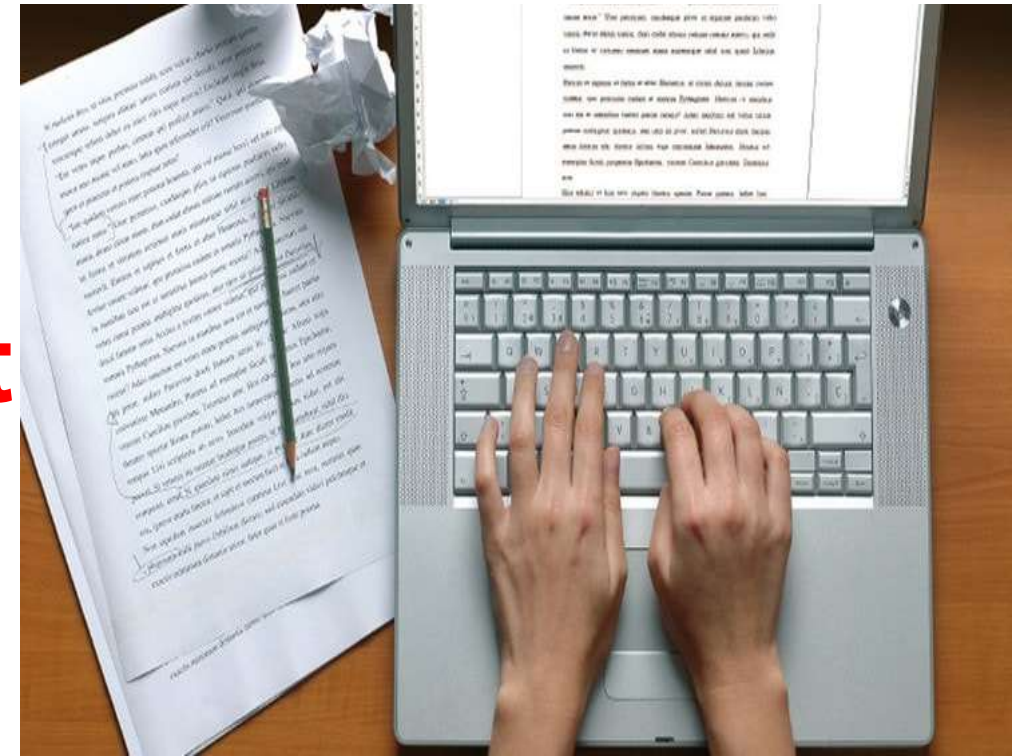


Writing A Manuscript



