UNIVERSITY OF STRATHCLYDE
DEPARTMENT OF MATHEMATICS & STATISTICS

MM104/MM107: Statistics and Data Presentation

Mystery Week Checklist

Introduction

- The introduction should be approximately one page in length.
- There should be no information about the study appearing in the Introduction.
- The Introduction should be well referenced, you should ideally have a reference appearing at the end of every sentence, this ensures that your references are not ambiguous.
- You may wish to include an aims section at the end of the introduction. An example of this would be "The aim of this report is to... To do this we will use statistical techniques. most notably..., details of these techniques will be discussed in the Methods."
- **You should not include any statistical hypotheses in your Introduction.**

Methods

- The Methods should be one of the longest sections in the report and **should contain references** e.g. lecture slides or textbooks.
- The Methods should begin with an overview of the study. You may not know too much about the study - so will just have to make do with what is in the brief. At the very least you should include the sample size and a discussion of the variables in the methods - were people asked a question ? If so what was the question and what were the possible responses ? This information is relevant to the study and should be in the Methods.
- In other cases you will have been given more information about the study that you should look in to e.g. when we covered the Chi Squared test the data came from the ALPSAC study and students should have looked up that study and written about it in more detail than what was provided in the project brief.
- It is most likely that you will mention Minitab in your Methods - make sure you reference it.
- Make sure your null and alternative hypothesis are clearly stated and you state the level of significance.
- You should state any equations that your test uses - make sure you format these correctly.

- You should not include equations for the mean and standard deviation as these are very common equations.
- **You must state the assumptions of your statistical test in the methods.** and then discuss how you will validate these.

Results and Discussion

- The results and discussion are one section.
- The results should not be a dump of figures and tables, you should have a figure/table explain it and and then move on the next figure/table.
- Figures/tables should be captioned and the caption should be detailed. The caption should be detailed enough such that someone could open your project at a random page, see the figure/table and understand what was going on, without having read any other part of your report. I have provided slides on this.
- The Results should be presented in a logical fashion - it does not make sense to have the results of your complicated statistical test and then have descriptive statistics/visualisation.
- If a Figure/Table does not add to anything to report get rid of it.
- Make sure you are using the appropriate tables/charts etc.
- Make sure you explain every aspect of your output - it would be silly to output summary statistics that include the mean, median, mode, IQR, standard deviation and variance, and then only talk about the mean. Make sure you edit and only include relevant statistics.
- If you are talking about the mean/standard deviation, have you checked that this is the appropriate descriptive statistic i.e. have you checked for skewness.

Limitations

- The limitations should be about three quarters of a page.
- A small sample size may not be limitation. It may not be possible to get more people to participate in a medical study due to ethics or the participants not being well enough to take part.

Expression and Presentation

- If you have a table the font size should be the same as the rest of the report.
- Equations should be correctly presented - I have made slides on this.

- I have provided slides on how to display Figures and Tables - make sure you look at those.
- Avoid saying “don’t”, “couldn’t” - you should say “do not”, “could not” etc.

References

- Your report should be well referenced, we use Harvard style in Mathematics and Statistics and your references in the body of the text should look like [1]. They should not be [1], (Miller, 2021) or anything that is not [1].
- Tabloids are not an appropriate reference.