# Section A: Parametric and Non-parametric Counterparts

Complete the following table. For each parametric test describe the assumptions and its non-parametric counterpart.

|  |  |  |
| --- | --- | --- |
| Parametric Test | Assumptions | Non-Parametric Counterpart |
| Unpaired-T-test |  |  |
| Paired T-test |  |  |
| One-way ANOVA |  |  |
| Pearson Correlation |  |  |
| Linear Regression |  |  |

# Section B: Variable Criteria

For each statistical test, describe the criteria for both the independent and dependent variable.

|  |  |
| --- | --- |
| Test | Criteria for Variables |
| Chi-Square |  |
| Analysis of Variance |  |
| T-test |  |
| Wilcoxon Ranked Sum Test |  |
| Kruskal-Wallis Test |  |
| McNemar’s Test |  |
| Linear Regression |  |
| Logistic Regression |  |
| Pearson’s Correlation |  |
| Spearman’s Correlation |  |

# Section C: Research Design

The table below contains web links to two journal articles. Complete the table by analyzing each of these components. In the last column, you will choose an article and conduct the same analysis. You must provide the reference to this article in APA style.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | [Chen, W., Lu, F., Liu, S.J., DU, J.B., Wang, J.M., Qian, Y.,...Shen, H.B. (2012). Cancer risk and key components of metabolic syndrome: a population-based prospective cohort study in Chinese. Chin Med J (Engl). Retrieved from http://www.cmj.org/Periodical/PDF/20122342504960.pdf](http://www.cmj.org/Periodical/PDF/20122342504960.pdf) | [Chang, C.T., Lee, P.Y., Cheah, W.L. (2012). The prevalence of cardiovascular risk factors in the young and middle-aged rural population in Sarawak, Malaysia. Malays J Med Sci. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3431746/pdf/mjms-19-2-027.pdf](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3431746/pdf/mjms-19-2-027.pdf) | Your article |  |
| Research Question or Research Objective |  |  |  |  |
| Study Design |  |  |  |  |
| Independent Variable & Variable Type |  |  |  |  |
| Dependent Variable & Variable Type |  |  |  |  |
| Other covariates & Variable Type |  |  |  |  |
| Statistical Test used to Address Research Question |  |  |  |  |

Section D: Interpreting Statistical Results

This section has two parts.

### Part 1

Completely interpret the results from the odds ratio table below for those with high diastolic blood pressure (BP) and those with a history of chronic kidney disease (CKD).



The table was taken from Liu, Q., Li, Z., Wang, H., Chen, X., Dong, X., Mao, H.,…Chen, W. (2012). High prevalence and associated risk factors for impaired renal function and urinary abnormalities in a rural adult population from southern china. *PLoS One*. doi:10.1371/journal.pone.0047100.

**Provide your interpretation here:**

### Part 2

Completely interpret the chi-square results below for (1) age, (2) ethnicity, (3) histology and (4) tumor size.

**DFS** – Disease Free > 5 years post diagnosis **DOD** – Died of Disease

****

The table was taken from Voeghtly, L.M., Mamula, K., Campbell, J.L., Shriver, C.D., Ellsworth, R.E. (2012). Molecular alterations associated with breast cancer mortality. *PLoS One*. doi:10.1371/journal.pone.0046814.

**Describe your interpretation here:**

# Section E: Presenting Public Health Research

This section has two parts

### Part 1

This section will require you to create a Microsoft**®** PowerPoint**®** slideshow presentation. Identify a public health peer-reviewed journal article published within the last 5 years. Create a presentation in which you address the following: (1) purpose of the study; (2) research methodology; (3) study design; (4) summary of statistical results; (5) interpretation of the findings; and (6) implications for future research. You should have 5-10 slides, not including a title slide and slides that list your references.

**Please indicate if you have completed this as a separate Microsoft PowerPoint file:**

**\_\_\_\_Yes \_\_\_\_No**

**Please complete part 2 below.**

### Part 2

Based on your presentation in part 1, you will create an 8-10 minute audio recording in which you communicate your presentation. You should submit an MP3 file or a SoundCloud.com link. If you use SoundCloud.com, please make sure the settings for the web link are set to “public” so that the instructor may listen to your recording.

**Please indicate how you are submitting your audio recording:**

 **\_\_\_\_\_\_\_ MP3 File \_\_\_\_\_\_\_\_ SoundCloud.com link**

**If you used SoundCloud.com, please enter your web link here:**

# Section F: Life Tables and Relative Risks

Identify two peer-reviewed journal articles (published within the last 10 years) that contain: 1) a life table or figure and 2) a relative risk table or figure. Completely cite the article, insert the tables/figures into this document and interpret each table or figure.

Article #1 (APA Style):

Insert Life Table/Figure here:

Describe Your Interpretation Here:

Article #2 (APA Style):

Insert Life Table/Figure here:

Describe Your Interpretation Here:

# Section H: Analyzing Raw Data Sets

**Access a health-based raw data set. (Go to** [**http://www.data.gov**](http://www.data.gov) **and review the raw data catalog.) Complete the following steps.**

### Step 1

**Describe the data set:**

### Step 2

**How do you plan to analyze the data set? Why have you chosen this method?**

### Step 3

**Using SPSS, analyze the data. Insert data tables/figures that you produced by using SPSS below.**

### Step 4

**Interpret your results from Step 3.**

# References

List your references for this project below. Please use APA style 6th edition.