



IMRAD FORMAT Orientation

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Objectives

- For participants to be familiarized on the parts of the IMRAD format as an institutional guideline for research
- For participants to level off on the key requirements needed to complete their research manuscripts or protocols following the IMRAD format



IMRaD

The IMRaD (often pronounced “im-rad”) format is the most commonly used format in scientific article and journal writing and is used widely across most scientific and research fields.



IMRaD

Introduction
Methodology
Results
and
Discussions

*In the Germanic format

Chapters 1 and 2 : Intro and Methodology

Chapter 3 and 4: Results/Discussions/Conclusions and Recommendations

Reasons behind the migration

To encourage more students, faculty and non-teaching staff to publish their research work in Journals

Background

- It is the University of Baguio's institutional format
- Introduced during SY 2018-2019
- Guidelines were released and revisions were recommended by Faculty through the School Research Anchorpersons
- February 2019 and October 2019 RDC Memo

Technical Aspects of the Paper

Format

- Times New Roman, font size #12
- 1.5 line space in between sentences except when specified
- Paragraphs are justified and indented
- Left Margin: 1.5 inches
- Top, right and bottom margin: 1 inch
- Paper size: 8.5" x 11"

- Citation format

Grad school: APA 7th

Undergrad : APA 6th or 7th

- Pagination: Top right corner, indicated as header
1st page of the manuscript, no page shown
- # of Tables: 5
- # of figures: 5
- Recommended # of pages: 15-25 excluding appendices

**however, it was recommended by teachers that this rule should be flexible, students are supposed to follow Germanic Content*

- Word Count Per Section

| Section | Word Count |
|--|-----------------|
| Abstract | 250-300 words |
| Keywords | 5 words |
| Introduction | 1500-3000 words |
| Materials/Method (<i>Experimental Designs</i>) | 500-1000 words |
| Methodology (<i>non-experimental designs</i>) | 500-1000 words |
| Results and Discussion | 1500-3000 words |
| Conclusions and Recommendations | 250-500 words |

Sections of the research paper

Title

Abstract

Introduction

- Literature Review
- Theoretical/Conceptual Framework/Paradigm of the Study
- Objectives of the Study

Materials and Method (if experimental) and Methodology (if non-experimental)

- Study Design
- Sample/Population of the Study

Sections of the research paper, continuation...

Materials and Method *(if experimental)* and Methodology *(if non-experimental)*

- Materials *(if experimental)* and Data Gathering Tools *(if non-experimental)*
- Methods or Procedures *(if experimental)* and Data Gathering procedures *(if non- experimental)*
- Treatment of data
- Ethical Considerations

Format: Title

Title

**TITLE OF THE STUDY SHOULD BE CENTERED
IN INVERTED PYRAMID**

Maximum of 15 Words, Single Space Within The Title

Should preferably answer the following questions: **What** will be researched?

How will the topic be researched? **With whom** – describes the research population and units of measurement; **Where/in** what context will the study be conducted?

1.5 line space from the Title

Authors are Listed Here in Alphabetical Order and Italicized (First Name, Middle Initial, Surname)

Rhoda Marie A. Carbonel


Brian R. Flores

School of Teacher Education and Liberal Arts/Bachelor of Arts in Political Science



Format: Abstract

- All caps, bold
- Left-aligned
- Justified, no paragraph indention



ABSTRACT

Double spaced above and below the Main Section Heading, justified

This is the last part of the paper that is to be written. The Abstract helps readers decide whether they want to read the rest of the paper, or it may be the only part they can obtain via electronic literature searches or in published abstracts. Therefore, enough key



Content: Abstract

- Last to be written, overview, key information

| | |
|------------|---|
| Element 1: | what is the overall issue addressed |
| Element 2: | main aim or objectives |
| Element 3: | academic or practical importance of the study |
| Element 4: | methodology |
| Element 5: | main findings |
| Element 6: | statement of conclusions |
| Element 7: | practical implications of the study |

Format: Main Section Headings

- All caps, bold
- Double-spaced above and below the main section headings
- Left-aligned

INTRODUCTION


Double spaced above and below the Main Section Heading

Begin your Introduction by clearly identifying the subject area of interest. Do this by using key words from your Title in the first few sentences of the Introduction to

Format: Subheadings

- Upper/lower case, bold
- 1.5 line space
- Left-aligned

Theoretical/Conceptual Framework/Paradigm of the Study



Given the identified knowledge gap, what concepts can be used to address it.

