

National university Sudan

Faculty of Medical Laboratory Sciences

**Batch 9 - Third year (sem. 6)**

Introduction to Research – MLS – RESH -326

# Writing a research proposal

Lecture {4}

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## Research proposal

- A **research proposal** is a document that provides a detailed description of the intended program.
- It is like an outline of the entire research process that gives a reader a summary of the information discussed in a project
- The objective in writing a proposal is to describe what you will do, why it should be done, how you will do it and what you expect will result.

## Research proposal

- The first part of the thesis will be the research proposal
- In order to continue on with the thesis, the research proposal has to be approved by your supervisor and then submitted to the research ethics committee for approval

## Writing Proposals

The proposal describes the proposed plan of work:

- What you intend to study (**scope and research questions**).
- How you intend to study your topic (**methodology**).
- Why this topic needs to be studied (**significance**).
- When you will complete this work (**timeline**).
- How much will it cost to conduct this work (**budget**).

## Purpose of writing proposals

- Justify and plan a research project.
- Show how your project contributes to existing research
- Demonstrate that you understand how to conduct discipline-specific research in an acceptable time-frame.

**Audience:**

- Supervisor and research ethics committee

# Steps in development of a research proposal

## Step 1

Decide on the problem for research  
(problem statement)

## Step 2

Do some literature search  
and review other studies

## Step 3

Formation of objectives

**Step 4**

Decide your research method

**Step 5**

Discuss and decide your

Work - plan

**Step 6**

Plan for project administration

**Step 7**

Calculate the Budget

**Structure of the research  
Proposal**

Cover page

Declaration page

### Chapter 1: Introduction

1. Background
2. Problem Statement
3. Justification
4. Objectives
5. Hypothesis (if any)

### Chapter 2: Literature Review

(depends on institutional guidelines – this chapter is not a requirement in the proposal in some universities)

### Chapter 3: Methodology

- **Study Design.**
- **Study Population:**
  - Inclusion & exclusion criteria.
- **Study Area/Study Setting.**
- **Sampling:**
  - Sample size.
  - Sampling technique.

**Data collection:**

- Data collection tool.
- List of variables.
- Data Analysis.

**Ethical consideration :**

- Ethical approval from the university, hospital administration
- Permission from area where research is conducted.
- Consent from patients.

**• Work Plan**

(Gantt chart)

**• Budget:**

Budget justification

Project administration

**• References****• Annex**

## 1. Cover Page

Cover page will depend on the institutional guidelines·

This page should not be paginated.

- All wording should be single-spaced and in uppercase.
- The title at the cover page to be bold and font-size is 14.

Items will be arranged in the following sequence:

- Name of the institution
- Title: which should be focused, informative and not more than 16 words (some institutions have different number of wordings).

## Cover Page

For BSc (bachelor of sciences).

"A Research Proposal submitted in fulfilment of the Requirements for the Award of the Degree of (specify, e.g. BSc (Honor) ) in medical laboratory sciences

- Full names of student followed by highest qualification in standard abbreviation in brackets.
- Registration number of student below the name
- Name of supervisor followed by highest qualification in standard abbreviation in brackets.
- Month and year of submission comes immediately after (Centred)



## 2. Declaration Page

### A. Student declaration:

- "This Proposal is my original work and has not been presented for a Degree in any other University." Then the student signs above his/her name and registration number, followed by the date. E.g.: Signature:----- Date:-----

### B. Supervisor declaration:

- This proposal has been submitted for review with our approval as University supervisors
- Then the supervisors, sign above at least two of their names written in full, together with their respective departments.

## Title of the study

- The title is extremely important and must be chosen with great care.
- The title should be in line with your general Objective.
- A good title is defined as the fewest possible words that adequately describe the contents of the paper.
- Remove empty phrases (studies on, investigations on)
- Words like on, a, an, the etc.... should not be used unless needed.
- Be careful with Joining words like (and, with).
- Word order must be very carefully considered.

## Title of the study

Criteria for the title:

**1. Aim specific:**

(What is the research about?)

**2. Place specific:**

(Where the research will be implemented?)

**3. Time specific:**

(When the research is planned to be implemented?)

**Example:**

NOT: A study of coagulation profile on patients with ulcerative colitis

BUT: "Coagulation profile among patients with ulcerative colitis  
in Khartoum state during the year 2018"

## Good Title

- Titles should neither be too short nor too long .
- It should contain the keywords that reflect the contents of the paper
- It should be meaningful and not general .
- It should be concise, specific and informative
- Subtitles can be used if require .

## Introduction

The introduction provides the readers with the background information

### 1. Background to the Study - what is the problem?

Information such as background information about the research topic problem definition, description & statement.

### 2. Problem Statement A Problem is discrepancy between what should be and what is existing .

### 3. Justification - why is it important, highlight the gap

The justification/rationale -this is the logical reasoning to show why the research topic is important and the need to conduct the research project

### 3. Purpose of the study - your research aim

## Objectives

- Objectives should be stated using "action verbs" that are specific enough to be measured:  
e.g. To determine ..., To compare..., To verify..., To calculate ..., To describe..., etc.
- **The general objective of the research** is what is to be accomplished by the research project.
- **The specific objectives** relate to the specific research question that the investigator wants to answer through the proposed study and may be presented as primary and secondary objectives .

## Work plan

A work plan is a schedule, chart or graph that summarizes the different components of a research project and how they will be implemented in a coherent way within a specific time-span.

### The Gantt chart

- A Gantt chart is a planning tool that depicts graphically the order in which various tasks must be completed and the duration of each activity.

## Budget

- The budget translates project activities into monetary terms
- A proposal budget is with item wise/activity wise breakdown and justification for the same.
- Indicate how will the study be financed

## References

- References should be written in reference style eg ( Vancouver style).
- Will discuss later .

## Annexes

Only important documents supporting the content of the text should be appended to the thesis.

- Each appendix must be referred to in the body of the text
- Example: -see template 1 for map of the area.  
-leaflet of the reagent kits.
- The appendices are listed in the table of contents.

## Avoid Plagiarism

Plagiarism is presenting someone else's ideas or words as though they were your own .

