

## Exam 2 Part II - Section 1

### Univariate Analysis of Variance

#### Between-Subjects Factors

	Value Label	N
SEX 1.00	male	30
2.00	female	30

#### Descriptive Statistics

Dependent Variable: ANXIETY

SEX	Mean	Std. Deviation	N
male	38.1059	3.0912	30
female	38.6852	4.9272	30
Total	38.3958	4.0884	60

#### Levene's Test of Equality of Error Variances<sup>a</sup>

Dependent Variable: ANXIETY

F	df1	df2	Sig.
9.933	1	58	.003

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+SELFEST+SEX

#### Tests of Between-Subjects Effects

Dependent Variable: ANXIETY

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Eta Squared
Corrected Model	249.916 <sup>b</sup>	2	124.958	9.674	.000	.253
Intercept	1910.503	1	1910.503	147.907	.000	.722
SELFEST	244.883	1	244.883	18.958	.000	.250
SEX	166.644	1	166.644	12.901	.001	.185
Error	736.265	57	12.917			
Total	89439.336	60				
Corrected Total	986.181	59				

Tests of Between-Subjects Effects

Dependent Variable: ANXIETY

Source	Noncent. Parameter	Observed Power <sup>a</sup>
Corrected Model	19.348	.977
Intercept	147.907	1.000
SELFEST	18.958	.990
SEX	12.901	.942
Error		
Total		
Corrected Total		

- a. Computed using alpha = .05
- b. R Squared = .253 (Adjusted R Squared = .227)

Parameter Estimates

Dependent Variable: ANXIETY

Parameter	B	Std. Error	t	Sig.	95% Confidence Interval		Eta Squared
					Lower Bound	Upper Bound	
Intercept	56.000	4.030	13.894	.000	47.929	64.071	.772
SELFEST	<u>-4.354</u>	.101	-4.354	<u>.000</u>	-6.41	-.237	.250
[SEX=1.00]	7.317	2.037	3.592	.001	3.238	11.397	.185
[SEX=2.00]	0 <sup>b</sup>						

Parameter Estimates

Dependent Variable: ANXIETY

Parameter	Noncent. Parameter	Observed Power <sup>a</sup>
Intercept	13.894	1.000
SELFEST	4.354	.990
[SEX=1.00]	3.592	.942
[SEX=2.00]		

- a. Computed using alpha = .05
- b. This parameter is set to zero because it is redundant.

Estimated Marginal Means

SEX

Dependent Variable: ANXIETY

SEX	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
male	42.054 <sup>a</sup>	1.119	39.813	44.296
female	34.737 <sup>a</sup>	1.119	32.496	36.978

- a. Evaluated at covariates appeared in the model: self-esteem = 48.4453.

## Exam 2 Part II - Section 2

### General Linear Model

#### Within-Subjects Factors

Measure: MEASURE\_1

TEST	Dependent Variable
1	ANXIETY
2	DEPRESS
3	SELFEST

#### Between-Subjects Factors

SEX	Value Label	N
1	male	30
2	female	32

#### Descriptive Statistics

	SEX	Mean	Std. Deviation	N
ANXIETY	male	42.29	7.94	30
	female	38.81	11.12	32
	Total	40.49	9.79	62
DEPRESS	male	51.22	12.19	30
	female	40.11	12.41	32
	Total	45.49	13.42	62
SELFEST	male	62.04	7.67	30
	female	38.60	11.84	32
	Total	49.94	15.45	62

#### Box's Test of Equality of Covariance Matrices<sup>a</sup>

Box's M	8.697
F	1.370
df1	6
df2	25776
Sig.	.222

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

a.

Design: Intercept+SEX  
Within Subjects Design: TEST

Multivariate Tests<sup>c</sup>

Effect		Value	F	Hypothesis df	Error df	Sig.
TEST	Pillai's Trace	.460	25.097 <sup>b</sup>	2.000	59.000	.000
	Wilks' Lambda	.540	25.097 <sup>b</sup>	2.000	59.000	.000
	Hotelling's Trace	.851	25.097 <sup>b</sup>	2.000	59.000	.000
	Roy's Largest Root	.851	25.097 <sup>b</sup>	2.000	59.000	.000
TEST * SEX	Pillai's Trace	.461	25.247 <sup>b</sup>	2.000	59.000	.000
	Wilks' Lambda	.539	25.247 <sup>b</sup>	2.000	59.000	.000
	Hotelling's Trace	.856	25.247 <sup>b</sup>	2.000	59.000	.000
	Roy's Largest Root	.856	25.247 <sup>b</sup>	2.000	59.000	.000

**Multivariate Tests<sup>a</sup>**

Effect		Noncent. Parameter	Observed Power <sup>a</sup>
TEST	Pillai's Trace	50.194	1.000
	Wilks' Lambda	50.194	1.000
	Hotelling's Trace	50.194	1.000
	Roy's Largest Root	50.194	1.000
TEST * SEX	Pillai's Trace	50.494	1.000
	Wilks' Lambda	50.494	1.000
	Hotelling's Trace	50.494	1.000
	Roy's Largest Root	50.494	1.000

a. Computed using alpha = .05

b. Exact statistic

c.

