Anatomy of a Scientific Paper

Writing is a skill born from practice
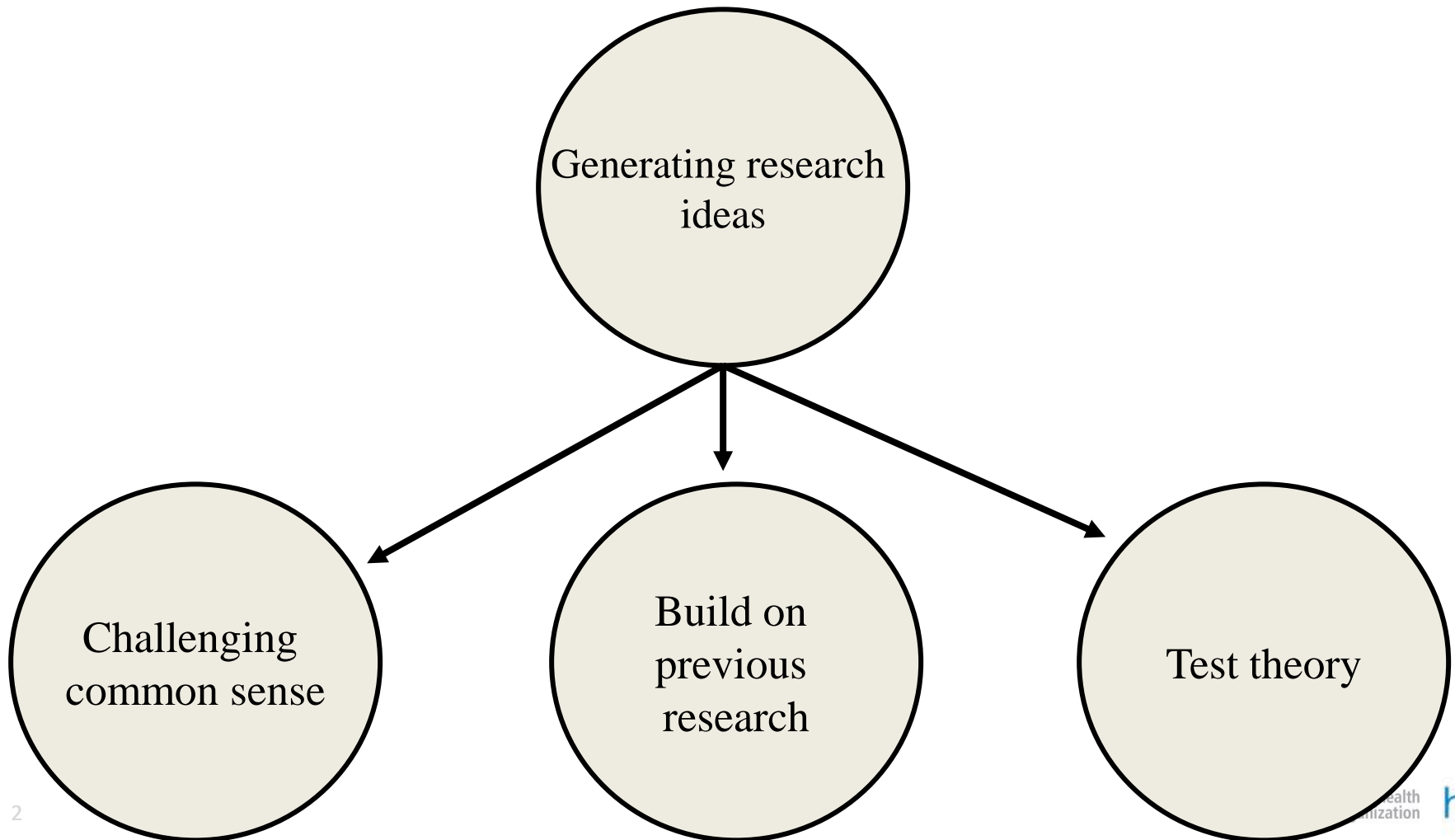
Moazzam Ali **MBBS, PhD, MPH**

Epidemiologist/Medical officer

SRH/WHO

Start with …

❑ Generate ideas and choose a research question

Introduction section

- ✓ Emphasis on literature review
  - ✓ Use published literature
  - ✓ Grey literature ? Probably not
- ✓ Past work and current status of knowledge
- ✓ Focus needs to be clear

It needs to be around 500-700 words

Methods section

It should include the following:

- ✓ Declare type of study design, in line with the objectives
- ✓ Geographic location – one district, multicenter trial?
- ✓ Timeline
- ✓ Target population – children under 5; women, adolescents
- ✓ Describe tools used for data collection
- ✓ Data management - how did you do it. Telephonic interviews, field visits etc.
- ✓ Analysis/Statistics plan
- ✓ Ethics approval ?

It should be around 400-500 words

World Health Organization

hrp

Results section

It should focus on:

✓ **Summary of your key findings** arranged in a logical sequence that generally follows your methodology section.

✓ Inclusion of non-textual elements, such as, **figures, charts, photos, maps, tables,** etc. to further illustrate the findings, if appropriate. Do not repeat things

✓ In the text, a **systematic description of your results**, highlighting for the reader observations that are most relevant to the topic under investigation.

✓ Use of the **past tense** when referring to your results.

It should be around 800-1000 words

Discussion section

✓ **Summary**: brief recap of your key results/ findings

✓ **Interpretations**: What do your results mean? And how do they compare with existing knowledge?

✓ **Implications**: Why do your results matter? What novelty does the study brings in? how will it influence:
  ✓ Policy
  ✓ Current practices
  ✓ Program implementation etc.

✓ **Limitations**: What can't your results tell us?

✓ **Recommendations**: Is the data sufficient to understand and describe phenomenon under study? Do we need to do further research to understand it better (better design, large sample size, multi-country study?)

It should be around 1000-1200 words

Referencing

- Howard style (Alphabetical)
- APA (American Psychological Association)
- Vancouver (numbering)

- Software for referencing:
- Endnote.
  - Endnote Basic https://endnote.com/product-details/basic/
- Reference manager
- Mendeley
- Zotero

Key messages

❑ Is your thesis statement clear and concise?

❑ Is your paper well-organized, and does it flow from beginning to end with logical transitions?

❑ Do your ideas follow a logical sequence in each paragraph?

❑ Have you used concrete details and facts and avoided generalizations?

❑ Do your arguments support and prove your thesis?

❑ Have you avoided repetition?

❑ Are your sources properly cited?

❑ Have you checked for accidental plagiarism?

❑ Submit the manuscript.