

General Linear Model

Within-Subjects Factors

| Measure | time | Dependent Variable |
|---------|------|--------------------|
| anti | 1 | anti1 |
| | 2 | anti2 |
| | 3 | anti3 |
| | 4 | anti4 |
| gpa | 1 | gpa1 |
| | 2 | gpa2 |
| | 3 | gpa3 |
| | 4 | gpa4 |

Between-Subjects Factors

| | Value Label | N | |
|--------|-------------|--------|-----|
| gender | 0 | female | 202 |
| | 1 | male | 203 |

Multivariate Tests^b

| Effect | | Value | F | Hypothesis df | Error df | Sig. | | |
|------------------|-----------------|--------------------|--------------------|----------------------|---------------------|---------|---------|------|
| Between Subjects | Intercept | Pillai's Trace | .534 | 230.167 ^a | 2.000 | 401.000 | .000 | |
| | | Wilks' Lambda | .466 | 230.167 ^a | 2.000 | 401.000 | .000 | |
| | | Hotelling's Trace | 1.148 | 230.167 ^a | 2.000 | 401.000 | .000 | |
| | | Roy's Largest Root | 1.148 | 230.167 ^a | 2.000 | 401.000 | .000 | |
| | support | Pillai's Trace | .132 | 30.409 ^a | 2.000 | 401.000 | .000 | |
| | | Wilks' Lambda | .868 | 30.409 ^a | 2.000 | 401.000 | .000 | |
| | | Hotelling's Trace | .152 | 30.409 ^a | 2.000 | 401.000 | .000 | |
| | | Roy's Largest Root | .152 | 30.409 ^a | 2.000 | 401.000 | .000 | |
| | gender | Pillai's Trace | .087 | 19.010 ^a | 2.000 | 401.000 | .000 | |
| | | Wilks' Lambda | .913 | 19.010 ^a | 2.000 | 401.000 | .000 | |
| | | Hotelling's Trace | .095 | 19.010 ^a | 2.000 | 401.000 | .000 | |
| | | Roy's Largest Root | .095 | 19.010 ^a | 2.000 | 401.000 | .000 | |
| | Within Subjects | time | Pillai's Trace | .204 | 16.957 ^a | 6.000 | 397.000 | .000 |
| | | | Wilks' Lambda | .796 | 16.957 ^a | 6.000 | 397.000 | .000 |
| | | | Hotelling's Trace | .256 | 16.957 ^a | 6.000 | 397.000 | .000 |
| | | | Roy's Largest Root | .256 | 16.957 ^a | 6.000 | 397.000 | .000 |
| time * support | | Pillai's Trace | .091 | 6.637 ^a | 6.000 | 397.000 | .000 | |
| | | Wilks' Lambda | .909 | 6.637 ^a | 6.000 | 397.000 | .000 | |
| | | Hotelling's Trace | .100 | 6.637 ^a | 6.000 | 397.000 | .000 | |
| | | Roy's Largest Root | .100 | 6.637 ^a | 6.000 | 397.000 | .000 | |
| time * gender | | Pillai's Trace | .009 | .589 ^a | 6.000 | 397.000 | .739 | |
| | | Wilks' Lambda | .991 | .589 ^a | 6.000 | 397.000 | .739 | |
| | | Hotelling's Trace | .009 | .589 ^a | 6.000 | 397.000 | .739 | |
| | | Roy's Largest Root | .009 | .589 ^a | 6.000 | 397.000 | .739 | |

a. Exact statistic

b. Design: Intercept+support+gender
Within Subjects Design: time

Mauchly's Test of Sphericity^b

| Within Subjects Effect | Measure | Mauchly's W | Approx. Chi-Square | df | Sig. | Epsilon ^a | | |
|------------------------|---------|-------------|--------------------|----|------|----------------------|-------------|-------------|
| | | | | | | Greenhouse-Geisser | Huynh-Feldt | Lower-bound |
| time | anti | .926 | 30.767 | 5 | .000 | .949 | .961 | .333 |
| | gpa | .598 | 205.929 | 5 | .000 | .728 | .735 | .333 |