What theories, principles, laws may be integrated in designing your study or which will guide the conduct of your study?

Format: Paragraph Headings

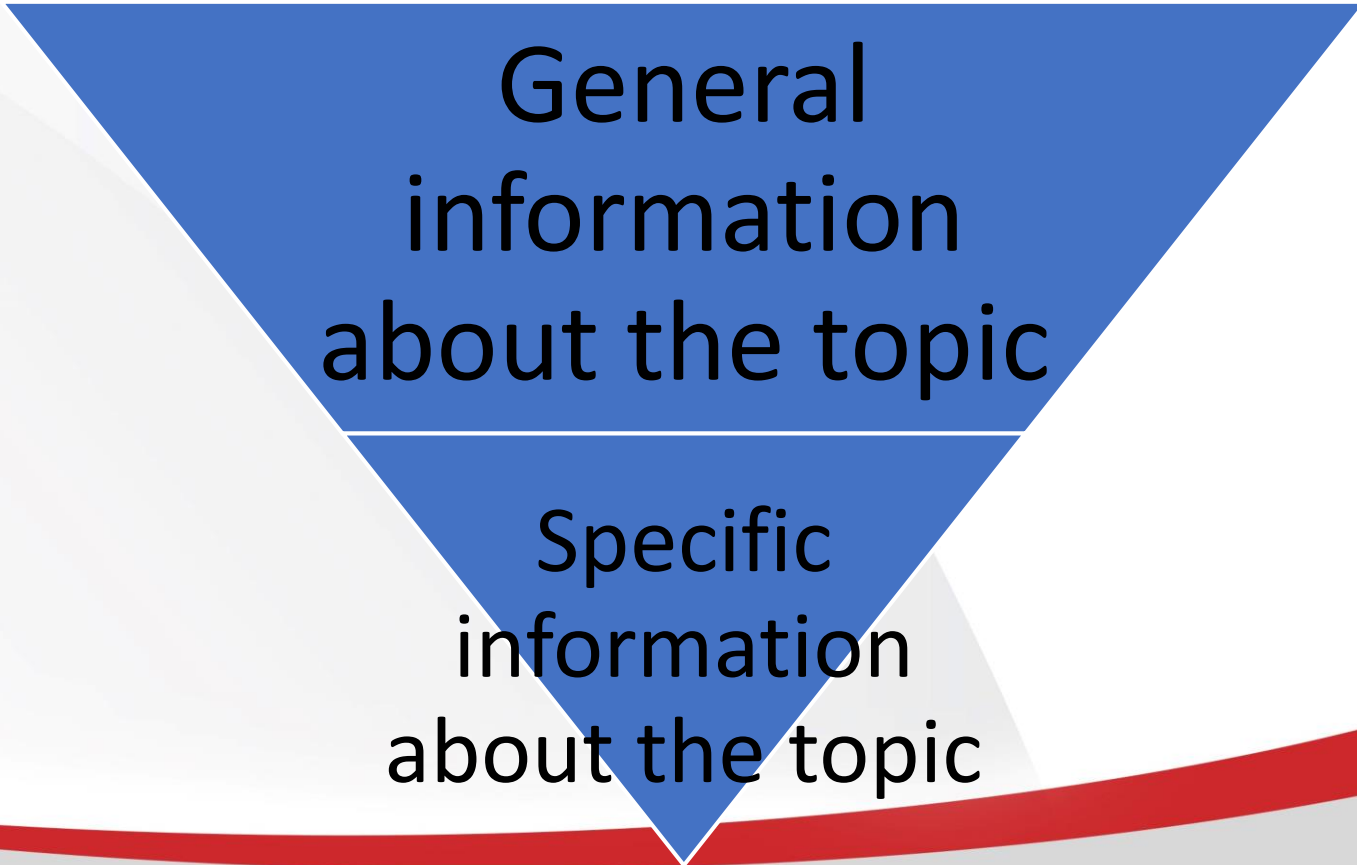
Paragraph Headings

- Upper/lower case
- Italicized, indented

Paragraph Heading. Terms and concepts are defined and described as they are touched in the discussion

