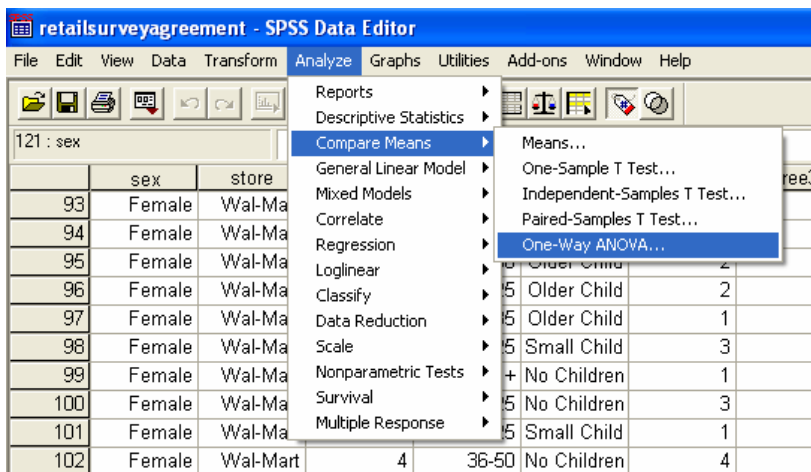
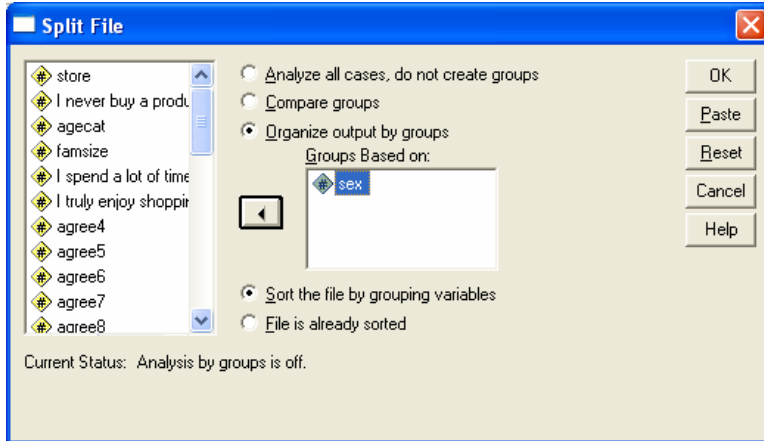
a. R Squared = .621 (Adjusted R Squared = .597)

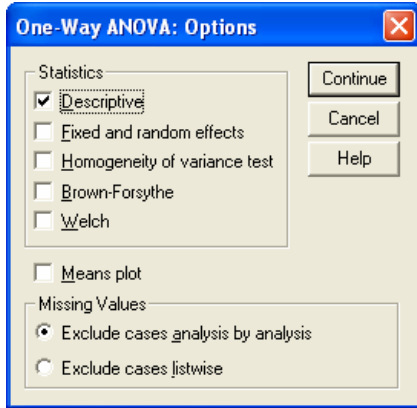
Profile Plots



What is the relationship of store type to level of agreement for females? For males?







Oneway sex = Male

Descriptives^a

I truly enjoy shopping.

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Target	15	1.53	.640	.165	1.18	1.89	1	3
Kmart	15	2.13	.915	.236	1.63	2.64	1	4
Wal-Mart	15	3.27	.799	.206	2.82	3.71	2	4
Dollar General	15	3.73	.799	.206	3.29	4.18	2	5
Total	60	2.67	1.174	.152	2.36	2.97	1	5

a. sex = Male

ANOVA^a

I truly enjoy shopping.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	46.000	3	15.333	24.302	.000
Within Groups	35.333	56	.631		
Total	81.333	59			

a. sex = Male

Post Hoc Tests

Multiple Comparisons^a

Dependent Variable: I truly enjoy shopping.

Tukey HSD

(I) store	(J) store	Mean Difference (I-J)	Std. Error	Sig.	97.5% Confidence Interval	
					Lower Bound	Upper Bound
Target	Kmart	-.60000	.29005	.176	-1.4479	.2479
	Wal-Mart	-1.73333*	.29005	.000	-2.5812	-.8855
	Dollar General	-2.20000*	.29005	.000	-3.0479	-1.3521
Kmart	Target	.60000	.29005	.176	-.2479	1.4479
	Wal-Mart	-1.13333*	.29005	.001	-1.9812	-.2855
	Dollar General	-1.60000*	.29005	.000	-2.4479	-.7521
Wal-Mart	Target	1.73333*	.29005	.000	.8855	2.5812
	Kmart	1.13333*	.29005	.001	.2855	1.9812
	Dollar General	-.46667	.29005	.382	-1.3145	.3812
Dollar General	Target	2.20000*	.29005	.000	1.3521	3.0479
	Kmart	1.60000*	.29005	.000	.7521	2.4479
	Wal-Mart	-.46667	.29005	.382	-.3812	1.3145

*. The mean difference is significant at the .025 level.

a. sex = Male

sex = Female

Descriptives^a

I truly enjoy shopping.

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Target	15	2.80	1.265	.327	2.10	3.50	1	5
Kmart	15	4.47	.743	.192	4.06	4.88	3	5
Wal-Mart	15	4.73	.594	.153	4.40	5.06	3	5
Dollar General	15	4.47	1.125	.291	3.84	5.09	2	5
Total	60	4.12	1.223	.158	3.80	4.43	1	5

a. sex = Female

ANOVA^a

I truly enjoy shopping.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	35.383	3	11.794	12.509	.000
Within Groups	52.800	56	.943		
Total	88.183	59			

a. sex = Female

Post Hoc Tests

Multiple Comparisons^a

Dependent Variable: I truly enjoy shopping.