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

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+support+gender
Within Subjects Design: time

Tests of Within-Subjects Effects

Multivariate^{c,d}

| Within Subjects Effect | | Value | F | Hypothesis df | Error df | Sig. |
|------------------------|--------------------|-------|---------------------|---------------|----------|------|
| time | Pillai's Trace | .128 | 27.501 | 6.000 | 2412.000 | .000 |
| | Wilks' Lambda | .872 | 28.441 ^a | 6.000 | 2410.000 | .000 |
| | Hotelling's Trace | .146 | 29.381 | 6.000 | 2408.000 | .000 |
| | Roy's Largest Root | .145 | 58.273 ^b | 3.000 | 1206.000 | .000 |
| time * support | Pillai's Trace | .043 | 8.825 | 6.000 | 2412.000 | .000 |
| | Wilks' Lambda | .957 | 8.909 ^a | 6.000 | 2410.000 | .000 |
| | Hotelling's Trace | .045 | 8.993 | 6.000 | 2408.000 | .000 |
| | Roy's Largest Root | .044 | 17.676 ^b | 3.000 | 1206.000 | .000 |
| time * gender | Pillai's Trace | .003 | .517 | 6.000 | 2412.000 | .796 |
| | Wilks' Lambda | .997 | .517 ^a | 6.000 | 2410.000 | .796 |
| | Hotelling's Trace | .003 | .516 | 6.000 | 2408.000 | .796 |
| | Roy's Largest Root | .002 | .618 ^b | 3.000 | 1206.000 | .604 |

a. Exact statistic

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

c. Design: Intercept+support+gender
Within Subjects Design: time

d. Tests are based on averaged variables.

Univariate Tests

| Source | Measure | | Type III Sum of Squares | df | Mean Square | F | Sig. | |
|---------------|----------------|--------------------|-------------------------|----------|-------------|--------|-------|------|
| time | anti | Sphericity Assumed | 25.435 | 3 | 8.478 | 5.528 | .001 | |
| | | Greenhouse-Geisser | 25.435 | 2.847 | 8.935 | 5.528 | .001 | |
| | | Huynh-Feldt | 25.435 | 2.883 | 8.821 | 5.528 | .001 | |
| | | Lower-bound | 25.435 | 1.000 | 25.435 | 5.528 | .019 | |
| | gpa | Sphericity Assumed | 52.097 | 3 | 17.366 | 54.776 | .000 | |
| | | Greenhouse-Geisser | 52.097 | 2.183 | 23.865 | 54.776 | .000 | |
| | | Huynh-Feldt | 52.097 | 2.206 | 23.613 | 54.776 | .000 | |
| | | Lower-bound | 52.097 | 1.000 | 52.097 | 54.776 | .000 | |
| | time * support | anti | Sphericity Assumed | 13.007 | 3 | 4.336 | 2.827 | .037 |
| | | | Greenhouse-Geisser | 13.007 | 2.847 | 4.569 | 2.827 | .040 |
| | | | Huynh-Feldt | 13.007 | 2.883 | 4.511 | 2.827 | .040 |
| | | | Lower-bound | 13.007 | 1.000 | 13.007 | 2.827 | .093 |
| gpa | | Sphericity Assumed | 13.861 | 3 | 4.620 | 14.574 | .000 | |
| | | Greenhouse-Geisser | 13.861 | 2.183 | 6.350 | 14.574 | .000 | |
| | | Huynh-Feldt | 13.861 | 2.206 | 6.283 | 14.574 | .000 | |
| | | Lower-bound | 13.861 | 1.000 | 13.861 | 14.574 | .000 | |
| time * gender | | anti | Sphericity Assumed | 2.783 | 3 | .928 | .605 | .612 |
| | | | Greenhouse-Geisser | 2.783 | 2.847 | .978 | .605 | .603 |
| | | | Huynh-Feldt | 2.783 | 2.883 | .965 | .605 | .605 |
| | | | Lower-bound | 2.783 | 1.000 | 2.783 | .605 | .437 |
| | gpa | Sphericity Assumed | .405 | 3 | .135 | .425 | .735 | |
| | | Greenhouse-Geisser | .405 | 2.183 | .185 | .425 | .671 | |
| | | Huynh-Feldt | .405 | 2.206 | .183 | .425 | .673 | |
| | | Lower-bound | .405 | 1.000 | .405 | .425 | .515 | |
| | Error(time) | anti | Sphericity Assumed | 1849.717 | 1206 | 1.534 | | |
| | | | Greenhouse-Geisser | 1849.717 | 1144.408 | 1.616 | | |
| | | | Huynh-Feldt | 1849.717 | 1159.157 | 1.596 | | |
| | | | Lower-bound | 1849.717 | 402.000 | 4.601 | | |
| gpa | | Sphericity Assumed | 382.342 | 1206 | .317 | | | |
| | | Greenhouse-Geisser | 382.342 | 877.562 | .436 | | | |
| | | Huynh-Feldt | 382.342 | 886.927 | .431 | | | |
| | | Lower-bound | 382.342 | 402.000 | .951 | | | |