DR.TEJASHRI THAKARE ASST.PROFESSOR

OBJECTIVE

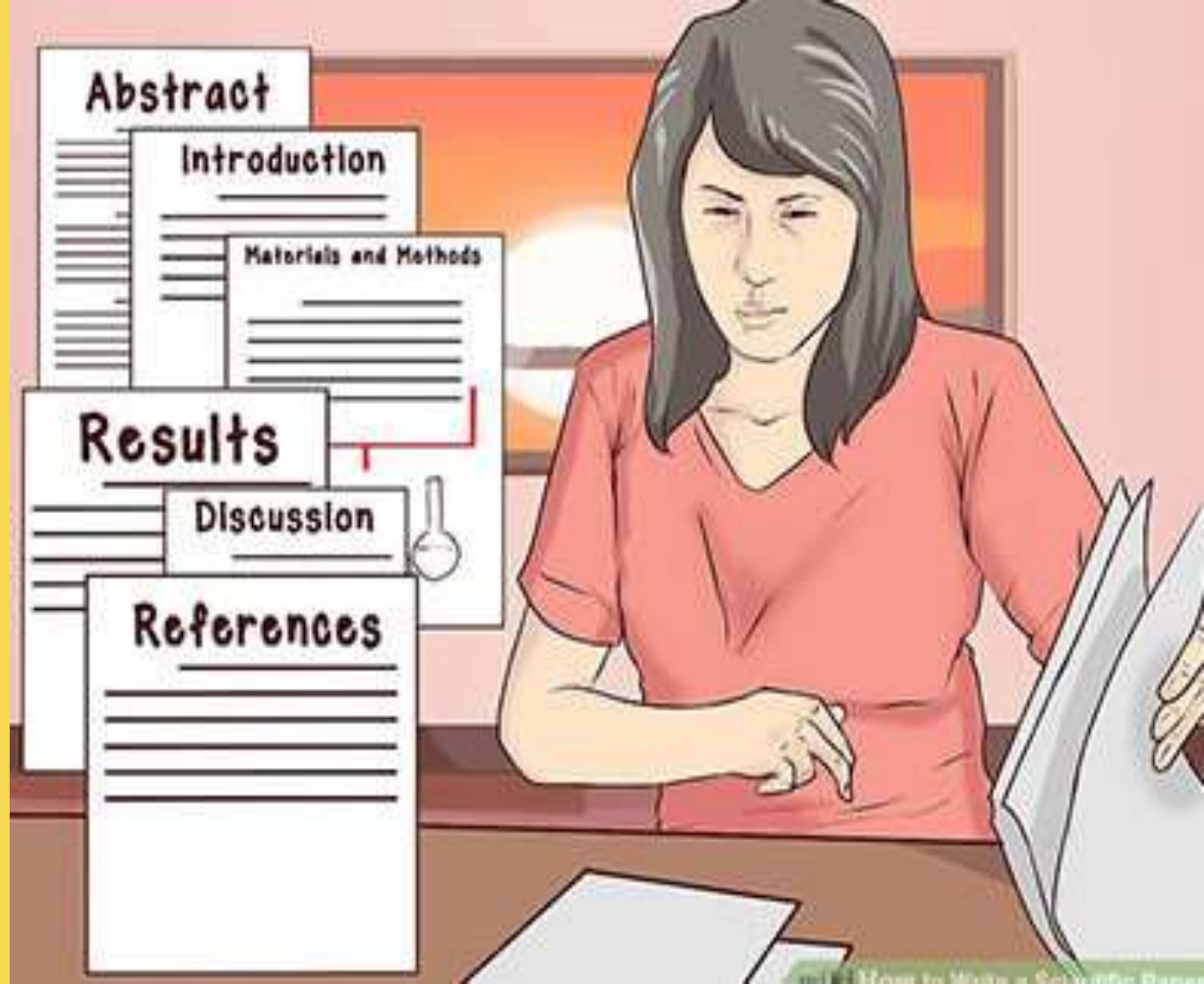