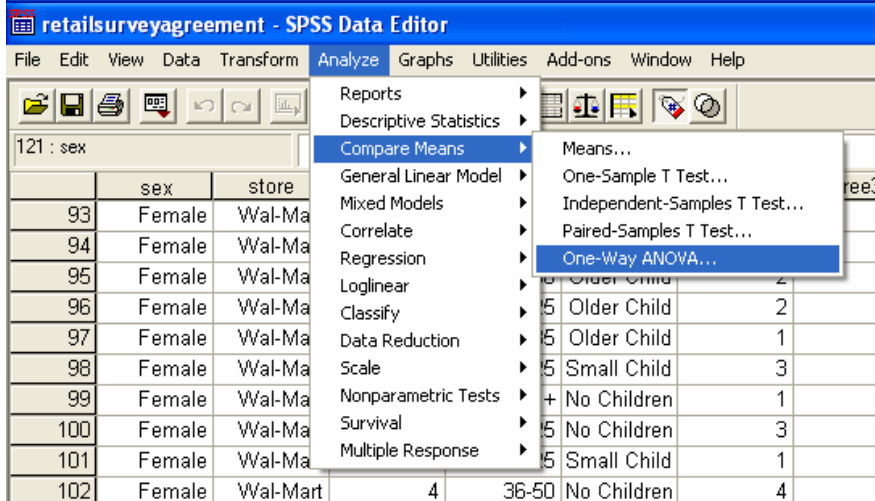
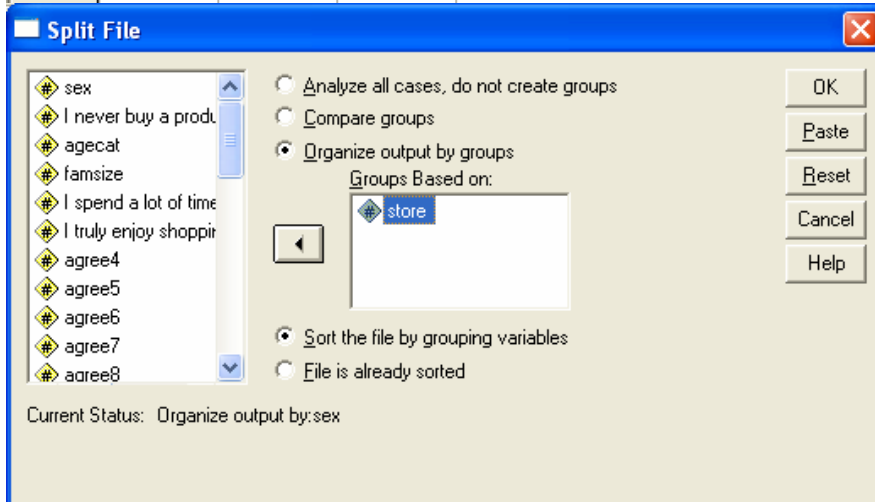
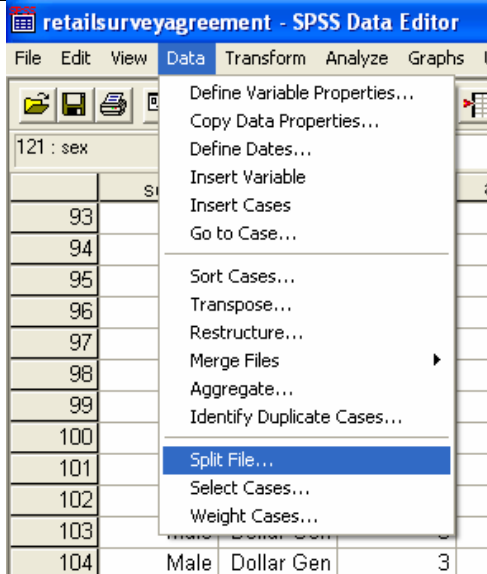
Tukey HSD

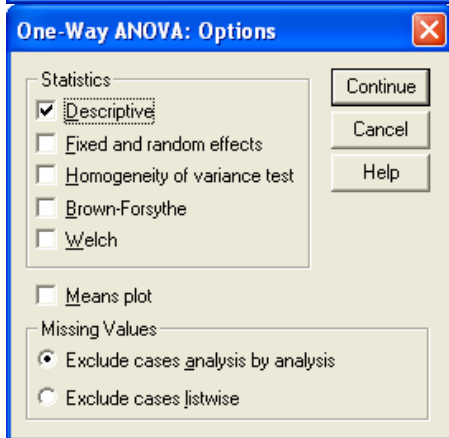
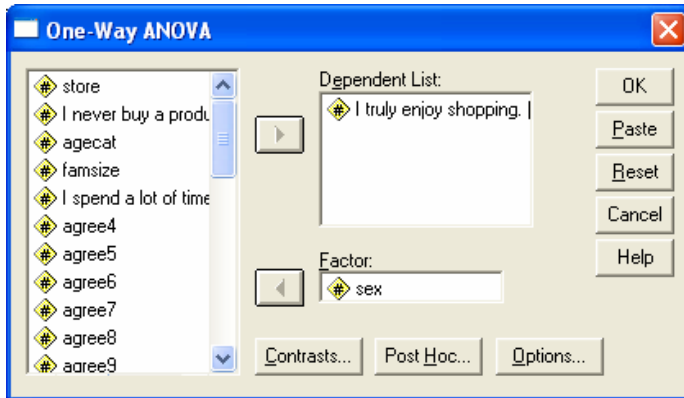
(I) store	(J) store	Mean Difference (I-J)	Std. Error	Sig.	97.5% Confidence Interval	
					Lower Bound	Upper Bound
Target	Kmart	-1.66667*	.35456	.000	-2.7031	-.6302
	Wal-Mart	-1.93333*	.35456	.000	-2.9698	-.8969
	Dollar General	-1.66667*	.35456	.000	-2.7031	-.6302
Kmart	Target	1.66667*	.35456	.000	.6302	2.7031
	Wal-Mart	-.26667	.35456	.875	-1.3031	.7698
	Dollar General	.00000	.35456	1.000	-1.0364	1.0364
Wal-Mart	Target	1.93333*	.35456	.000	.8969	2.9698
	Kmart	.26667	.35456	.875	-.7698	1.3031
	Dollar General	.26667	.35456	.875	-.7698	1.3031
Dollar General	Target	1.66667*	.35456	.000	.6302	2.7031
	Kmart	.00000	.35456	1.000	-1.0364	1.0364
	Wal-Mart	-.26667	.35456	.875	-1.3031	.7698