Design: Intercept+SEX

Within Subjects Design: TEST

**Mauchly's Test of Sphericity<sup>b</sup>**

Measure: MEASURE\_1

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.
TEST	.946	3.247	2	.195

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

**Mauchly's Test of Sphericity<sup>b</sup>**

Measure: MEASURE\_1

Within Subjects Effect	Epsilon <sup>a</sup>		
	Greenhouse-Geisser	Huynh-Feldt	Lower-bound
TEST	.949	.996	.500

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+SEX

Within Subjects Design: TEST

Tests of Within-Subjects Effects

Measure: MEASURE\_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
TEST	Sphericity Assumed	2956.973	2	1478.487	20.774	.000
	Greenhouse-Geisser	2956.973	1.898	1557.658	20.774	.000
	Huynh-Feldt	2956.973	1.991	1484.951	20.774	.000
	Lower-bound	2956.973	1.000	2956.973	20.774	.000
TEST * SEX	Sphericity Assumed	3140.147	2	1570.074	22.060	.000
	Greenhouse-Geisser	3140.147	1.898	1654.149	22.060	.000
	Huynh-Feldt	3140.147	1.991	1576.939	22.060	.000
	Lower-bound	3140.147	1.000	3140.147	22.060	.000
Error(TEST)	Sphericity Assumed	8540.579	120	71.171		
	Greenhouse-Geisser	8540.579	113.901	74.983		
	Huynh-Feldt	8540.579	119.478	71.483		
	Lower-bound	8540.579	60.000	142.343		

**Tests of Within-Subjects Effects**

Measure: MEASURE\_1

Source		Noncent. Parameter	Observed Power <sup>a</sup>
TEST	Sphericity Assumed	41.547	1.000
	Greenhouse-Geisser	39.435	1.000
	Huynh-Feldt	41.366	1.000
	Lower-bound	20.774	.994
TEST * SEX	Sphericity Assumed	44.121	1.000
	Greenhouse-Geisser	41.878	1.000
	Huynh-Feldt	43.929	1.000
	Lower-bound	22.060	.996
Error(TEST)	Sphericity Assumed		
	Greenhouse-Geisser		
	Huynh-Feldt		
	Lower-bound		

a. Computed using alpha = .05

**Tests of Within-Subjects Contrasts**

Measure: MEASURE\_1

Source	TEST	Type III Sum of Squares	df	Mean Square	F	Sig.
TEST	Linear	2954.754	1	2954.754	49.048	.000
	Quadratic	2.219	1	2.219	.027	.870
TEST * SEX	Linear	3082.651	1	3082.651	51.171	.000
	Quadratic	57.496	1	57.496	.700	.406
Error(TEST)	Linear	3614.520	60	60.242		
	Quadratic	4926.059	60	82.101		

Tests of Within-Subjects Contrasts

Measure: MEASURE\_1

Source	TEST	Noncent. Parameter	Observed Power <sup>a</sup>
TEST	Linear	49.048	1.000
	Quadratic	.027	.053
TEST * SEX	Linear	51.171	1.000
	Quadratic	.700	.131
Error(TEST)	Linear		
	Quadratic		

a. Computed using alpha = .05

Levene's Test of Equality of Error Variances<sup>a</sup>

	F	df1	df2	Sig.
ANXIETY	2.923	1	60	.092
DEPRESS	.050	1	60	.824
SELFEST	3.200	1	60	.079

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a.

Design: Intercept+SEX  
Within Subjects Design: TEST

Tests of Between-Subjects Effects

Measure: MEASURE\_1

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Noncent. Parameter	Observed Power <sup>a</sup>
Intercept	384835.024	1	384835.024	1883.681	.000	1883.681	1.000
SEX	7462.224	1	7462.224	36.526	.000	36.526	1.000
Error	12257.966	60	204.299				

a. Computed using alpha = .05

Estimated Marginal Means

1. SEX

Measure: MEASURE\_1

SEX	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
male	51.847	1.507	48.834	54.861
female	39.173	1.459	36.255	42.091



2. TEST

Measure: MEASURE\_1

TEST	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	40.549	1.235	38.079	43.018
2	45.665	1.563	42.537	48.792
3	50.317	1.276	47.764	52.869

3. SEX \* TEST

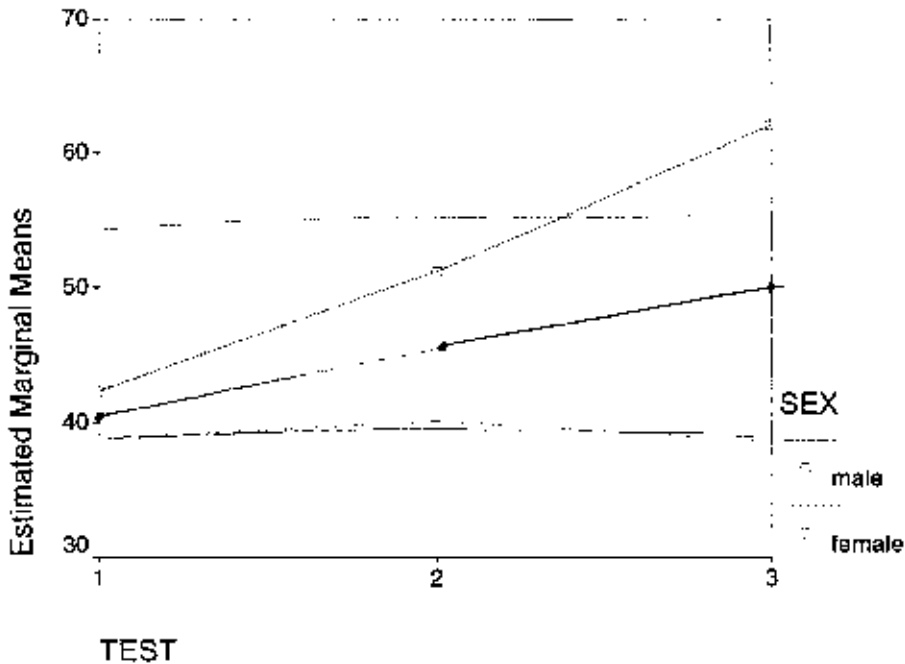
Measure: MEASURE\_1

SEX	TEST	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
male	1	42.291	1.774	38.743	45.839
	2	51.215	2.246	46.722	55.709
	3	62.036	1.834	58.368	65.704
female	1	38.807	1.718	35.371	42.242
	2	40.114	2.175	35.763	44.465
	3	38.598	1.775	35.046	42.149



