

*following creates z scores for the ydacl statedp traitdp and rads vars.
 *specifically adding the /SAVE subcommand to descriptives will create z.
 *scores for whatever variables are in the command.

DESCRIPTIVES

```
VARIABLES=ydacl statedp traitdp rads /SAVE
/STATISTICS=MEAN STDDEV MIN MAX .
```

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ydacl	1380	.00	21.00	6.0775	4.01797
statedp state depression	1341	1.00	4.00	1.8920	.63368
traitdp trait depression	1302	1.00	4.00	1.9533	.62583
rads reynolds adol depress scale	1290	1.00	3.97	1.9897	.58120
Valid N (listwise)	1270				

*Following just runs descriptives on the resulting variables to check to.
 * be sure that we have ended up with variables with mean = 0 and sd = 1.

DESCRIPTIVES

```
VARIABLES=zydacl zstatedp ztraitdp zrads
/STATISTICS=MEAN STDDEV MIN MAX skew kurt.
```

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std.	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Zydacl Zscore(ydacl)	1380	-1.51259	3.71393	.0000000	1.0000000	.896	.066	1.003	.132
Zstatedp Zscore: state depression	1341	-1.40772	3.32650	.0000000	1.0000000	.848	.067	.296	.134
Ztraitdp Zscore: trait depression	1302	-1.52334	3.27031	.0000000	1.0000000	.775	.068	.354	.136
Zrads Zscore: reynolds adol depress scale	1290	-1.70287	3.40154	.0000000	1.0000000	.525	.068	-.206	.136
Valid N (listwise)	1270								

*Following calculates the mean for the 6 items in question 15, provided that.
 *at least 4 valid values are present.

```
compute socsup=mean.4(q15a to q15f).
```

*Following gives me a look at the resulting variable I asked for percentiles.
 *for 25 50 and 75 which I will use to construct four approximately equally sized
 groups for my social support variable.

```
EXAMINE
  VARIABLES=socsup
  /PERCENTILES(25,50,75)
  /STATISTICS = descriptives
  /plot = none
  /MISSING LISTWISE
  /NOTOTAL.
```

Explore

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
socsup social support average Q15 w at least 4 valid	1283	92.4%	106	7.6%	1389	100.0%

Descriptives

			Statistic	Std. Error
socsup social support average Q15 w at least 4 valid	Mean		2.2601	.01767
	95% Confidence Interval for Mean	Lower Bound	2.2254	
		Upper Bound	2.2947	
		5% Trimmed Mean	2.2523	
	Median	2.1667		
	Variance	.400		
	Std. Deviation	.63278		
	Minimum	1.00		
	Maximum	4.00		
	Range	3.00		
	Interquartile Range	.83		
	Skewness	.165	.068	
	Kurtosis	-.224	.137	

Percentiles

		Percentiles		
		25	50	75
Weighted Average(Definition 1)	socsup social support average Q15 w at least 4 valid	1.8333	2.1667	2.6667
Tukey's Hinges	socsup social support average Q15 w at least 4 valid	1.8333	2.1667	2.6667

```
*First ran this syntax to create groups.
*resulted in groups that were a little too unbalanced.
*changed slightly and ran block of commands that follows.
Do if socsup le 1.833333.
+ compute socsupgp = 1.
else if socsup le 2.166666.
+ compute socsupgp = 2.
else if socsup le 2.666666.
+ compute socsupgp = 3.
else if socsup gt 2.666666.
+ compute socsupgp = 4.
end if.
```

```
*This block created more nearly equal groups.
Do if socsup le 1.8334.
+ compute socsupgp = 1.
else if socsup le 2.1667.
+ compute socsupgp = 2.
else if socsup le 2.6667.
+ compute socsupgp = 3.
else if socsup gt 2.6667.
+ compute socsupgp = 4.
end if.
```

```
*runs frequencies to look at distribution across the groups.
freq var = socsupgp.
```