Guidelines for the Introduction

- Identify the subject of interest
- The structure follows the inverted pyramid

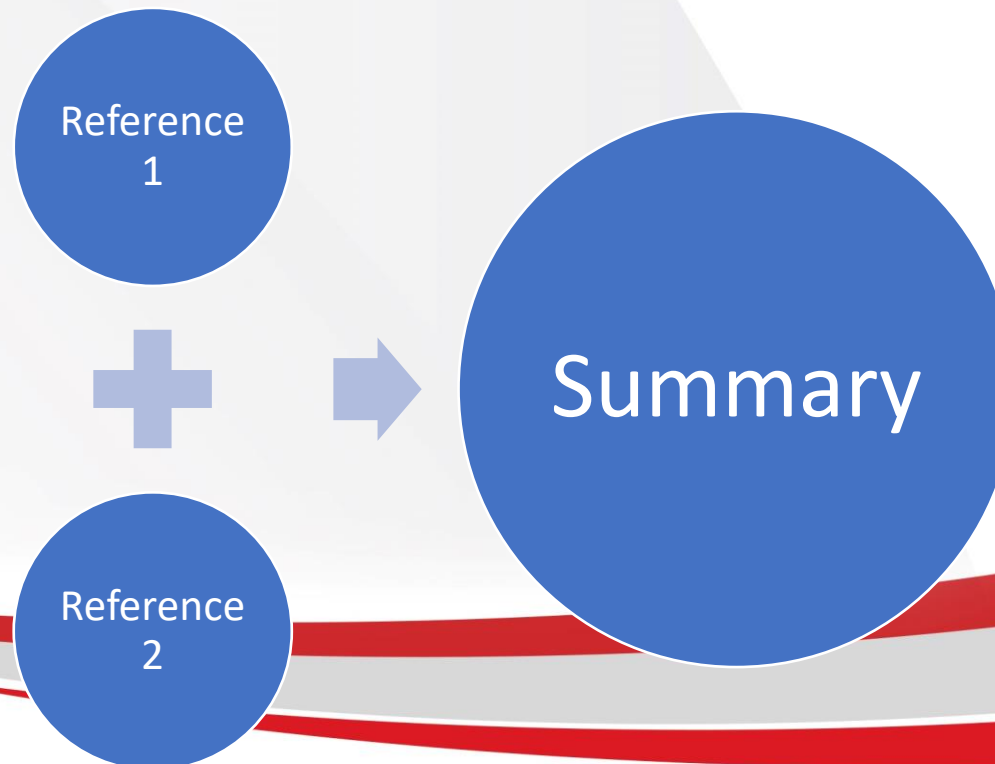
A blue inverted pyramid diagram illustrating the structure of an introduction. It is divided into two horizontal sections. The top section is larger and contains the text 'General information about the topic'. The bottom section is smaller and contains the text 'Specific information about the topic'. The pyramid is set against a background with light gray curved lines and a red and gray wavy border at the bottom.

General
information
about the topic

Specific
information
about the topic

Literature Review

- Brief and balanced review of pertinent published literature (within 10 years)
- Discuss relevant primary literature
- Summarize current understanding of the problem you are investigating



Literature Review

- emphasize problems or gaps in knowledge

What don't we know yet?

What do we need to know?

What does the field still need to understand?

What's been left out of previous research?

Is this a new issue that needs some direction?



Literature Review

- Focus your efforts on the **primary research journals** - the journals that publish original research articles.
- Cite, articles that reported specific results relevant to your study.
- Learn how to find the primary literature (research journals) and review articles rather than depending on reference books.





International

National

Local

Theoretical/Conceptual Framework/ Paradigm of the Study

- What theories, principles, laws may be integrated in designing your study or which will guide the conduct of your study?
- Terms and concepts are defined and described as they are touched in the discussions

Ex. Variables, constructs, concepts and their operational definitions

Significance of the Study

- explain the rationale and approach
- explain the outcomes of your study
- who will benefit: community? Decision-makers? Policy makers?
- What benefits can you derive as a researcher?



