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EDG500

4/11/23

SPSS Chapter 15

**Descriptives**

Reported Pain Level

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|---|---|---|---|---|---|---|---|---|
| | | | | | Lower Bound | Upper Bound | | |
| Low Dosage | 3 | 7.0000 | 1.00000 | .57735 | 4.5159 | 9.4841 | 6.00 | 8.00 |
| Moderate Dosage | 3 | 5.6667 | 2.08167 | 1.20185 | .4955 | 10.8378 | 4.00 | 8.00 |
| High Dosage | 3 | 2.0000 | 1.00000 | .57735 | -.4841 | 4.4841 | 1.00 | 3.00 |
| Total | 9 | 4.8889 | 2.57121 | .85707 | 2.9125 | 6.8653 | 1.00 | 8.00 |

**ANOVA**

Reported Pain Level

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 40.222 | 2 | 20.111 | 9.526 | .014 |
| Within Groups | 12.667 | 6 | 2.111 | | |
| Total | 52.889 | 8 | | | |

**Post Hoc Tests**

**Multiple Comparisons**

Dependent Variable: Reported Pain Level

Tukey HSD

| (I) Dosage Level | (J) Dosage Level | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|---|---|---|---|---|---|---|
| | | | | | Lower Bound | Upper Bound |
| Low Dosage | Moderate Dosage | 1.33333 | 1.18634 | .535 | -2.3067 | 4.9734 |
| | High Dosage | 5.00000* | 1.18634 | .013 | 1.3600 | 8.6400 |
| Moderate Dosage | Low Dosage | -1.33333 | 1.18634 | .535 | -4.9734 | 2.3067 |
| | High Dosage | 3.66667* | 1.18634 | .049 | .0266 | 7.3067 |
| High Dosage | Low Dosage | -5.00000* | 1.18634 | .013 | -8.6400 | -1.3600 |
| | Moderate Dosage | -3.66667* | 1.18634 | .049 | -7.3067 | -.0266 |

*. The mean difference is significant at the 0.05 level.

**Homogeneous Subsets**

**Reported Pain Level**

Tukey HSD[a]

| Dosage Level | N | Subset for alpha = 0.05 | |
|---|---|---|---|
| | | 1 | 2 |
| High Dosage | 3 | 2.0000 | |
| Moderate Dosage | 3 | | 5.6667 |
| Low Dosage | 3 | | 7.0000 |
| Sig. | | 1.000 | .535 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

*Figure 15.7.* SPSS Statistics output for a one-way ANOVA.

Chapter 15 Exercise

**Descriptives**

Hours of Internet Usage

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|---|---|---|---|---|---|---|---|---|
| | | | | | Lower Bound | Upper Bound | | |
| Low SES | 4 | 10.0000 | 1.82574 | .91287 | 7.0948 | 12.9052 | 8.00 | 12.00 |
| Middle SES | 4 | 12.2500 | 1.70783 | .85391 | 9.5325 | 14.9675 | 10.00 | 14.00 |
| High SES | 4 | 12.0000 | 2.16025 | 1.08012 | 8.5626 | 15.4374 | 10.00 | 15.00 |
| Total | 12 | 11.4167 | 2.02073 | .58333 | 10.1328 | 12.7006 | 8.00 | 15.00 |

**ANOVA**

Hours of Internet Usage

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 12.167 | 2 | 6.083 | 1.672 | .241 |
| Within Groups | 32.750 | 9 | 3.639 | | |
| Total | 44.917 | 11 | | | |

**Post Hoc Tests**

**Multiple Comparisons**

Dependent Variable: Hours of Internet Usage

Tukey HSD

| (I) Socioeconomic Status | (J) Socioeconomic Status | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|---|---|---|---|---|---|---|
| | | | | | Lower Bound | Upper Bound |
| Low SES | Middle SES | -2.25000 | 1.34887 | .269 | -6.0160 | 1.5160 |
| | High SES | -2.00000 | 1.34887 | .343 | -5.7660 | 1.7660 |
| Middle SES | Low SES | 2.25000 | 1.34887 | .269 | -1.5160 | 6.0160 |
| | High SES | .25000 | 1.34887 | .981 | -3.5160 | 4.0160 |
| High SES | Low SES | 2.00000 | 1.34887 | .343 | -1.7660 | 5.7660 |
| | Middle SES | -.25000 | 1.34887 | .981 | -4.0160 | 3.5160 |

**Homogeneous Subsets**

**Hours of Internet Usage**

Tukey HSD[a]

| Socioeconomic Status | N | Subset for alpha = 0.05 |
|---|---|---|
| | | 1 |
| Low SES | 4 | 10.0000 |
| High SES | 4 | 12.0000 |
| Middle SES | 4 | 12.2500 |
| Sig. | | .269 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 4.000.

*Figure 15.8.* SPSS Statistics output for one-way ANOVA and Turkey Chart comparing means of internet usage among three groups of socioeconomic status.

A. The mean for the low SES is 10.00.
B) The mean for the middle SES is 12.25.
C) The mean for the high SES is 12.00.
D) The value of *F* is 1.672
E) The Sig. is .241
F) The differences are not statistically significant at the .05 level.
G) Weekly hours of internet usage was reported among three levels of socioeconomic status. Low, Middle and High. The mean for the High SES was 12.00 (*sd* =2.16). The mean for the Middle SES was 12.25 (*sd* = 1.71). The mean for the Low SES was 10.00 (*sd* = 1.83). The differences among the means is not statistically significant at the .05 level (F [2,9] = 1.67, p = 2.41).