Profile Plots

Estimated Marginal Means of MEASURE\_1



## Exam 2 Part II - Section 3

### General Linear Model

#### Within-Subjects Factors

Measure	TIME	Dependent Variable
ANXIETY	1	ANXIETY1
	2	ANXIETY2
	3	ANXIETY3
DEPRESS	1	DEPRESS1
	2	DEPRESS2
	3	DEPRESS3

#### Between-Subjects Factors

	Value Label	N
SEX	1 male	30
	2 female	28

#### Descriptive Statistics

	SEX	Mean	Std. Deviation	N
ANXIETY1	male	11.90	5.32	30
	female	13.57	4.63	28
	Total	12.71	5.03	58
ANXIETY2	male	11.40	4.17	30
	female	13.14	4.91	28
	Total	12.24	4.59	58
ANXIETY3	male	11.03	4.83	30
	female	12.32	4.09	28
	Total	11.66	4.50	58
DEPRESS1	male	63.10	9.50	30
	female	63.82	10.18	28
	Total	63.45	9.75	58
DEPRESS2	male	66.50	10.20	30
	female	62.04	9.41	28
	Total	64.34	10.00	58
DEPRESS3	male	63.90	8.63	30
	female	63.71	12.12	28
	Total	63.81	10.37	58

**Box's Test of Equality of Covariance Matrices<sup>a</sup>**

Box's M	15.986
F	.673
df1	21
df2	11412
Sig.	.863

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

a.

Design: Intercept+SEX  
 Within Subjects Design: TIME

**Multivariate Tests<sup>c</sup>**

Effect			Value	F	Hypothesis df	Error df
Between Subjects	Intercept	Pillai's Trace	.988	2315.529 <sup>b</sup>	2.000	55.000
		Wilks' Lambda	.012	2315.529 <sup>b</sup>	2.000	55.000
		Hotelling's Trace	84.201	2315.529 <sup>b</sup>	2.000	55.000
		Roy's Largest Root	84.201	2315.529 <sup>b</sup>	2.000	55.000
	SEX	Pillai's Trace	.060	1.749 <sup>b</sup>	2.000	55.000
		Wilks' Lambda	.940	1.749 <sup>b</sup>	2.000	55.000
		Hotelling's Trace	.064	1.749 <sup>b</sup>	2.000	55.000
		Roy's Largest Root	.064	1.749 <sup>b</sup>	2.000	55.000
Within Subjects	TIME	Pillai's Trace	.044	.617 <sup>b</sup>	4.000	53.000
		Wilks' Lambda	.956	.617 <sup>b</sup>	4.000	53.000
		Hotelling's Trace	.047	.617 <sup>b</sup>	4.000	53.000
		Roy's Largest Root	.047	.617 <sup>b</sup>	4.000	53.000
	TIME * SEX	Pillai's Trace	.061	.867 <sup>b</sup>	4.000	53.000
		Wilks' Lambda	.939	.867 <sup>b</sup>	4.000	53.000
		Hotelling's Trace	.065	.867 <sup>b</sup>	4.000	53.000
		Roy's Largest Root	.065	.867 <sup>b</sup>	4.000	53.000

Multivariate Tests<sup>a</sup>

Effect			Sig.	Eta Squared	Noncent. Parameter	Observed Power <sup>a</sup>
Between Subjects	Intercept	Pillai's Trace	.000	.988	4631.058	1.000
		Wilks' Lambda	.000	.988	4631.058	1.000
		Hotelling's Trace	.000	.988	4631.058	1.000
		Roy's Largest Root	.000	.988	4631.058	1.000
	SEX	Pillai's Trace	.183	.060	3.499	.351
		Wilks' Lambda	.183	.060	3.499	.351
		Hotelling's Trace	.183	.060	3.499	.351
		Roy's Largest Root	.183	.060	3.499	.351
Within Subjects	TIME	Pillai's Trace	.653	.044	2.467	.190
		Wilks' Lambda	.653	.044	2.467	.190
		Hotelling's Trace	.653	.044	2.467	.190
		Roy's Largest Root	.653	.044	2.467	.190
	TIME * SEX	Pillai's Trace	.490	.061	3.466	.257
		Wilks' Lambda	.490	.061	3.466	.257
		Hotelling's Trace	.490	.061	3.466	.257
		Roy's Largest Root	.490	.061	3.466	.257

a. Computed using alpha = .05

b. Exact statistic

c.

