**Statistical Report Writing Guideline and ChatGPT policy**

Sophisticated statistical analyses must be meaningfully transmitted to the general public, and it is necessary to convey the results effectively. The statistical report writing must consist of three basic components:

**Introduction.** This section identifies the subject area of interest, and explains how you (or the authors of original article) carried out the study.

* *Statement of study objective:* What is the topic of your analysis? What is/are the study question/questions you planned to investigate? *Most of the study questions, presumably the main questions, must be answered by hypothesis tests.*
* *Background:* Describe why you (or the authors of original article) are interested in this particular study. What kind of background information do you have for the study?
* *Method for data collection:* How did you (or the authors of original article) gather data (via experiment, survey, etc.)? Describe the procedure of the study in sufficient detail or publish raw data so that others can replicate your work and verify your findings.

**Analysis.** This section should exhibit your understanding of data analysis, including visualization and hypothesis test used in your analysis. Discuss other calculations required for the completion of the study, and include:

* *Methods for statistical investigation:* Describe what type of statistical analysis and what hypotheses (null and alternative) you used. Adequate statistical analyses typically include (but are not limited to):
  1. comparison of two groups
  2. linear normal model
  3. analysis of variance
  4. test for proportions by z-test or chi-square test
  5. logistic regression
* *Results of data analysis:* The results include graphical and numerical summaries of the data, and the hypothesis test (and p-values) with respect to the study objective.

**Conclusion.** In this section you will summarize your own analysis. You may start with the highlight of the results of analysis you have presented in the previous section, and explain what you can support or fail to support regarding the study objective. If you see the weakness in your conclusion, make suggestions for future study. Tell us what you have learned from this whole activity.

**ChatGPT policy.** It can generate R code and create a statistical report using it. However, the service providers (Open AI, and others) are concerned with fundamental accuracy as well as legal issues surrounding ChatGPT, and have chosen to obscure their results on purpose. Consequently, ChatGPT will randomly alter the output of R code and make sure that the statistical report remains fictitious. A possible remediation is to run the R code generated by ChatGPT in your machine, and revise the ChatGPT responses accordingly. However, when your report is assisted by ChatGPT, you must acknowledge it in your report, publish the R code, and take full responsibility. For example, you can state “this report is partially assisted by ChatGPT (OpenAI, 2023), and I am fully responsible for the integrity of the content generated by ChatGPT.”