Objectives of the study

- Mention here the **aim of the study** and the **specific objectives**. The specific objectives are those that you will actually measure.
- *Follow the rules for writing objectives if your study is Quantitative or Qualitative
- The objectives may be presented in a **bulleted list** and should be phrased in the form:

To determine...

To investigate ...

To evaluate...

To compare...

Guidelines for the Materials and Method/ Methodology

- this section needs to be very clear, very specific, very detailed, and only focused on research.
- show that you arrived at your results by applying valid and reliable methods.
- You may use the active voice to a certain extent, although this section requires more use of third person, passive constructions than others.

Study design

Do not define the design. Rather, explain how the variables in your study fits into the design.



QUANTITATIVE



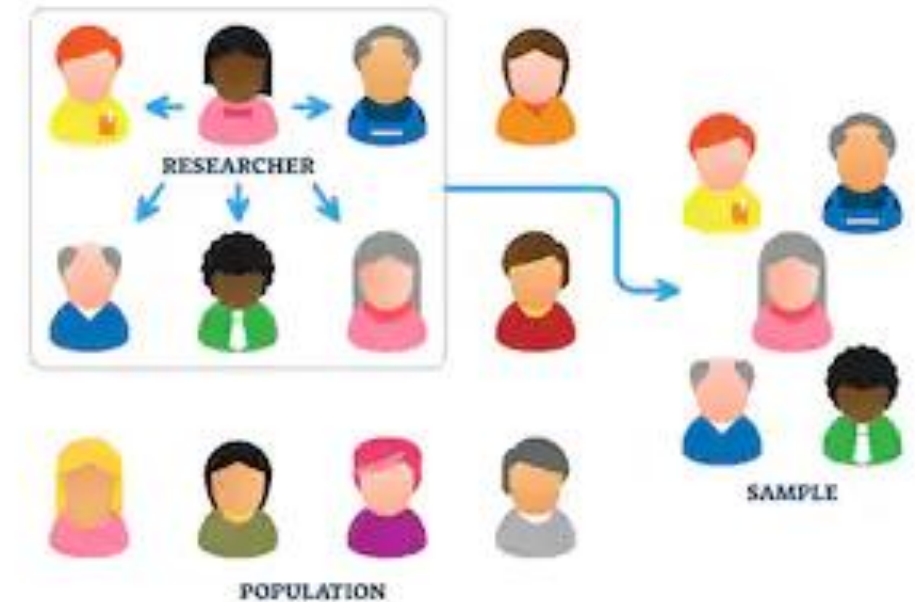
QUALITATIVE



Sample/Population of the Study

- discuss the **characteristics** of the population
- what is your **inclusion or exclusion** criteria
- how did you **arrive** at the sample size?
- how did you **recruit** the participants?
- (if non-human) how did you **collect** the samples? What **authentication** procedures were considered

CONVENIENCE SAMPLING



Data Gathering Tools

- Describe what materials, subjects, and equipment(chemicals, experimental animals, apparatus, etc.) you used (these may be subheaded Animals, Reagents, etc.).
- What research tools did you use? What are the parts/sections?
- Did you pre-test your tool?



Data Gathering Tools

- What are some considerations or steps undertaken to ensure validity and reliability? (i.e. psychometric properties of the tool)
- What are the parts of the tools that you used? Are they **adopted/adapted** from another source? If yes, then cite properly.
- Indicate how you will record your data



Data Gathering Procedures

- Methodical discussion of the steps undertaken

From whom will you ask permission?

What communications do you need to send out?

how will you gather data?