Design: Intercept+SEX

Within Subjects Design: TIME

Mauchly's Test of Sphericity<sup>b</sup>

Within Subjects Effect	Measure	Mauchly's W	Approx. Chi-Square	df	Sig.
TIME	ANXIETY	.987	.731	2	.694
	DEPRESS	.899	5.847	2	.053

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

*Time*

**Mauchly's Test of Sphericity<sup>a</sup>**

Within Subjects Effect	Measure	Epsilon <sup>a</sup>		
		Greenhouse-Geisser	Huynh-Feldt	Lower-bound
TIME	ANXIETY	.987	1.000	.500
	DEPRESS	.908	.954	.500

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+SEX

Within Subjects Design: TIME

**Tests of Within-Subjects Effects**

**Multivariate<sup>d,e</sup>**

Within Subjects Effect		Value	F	Hypothesis df	Error df	Sig.
TIME	Pillai's Trace	.020	.580	4.000	224.000	.678
	Wilks' Lambda	.980	.576 <sup>b</sup>	4.000	222.000	.680
	Hotelling's Trace	.021	.573	4.000	220.000	.683
	Roy's Largest Root	.018	1.034 <sup>c</sup>	2.000	112.000	.359
TIME * SEX	Pillai's Trace	.032	.901	4.000	224.000	.464
	Wilks' Lambda	.968	.900 <sup>b</sup>	4.000	222.000	.465
	Hotelling's Trace	.033	.898	4.000	220.000	.466
	Roy's Largest Root	.032	1.787 <sup>c</sup>	2.000	112.000	.172

Multivariate<sup>d,e</sup>

Within Subjects Effect		Eta Squared	Noncent. Parameter	Observed Power <sup>a</sup>
TIME	Pillai's Trace	.010	2.319	.191
	Wilks' Lambda	.010	2.306	.190
	Hotelling's Trace	.010	2.292	.189
	Roy's Largest Root	.018	2.068	.227
TIME * SEX	Pillai's Trace	.016	3.605	.284
	Wilks' Lambda	.016	3.599	.284
	Hotelling's Trace	.016	3.593	.283
	Roy's Largest Root	.031	3.574	.367

a. Computed using alpha = .05

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

d.

Design: Intercept+SEX

Within Subjects Design: TIME

e. Tests are based on averaged variables.

Univariate Tests

Source	Measure		Type III Sum of Squares	df	Mean Square	F
TIME	ANXIETY	Sphericity Assumed	32.606	2	16.303	1.029
		Greenhouse-Geisser	32.606	1.974	16.518	1.029
		Huynh-Feldt	32.606	2.000	16.303	1.029
		Lower-bound	32.606	1.000	32.606	1.029
	DEPRESS	Sphericity Assumed	18.997	2	9.498	.153
		Greenhouse-Geisser	18.997	1.817	10.456	.153
		Huynh-Feldt	18.997	1.908	9.957	.153
		Lower-bound	18.997	1.000	18.997	.153
TIME * SEX	ANXIETY	Sphericity Assumed	1.732	2	.866	.055
		Greenhouse-Geisser	1.732	1.974	.878	.055
		Huynh-Feldt	1.732	2.000	.866	.055
		Lower-bound	1.732	1.000	1.732	.055
	DEPRESS	Sphericity Assumed	222.169	2	111.084	1.787
		Greenhouse-Geisser	222.169	1.817	122.288	1.787
		Huynh-Feldt	222.169	1.908	116.451	1.787
		Lower-bound	222.169	1.000	222.169	1.787
Error(TIME)	ANXIETY	Sphericity Assumed	1774.716	112	15.846	
		Greenhouse-Geisser	1774.716	110.541	16.055	
		Huynh-Feldt	1774.716	112.000	15.846	
		Lower-bound	1774.716	56.000	31.691	
	DEPRESS	Sphericity Assumed	6962.900	112	62.169	
		Greenhouse-Geisser	6962.900	101.739	68.439	
		Huynh-Feldt	6962.900	106.839	65.172	
		Lower-bound	6962.900	56.000	124.337	

**Univariate Tests**

Source	Measure		Sig.	Eta Squared	Noncent. Parameter	Observed Power <sup>a</sup>
TIME	ANXIETY	Sphericity Assumed	.361	.018	2.058	.226
		Greenhouse-Geisser	.360	.018	2.031	.225
		Huynh-Feldt	.361	.018	2.058	.226
		Lower-bound	.315	.018	1.029	.169
	DEPRESS	Sphericity Assumed	.858	.003	.308	.073
		Greenhouse-Geisser	.839	.003	.278	.072
		Huynh-Feldt	.849	.003	.291	.073
		Lower-bound	.697	.003	.153	.067
TIME * SEX	ANXIETY	Sphericity Assumed	.947	.001	.109	.058
		Greenhouse-Geisser	.945	.001	.108	.058
		Huynh-Feldt	.947	.001	.109	.058
		Lower-bound	.816	.001	.055	.056
	DEPRESS	Sphericity Assumed	.172	.031	3.574	.367
		Greenhouse-Geisser	.176	.031	3.246	.349
		Huynh-Feldt	.174	.031	3.409	.358
		Lower-bound	.187	.031	1.787	.260
Error(TIME)	ANXIETY	Sphericity Assumed				
		Greenhouse-Geisser				
		Huynh-Feldt				
		Lower-bound				
	DEPRESS	Sphericity Assumed				
		Greenhouse-Geisser				
		Huynh-Feldt				
		Lower-bound				

a. Computed using alpha = .05

**Tests of Within-Subjects Contrasts**

Source	Measure	TIME	Type III Sum of Squares	df	Mean Square	F	Sig.
TIME	ANXIETY	Linear	32.443	1	32.443	2.183	.145
		Quadratic	.163	1	.163	.010	.922
	DEPRESS	Linear	3.476	1	3.476	.070	.792
		Quadratic	15.520	1	15.520	.208	.650
TIME * SEX	ANXIETY	Linear	1.064	1	1.064	.072	.790
		Quadratic	.668	1	.668	.040	.843
	DEPRESS	Linear	5.959	1	5.959	.120	.730
		Quadratic	216.210	1	216.210	2.896	.094
Error(TIME)	ANXIETY	Linear	832.358	56	14.864		
		Quadratic	942.358	56	16.828		
	DEPRESS	Linear	2781.739	56	49.674		
		Quadratic	4181.161	56	74.664		

