Heading: Assessment 2: Preparation of statistical methods and analysis for a peer-reviewed journal article - Lane 2 Assessment

Purpose: To further develop students' analytical capabilities and ability to articulate their analysis in a form commonly encountered in practice: an academic journal article.

Learning outcomes assessed: 2, 3, 4, 5

Overview: Students will be required to present the findings from their analysis as an academic paper. This will be in the form of a manuscript for submission to the Medical Journal of Australia.

Due date: 9th May before 11:59pm

Weighting: 40%

Length and/or format: 1500 words excluding references, tables and diagrams - Lane 2 category task.

Referencing style: APA7 referencing should be used for this assignment. Information on referencing can be found within the Library Referencing Guides.

How to submit: You must submit a .docx file and a .spv file via the upload option below. Please do not upload more than two files.

Return of assignment: Marks and feedback will be returned to students via Canvas

Assessment criteria: Please see marking rubric below

Please take note that you ONLY need to complete five sections of the paper:

1. A brief introduction, then
2. Methods
3. Results
4. Discussion and Conclusion
5. References (APA7)

Completing an abstract for this assessment task is optional and will not net you additional marks however, completing an abstract will help you to better understand the context of the paper you are writing.

Write-up Instructions

For this assessment task, you will present your results in the format of a manuscript suitable for submission to the *Medical Journal of Australia (MJA)*.

There is a journal article that will help you, but you are welcome to find others:

Witkowski, K., Okhai, R., & Neely, S. R. (2024). Public perceptions of artificial intelligence in healthcare: ethical concerns and opportunities for patient-centered care. BMC Medical Ethics, 25(1), 74.

Note that MJA uses Vancouver referencing but you are to use APA7.

Word count and guidance about writing your paper:

The required word count for this submission is **1,500 ± 10%** words (**NOT including figures, tables or references**). Your brief introduction should be around 200-250 words; you will find that the bulk of your word count will be in the discussion section.

The following guidance is provided about content and writing:

Brief Introduction

- For your introduction, you should include a short original discussion about what the issue under consideration is and why it is an important consideration in healthcare.
- You should create an aim or objective to your study, and state this at the end of the introduction.
- It is important that you have at least one scholarly and reputable reference in this section. You can have more as long as they have been used in the appropriate context.
- The word count associated with this section will be relatively small compared to the results and discussion sections.

Methods

You should decide on a brief **general** description of how the study was carried out i.e. Explain how the data was collected and write it in a way that another reader could reproduce your study.

- You should only include a brief description of the method as it relates to data collection. You should be considering participants, research design, sampling techniques and variables of interest.
- You should also include the statistical methods used in your analysis as well as level of significance used and type of tailed test (as relevant). These will reflect your understanding of the statistical methods used.
- You need to state that your study was approved by the ACU Human Research Ethics Committee (HREC) - you will see that this is an important thing to note in writing research papers.

Results

- This section will typically include tables as well as descriptions of your findings. Please see this video to help you with creating APA7 tables. There are also some materials on Canvas under "Assessment 2" in the Modules link.
- It is essential to summarise your findings using statistical language. Do not forget these need to adhere to APA7 format.

Discussion

- Here, you discuss your results. What were the findings of your study? i.e. what does the data tell you about? Link this back to your research aim or objective.
- In your discussion, you should compare your findings to those of other similar papers you find in journal databases.
- What were the limitations of the study? What are the future implications of the study? Do you have any suggestions for improvements?
- This should be the longest section of your paper, and you will typically have references to literature here, which will be used as evidence to any claims you make.

Important Note: While establishing null and alternate hypotheses are essential to all statistical analysis, you do not need to include these in your article. While it is good to state that you have checked the assumptions, you do not need to include a lot of detail. Simply state which test(s) were used to check them.

You will need to use the 'AT2 Dataset.sav' file for your analysis.

Instructions for Statistical Analysis

- Perform descriptives to generate a demographic characteristics table
- Do gender and occupation (industry) influence trust in AI (Item 6)?
- Perform a binary logistic regression analysis using:
    - TrustLikelihood as the dependent variable
    - Age group, gender, occupation (industry), accuracy, reduce cost and improved personalised care as the independent variables
- Make sure to interpret and report on the odds ratios for a 95% CI, B coefficients and p-values

Your statistical analysis should guide the narrative of your article. Think carefully about what the research question is. This should be represented clearly in your article's title.