Frequencies

Statistics

socsupgp social support group

N	Valid	1283
	Missing	106

socsupgp social support group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00 highest support le 1.8334	366	26.3	28.5	28.5
	2.00 second highest le 2.1667	279	20.1	21.7	50.3
	3.00 second lowest le 2.6667	358	25.8	27.9	78.2
	4.00 lowest support gt 2.6667	280	20.2	21.8	100.0
	Total	1283	92.4	100.0	
Missing	System	106	7.6		
Total		1389	100.0		

*now label the new variables.

```
Variable labels socsup 'social support average Q15 w at least 4 valid'
                /socsupgp 'social support group'.
```

```
Value labels socsupgp 1 'highest support le 1.8334'
                    2 'second highest le 2.1667'
                    3 'second lowest le 2.6667'
                    4 'lowest support gt 2.6667'.
```

*runs the mixed analysis within subjects factor is the three different.

* depression measures and the within factor is the four level social.

* support group factor we just created.

GLM

```
zydacr ztraitdp zstatedp zrads BY socsupgp
/WSFACTOR = depress 4
/METHOD = SSTYPE(3)
/POSTHOC = socsupgp ( SNK QREGW )
/PLOT = PROFILE( socsupgp )
/EMMEANS = TABLES(depress) COMPARE ADJ(SIDAK)
/EMMEANS = TABLES(socsupgp) COMPARE ADJ(SIDAK)
/EMMEANS = TABLES(socsupgp*depress)
```

```

/PRINT = DESCRIPTIVE ETASQ
/CRITERIA = ALPHA(.05)
/WSDESIGN = depress
/DESIGN = socsupgp .

```

General Linear Model

Within-Subjects Factors

Measure: MEASURE_1

depress	Dependent Variable
1	Zydacl
2	Ztraitdp
3	Zstatedp
4	Zrads

Between-Subjects Factors

		Value Label	N
socsupgp social support group	1.00	highest support le 1. 8334	363
	2.00	second highest le 2. 1667	272
	3.00	second lowest le 2. 6667	352
	4.00	lowest support gt 2. 6667	272

Descriptive Statistics

	socsupgp social	Mean	Std. Deviation	N
Zydacl Zscore(ydacl)	1.00 highest support le 1.8334	-.3854210	.78664703	363
	2.00 second highest le 2.1667	-.1785085	.83531441	272
	3.00 second lowest le 2.6667	.0337314	.95545821	352
	4.00 lowest support gt 2.6667	.5992472	1.13700134	272
	Total	-.0107970	.99457551	1259
	Ztraitdp Zscore: trait depression	1.00 highest support le 1.8334	-.5644113	.72084682
2.00 second highest le 2.1667		-.1740303	.84059074	272
3.00 second lowest le 2.6667		.1109868	.92289646	352
4.00 lowest support gt 2.6667		.7224440	1.04922306	272
Total		-.0132211	.99555431	1259
Zstatedp Zscore: state depression		1.00 highest support le 1.8334	-.5092757	.74516055
	2.00 second highest le 2.1667	-.2144954	.86625931	272
	3.00 second lowest le 2.6667	.1106274	.95609643	352
	4.00 lowest support gt 2.6667	.6832264	1.06489634	272
	Total	-.0146397	1.00483991	1259
	Zrads Zscore: reynolds adol depress scale	1.00 highest support le 1.8334	-.5953446	.78876829
2.00 second highest le 2.1667		-.1234275	.84877312	272
3.00 second lowest le 2.6667		.1384760	.88839035	352
4.00 lowest support gt 2.6667		.6984307	1.02090373	272
Total		-.0087098	.99763815	1259

Multivariate Tests^c

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
depress	Pillai's Trace	.000	.142 ^a	3.000	1253.000	.935	.000
	Wilks' Lambda	1.000	.142 ^a	3.000	1253.000	.935	.000
	Hotelling's Trace	.000	.142 ^a	3.000	1253.000	.935	.000
	Roy's Largest Root	.000	.142 ^a	3.000	1253.000	.935	.000
depress * socsupgp	Pillai's Trace	.030	4.271	9.000	3765.000	.000	.010
	Wilks' Lambda	.970	4.295	9.000	3049.623	.000	.010
	Hotelling's Trace	.031	4.311	9.000	3755.000	.000	.010
	Roy's Largest Root	.026	10.921 ^b	3.000	1255.000	.000	.025