Tests of Within-Subjects Contrasts

Source	Measure	TIME	Eta Squared	Noncent. Parameter	Observed Power <sup>a</sup>
TIME	ANXIETY	Linear	.038	2.183	.306
		Quadratic	.000	.010	.051
	DEPRESS	Linear	.001	.070	.058
		Quadratic	.004	.208	.073
TIME * SEX	ANXIETY	Linear	.001	.072	.058
		Quadratic	.001	.040	.054
	DEPRESS	Linear	.002	.120	.063
		Quadratic	.049	2.896	.387
Error(TIME)	ANXIETY	Linear			
		Quadratic			
	DEPRESS	Linear			
		Quadratic			

a. Computed using alpha = .05

Levene's Test of Equality of Error Variances<sup>a</sup>

	F	df1	df2	Sig.
ANXIETY1	.859	1	56	.358
ANXIETY2	.485	1	56	.489
ANXIETY3	.427	1	56	.516
DEPRESS1	.014	1	56	.906
DEPRESS2	.065	1	56	.799
DEPRESS3	1.259	1	56	.267

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a.

Design: Intercept+SEX  
Within Subjects Design: TIME

Tests of Between-Subjects Effects

Transformed Variable: Average

Source	Measure	Type III Sum of Squares	df	Mean Square	F	Sig.	Eta Squared
Intercept	ANXIETY	25986.979	1	25986.979	762.503	.000	.932
	DEPRESS	708417.956	1	708417.956	3971.594	.000	.986
SEX	ANXIETY	106.749	1	106.749	3.132	.082	.053
	DEPRESS	74.507	1	74.507	.418	.521	.007
Error	ANXIETY	1908.544	56	34.081			
	DEPRESS	9988.786	56	178.371			



### Tests of Between-Subjects Effects

Transformed Variable: Average

Source	Measure	Noncent. Parameter	Observed Power <sup>a</sup>
Intercept	ANXIETY	782.503	1.000
	DEPRESS	3971.594	1.000
SEX	ANXIETY	3.132	.413
	DEPRESS	.418	.097
Error	ANXIETY		
	DEPRESS		

a. Computed using alpha = .05

### Estimated Marginal Means

#### 1. SEX

Measure	SEX	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
ANXIETY	male	11.444	.615	10.212	12.677
	female	13.012	.637	11.736	14.288
DEPRESS	male	64.500	1.408	61.680	67.320
	female	63.190	1.457	60.271	66.110

#### 2. TIME

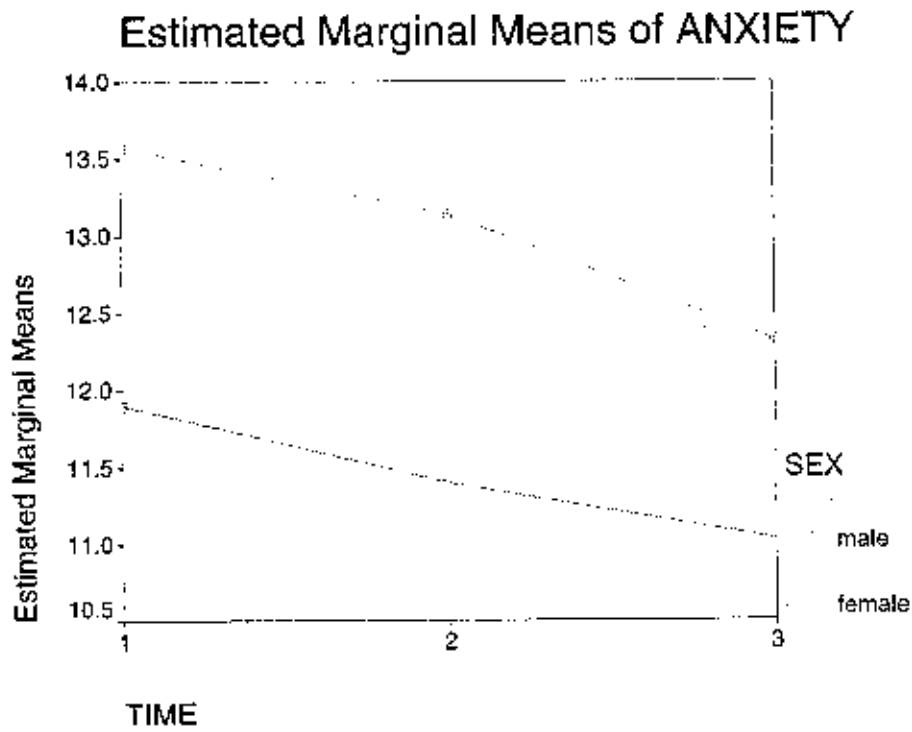
Measure	TIME	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
ANXIETY	1	12.736	.657	11.420	14.051
	2	12.271	.597	11.076	13.467
	3	11.677	.590	10.496	12.859
DEPRESS	1	63.461	1.292	60.873	66.049
	2	64.268	1.291	61.681	66.854
	3	63.807	1.374	61.054	66.560

