

### Univariate Analysis of Variance

[DataSet1] C:\Documents and Settings\jelhai\My Documents\My Docs #1\Business\Teaching\\_USD\Multivariate Stats\Computer Examples\Chapter6 Ancova Ex\Chapter 6 Ancova Ex Data.sav

#### Between-Subjects Factors

|        | Value  | N   |
|--------|--------|-----|
| gender | Female | 135 |
| 1      | Male   | 52  |

#### Tests of Between-Subjects Effects

Dependent Variable: atspphot

| Source          | Type III Sum of Squares | df  | Mean Square | F      | Sig. | Partial Eta Squared |
|-----------------|-------------------------|-----|-------------|--------|------|---------------------|
| Corrected Model | 73.138 <sup>a</sup>     | 1   | 73.138      | 2.425  | .121 | .013                |
| Intercept       | 60909.3                 | 1   | 60909.3     | 2019.9 | .000 | .916                |
| gender          | 73.138                  | 1   | 73.138      | 2.425  | .121 | .013                |
| Error           | 5578.568                | 185 | 30.154      |        |      |                     |
| Total           | 83855.4                 | 187 |             |        |      |                     |
| Corrected Total | 5651.706                | 186 |             |        |      |                     |

a. R Squared = .013 (Adjusted R Squared = .008)

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#### Between-Subjects Factors

|        | Value  | N   |
|--------|--------|-----|
| gender | Female | 135 |
| 1      | Male   | 52  |

#### Tests of Between-Subjects Effects

Dependent Variable: atspphot

| Source          | Type III Sum of Squares | df  | Mean Square | F       | Sig. | Partial Eta Squared |
|-----------------|-------------------------|-----|-------------|---------|------|---------------------|
| Corrected Model | 213.270 <sup>a</sup>    | 2   | 106.635     | 3.608   | .029 | .038                |
| Intercept       | 6573.532                | 1   | 6573.53     | 222.404 | .000 | .547                |
| age             | 140.132                 | 1   | 140.132     | 4.741   | .031 | .025                |
| gender          | 90.145                  | 1   | 90.145      | 3.050   | .082 | .016                |
| Error           | 5438.436                | 184 | 29.557      |         |      |                     |
| Total           | 83855.4                 | 187 |             |         |      |                     |
| Corrected Total | 5651.706                | 186 |             |         |      |                     |

a. R Squared = .038 (Adjusted R Squared = .027)

### Univariate Analysis of Variance

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#### Between-Subjects Factors

|         | Value     | N   |
|---------|-----------|-----|
| gender  | Female    | 135 |
| 1       | Male      | 52  |
| marital | unmarried | 77  |
| 1       | married   | 110 |
| 1       | current   |     |
| 1       | Y         |     |

Tests of Between-Subjects Effects

Dependent Variable: atspph1ot

| Source           | Type III Sum of Squares | df  | Mean Square | F       | Sig. | Partial Eta Squared |
|------------------|-------------------------|-----|-------------|---------|------|---------------------|
| Corrected Model  | 314.628 <sup>a</sup>    | 4   | 78.657      | 2.682   | .033 | .056                |
| Intercept        | 6660.334                | 1   | 6660.33     | 227.124 | .000 | .555                |
| age              | 94.712                  | 1   | 94.712      | 3.230   | .074 | .017                |
| gender           | 60.983                  | 1   | 60.983      | 2.080   | .151 | .011                |
| marital          | 15.036                  | 1   | 15.036      | .513    | .475 | .003                |
| gender * marital | 34.229                  | 1   | 34.229      | 1.167   | .281 | .006                |
| Error            | 5337.078                | 182 | 29.325      |         |      |                     |
| Total            | 83855.4                 | 187 |             |         |      |                     |
| Corrected Total  | 5651.706                | 186 |             |         |      |                     |

a. R Squared = .056 (Adjusted R Squared = .035)