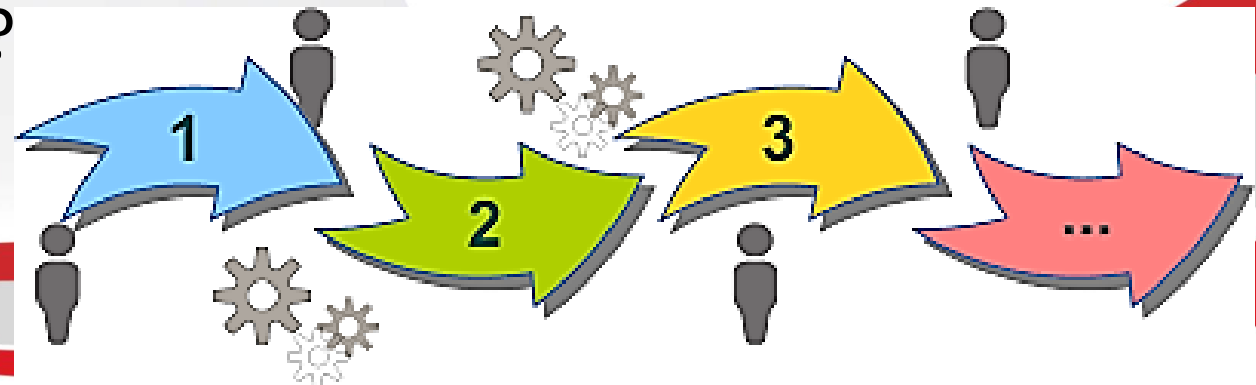
how will you distribute and retrieve the data?

how will you quality check your data?

how will you conduct the interview?

how long did the data gathering last?

How will you safekeep the data?



Treatment of Data

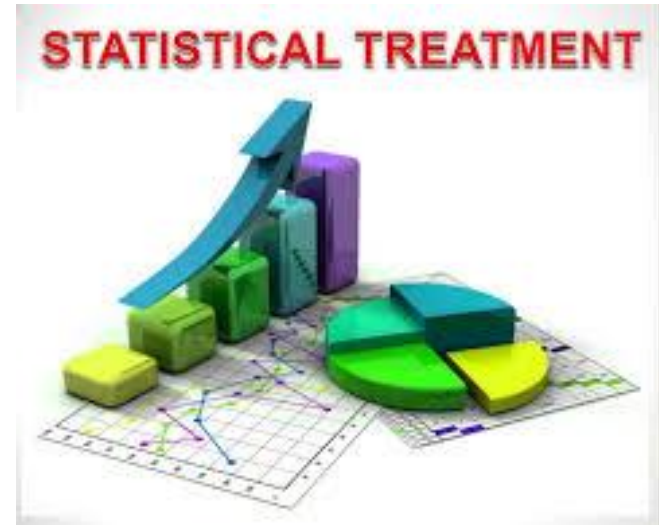
- Describe how the data were summarized and analyzed.

Did you compute means?

Did you simply use frequencies, ratios, percentages?

Did you do statistical treatment? If yes, what?

What kind of qualitative data analysis did you do?



- You should also indicate the statistical procedures used to analyze your results, including the probability level at which you determined significance (usually at 0.05 probability).