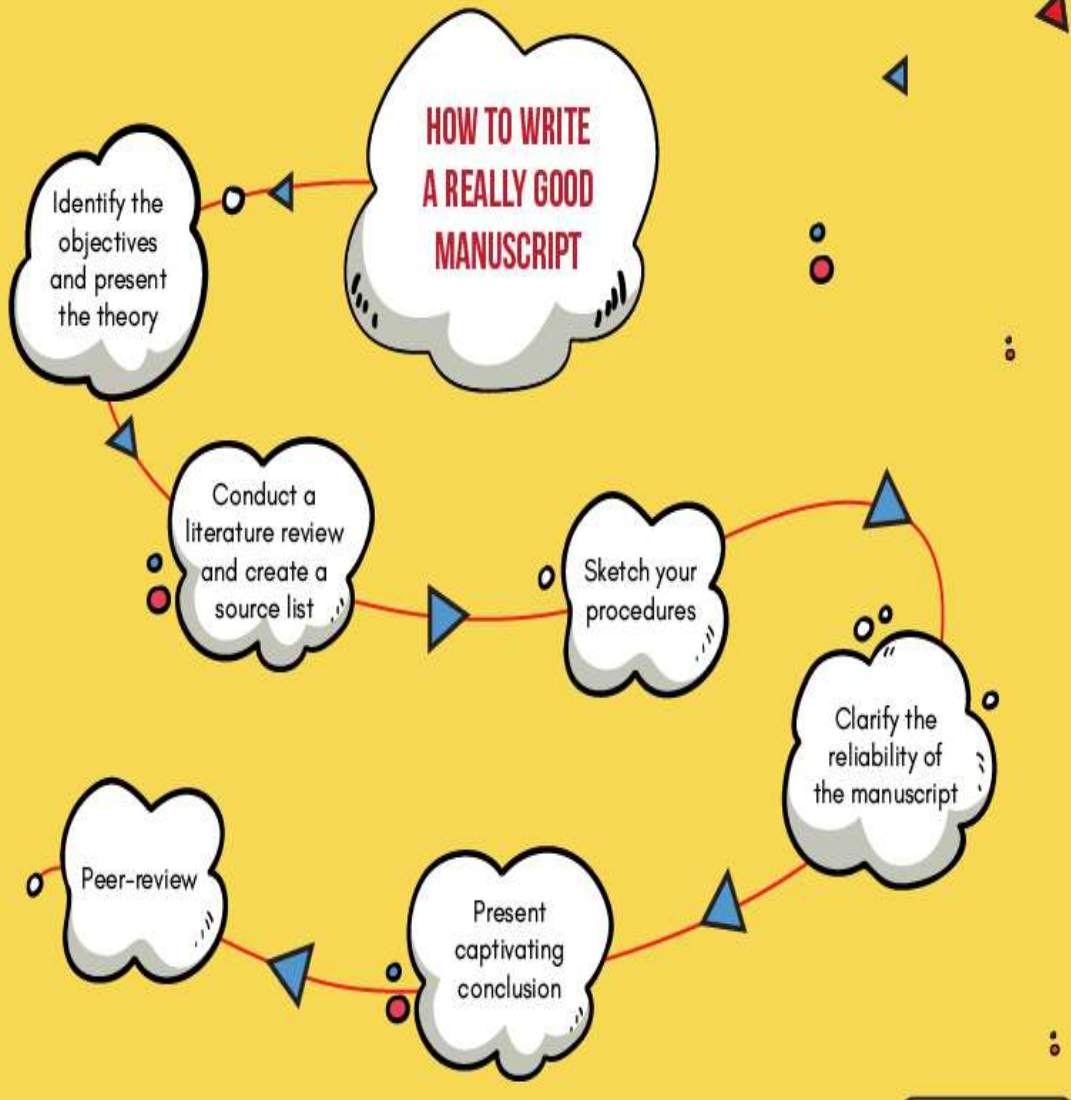
Promoting A Research culture