Regression

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Variables Entered/Removed<sup>b</sup>

| Model | Variables Entered  | Variables Removed | Method |
|-------|--|-------------------|--------|
| 1     | Zscore: age  |                   | Enter  |
| 2     | gender, genderxm arital, <sup>a</sup> marital <sup>a</sup> |                   | Enter  |

- a. All requested variables entered.
- b. Dependent Variable: atspph1ot

Model Summary

| Model | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1     | .148 <sup>a</sup> | .022     | .016              | 5.46665                    |
| 2     | .236 <sup>b</sup> | .056     | .035              | 5.41522                    |

Model Summary

| Model | Change Statistics |          |     |     |               |
|-------|-------------------|----------|-----|-----|---------------|
|       | R Square Change   | F Change | df1 | df2 | Sig. F Change |
| 1     | .022              | 4.120    | 1   | 185 | .044          |
| 2     | .034              | 2.177    | 3   | 182 | .092          |

- a. Predictors: (Constant), Zscore: age
- b. Predictors: (Constant), Zscore: age, gender, genderxm arital, marital

ANOVA<sup>c</sup>

| Model | Sum of Squares                  | df                              | Mean Square     | F                 | Sig.                       |
|-------|---------------------------------|---------------------------------|-----------------|-------------------|----------------------------|
| 1     | Regression<br>Residual<br>Total | 123.125<br>5528.581<br>5651.706 | 1<br>185<br>186 | 123.125<br>29.884 | 4.120<br>.044 <sup>a</sup> |
| 2     | Regression<br>Residual<br>Total | 314.628<br>5337.078<br>5651.706 | 4<br>182<br>186 | 78.657<br>29.325  | 2.682<br>.033 <sup>b</sup> |

- a. Predictors: (Constant), Zscore: age
- b. Predictors: (Constant), Zscore: age, gender, genderxm arital, marital
- c. Dependent Variable: atspph1ot

Coefficients<sup>a</sup>

| Model | Unstandardized Coefficients                                       | Standardized Coefficients                   | t                                       | Sig.                                 |
|-------|---|---|---|--------------------------------------|
|       |   |   |   |                                      |
| 1     | (Constant)<br>Zscore: age   | .400<br>.401                                | 51.156<br>2.030                         | .000<br>.044                         |
| 2     | (Constant)<br>Zscore: age<br>gender<br>marital<br>genderxm arital | 19.940<br>.738<br>-1.600<br>-2.426<br>2.090 | .693<br>.411<br>1.600<br>3.527<br>1.935 | .000<br>.074<br>.827<br>.492<br>.281 |

**Coefficients<sup>a</sup>**

| Model   | Correlations |         |       |
|---|--------------|---------|-------|
|   | Zero-order   | Partial | Part  |
| 1<br>(Constant)<br>Zscore: age  |              |         |       |
|   | .148         | .148    | .148  |
| 2<br>(Constant)<br>Zscore: age<br>gender<br>marital<br>genderxmarital |              |         |       |
|   | .148         | .132    | .129  |
|   |              | -.114   | -.016 |
|   |              | .121    | -.051 |
|   |              | .174    | .080  |
|   |              |         | .078  |

a. Dependent Variable: atsphtot

**Excluded Variables<sup>b</sup>**

| Model          | Beta In            | t      | Sig. | Partial<br>Correlation | Collinearity<br>Statistics |      |
|----------------|--------------------|--------|------|------------------------|----------------------------|------|
|                |                    |        |      |                        | Tolerance                  | Sig. |
| 1              |                    |        |      |                        |                            |      |
| gender         | -.127 <sup>a</sup> | -1.746 | .082 | -.128                  | .993                       | .993 |
| marital        | .089 <sup>a</sup>  | 1.193  | .234 | .088                   | .938                       | .938 |
| genderxmarital | .149 <sup>a</sup>  | 2.027  | .044 | .148                   | .957                       | .957 |

a. Predictors in the Model: (Constant), Zscore: age

b. Dependent Variable: atsphtot