# IMRD Article Analysis Template

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| Citation of the Article Analyzed: N. A. M. R. Senaviratna and T. M. J. A. Cooray (2019). Diagnosing Multicollinearity of Logistic Regression Model. *Asian Journal of*  *Probability and Statistics*,5(2),1-9   Article Analysis: | | |
|  | **Guiding Questions** | **Your Analysis** |
| **Overview** | * Major * Overall structure of the paper and highlight variation from IMRD (if applicable) | Major of the article is *Probability and Statistics.*  Senaviratna and Cooray (2019) follow Introduction-Methods-Results-Discussion pattern in their article with minor variations like results and discussion are written as one heading and this article has an additional “Conclusion” part which describes complete article. |
| **Introduction & Literature Review[[1]](#footnote-1)** | What is the topic (subject area of interest) based on the background information and previous research that the author provides? Where does the author convey that it is an important area of research? | The author would like to diagnose the Multicollinearity test with tolerance, Variance Inflation Factor (VIF), condition index and variance proportions with some measurements before performing logistic regression model in order to ensure that the model fits accurately.  The author conveyed the importance of study in the introduction section. |
| In reviewing the previous research on the topic, what is the “gap” in the research (i.e., what is lacking in the current knowledge on the topic or an area of disagreement or tension) that the author highlights? How does the author signal the gap and/or critique the previous research? |  |
| What is the purpose of the study[[2]](#footnote-2)? What are the research questions? Where does the author make a connection between the gap in the previous research and the purpose of the current study? | The study is to explore the various methods to decrease the multicollinearity of the taken sample data sets.  This article tests the collinearity of the logistic regression from the taken sample data sets. |
| **Method** | What kind of information is provided in the methods section regarding the method and materials used for the study? How does the author justify or add credibility to the methods?  If your paper does not contain a traditional methods section, explain why and/or how it’s unique to your discipline. | The author listed various methods to diagnose collinearity which are tolerance, Variance Inflation Factor (VIF), condition index and variance proportions and how they collected the data in the study. |
| **Results[[3]](#footnote-3)** | How does the author present the results of the study? Consider the following points as you answer this question:   * How does the author(s) utilize visuals (e.g., tables, graphs) in their reporting of the result? What seems to be the rationale for including (or not including) the visuals? * How do the results help answer the research questions found in the Introduction section? * How objective/subjective is the author’s presentation of the results? |  |
| **Discussion[[4]](#footnote-4)** | How does the author connect their current research to previous research[[5]](#footnote-5)? |  |
| What are the broader implications of the author’s findings? How does the author convey the implications? |  |
| Does the author discuss limitations of the research and offer perspectives for future research or projects? If so, what are they? What is the significance of the limitations for the credibility of the author’s findings? | It is quite possible to have data in which no pair of variables has a high correlation, but several variables together may be highly interdependent.  Since some of the results are in consistent with the previous findings that results much better diagnostics will be produced by tolerance and VIF values. |
| Is a “conclusion” provided as part of this section or is it a separate section? If the conclusion is a separate section, how is the conclusion different from the Discussion section? | Conclusion is in a separate section.  In this article the author mainly discussed their results and limitations and about the future research in the discussion section and he stated practical significance in conclusion section. |

1. Review of literature (previous research) may be found in (a) separate section(s) of the paper or it may be part of the introduction section. [↑](#footnote-ref-1)
2. If the paper you’re analyzing does not include a research “study”, you may provide the purpose of the author’s inquiry or the central question that the author is trying to answer in the paper. [↑](#footnote-ref-2)
3. This section may be combined with “Discussion” section or it may be labelled differently in some papers. Regardless, you can still answer the guiding questions based on how the author communicates the research findings. [↑](#footnote-ref-3)
4. This section may be combined with “Results” section or it may be labelled differently in some papers (or may not be labelled at all). Regardless, you can still answer the guiding questions based on how the author communicates the research findings and draws conclusions. [↑](#footnote-ref-4)
5. If the paper you’re analyzing does not include a research “study”, you may discuss how the author uses other scholars’ work to support or illustrate his/her argument in the paper. [↑](#footnote-ref-5)