*. The mean difference is significant at the .025 level.

a. sex = Female

What is the relationship of sex to level of agreement for Target shoppers? For Kmart shoppers? For Wal-Mart shoppers? For Dollar General shoppers?





Oneway store = Target

Descriptives^a

I truly enjoy shopping.

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Male	15	1.53	.640	.165	1.18	1.89	1	3
Female	15	2.80	1.265	.327	2.10	3.50	1	5
Total	30	2.17	1.177	.215	1.73	2.61	1	5

a. store = Target

ANOVA^a

I truly enjoy shopping.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	12.033	1	12.033	11.976	.002
Within Groups	28.133	28	1.005		
Total	40.167	29			

a. store = Target

store = Kmart

Descriptives^a

I truly enjoy shopping.

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Male	15	2.13	.915	.236	1.63	2.64	1	4
Female	15	4.47	.743	.192	4.06	4.88	3	5
Total	30	3.30	1.442	.263	2.76	3.84	1	5

a. store = Kmart

ANOVA^a

I truly enjoy shopping.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	40.833	1	40.833	58.733	.000
Within Groups	19.467	28	.695		
Total	60.300	29			

a. store = Kmart

store = Wal-Mart

Descriptives^a

I truly enjoy shopping.

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Male	15	3.27	.799	.206	2.82	3.71	2	4
Female	15	4.73	.594	.153	4.40	5.06	3	5
Total	30	4.00	1.017	.186	3.62	4.38	2	5

a. store = Wal-Mart

ANOVA^a

I truly enjoy shopping.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	16.133	1	16.133	32.577	.000
Within Groups	13.867	28	.495		
Total	30.000	29			

a. store = Wal-Mart

store = Dollar General

Descriptives^a

I truly enjoy shopping.

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Male	15	3.73	.799	.206	3.29	4.18	2	5
Female	15	4.47	1.125	.291	3.84	5.09	2	5
Total	30	4.10	1.029	.188	3.72	4.48	2	5

a. store = Dollar General

ANOVA^a

I truly enjoy shopping.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.033	1	4.033	4.235	.049
Within Groups	26.667	28	.952		
Total	30.700	29			

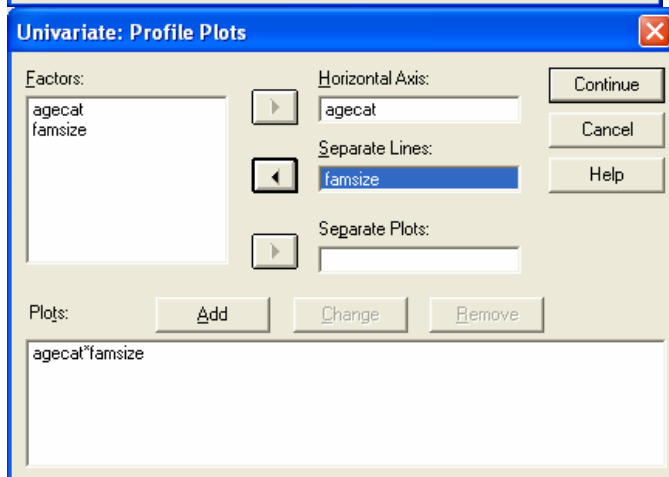
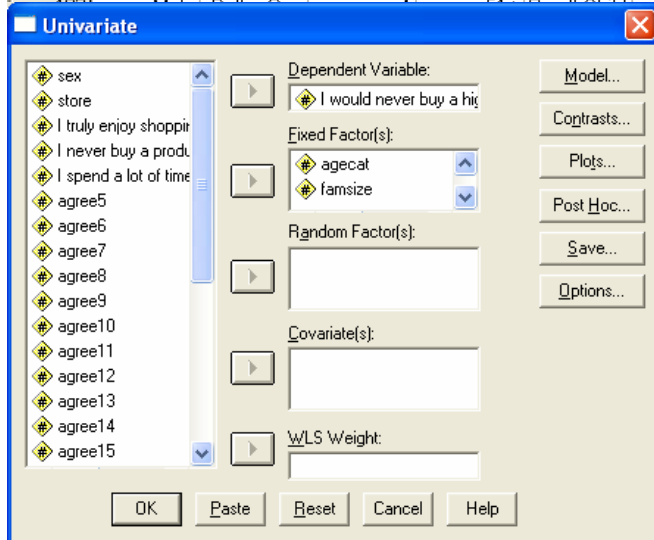
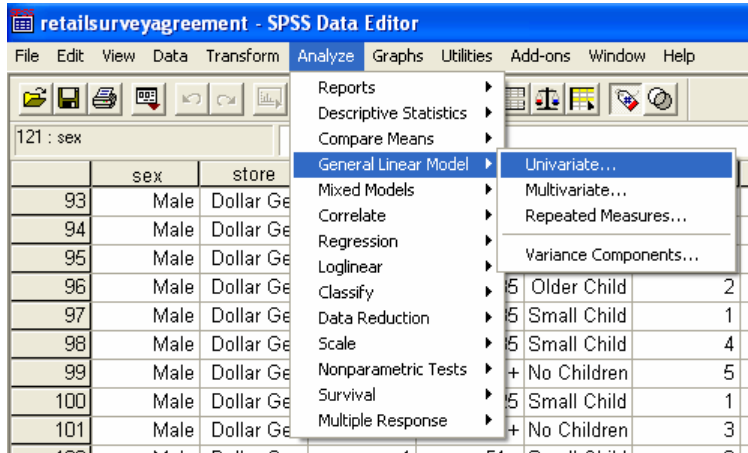
a. store = Dollar General