STORYTELLING

A VOICE

Thought

Outcome

Technology

Motivation

Language

Cultural context

Social cognition

no observable action verb

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graph TD; D[Dislike of school] <--> P[Poor material circumstances and unhappy childhoods]; D <--> E[Expectations/aspirations for the future]; P <--> E; D --- D1[Boredom]; D --- D2[Frustration with rules and regulations]; D --- D3[Lack of relevance]; D --- D4[Bullying]; D --- D5[Difficulties making friends]; D --- D6[Lack of support if experiencing difficulties at home or school]; P --- P1[Have to 'grow up faster']; P --- P2[Violence]; P --- P3[Poor housing]; P --- P4[Frequent moves]; P --- P5[Family conflict and breakdown]; P --- P6[Lack of good role models]; E --- E1[Bad work experiences]; E --- E2[Lack of local opportunities]; E --- E3[Low/no expectations from others]; E --- E4[Having a baby as most attractive option]; E --- E5[Desire to leave school as soon as possible and get a job]; E --- E6[Need to escape from/change difficult circumstances];
```

Dislike of school

- Boredom
- Frustration with rules and regulations
- Lack of relevance
- Bullying
- Difficulties making friends
- Lack of support if experiencing difficulties at home or school

Poor material circumstances and unhappy childhoods

- Have to 'grow up faster'
- Violence
- Poor housing
- Frequent moves
- Family conflict and breakdown
- Lack of good role models

Expectations/aspirations for the future


- Bad work experiences
- Lack of local opportunities
- Low/no expectations from others
- Having a baby as most attractive option
- Desire to leave school as soon as possible and get a job
- Need to escape from/change difficult circumstances

Ethical Considerations

- how **anonymity and voluntary participation** of the informants/participants were **respected** throughout the study (if informants/participants opted for non-disclosure of identity);
- how **confidentiality** of information was insured (if informants/participants opted for non-disclosure of information),



Ethical Considerations

- how **risk management measures/strategies** for participants, researchers and auxiliary personnel were adopted by the researcher
 - how **informants/participants were selected** using non-discriminatory criteria and processes (unless inclusion and exclusion criteria are justifiable based on the nature of the study);
 - how the findings of the study will be **disseminated** to the beneficiaries.
- 



Guidelines for the Results and Discussion

- Introduce the section by describing the flow of your discussion, present the results according to the sequence of your objectives
- Textual, graphical, tabular
- Introduce the table first and then discuss the results, support your findings with corroborations

- avoid table reading of values, instead highlight those that are relevant

Table 1

Error Rates of Older and Younger Groups

| Level of difficulty | <u>Mean error rate</u> | | <u>Standard deviation</u> | | <u>Sample size</u> | |
|---------------------|------------------------|-------|---------------------------|-------|--------------------|-------|
| | Younger | Older | Younger | Older | Younger | Older |