Referencing

APA7 is the required referencing style for this assessment task. Please ensure that you are familiar with the formatting and usage requirements for this style. Aside from the ACU Library materials provided, you may wish to use the *Academic Referencing Tool* from the La Trobe University Library.

Marking Criteria	Marks	Criteria satisfied	Criteria partially satisfied	Criteria not satisfied
Introduction	5	A concise introduction has been written that clearly outlines the objective or research aim of the article. Contextualisation is sound and is understandable to the reader. At least one scholarly and reputable reference has been used in the appropriate context.	A concise introduction has been written that clearly outlines the objective or research aim of the article. Contextualisation is not clear and/or is ambiguous. At least one scholarly and reputable reference has been used in the appropriate context.	Introduction does not include a clear research objective or aim. Contextualisation is not clear or ambiguous and no references have been used or references are not scholarly and reputable.
		(4 – 5 marks)	(3 marks)	(< 3 marks)
Methods	7	Method for data collection is rational and takes into consideration participants, research design, sampling technique and variables of interest. Participant description is clear and statistical methods used are appropriate and well communicated.	Method for data collection is rational and takes into consideration participants, research design, sampling technique and variables of interest but there is still some ambiguity or lack of ability to reproduce the study. Participant description is clear and statistical methods used are appropriate and well communicated but with some minor errors.	Method for data collection is not clear or non-existent and there is no consideration of participants, research design, sampling techniques and/or variables of interest. Participant description is not clear and statistical methods used are inappropriate and not well communicated.
		(6 – 7 marks)	(4 - 5 marks)	(< 4 marks)
Results	10	Tables and statistical reporting adhere to APA7 format and are well presented. Statistical methods chosen have been conducted well and correct values have been achieved. Where relevant, justifications for choices have been made.	Tables and statistical reporting adhere to APA7 format are presented well but with minor errors. In some instances, statistical tests chosen are inappropriate and some values are incorrect or missing. Little or no justification for choices have been made.	Tables and statistical reporting do not adhere to APA7 format and are not presented well. Statistical tests chosen are not appropriate or some values are incorrect and/or missing. No justification for choices have been made.
		(8 – 10 marks)	(5 – 7 marks)	(< 5 marks)
Discussion and Conclusion	10	Discussion section is written well and clearly discusses the findings from statistical analyses. There is evidence of comparing to other studies and a clear outline of limitations of the study and future implications and/or improvements have been documented or suggested. Conclusion section has been written and gives a good overall summary of the work done.	Discussion section is written well and clearly discusses the findings from statistical analyses. There is however a lack in - comparison of this study to other studies, limitations of the study and/or future implications/improvements to the study. Conclusion section has been written but lacks in its summary of the work done.	Discussion section is not written well and does clearly discuss the findings from statistical analyses. There is no evidence of comparing to other studies and limitations of the study and/or future implications and improvements to the study are not documented or suggested. Conclusion section is written poorly and/or is severely lacking in summary.
		(8 – 10 marks)	(5 – 7 marks)	(< 5 marks)
References and written communication	8	At least 10 references have been used. Majority of references are scholarly and reputable and used in an appropriate context. Reference list and citations adhere to the APA7 style of referencing. Overall, written communication is at a high academic standard with no grammatical errors or ambiguity in the construction of English sentences.	Less than 10 references have been used. Majority of references are scholarly and reputable and in an appropriate context. Reference list and citations adhere to the APA7 style of referencing. Overall, written communication is sound but is not articulate and there are grammatical errors, ambiguity, and/or incorrect phrases in the construction of English sentences.	Less than 5 references have been used. Majority of references are not scholarly or reputable and not used in an appropriate context. Reference list and citations do not adhere to the APA7 style of referencing. Overall, written communication is poor and construction of English sentences are disconnected. Article contains many grammatical errors, ambiguity, and/or incorrect phrases.
		(7 – 8 marks)	(4 – 6 marks)	(< 4 marks)