What is Research ?

- According to John W. Best, *“Research may be defined as the systematic and objective analysis and recording of controlled observations that may lead to the developments of generalizations, principles, or theories, resulting in prediction and possibly ultimate control or events.”*
- Research fulfills the gap of knowledge.



Research is formal work undertaken systematically to increase stock of knowledge and the use of this stock of knowledge to devise new applications



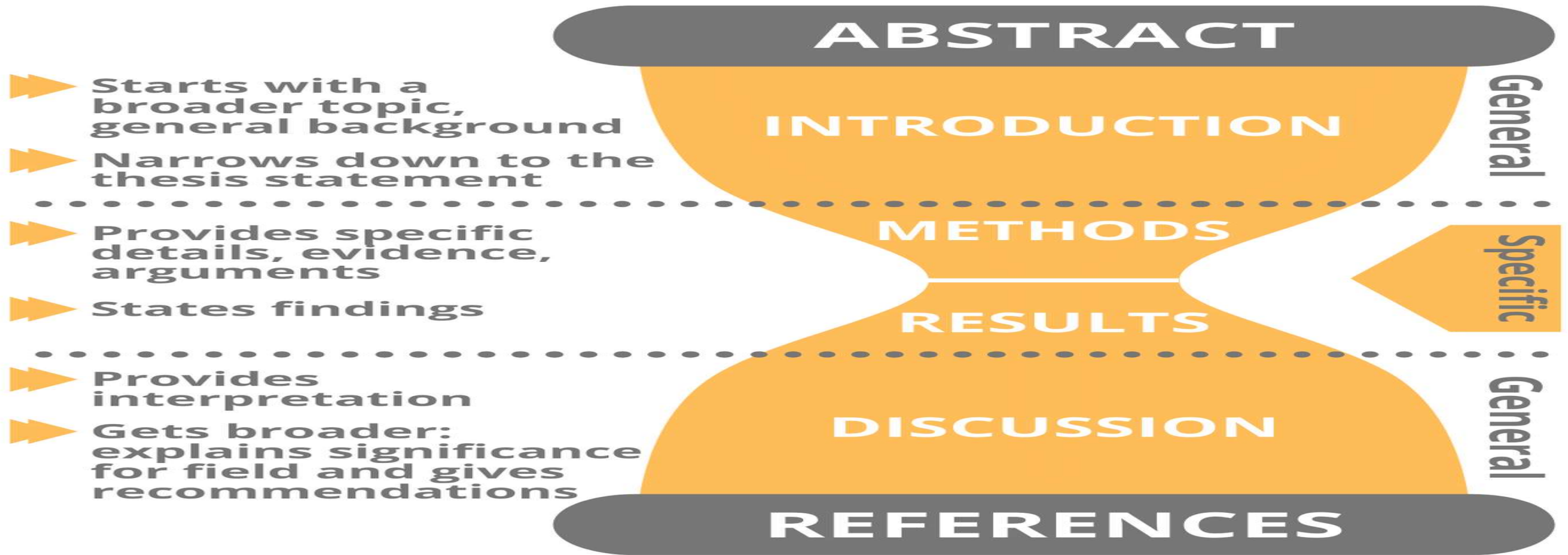
STEPS TO TITLE YOUR RESEARCH MANUSCRIPT

1. Start by answering specific questions:
 - a. What's your paper about?
 - b. What techniques did you use?
 - c. What is being studied?
 - d. What are your results?
2. Craft a keyword list based on your answers.
3. Construct 1 detailed sentence with your keywords.
4. Cut unnecessary words
5. Remove "nonessential information & reword."
6. Trim your title down to 10-15 words.

Summarized from "How to write an effective title and abstract and choose appropriate keywords." by Velany Rodrigues of Editage Insights

Motiwala (National) Homoeopathic Medical College ,
Nashik

RESEARCH PAPER STRUCTURE



IMRaD Model



ESSAYTIGERS.com

When

It is suggested to write an abstract when the rough draft of the research paper is completed.

What

Abstract is an summary of an research paper.

Abstract

Why

Abstract is written to get a brief understanding of whole research paper.

How

Abstract is written either in structured or unstructured format in descriptive way or in an informative way.

Abstract

- It is a summary of the information in the research article.
- Gives the salient features of the main sections of a Paper.
- Abstracts of standard journals are made available on the internet by indexing services such as *Biological abstracts, Medline*.
- Should not contain any reference, table, figures etc.
- Should be written in short and concise sentences, in past tense and in passive voice.

THE ABSTRACT 4 C'S

- 1)COMPLETE-It covers major part of project
- 2)CONCISE-It is focused & provides clear information.
- 3)CLEAR-It is readable,well organised
- 4)COHESIVE-It flows smoothly between the parts

STEPS TO WRITING A GREAT ABSTRACT

1. Write the abstract after you write your paper.
2. Begin your abstract answering specific questions.
3. Answer *how* you accomplished your research.
4. Reveal your findings.
5. Determine the implications of your findings.
6. Construct your abstract.
7. Do a final check.

Summarized from "How to write an effective title and abstract and choose appropriate keywords." by Velany Rodrigues of Editage Insights

KEYWORDS

These are the labels of your manuscript and critical to correct indexing & searching.

- Shouldn't be too broad or too narrow.
- Use only those abbreviations that are firmly established in the field.
- e.g., DNA, RT-PCR

Title/Abstract

Introduction

Methods

Results

Discussion

Why did you do the study?

What did you do?

What did you find?

How does your study contribute to your field?