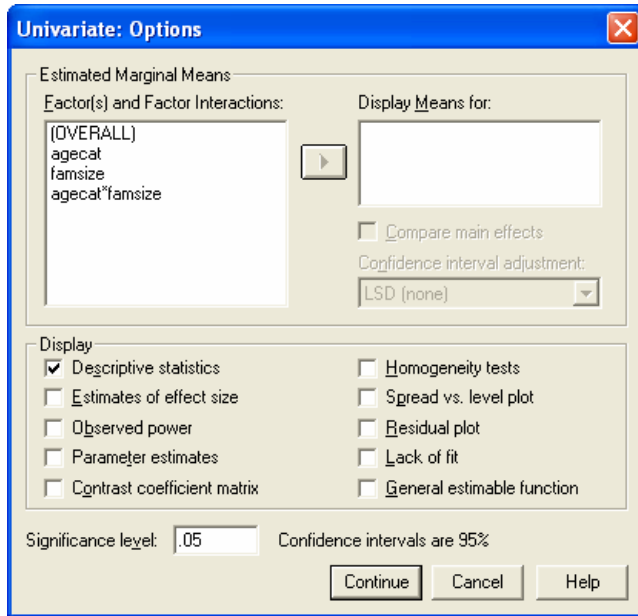
**Two-way Anova Lab
(Significant Interaction: Unequal Sample Sizes)**

A marketing researcher contacted individuals within a local shopping mall. The researcher recorded each person's age and family size as well as their level of agreement with the statement **'I would never buy a high quality product in a discount store.'** Their responses are given below.

I would never buy a high quality product in a discount store. (1 = Strongly Disagree, 5 = Strongly Agree).				
Family Size	1 = Age 18 – 25	2 = Age 26 – 35	3 = Age 36 – 50	4 = Age 51+
1 = No Children in Home	2	4	4	1
	3	5	5	2
	3	5	5	4
	4	5	5	5
	4	4	2	5
	5	5	1	5
		4	4	3
		5	4	4
		5	2	4
		5	3	4
		1	4	5
		5	4	5
			4	5
			4	4
2 = Young Children in Home	5	3	1	1
	5	3	2	1
	4	4	3	1
	5	4	3	1
	5	4	1	1
	5	5	3	3
	5	3	3	
	4	3		
	4			
	3			
	5			
4				
3 = Older Children in Home	3	2	3	1
	5	2	2	2
	4	1	2	1
	3	2	2	2
	5	2	1	3
	5	3	2	
	3	4	1	
	3	5	1	
		5	1	
		1	1	
		2	1	
		3	1	
		1	2	
	3			

What is the relationship of age and family size to level of agreement?





Univariate Analysis of Variance

Between-Subjects Factors

		Value Label	N
agecat	1	18-25	26
	2	26-35	35
	3	36-50	36
	4	51+	23
famsize	1	No Children in Home	47
	2	Small Children in Home	33
	3	Older Children in Home	40

Descriptive Statistics

Dependent Variable: I would never buy a high quality product in a discount store.

agecat	famsize	Mean	Std. Deviation	N
18-25	No Children in Home	3.50	1.049	6
	Small Children in Home	4.50	.674	12
	Older Children in Home	3.88	.991	8
	Total	4.08	.935	26
26-35	No Children in Home	4.31	1.182	13
	Small Children in Home	3.63	.744	8
	Older Children in Home	2.57	1.342	14
	Total	3.46	1.379	35
36-50	No Children in Home	3.81	1.223	16
	Small Children in Home	2.29	.951	7
	Older Children in Home	1.54	.660	13
	Total	2.69	1.431	36
51+	No Children in Home	3.92	1.311	12
	Small Children in Home	1.33	.816	6
	Older Children in Home	1.80	.837	5
	Total	2.78	1.622	23
Total	No Children in Home	3.94	1.205	47
	Small Children in Home	3.24	1.437	33
	Older Children in Home	2.40	1.317	40
	Total	3.23	1.454	120