- a. Exact statistic
- b. The statistic is an upper bound on F that yields a lower bound on the significance level.
- c. Design: Intercept+socsupgp
Within Subjects Design: depress

Mauchly's Test of Sphericity^b

Measure: MEASURE_1

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon ^a		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
depress	.710	429.515	5	.000	.819	.822	.333

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

- a. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.
- b. Design: Intercept+socsupgp
Within Subjects Design: depress

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
depress	Sphericity Assumed	.126	3	.042	.162	.922	.000
	Greenhouse-Geisser	.126	2.456	.051	.162	.890	.000
	Huynh-Feldt	.126	2.467	.051	.162	.891	.000
	Lower-bound	.126	1.000	.126	.162	.688	.000
depress * socsupgp	Sphericity Assumed	14.939	9	1.660	6.364	.000	.015
	Greenhouse-Geisser	14.939	7.367	2.028	6.364	.000	.015
	Huynh-Feldt	14.939	7.400	2.019	6.364	.000	.015
	Lower-bound	14.939	3.000	4.980	6.364	.000	.015
Error(depress)	Sphericity Assumed	981.959	3765	.261			
	Greenhouse-Geisser	981.959	3081.701	.319			
	Huynh-Feldt	981.959	3095.580	.317			
	Lower-bound	981.959	1255.000	.782			

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	depress	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
depress	Linear	.058	1	.058	.185	.667	.000
	Quadratic	.009	1	.009	.038	.845	.000
	Cubic	.059	1	.059	.267	.606	.000
depress * socsupgp	Linear	8.845	3	2.948	9.426	.000	.022
	Quadratic	2.279	3	.760	3.068	.027	.007
	Cubic	3.814	3	1.271	5.727	.001	.014
Error(depress)	Linear	392.559	1255	.313			
	Quadratic	310.792	1255	.248			
	Cubic	278.608	1255	.222			

Tests of Between-Subjects Effects

Measure: MEASURE_1

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	2.396	1	2.396	.973	.324	.001
socsupgp	925.346	3	308.449	125.225	.000	.230
Error	3091.256	1255	2.463			

Estimated Marginal Means

1. depress

Estimates

Measure: MEASURE_1

depress	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	.017	.026	-.035	.069
2	.024	.025	-.025	.073
3	.018	.026	-.033	.068
4	.030	.025	-.020	.079

Pairwise Comparisons

Measure: MEASURE_1

(I) depress	(J) depress	Mean Difference (I-J)	Std. Error	Sig. ^a	95% Confidence Interval for Difference ^a	
					Lower Bound	Upper Bound
1	2	-.006	.023	1.000	-.068	.055
	3	.000	.022	1.000	-.059	.058
	4	-.012	.024	.997	-.077	.052
2	1	.006	.023	1.000	-.055	.068
	3	.006	.016	.999	-.037	.049
	4	-.006	.016	.999	-.047	.035
3	1	.000	.022	1.000	-.058	.059
	2	-.006	.016	.999	-.049	.037
	4	-.012	.019	.990	-.063	.039
4	1	.012	.024	.997	-.052	.077
	2	.006	.016	.999	-.035	.047
	3	.012	.019	.990	-.039	.063

Based on estimated marginal means

a. Adjustment for multiple comparisons: Sidak.