IMRaD

IMRaD → MRDI

Title/Abstract

Introduction

Methods

*Results
and
Discussion*

(=IMRaD)

WRITING

Title/Abstract

Methods

Results

Discussion

Introduction

Introduction (IMRAD format)

- **What is the problem?**
 - Describe the research question to provide context, key terms and concepts so your reader can understand the study.
- **What is the gap in information?**
 - What gap or unanswered question, untested population, or untried method in existing research does your study address?
- **Why is this research important?**
 - Review relevant research to provide a rationale for your study...the “so what?” question.
- **What is the aim and objective of the study?**

Introduction Section Outline Example

**Broad
Topic**

Background Information

- The subject of the study
- The impact of the subject of study
- More information about the subject of study



Gap Analysis

- Previous works related to the subject of the study
- The limitations of the published works (or gaps)
- The importance of filling the research gaps for the field of study



Research Goal/Hypothesis

- The goal of the study
- Why the study is the next logical step to fill the gaps in previous works
- Research hypothesis
- A summary of research method



Results/the Significance of the Findings

- Research findings
- The significance of the findings
- The future impact of the study

**Narrow
Topic**

Methods (IMRAD)

- **Describe the study site and study population**
 - Describe the setting in which the study was carried out, e.g., urban vs rural.
 - Describe the study participants, e.g., women, or children under five years of age.
- **How did you study the problem?**
 - Explain the study design.
 - Give operational definitions.
 - State your sample size and explain how you calculated it.
 - Describe your sampling methods.
- **How did you proceed?**
 - Explain the steps you took in collecting data.
- **What did you use?**
 - Describe any special materials, equipment, or reagents.
- **How did you plan to analyze your data?**
- **How did you protect the ethical rights of humans/animals in your study?**
- Explain how you ensured you would 'do no harm'.

Results (IMRAD)

1. Determine which results to present by deciding which are relevant to the objectives
2. Organize the data in the Results section in either chronological order according to the Methods or in order of most to least important. Within each paragraph, the order of most to least important results should be followed.
3. Determine whether the data are best presented in the form of text, figures, graphs, or tables.
4. Summarize your findings and point the reader to the relevant data in the text, figures and/or tables. The text should complement the figures or tables, not repeat the same information.

Discussion (IMRAD)

- Organize the Discussion from the specific to the general: your findings to the literature, to theory, to practice.
- Use the same key terms, the same verb tense (present tense), and the same point of view that you used when posing the questions in the Introduction.
- Begin by re-stating the hypothesis you were testing and answering the questions posed in the introduction.
- Support the answers with the results. Explain how your results relate to expectations and to the literature, clearly stating why they are acceptable and how they are consistent or fit in with previously published knowledge on the topic.
- Compare and contrast with other studies

**Narrow
Context**

Discussion Section

The Beginning Part

- the answers of the research questions provided by the findings



The Middle Part

- a comparison with previous works (to support the study)
- the interpretations of the results (to defend the answers)
- the strength and limitations of the study