Tests of Between-Subjects Effects

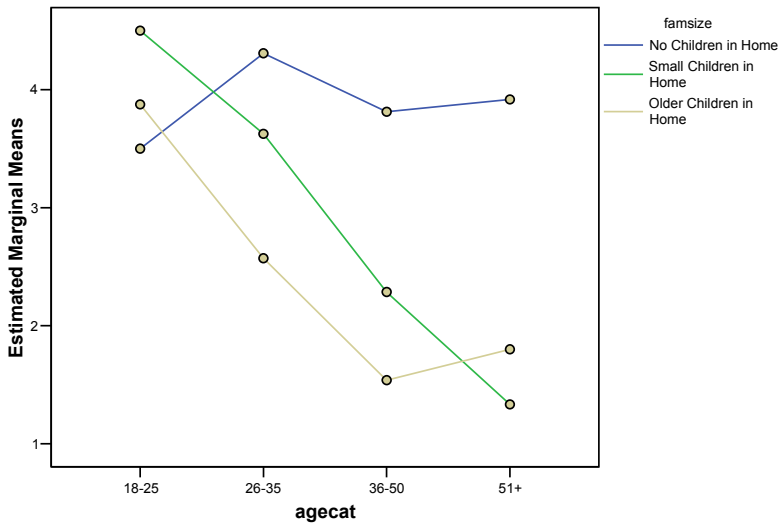
Dependent Variable: I would never buy a high quality product in a discount store.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	131.872 ^a	11	11.988	10.826	.000
Intercept	995.105	1	995.105	898.630	.000
agecat	44.025	3	14.675	13.252	.000
famsize	40.305	2	20.152	18.199	.000
agecat * famsize	32.569	6	5.428	4.902	.000
Error	119.595	108	1.107		
Total	1506.000	120			
Corrected Total	251.467	119			

a. R Squared = .524 (Adjusted R Squared = .476)

Profile Plots

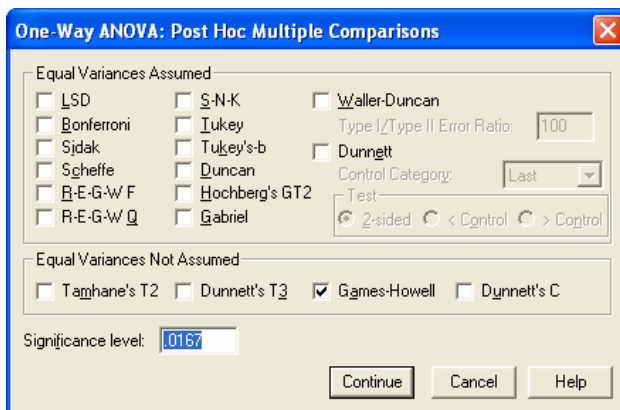
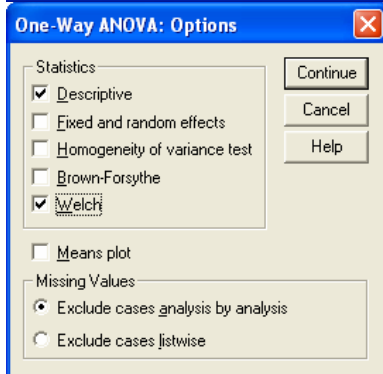
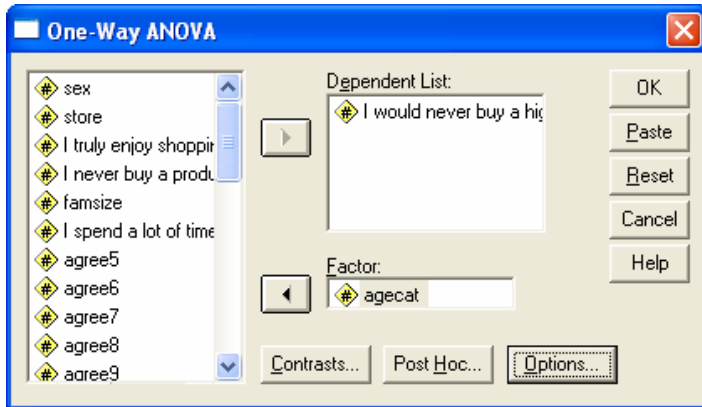
Estimated Marginal Means of I would never buy a high quality product in a discount store.



What is the relationship of age to level of agreement for those with no children in the home? Small children in the home? Older children in the home?

The image shows two screenshots from the SPSS Data Editor. The top screenshot shows the 'Data' menu with 'Split File...' selected. The bottom screenshot shows the 'Split File' dialog box with 'Organize output by groups' selected and 'famsize' in the 'Groups Based on:' list. Below the dialog box, the 'Analyze' menu is open with 'One-Way ANOVA...' selected. The data table below shows the following information:

Case #	sex	store	famsize	agecat	agree5	agree6	agree7	agree8
93	Female	Wal-Mart	2	Older Child	2	2	2	2
94	Female	Wal-Mart	2	Older Child	2	2	2	2
95	Female	Wal-Mart	2	Older Child	2	2	2	2
96	Female	Wal-Mart	2	Older Child	2	2	2	2
97	Female	Wal-Mart	1	Older Child	1	1	1	1
98	Female	Wal-Mart	3	Small Child	3	3	3	3
99	Female	Wal-Mart	1	No Children	1	1	1	1
100	Female	Wal-Mart	3	No Children	3	3	3	3
101	Female	Wal-Mart	1	Small Child	1	1	1	1
102	Female	Wal-Mart	4	36-50	No Children	4	4	4



Oneway famsize = No Children in Home

Descriptives^a

I would never buy a high quality product in a discount store.