#### 3. SEX \* TIME

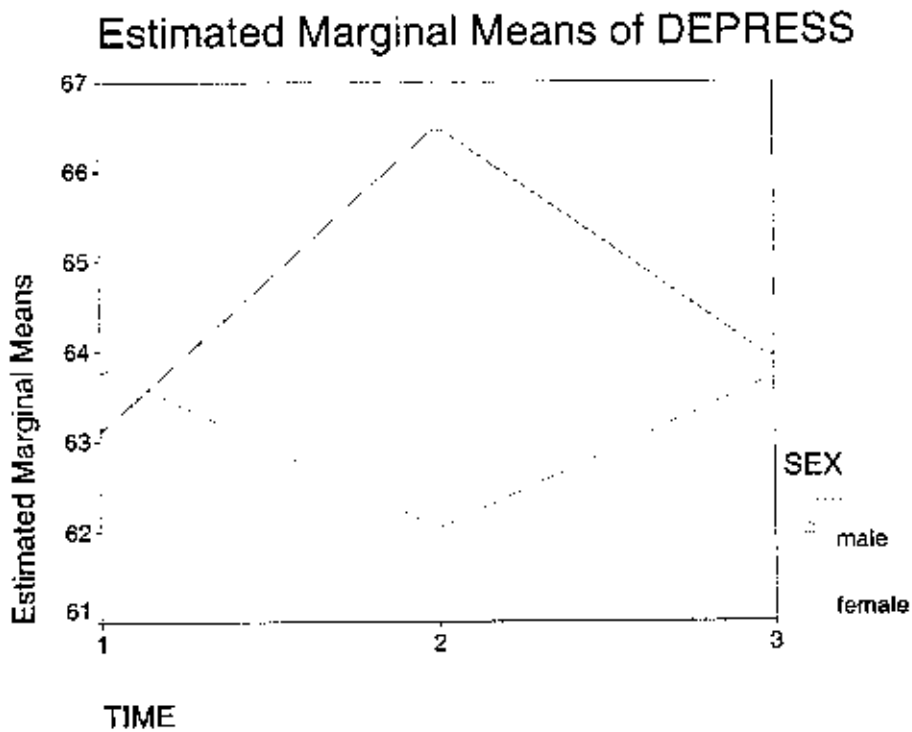
Measure	SEX	TIME	Mean	Std. Error	95% Confidence Interval	
					Lower Bound	Upper Bound
ANXIETY	male	1	11.900	.913	10.072	13.728
		2	11.400	.829	9.739	13.061
		3	11.033	.820	9.391	12.676
	female	1	13.571	.945	11.679	15.464
		2	13.143	.858	11.424	14.862
		3	12.321	.849	10.622	14.021
DEPRESS	male	1	63.100	1.795	59.504	66.696
		2	66.500	1.794	62.906	70.094
		3	63.900	1.910	60.074	67.726
	female	1	63.821	1.858	60.099	67.544
		2	62.036	1.857	58.315	65.756
		3	63.714	1.977	59.754	67.675

## Profile Plots

### ANXIETY



### DEPRESS



## Exam 2 Part II - Section 4

### General Linear Model

#### Between-Subjects Factors

	Value Label	N
SEX	1 male	96
	2 female	101
SES	1 low	65
	2 medium	68
	3 high	64

#### Descriptive Statistics

	SEX	SES	Mean	Std. Deviation	N
ANXIETY	male	low	10.83	5.26	30
		medium	14.94	5.09	32
		high	16.24	5.65	34
		Total	14.11	5.77	96
	female	low	12.20	4.79	35
		medium	10.81	4.48	36
		high	9.03	4.66	30
		Total	10.76	4.77	101
	Total	low	11.57	5.02	65
		medium	12.75	5.18	68
		high	12.86	6.31	64
		Total	12.40	5.53	197
DEPRESS	male	low	12.97	5.08	30
		medium	10.66	4.83	32
		high	13.26	4.99	34
		Total	12.30	5.05	96
	female	low	15.03	3.85	35
		medium	14.75	4.03	36
		high	14.37	4.77	30
		Total	14.73	4.17	101
	Total	low	14.08	4.54	65
		medium	12.82	4.85	68
		high	13.78	4.88	64
		Total	13.55	4.77	197
SELFEST	male	low	49.63	6.81	30
		medium	60.56	8.70	32
		high	66.94	8.94	34
		Total	59.41	10.84	96
	female	low	48.49	9.45	35
		medium	57.42	11.67	36
		high	71.57	12.64	30
		Total	58.52	14.53	101
	Total	low	49.02	8.29	65
		medium	58.90	10.42	68
		high	69.11	10.99	64
		Total	58.95	12.84	197

**Box's Test of Equality of Covariance Matrices<sup>a</sup>**

Box's M	34.415
F	1.101
df1	30
df2	79426
Sig.	.321

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

a. Design: Intercept+SEX+SES+SEX \* SES

**Multivariate Tests<sup>a</sup>**

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.981	3325.956 <sup>b</sup>	3.000	189.000	.000
	Wilks' Lambda	.019	3325.956 <sup>b</sup>	3.000	189.000	.000
	Hotelling's Trace	52.793	3325.956 <sup>b</sup>	3.000	189.000	.000
	Roy's Largest Root	52.793	3325.956 <sup>b</sup>	3.000	189.000	.000
SEX	Pillai's Trace	.167	12.617 <sup>b</sup>	3.000	189.000	.000
	Wilks' Lambda	.833	12.617 <sup>b</sup>	3.000	189.000	.000
	Hotelling's Trace	.200	12.617 <sup>b</sup>	3.000	189.000	.000
	Roy's Largest Root	.200	12.617 <sup>b</sup>	3.000	189.000	.000
SES	Pillai's Trace	.438	17.743	6.000	380.000	.000
	Wilks' Lambda	.572	20.305 <sup>b</sup>	6.000	378.000	.000
	Hotelling's Trace	.732	22.926	6.000	376.000	.000
	Roy's Largest Root	.708	44.838 <sup>c</sup>	3.000	190.000	.000
SEX * SES	Pillai's Trace	.154	5.283	6.000	380.000	.000
	Wilks' Lambda	.850	5.332 <sup>b</sup>	6.000	378.000	.000
	Hotelling's Trace	.172	5.381	6.000	376.000	.000
	Roy's Largest Root	.137	8.696 <sup>c</sup>	3.000	190.000	.000