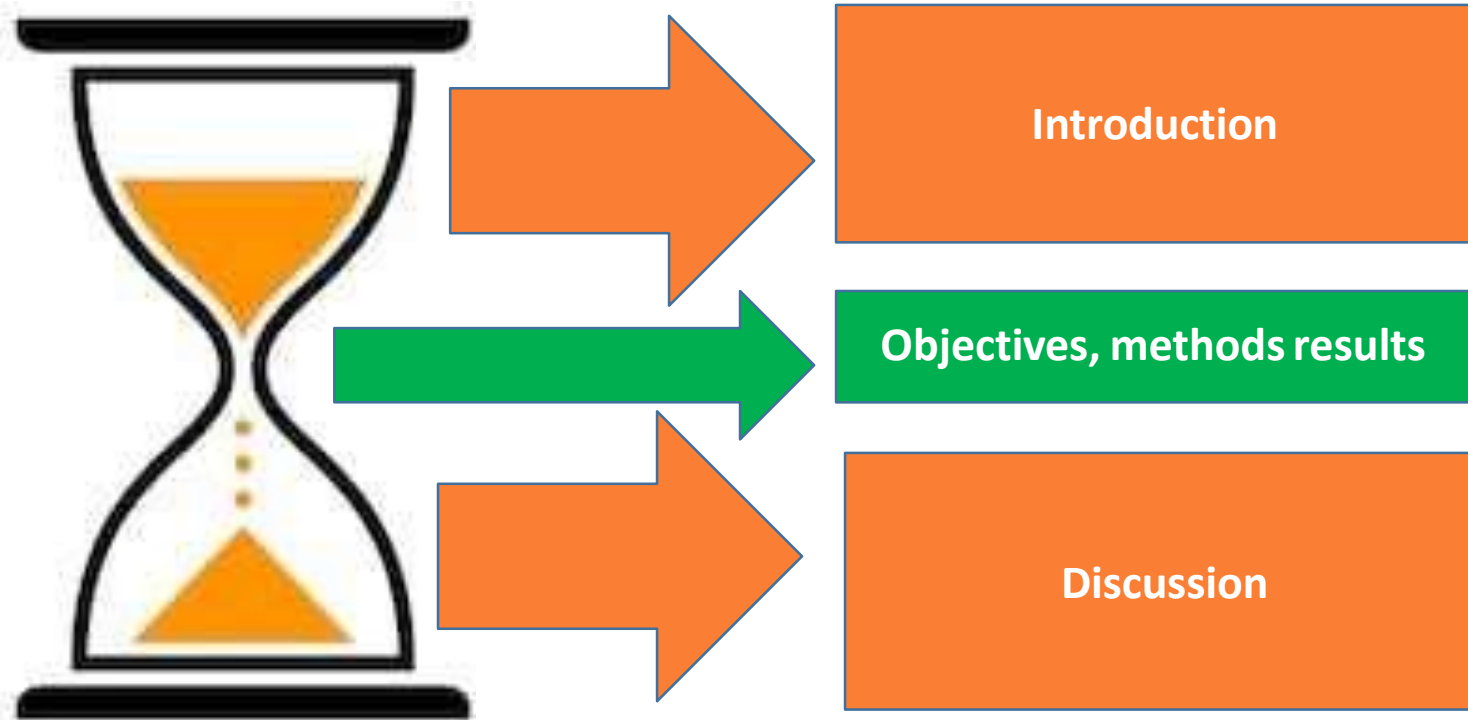
The End Part

- the conclusion of the study
- the significance of the study to fill the gap in the field of study