Multivariate Tests

	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Pillai's trace	.000	.142 ^a	3.000	1253.000	.935	.000
Wilks' lambda	1.000	.142 ^a	3.000	1253.000	.935	.000
Hotelling's trace	.000	.142 ^a	3.000	1253.000	.935	.000
Roy's largest root	.000	.142 ^a	3.000	1253.000	.935	.000

Each F tests the multivariate effect of depress. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

2. social support group

Estimates

Measure: MEASURE_1

social support group	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1.00 highest support le 1.8334	-.514	.041	-.594	-.433
2.00 second highest le 2.1667	-.173	.048	-.266	-.079
3.00 second lowest le 2.6667	.098	.042	.016	.181
4.00 lowest support gt 2.6667	.676	.048	.582	.769

Pairwise Comparisons

Measure: MEASURE_1

(I) social support group	(J) social support group	Mean Difference (I-J)	Std. Error	Sig. ^a	95% Confidence Interval for Difference ^a	
					Lower Bound	Upper Bound
1.00 highest support le 1.8334	2.00 second highest le 2.1667	-.341*	.063	.000	-.507	-.175
	3.00 second lowest le 2.6667	-.612*	.059	.000	-.767	-.457
	4.00 lowest support gt 2.6667	-1.189*	.063	.000	-1.355	-1.024
2.00 second highest le 2.1667	1.00 highest support le 1.8334	.341*	.063	.000	.175	.507
	3.00 second lowest le 2.6667	-.271*	.063	.000	-.438	-.104
	4.00 lowest support gt 2.6667	-.848*	.067	.000	-1.026	-.671
3.00 second lowest le 2.6667	1.00 highest support le 1.8334	.612*	.059	.000	.457	.767
	2.00 second highest le 2.1667	.271*	.063	.000	.104	.438
	4.00 lowest support gt 2.6667	-.577*	.063	.000	-.744	-.410
4.00 lowest support gt 2.6667	1.00 highest support le 1.8334	1.189*	.063	.000	1.024	1.355
	2.00 second highest le 2.1667	.848*	.067	.000	.671	1.026
	3.00 second lowest le 2.6667	.577*	.063	.000	.410	.744

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

a. Adjustment for multiple comparisons: Sidak.

Univariate Tests

Measure: MEASURE_1

	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Contrast	231.336	3	77.112	125.225	.000	.230
Error	772.814	1255	.616			

The F tests the effect of social support group. This test is based on the linearly independent pairwise comparisons among the estimated marginal means.

3. social support group * depress

Measure: MEASURE_1

social support group	depress	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
1.00 highest support le 1.8334	1	-.385	.049	-.481	-.290
	2	-.564	.046	-.655	-.474
	3	-.509	.048	-.603	-.416
	4	-.595	.046	-.686	-.504
2.00 second highest le 2.1667	1	-.179	.056	-.289	-.068
	2	-.174	.053	-.279	-.069
	3	-.214	.055	-.322	-.107
	4	-.123	.054	-.229	-.018
3.00 second lowest le 2.6667	1	.034	.050	-.063	.131
	2	.111	.047	.019	.203
	3	.111	.048	.016	.205
	4	.138	.047	.046	.231
4.00 lowest support gt 2.6667	1	.599	.056	.489	.710
	2	.722	.053	.617	.827
	3	.683	.055	.575	.791
	4	.698	.054	.593	.804

Post Hoc Tests

socsupgp social support group

Homogeneous Subsets

MEASURE_1

social support group		N	Subset			
			1	2	3	4
Student-Newman-Keuls ^{a,b}	1.00 highest support le 1.8334	363	-.5136132			
	2.00 second highest le 2.1667	272		-.1726154		
	3.00 second lowest le 2.6667	352			.0984554	
	4.00 lowest support gt 2.6667	272				.6758371
	Sig.		1.000	1.000	1.000	1.000
Ryan-Einot-Gabriel- Welsch Range ^{c,d}	1.00 highest support le 1.8334	363	-.5136132			
	2.00 second highest le 2.1667	272		-.1726154		
	3.00 second lowest le 2.6667	352			.0984554	
	4.00 lowest support gt 2.6667	272				.6758371
	Sig.		1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

Based on Type III Sum of Squares

The error term is Mean Square(Error) = .616.

a. Uses Harmonic Mean Sample Size = 308.912.

b. Alpha = .05.

c. Critical values are not monotonic for these data. Substitutions have been made to ensure monotonicity. Type I error is therefore smaller.

Profile Plots

Estimated Marginal Means of MEASURE_1

