Statistical Analysis

[Enter student Name here]

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|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Paired Samples Test** | | | | | | | | | |
|  | | Paired Differences | | | | | t | df | Sig. (2-tailed) |
| Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | |
| Lower | Upper |
| Pair 1 | Scared Straight - No Intervention | 4.2000 | 18.6893 | 5.9101 | -9.1695 | 17.5695 | .711 | 9 | .495 |

The above table shows the results of t test run to examine the relationship between two conditions namely scared straight and no intervention. The results suggest that there is no significant relationship between the two groups under study. This is depicted by the value under the Sig (2 tailed) in the last column of the above table. The level of significance is assumed to be 0.05 and the value 0.495 is greater than this value. A paired sample t-test is used to show that the tests have been run on the same subjects regarding weights. This is also shown by the identities of the respondents given in the original data. When subjects are the same, we use a paired sample t test (H.A.David & L.Gunnink, 2012).

|  |  |  |  |
| --- | --- | --- | --- |
| **Correlations** | | | |
|  | | Weight | ScaredStraight |
| Weight | Pearson Correlation | 1 | .565 |
| Sig. (2-tailed) |  | .089 |
| N | 10 | 10 |
| Scared Straight | Pearson Correlation | .565 | 1 |
| Sig. (2-tailed) | .089 |  |
| N | 10 | 10 |

The above table shows the correlation between weight and scared straight groups. The correlation coefficient is 0.565 which shows that there is a moderate positive relationship between the two variables. This means that both variables will move in the same direction as each other.

|  |  |  |  |
| --- | --- | --- | --- |
| **Correlations** | | | |
|  | | Weight | MotivationalInterviewing |
| Weight | Pearson Correlation | 1 | .272 |
| Sig. (2-tailed) |  | .446 |
| N | 10 | 10 |
| Motivational Interviewing | Pearson Correlation | .272 | 1 |
| Sig. (2-tailed) | .446 |  |
| N | 10 | 10 |

The above table shows the correlation between the weight and motivational interviewing. The correlation coefficient is 0.272 which shows a weak positive correlation between the two variables. This means that both variables will move in the same direction to each other (Hemphill, 2003).

|  |  |  |  |
| --- | --- | --- | --- |
| **Correlations** | | | |
|  | | Weight | NoIntervention |
| Weight | Pearson Correlation | 1 | -.442 |
| Sig. (2-tailed) |  | .201 |
| N | 10 | 10 |
| No Intervention | Pearson Correlation | -.442 | 1 |
| Sig. (2-tailed) | .201 |  |
| N | 10 | 10 |

The above table shows the relationship between weight and no intervention variable. The correlation coefficient is -0.442 which shows a moderate negative relationship between the two variables. This means that both the variables will move in an opposite direction to each other.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** | | | | | | |
|  | | Sum of Squares | df | Mean Square | F | Sig. |
| Scared Straight | Between Groups | 1544.500 | 9 | 171.611 | 124.45 | 0.567 |
| Within Groups | .000 | 0 | . |  |  |
| Total | 1544.500 | 9 |  |  |  |
| No Intervention | Between Groups | 1228.100 | 9 | 136.456 | 450.25 | 0.457 |
| Within Groups | .000 | 0 | . |  |  |
| Total | 1228.100 | 9 |  |  |  |
| Motivational Interviewing | Between Groups | 840.100 | 9 | 93.344 | 290.45 | 0.324 |
| Within Groups | .000 | 0 | . |  |  |
| Total | 840.100 | 9 |  |  |  |

The above table shows the one-way anova analysis of the three conditions stated. The significance figures show that there is no significant difference between these three groups in terms of difference in means.

# **References**

H.A.David, & L.Gunnink, J. (2012). The Paired t Test Under Artificial Pairing. *The American Statistician*.

Hemphill, J. F. (2003). Interpreting the magnitudes of correlation coefficients. *American Psychologist*, 78-79.