Data Analysis

Assignment number 2

(Alternative / compulsory for all)

Significant tests

This assignment will examine students experience in performing significant tests; one sample t-test, independent sample t-test, dependent(Paired) sample t-test, ANOVA test, and chi-square test and others.

The questions below are to be analyzed based on the file World95\_data.sav

1. **Compare the literacy status reported in the data set based on religion;**

* **How do we compare the literacy rate of countries with majority of Muslims, Jews, Hindu, Catholic and protestant?**

**Research Question: is there a significant difference in literacy mean among countries with majority of Muslims, Jews, Hindu, Catholic and protestant?**

**What is the Test Name you use, write down the Null Hypothesis**

**What is the Output**

**What is the Explanation**

**Display average literacy rate (Average) for each of mentioned Relegions**

**Which country has**

**Most Literacy rate mean ==>**

**Least Literacy rate mean ==>**

1. **Compare the literacy rate average of Catholic with [protestant, and Orthodox].**

**Research Question: is there a significant difference in literacy rate mean between countries with majority of Catholic and [protestant, and Orthodox].**

**What is the Test Name you use, write down the Null Hypothesis**

**What is the Output**

**What is the Explanation?**

* **How to Divide literacy into 4 segments, 0-25, 25-50, 50-75, 75-100**

1. **Test the following hypotheses based on the data listed in the file**

**Research Question: Is there a significant difference in life expectancy mean of males between Middle East and Latin America.**

**What is the Test Name you use, write down the Null Hypothesis**

**What is the Output?**

**What is the Explanation?**

**Research Question: Is there a significant difference in level of literacy between OECD, and Latin America countries?**

**What is the Test Name you use, write down the Null Hypothesis**

**What is the Output?**

**What is the Explanation?**

**Research Question: Is there a significant difference in level of literacy for the countries who have life expectancy of female below and above 60 years.**

**What is the Test Name you use, write down the Null Hypothesis**

**What is the Output?**

**What is the Explanation?**

**Research Question: Is there no difference in GDP/capita of countries whose literacy ranges between 50-75 and 75-100.**

**What is the Test Name you use, write down the Null Hypothesis**

**What is the Output?**

**What is the Explanation?**

* Consider the literacy rate of included countries in the study, compare the level of literacy of the countries according to their dominant religion, by creating a table which shows the mean literacy per religion, in addition to standard deviation, and the confidence interval which depicts the interval which contains the population average by a chance of 95%.

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1. **Test for Normality: test the normality of the following variables.**

* **Literacy**
* **Calories**
* **Fertility**

**What is the Test Name you use, write down the Null Hypothesis**

**What is the Output?**

**What is the Explanation?**