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
18-25	6	3.50	1.049	.428	2.40	4.60	2	5
26-35	13	4.31	1.182	.328	3.59	5.02	1	5
36-50	16	3.81	1.223	.306	3.16	4.46	1	5
51+	12	3.92	1.311	.379	3.08	4.75	1	5
Total	47	3.94	1.205	.176	3.58	4.29	1	5

a. famsize = No Children in Home

ANOVA^a

I would never buy a high quality product in a discount store.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.185	3	1.062	.718	.547
Within Groups	63.623	43	1.480		
Total	66.809	46			

a. famsize = No Children in Home

Robust Tests of Equality of Means^b

I would never buy a high quality product in a discount store.

	Statistic ^a	df1	df2	Sig.
Welch	.773	3	18.747	.524

a. Asymptotically F distributed.

b. famsize = No Children in Home

Post Hoc Tests

Multiple Comparisons^b

Dependent Variable: I would never buy a high quality product in a discount store.

Games-Howell

(I) agecat	(J) agecat	Mean Difference (I-J)	Std. Error	Sig.	98.33% Confidence Interval	
					Lower Bound	Upper Bound
18-25	26-35	-.808	.539	.471	-2.78	1.17
	36-50	-.313	.526	.932	-2.26	1.64
	51+	-.417	.572	.884	-2.46	1.62
26-35	18-25	.808	.539	.471	-1.17	2.78
	36-50	.495	.448	.690	-.95	1.94
	51+	.391	.501	.862	-1.25	2.03
36-50	18-25	.313	.526	.932	-1.64	2.26
	26-35	-.495	.448	.690	-1.94	.95
	51+	-.104	.487	.996	-1.69	1.49
51+	18-25	.417	.572	.884	-1.62	2.46
	26-35	-.391	.501	.862	-2.03	1.25
	36-50	.104	.487	.996	-1.49	1.69

a. famsize = No Children in Home

famsize = Small Children in Home

Descriptives^a

I would never buy a high quality product in a discount store.

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
18-25	12	4.50	.674	.195	4.07	4.93	3	5
26-35	8	3.63	.744	.263	3.00	4.25	3	5
36-50	7	2.29	.951	.360	1.41	3.17	1	3
51+	6	1.33	.816	.333	.48	2.19	1	3
Total	33	3.24	1.437	.250	2.73	3.75	1	5

a. famsize = Small Children in Home

ANOVA^a

I would never buy a high quality product in a discount store.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	48.424	3	16.141	26.541	.000
Within Groups	17.637	29	.608		
Total	66.061	32			

a. famsize = Small Children in Home

Robust Tests of Equality of Means^b

I would never buy a high quality product in a discount store.

	Statistic ^a	df1	df2	Sig.
Welch	24.331	3	13.366	.000

a. Asymptotically F distributed.

b. famsize = Small Children in Home

Post Hoc Tests

Multiple Comparisons^b

Dependent Variable: I would never buy a high quality product in a discount store.

Games-Howell

(I) agecat	(J) agecat	Mean Difference (I-J)	Std. Error	Sig.	98.33% Confidence Interval	
					Lower Bound	Upper Bound
18-25	26-35	.875	.327	.076	-.27	2.02
	36-50	2.214*	.409	.002	.66	3.76
	51+	3.167*	.386	.000	1.65	4.68
26-35	18-25	-.875	.327	.076	-2.02	.27
	36-50	1.339	.445	.049	-.28	2.96
	51+	2.292*	.425	.001	.71	3.87
36-50	18-25	-2.214*	.409	.002	-3.76	-.66
	26-35	-1.339	.445	.049	-2.96	.28
	51+	.952	.490	.266	-.84	2.75
51+	18-25	-3.167*	.386	.000	-4.68	-1.65
	26-35	-2.292*	.425	.001	-3.87	-.71
	36-50	-.952	.490	.266	-2.75	.84

*. The mean difference is significant at the .0167 level.

a. famsize = Small Children in Home

famsize = Older Children in Home

Descriptives^a

I would never buy a high quality product in a discount store.

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
18-25	8	3.88	.991	.350	3.05	4.70	3	5
26-35	14	2.57	1.342	.359	1.80	3.35	1	5
36-50	13	1.54	.660	.183	1.14	1.94	1	3
51+	5	1.80	.837	.374	.76	2.84	1	3
Total	40	2.40	1.317	.208	1.98	2.82	1	5

a. famsize = Older Children in Home

ANOVA^a

I would never buy a high quality product in a discount store.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	29.266	3	9.755	9.161	.000
Within Groups	38.334	36	1.065		
Total	67.600	39			

a. famsize = Older Children in Home

Robust Tests of Equality of Means^b

I would never buy a high quality product in a discount store.

	Statistic ^a	df1	df2	Sig.
Welch	11.379	3	13.847	.000

a. Asymptotically F distributed.

b. famsize = Older Children in Home

Post Hoc Tests

Multiple Comparisons^b

Dependent Variable: I would never buy a high quality product in a discount store.

Games-Howell

(I) agecat	(J) agecat	Mean Difference (I-J)	Std. Error	Sig.	98.33% Confidence Interval	
					Lower Bound	Upper Bound
18-25	26-35	1.304	.501	.077	-.38	2.98
	36-50	2.337*	.395	.001	.88	3.79
	51+	2.075*	.513	.011	.14	4.01
26-35	18-25	-1.304	.501	.077	-2.98	.38
	36-50	1.033	.403	.081	-.31	2.38
	51+	.771	.518	.474	-1.10	2.65
36-50	18-25	-2.337*	.395	.001	-3.79	-.88
	26-35	-1.033	.403	.081	-2.38	.31
	51+	-.262	.417	.919	-2.12	1.59
51+	18-25	-2.075*	.513	.011	-4.01	-.14
	26-35	-.771	.518	.474	-2.65	1.10
	36-50	.262	.417	.919	-1.59	2.12

*. The mean difference is significant at the .0167 level.

a. famsize = Older Children in Home

**What is the relationship of family size to level of agreement for 18 – 25 year olds?
For 26 – 35 year olds? For 36 – 50 year olds? For those 51+?**

The image shows two screenshots from the SPSS Data Editor. The top screenshot shows the 'Data' menu with 'Split File...' selected. The bottom screenshot shows the 'Analyze' menu with 'One-Way ANOVA...' selected.

