**STA 544 Critical Assignment**

**PART 1: Analysis of CHIS Data (data available on Blackboard).** You will need SPSS to open the data set. This is a CHIS data on California Teen’s health for 2013.

1. Look through the data set (TEEN.sav) and pick at least 2 variables you would like to test.

2. Write a null and research hypothesis for the variables. 

3. Identify the variables measurement level (e.g. nominal, ordinal, ratio, and or interval).

4. Based on how your variables were measured, pick a couple of tests we have covered in the class and run your analysis (use the 'Tests' excel provided under lecture to help you choose the appropriate tests to run). Also include graphs in your analysis.

5. Interpret your analysis and tables. To run any statistical test, remember, you would need at least 2 variables (you can also run multiple variables), you have free reign on which variables you want to test from the data available on Blackboard.

6: Conclusions: Using the 10 steps for testing hypotheses (list all the ten steps and provide the answer under each), determine if the null hypothesis can be rejected or fail to be rejected.

**PART 2: Interpretation of Tables and Graphs.** Interpret each diagram by following the instructions provided above it.

1. Interpret the following table. Write a thorough interpretation of the table below it.

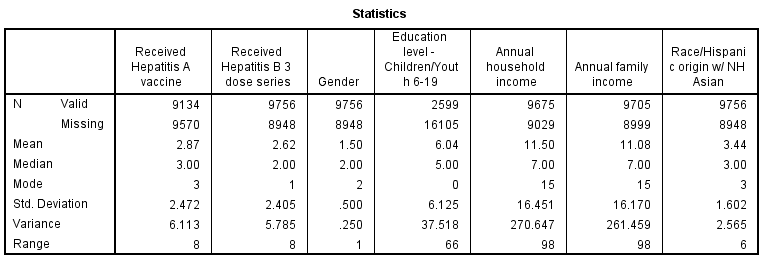
|  |  |  |
| --- | --- | --- |
| How many minutes do you usually exercise per session? (Please choose only one answer) | | |
| Answer Options | Response Percent | Response Count |
| Less than 30 minutes | 12.6% | 146 |
| 30 to 45 minutes | 29.0% | 336 |
| 46 to 60 minutes | 36.8% | 426 |
| 61 to 90 minutes | 17.3% | 200 |
| 91 to 120 minutes | 3.2% | 37 |
| over 120 minutes | 1.3% | 15 |
| answered question | | 1157 |
|  | | 158 |

2. The following tables display the relationship between two variables, the quality of marriage and the quality of parent–child relationships. Interpret the tables:

|  |  |  |  |
| --- | --- | --- | --- |
| **Statistics** | | | |
|  | | QualityofMarriage | QualityofChildRelationship |
| N | Valid | 30 | 30 |
| Missing | 0 | 0 |
| Mean | | 78.53 | 41.27 |
| Median | | 77.50 | 42.00 |
| Mode | | 76 | 33a |
| Std. Deviation | | 12.528 | 11.169 |
| Variance | | 156.947 | 124.754 |
| Range | | 55 | 47 |
| a. Multiple modes exist. The smallest value is shown | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Correlations** | | | |
|  | | QualityofMarriage | QualityofChildRelationship |
| QualityofMarriage | Pearson Correlation | 1 | .437\* |
| Sig. (2-tailed) |  | .016 |
| N | 30 | 30 |
| QualityofChildRelationship | Pearson Correlation | .437\* | 1 |
| Sig. (2-tailed) | .016 |  |
| N | 30 | 30 |

3. Tell me what type of statistical test was run and what are the variables? Then interpret the data.



1. Describe the shape of this histogram with reference to its central location, spread, skew, and kurtosis.