Tests of Within-Subjects Contrasts

| Source | Measure | time | Type III Sum of Squares | df | Mean Square | F | Sig. | |
|---------------|----------------|-----------|-------------------------|---------|-------------|--------|-------|------|
| time | anti | Linear | 25.041 | 1 | 25.041 | 13.451 | .000 | |
| | | Quadratic | .393 | 1 | .393 | .282 | .596 | |
| | | Cubic | .002 | 1 | .002 | .001 | .972 | |
| | gpa | Linear | 49.625 | 1 | 49.625 | 90.307 | .000 | |
| | | Quadratic | 2.242 | 1 | 2.242 | 10.178 | .002 | |
| | | Cubic | .230 | 1 | .230 | 1.266 | .261 | |
| | time * support | anti | Linear | 12.391 | 1 | 12.391 | 6.656 | .010 |
| | | | Quadratic | .591 | 1 | .591 | .425 | .515 |
| | | | Cubic | .025 | 1 | .025 | .018 | .892 |
| gpa | | Linear | 13.010 | 1 | 13.010 | 23.675 | .000 | |
| | | Quadratic | .032 | 1 | .032 | .146 | .702 | |
| | | Cubic | .819 | 1 | .819 | 4.519 | .034 | |
| time * gender | | anti | Linear | 1.277 | 1 | 1.277 | .686 | .408 |
| | | | Quadratic | 1.483 | 1 | 1.483 | 1.065 | .303 |
| | | | Cubic | .023 | 1 | .023 | .017 | .895 |
| | gpa | Linear | .083 | 1 | .083 | .151 | .698 | |
| | | Quadratic | .127 | 1 | .127 | .578 | .447 | |
| | | Cubic | .194 | 1 | .194 | 1.071 | .301 | |
| | Error(time) | anti | Linear | 748.368 | 402 | 1.862 | | |
| | | | Quadratic | 559.599 | 402 | 1.392 | | |
| | | | Cubic | 541.750 | 402 | 1.348 | | |
| gpa | | Linear | 220.904 | 402 | .550 | | | |
| | | Quadratic | 88.565 | 402 | .220 | | | |
| | | Cubic | 72.872 | 402 | .181 | | | |