Split File Dialog Box:

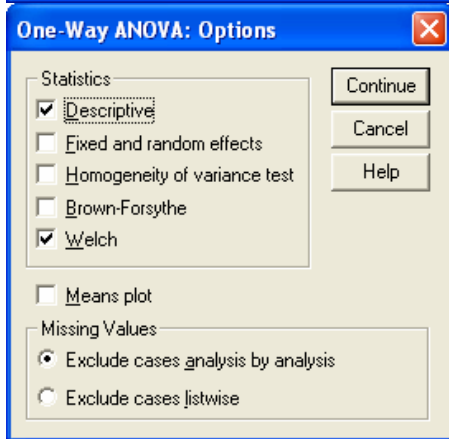
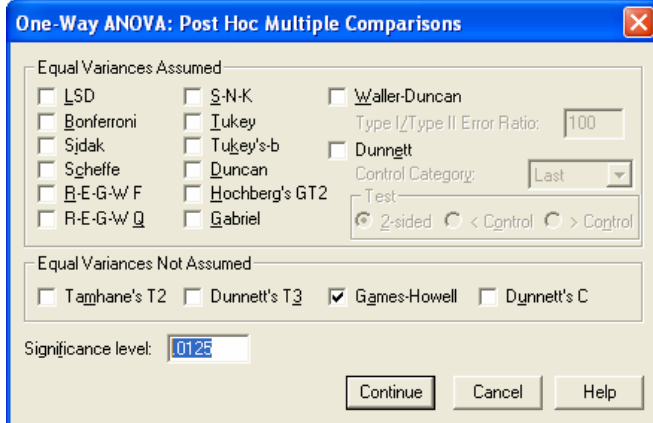
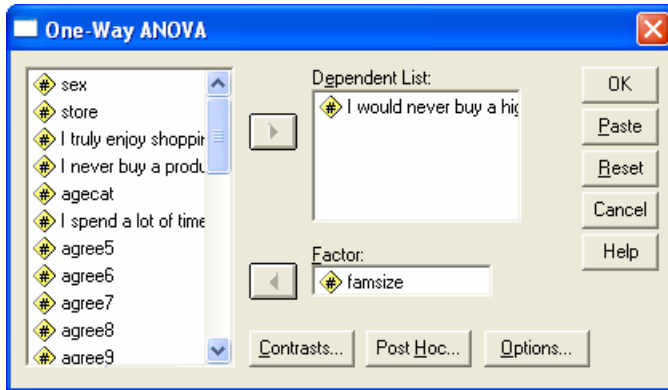
- Analyze all cases, do not create groups (unselected)
- Compare groups (unselected)
- Organize output by groups (selected)
 - Groups Based on: agecat
- Sort the file by grouping variables (selected)
- File is already sorted (unselected)

Analyze Menu:

- Reports
- Descriptive Statistics
- Compare Means
 - Means...
 - One-Sample T Test...
 - Independent-Samples T Test...
 - Paired-Samples T Test...
 - One-Way ANOVA...
- General Linear Model
- Mixed Models
- Correlate
- Regression
- Loglinear
- Classify
- Data Reduction
- Scale
- Nonparametric Tests
- Survival
- Multiple Response

Data Editor Table (Visible in Bottom Screenshot):

Case #	sex	store	agecat	children	agree
93	Female	Wal-Mart	18-25	2	3
94	Female	Wal-Mart	26-35	2	3
95	Female	Wal-Mart	36-50	2	3
96	Female	Wal-Mart	51+	2	3
97	Female	Wal-Mart	18-25	1	3
98	Female	Wal-Mart	26-35	3	3
99	Female	Wal-Mart	36-50	1	3
100	Female	Wal-Mart	51+	3	3
101	Female	Wal-Mart	18-25	1	3
102	Female	Wal-Mart	36-50	No Children	4



Oneway agecat = 18-25

Descriptives^a

I would never buy a high quality product in a discount store.

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
No Children in Home	6	3.50	1.049	.428	2.40	4.60	2	5
Small Children in Home	12	4.50	.674	.195	4.07	4.93	3	5
Older Children in Home	8	3.88	.991	.350	3.05	4.70	3	5
Total	26	4.08	.935	.183	3.70	4.45	2	5

a. agecat = 18-25

ANOVA^a

I would never buy a high quality product in a discount store.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.471	2	2.236	2.959	.072
Within Groups	17.375	23	.755		
Total	21.846	25			

a. agecat = 18-25

Robust Tests of Equality of Means^b

I would never buy a high quality product in a discount store.

	Statistic ^a	df1	df2	Sig.
Welch	2.756	2	10.655	.108

a. Asymptotically F distributed.

b. agecat = 18-25

Post Hoc Tests

Multiple Comparisons^b

Dependent Variable: I would never buy a high quality product in a discount store.