**Multivariate Tests<sup>d</sup>**

Effect		Eta Squared	Noncent. Parameter	Observed Power <sup>a</sup>
Intercept	Pillai's Trace	.981	9977.868	1.000
	Wilks' Lambda	.981	9977.868	1.000
	Hotelling's Trace	.981	9977.868	1.000
	Roy's Largest Root	.981	9977.868	1.000
SEX	Pillai's Trace	.167	37.851	1.000
	Wilks' Lambda	.167	37.851	1.000
	Hotelling's Trace	.167	37.851	1.000
	Roy's Largest Root	.167	37.851	1.000
SES	Pillai's Trace	.219	106.456	1.000
	Wilks' Lambda	.244	121.830	1.000
	Hotelling's Trace	.268	137.557	1.000
	Roy's Largest Root	.415	134.513	1.000
SEX * SES	Pillai's Trace	.077	31.701	.995
	Wilks' Lambda	.078	31.995	.996
	Hotelling's Trace	.079	32.284	.996
	Roy's Largest Root	.121	26.088	.994

a. Computed using alpha = .05

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

d. Design: Intercept+SEX+SES+SEX \* SES

**Levene's Test of Equality of Error Variances<sup>a</sup>**

	F	df1	df2	Sig.
ANXIETY	.732	5	191	.600
DEPRESS	.558	5	191	.732
SELFEST	1.653	5	191	.148

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+SEX+SES+SEX \* SES

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	ANXIETY	1212.752 <sup>b</sup>	5	242.550	9.707	.000
	DEPRESS	429.301 <sup>c</sup>	5	85.860	4.074	.002
	SELFEST	13551.005 <sup>d</sup>	5	2710.201	27.591	.000
Intercept	ANXIETY	29849.385	1	29849.385	1194.635	.000
	DEPRESS	35749.178	1	35749.178	1696.214	.000
	SELFEST	684598.613	1	684598.613	6969.472	.000
SEX	ANXIETY	540.871	1	540.871	21.647	.000
	DEPRESS	286.769	1	286.769	13.606	.000
	SELFEST	.600	1	.600	.006	.938
SES	ANXIETY	68.456	2	34.228	1.370	.257
	DEPRESS	65.370	2	32.685	1.551	.215
	SELFEST	13087.131	2	6543.566	66.616	.000
SEX * SES	ANXIETY	606.157	2	303.079	12.130	.000
	DEPRESS	77.168	2	38.584	1.831	.163
	SELFEST	529.842	2	264.921	2.897	.070
Error	ANXIETY	4772.365	191	24.986		
	DEPRESS	4025.491	191	21.076		
	SELFEST	18761.584	191	98.228		
Total	ANXIETY	36258.000	197			
	DEPRESS	40615.000	197			
	SELFEST	717008.000	197			
Corrected Total	ANXIETY	5985.117	196			
	DEPRESS	4454.792	196			
	SELFEST	32312.589	196			

Tests of Between-Subjects Effects

Source	Dependent Variable	Eta Squared	Noncent. Parameter	Observed Power <sup>a</sup>
Corrected Model	ANXIETY	.203	48.537	1.000
	DEPRESS	.096	20.369	.950
	SELFEST	.419	137.954	1.000
Intercept	ANXIETY	.862	1194.635	1.000
	DEPRESS	.899	1696.214	1.000
	SELFEST	.973	6969.472	1.000
SEX	ANXIETY	.102	21.647	.996
	DEPRESS	.067	13.606	.956
	SELFEST	.000	.006	.051
SES	ANXIETY	.014	2.740	.292
	DEPRESS	.016	3.102	.327
	SELFEST	.411	133.232	1.000
SEX * SES	ANXIETY	.113	24.260	.995
	DEPRESS	.019	3.661	.379
	SELFEST	.027	5.394	.529
Error	ANXIETY			
	DEPRESS			
	SELFEST			
Total	ANXIETY			
	DEPRESS			
	SELFEST			
Corrected Total	ANXIETY			
	DEPRESS			
	SELFEST			

- a. Computed using alpha = .05
- b. R Squared = .203 (Adjusted R Squared = .182)
- c. R Squared = .096 (Adjusted R Squared = .073)
- d. R Squared = .419 (Adjusted R Squared = .404)

Estimated Marginal Means

1. SEX

Dependent Variable	SEX	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
ANXIETY	male	14.002	.511	12.994	15.010
	female	10.680	.499	9.695	11.664
DEPRESS	male	12.296	.469	11.370	13.221
	female	14.715	.458	13.811	15.619
SELFEST	male	59.046	1.013	57.048	61.043
	female	59.156	.989	57.205	61.108