**Broad
Context**

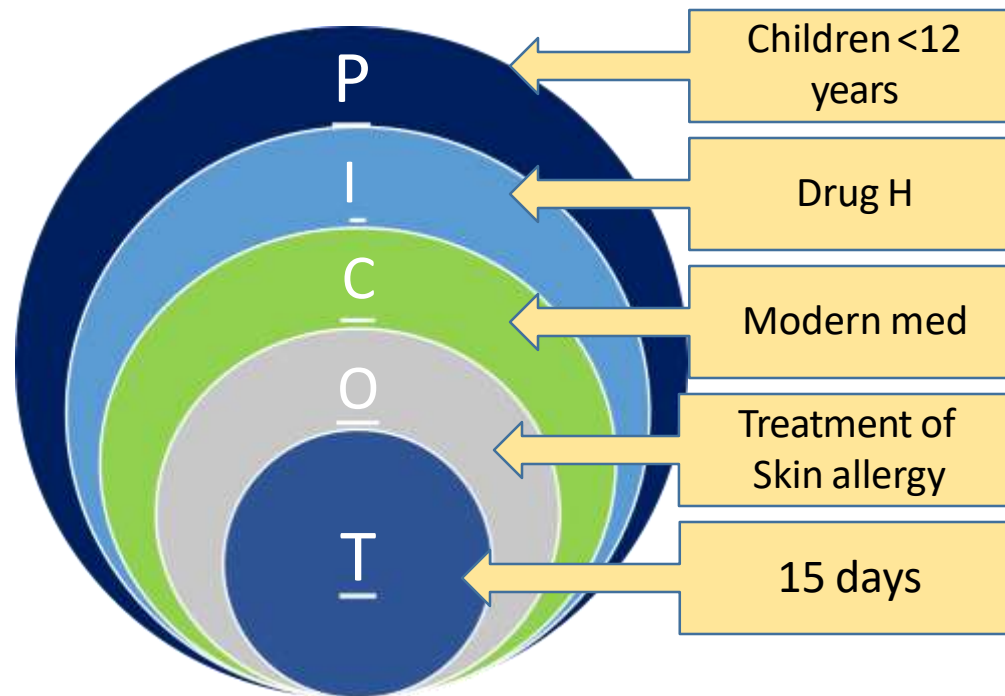
Discussion (IMRAD)... contd

- Identify potential limitations and weaknesses and comment on the relative importance of these to your interpretation of the results and how they may affect the validity of the findings. When identifying limitations and weaknesses, avoid using an apologetic tone.
- Summarize concisely the principal implications of the findings, regardless of statistical significance.
- Provide recommendations (no more than two) for further research. Do not offer suggestions which could have been easily addressed within the study, as this shows there has been inadequate examination and interpretation of the data.
- Explain how the results and conclusions of this study are important and how they influence our knowledge or understanding of the problem being examined.
- In your writing of the Discussion, discuss everything, but be concise, brief, and specific.



Formulate a research question

Is Drug H as effective as Modern medicines for treatment of skin allergies in children below 12 years of age?



P- Population
I- Intervention
C- Controls
O- Outcomes
T- Time

Introduction (IMRAD format)

- **What is the problem?**
 - Prevalence of skin allergies in children, why important to treat, treatment modalities available
- **What is the gap in information?**
 - Modern and homeopathy medicines available, side effects, costs etc. Comparative studies- available/ unavailable, if available comment on the gaps such as sample size or inconsistent treatment or poor follow up rates
- **Why is this research important?**
 - The research will help improve clinical practice, better outcomes, reduce long term morbidities etc
- **What is the aim and objective of the study?**
 - To evaluate the efficacy or effectiveness of Drug H for treatment of skin allergies in children <12 years as compared to modern medicines

Methods (IMRAD)

- **Describe the study site and study population**
 - Children <12 years visiting OPD, Hospital XXX, of City ABC. Children newly diagnosed with skin allergy/ old cases
- **How did you study the problem?**
 - Experimental study (randomized or non randomized), case definition, sample size 120 based on assumptions (expected benefit eg improvement in cure rate by 30%, power 80%, type 1 error 0.05), sampling technique (all consecutive patients, or prespecified criteria)
- **How did you proceed?**
 - Informed consent process, confidentiality, randomized, treatment and follow up, recording of data, management of side effects, referrals/ hospitalization,
- **What did you use?**
 - Complete specifications of medicines, dosages, duration
- **How did you plan to analyze your data?**
 - Measurement of outcomes, at what time, comparison of risk ratio between treatment and controls
- **How did you protect the ethical rights of humans/animals in your study?**
 - Approval from Ethics committees, Informed consent process, for minors, data confidentiality, data storage

Results (IMRAD)

1. Determine which results to present by deciding which are relevant to the objectives
 - Sociodemographic variables- mean age, % of males/ females, urban/ rural/ slum, family income, education of parents, family history of any allergies, any treatment sought etc
 - Side effects, hospitalizations required, stoppage of treatment required etc
 - Cure of skin allergies in both categories, reduction in signs and symptoms, difference between both arms, statistical significance
2. First prepare tables, and highlight key findings of each table.
3. Summarize your findings and point the reader to the relevant data in the text, figures and/or tables. The text should complement the figures or tables, not repeat the same information.

Discussion (IMRAD)

- The study ondemonstrated that Drug H resulted in 25% reduction in signs and symptoms as compared to modern medicines 15 days after treatment
- Highlight side effects and interpretation, explanation on why side effects were less
- Similar studies where homeopathy and modern medicines were compared with results in brief
- Strengths and limitations based on methods, follow up rates, data reporting etc

IMRaD

IMRaD structure

Title

Abstract

Introduction

**{Literature
Review}**

Methods

Results

**Discussion &
Conclusion**

References

Declarations