Games-Howell

(I) famsize	(J) famsize	Mean Difference (I-J)	Std. Error	Sig.	98.75% Confidence Interval	
					Lower Bound	Upper Bound
No Children in Home	Small Children in Home	-1.000	.470	.153	-2.87	.87
	Older Children in Home	-.375	.553	.781	-2.33	1.58
Small Children in Home	No Children in Home	1.000	.470	.153	-.87	2.87
	Older Children in Home	.625	.401	.302	-.77	2.02
Older Children in Home	No Children in Home	.375	.553	.781	-1.58	2.33
	Small Children in Home	-.625	.401	.302	-2.02	.77

a. agecat = 18-25

agecat = 26-35

Descriptives^a

I would never buy a high quality product in a discount store.

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
No Children in Home	13	4.31	1.182	.328	3.59	5.02	1	5
Small Children in Home	8	3.63	.744	.263	3.00	4.25	3	5
Older Children in Home	14	2.57	1.342	.359	1.80	3.35	1	5
Total	35	3.46	1.379	.233	2.98	3.93	1	5

a. agecat = 26-35

ANOVA^a

I would never buy a high quality product in a discount store.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	20.613	2	10.306	7.483	.002
Within Groups	44.073	32	1.377		
Total	64.686	34			

a. agecat = 26-35

Robust Tests of Equality of Means^b

I would never buy a high quality product in a discount store.

	Statistic ^a	df1	df2	Sig.
Welch	6.228	2	21.000	.008

a. Asymptotically F distributed.

b. agecat = 26-35

Post Hoc Tests

Multiple Comparisons^b

Dependent Variable: I would never buy a high quality product in a discount store.

Games-Howell

(I) famsize	(J) famsize	Mean Difference (I-J)	Std. Error	Sig.	98.75% Confidence Interval	
					Lower Bound	Upper Bound
No Children in Home	Small Children in Home	.683	.420	.260	-.66	2.03
	Older Children in Home	1.736*	.486	.004	.23	3.25
Small Children in Home	No Children in Home	-.683	.420	.260	-2.03	.66
	Older Children in Home	1.054	.445	.069	-.36	2.47
Older Children in Home	No Children in Home	-1.736*	.486	.004	-3.25	-.23
	Small Children in Home	-1.054	.445	.069	-2.47	.36

*. The mean difference is significant at the .0125 level.

a. agecat = 26-35

agecat = 36-50

Descriptives^a

I would never buy a high quality product in a discount store.

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
No Children in Home	16	3.81	1.223	.306	3.16	4.46	1	5
Small Children in Home	7	2.29	.951	.360	1.41	3.17	1	3
Older Children in Home	13	1.54	.660	.183	1.14	1.94	1	3
Total	36	2.69	1.431	.238	2.21	3.18	1	5

a. agecat = 36-50

ANOVA^a

I would never buy a high quality product in a discount store.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	38.542	2	19.271	19.215	.000
Within Groups	33.097	33	1.003		
Total	71.639	35			

a. agecat = 36-50

Robust Tests of Equality of Means^b

I would never buy a high quality product in a discount store.

	Statistic ^a	df1	df2	Sig.
Welch	19.593	2	15.681	.000

a. Asymptotically F distributed.

b. agecat = 36-50

Post Hoc Tests

Multiple Comparisons^a

Dependent Variable: I would never buy a high quality product in a discount store.

Games-Howell

(I) famsize	(J) famsize	Mean Difference (I-J)	Std. Error	Sig.	98.75% Confidence Interval	
					Lower Bound	Upper Bound
No Children in Home	Small Children in Home	1.527	.472	.015	-.04	3.09
	Older Children in Home	2.274*	.356	.000	1.16	3.39
Small Children in Home	No Children in Home	-1.527	.472	.015	-3.09	.04
	Older Children in Home	.747	.403	.207	-.73	2.23
Older Children in Home	No Children in Home	-2.274*	.356	.000	-3.39	-1.16
	Small Children in Home	-.747	.403	.207	-2.23	.73

*. The mean difference is significant at the .0125 level.

a. agecat = 36-50

agecat = 51+

Descriptives^a

I would never buy a high quality product in a discount store.

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
No Children in Home	12	3.92	1.311	.379	3.08	4.75	1	5
Small Children in Home	6	1.33	.816	.333	.48	2.19	1	3
Older Children in Home	5	1.80	.837	.374	.76	2.84	1	3
Total	23	2.78	1.622	.338	2.08	3.48	1	5

a. agecat = 51+

ANOVA^a

I would never buy a high quality product in a discount store.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	32.863	2	16.432	13.119	.000
Within Groups	25.050	20	1.253		
Total	57.913	22			

a. agecat = 51+

Robust Tests of Equality of Means^b

I would never buy a high quality product in a discount store.

	Statistic ^a	df1	df2	Sig.
Welch	13.397	2	11.190	.001

a. Asymptotically F distributed.

b. agecat = 51+

Post Hoc Tests

Multiple Comparisons^a

Dependent Variable: I would never buy a high quality product in a discount store.

Games-Howell

(I) famsize	(J) famsize	Mean Difference (I-J)	Std. Error	Sig.	98.75% Confidence Interval	
					Lower Bound	Upper Bound
No Children in Home	Small Children in Home	2.583*	.504	.000	.91	4.25
	Older Children in Home	2.117*	.532	.005	.28	3.95
Small Children in Home	No Children in Home	-2.583*	.504	.000	-4.25	-.91
	Older Children in Home	-.467	.501	.636	-2.34	1.41
Older Children in Home	No Children in Home	-2.117*	.532	.005	-3.95	-.28
	Small Children in Home	.467	.501	.636	-1.41	2.34

*. The mean difference is significant at the .0125 level.

a. agecat = 51+