Tests of Between-Subjects Effects

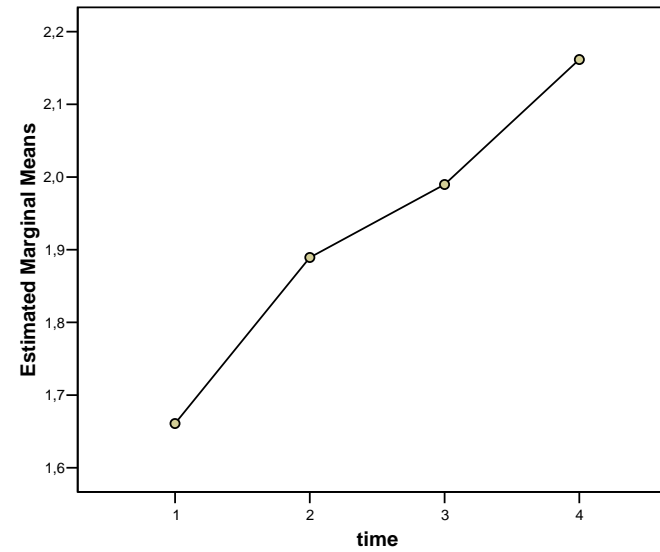
Transformed Variable: Average

| Source | Measure | Type III Sum of Squares | df | Mean Square | F | Sig. |
|-----------|---------|-------------------------|-----|-------------|---------|------|
| Intercept | anti | 1225.785 | 1 | 1225.785 | 158.074 | .000 |
| | gpa | 840.817 | 1 | 840.817 | 237.754 | .000 |
| support | anti | 346.179 | 1 | 346.179 | 44.642 | .000 |
| | gpa | 87.130 | 1 | 87.130 | 24.637 | .000 |
| gender | anti | 295.168 | 1 | 295.168 | 38.064 | .000 |
| | gpa | 4.395 | 1 | 4.395 | 1.243 | .266 |
| Error | anti | 3117.309 | 402 | 7.754 | | |
| | gpa | 1421.674 | 402 | 3.537 | | |

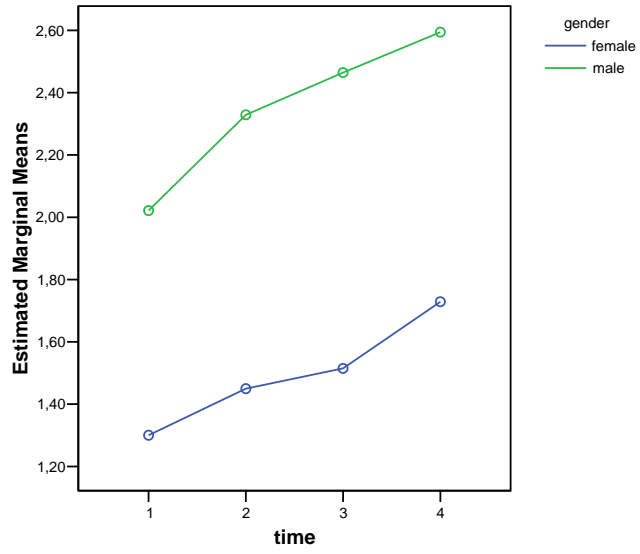
Profile Plots

anti

Estimated Marginal Means of anti

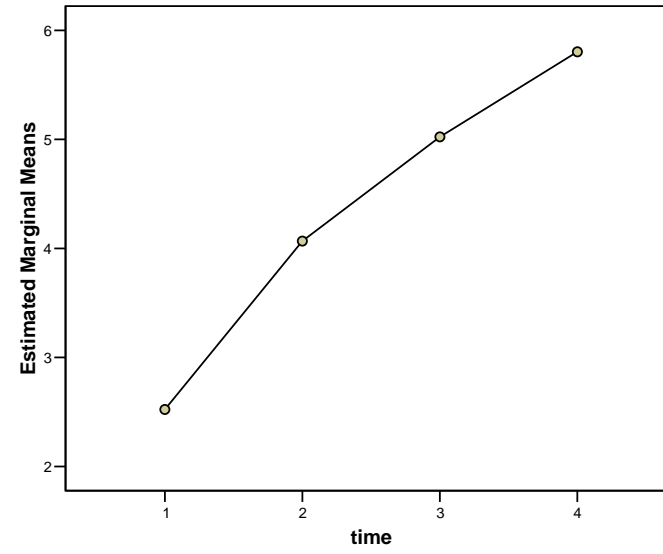


Estimated Marginal Means of anti



gpa

Estimated Marginal Means of gpa



Estimated Marginal Means of gpa