| Low | .05 | .14 | .08 | .15 | 12 | 18 |
| Moderate | .05 | .17 | .07 | .15 | 15 | 12 |
| High | .11 | .26 | .10 | .21 | 16 | 14 |

Note. From “Generations,” by L.G. Elias and C.C. Bent, 2002, *Journal of Geriatric Care*, 5, p. 22.

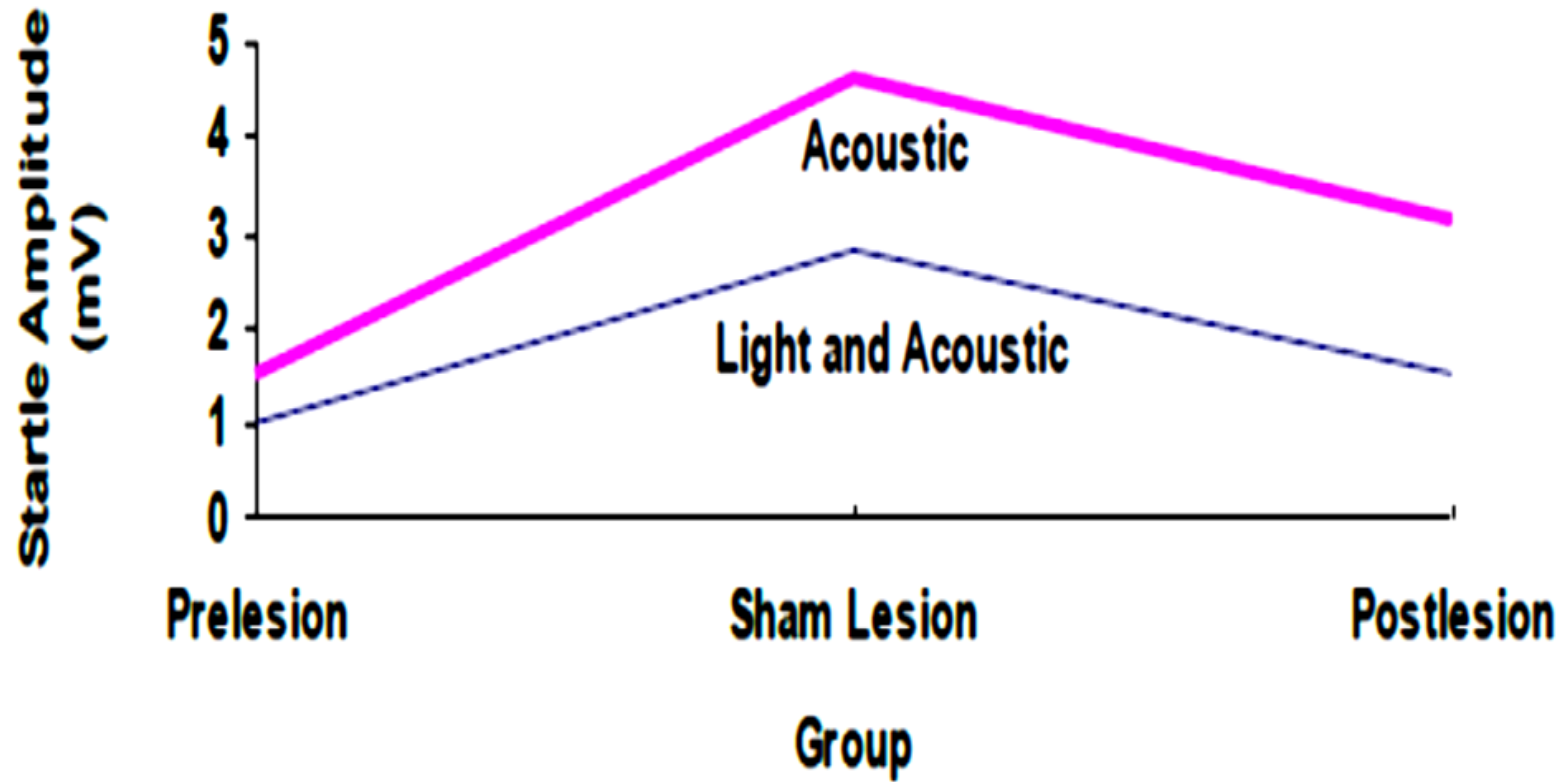


Figure 1. Mean amplitude startle response for prelesion, sham lesion, and postlesion groups in acoustic and light-and-acoustic test

conditions.

- Cite patterns, similarities, differences, negative results, unique results that have an implication
- **Avoid** presenting the **same data** in Table and Figure form
- Always report your results with parenthetical reference to the statistical conclusion that supports your finding (if statistical tests are being used in your course).
- This parenthetical reference should include the statistical test used and the level of significance (test statistic and DF are optional).

Guidelines for Conclusions And Recommendations

- Conclusions are brief generalizations from the findings
- Conclusions are not mere reiteration or repetition of findings

Avoid

- biased conclusions, incorrect generalizations, deductions, abstractions
- fallacies (i.e hasty generalizations or equivocation)

- Recommendations are counsels or advice which are feasible and specific
- Based on the conclusions and meant to improve the problems raised

Do

- Recommend the doable, feasible, economical, practical, efficient
- Recommend specific further studies based on the limitation that you encountered

Acknowledgement

Note: separate page after the conclusion

Acknowledgement (bold, upper/lower case, should be on a separate page)

1.5 line space after the heading

Acknowledge only those who have directly contributed to the study. If there are technical consultants (technical advisers*, statistician, English editors, etc.) who are not part of the approval body (see front page of this manuscript), this is where you

- Mention those who have directly contributed to the study
- technical consultants (technical advisers*, statistician, English editors, etc.) who are not part of the approval body (see front page of this manuscript),
- institutions or agencies that gave financial support or grants, please include them here.
- Be direct to the point, mention the person and their corresponding contribution

Guidelines for the References

- For Graduate school: APA 7th
- For Undergrad: APA 6th or APA 7th

REFERENCES

Double spaced above and below the Main Section Heading

Single space within the reference

1.5 space after the reference

References are to be listed at the end of the paper in alphabetical order of the last names of the first authors and referred in the text by the last name and the year of publication.

Appendices

- Sample Data Gathering Tool
- Sample Communications
- Consent Forms/Assent Forms
- Timetable for the Research
- Curriculum Vitae of the Researchers

References:

Szuchman, L.T. (2014). Writing with style. (6th ed.) USA: Wadsworth, Cengage Learning.

UB Research and Development Center (2019). IMRAD format guidelines. Baguio City: UBRDC

UB Research and Development Center (2015). Thesis/dissertation format guidelines. Baguio City: UBRDC

Thank you