## 2. SES

Dependent Variable	SES	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
ANXIETY	low	11.517	.622	10.290	12.743
	medium	12.872	.607	11.674	14.069
	high	12.834	.626	11.399	13.869
DEPRESS	low	13.998	.571	12.871	15.124
	medium	12.703	.558	11.603	13.803
	high	13.818	.575	12.682	14.950
SELFEST	low	49.060	1.233	46.628	51.491
	medium	58.990	1.204	56.615	61.364
	high	69.254	1.241	66.805	71.702

## 3. SEX \* SES

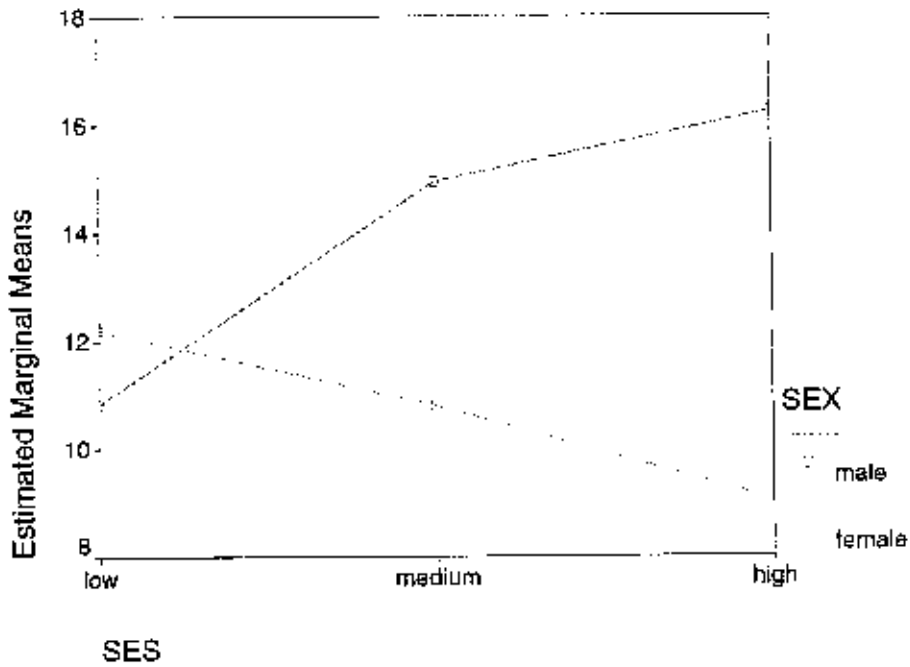
Dependent Variable	SEX	SES	Mean	Std. Error	95% Confidence Interval	
					Lower Bound	Upper Bound
ANXIETY	male	low	10.833	.913	9.033	12.633
		medium	14.937	.884	13.195	16.680
		high	16.235	.857	14.544	17.926
	female	low	12.200	.845	10.533	13.867
		medium	10.806	.833	9.162	12.449
		high	9.033	.913	7.233	10.833
DEPRESS	male	low	12.967	.838	11.313	14.620
		medium	10.656	.812	9.055	12.257
		high	13.265	.787	11.712	14.818
	female	low	15.029	.776	13.498	16.559
		medium	14.750	.765	13.241	16.259
		high	14.367	.838	12.713	16.020
SELFEST	male	low	49.633	1.809	46.064	53.202
		medium	60.563	1.752	57.107	64.018
		high	66.941	1.700	63.589	70.294
	female	low	48.486	1.675	45.181	51.790
		medium	57.417	1.652	54.158	60.675
		high	71.567	1.809	67.998	75.136

## Profile Plots

### ANXIETY

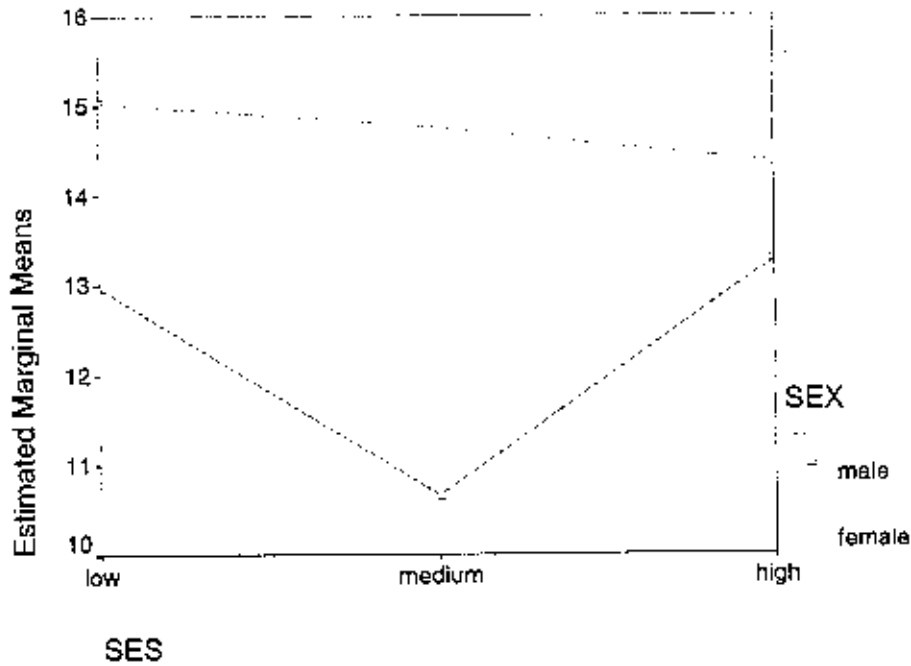


### Estimated Marginal Means of ANXIETY



### DEPRESS

#### Estimated Marginal Means of DEPRESS



### SELFEST

# Estimated Marginal Means of SELFEST

