

Republic of Sudan
Federal Ministry of Health
Health Research Council
The National Technical Advisory Committee

GUIDELINES FOR PREPARATION OF A RESEARCH PROPOSAL

2007

I. PROPOSAL FRAMEWORK

The proposal should include the following sections: title, introduction (background, statement of problem and rationale), objectives, methodology (study design, population, sample size, sampling technique, and instruments of data collection, ethical considerations, and methods of data analysis), budget, organization (work plan and time frame), references and annexes.

II. INSTRUCTIONS TO APPLICANTS

Research is systematic, scientific and methodological approach to search for basic facts related to a specific problem aiming to find solutions based on these facts.

II.1. Selection of a topic

The first step for one intending to do a research work is the selection of the research topic. It is of most importance that the topic should be a priority problem that goes with the national priority research agenda, which may affect a greater number of people or a serious problem being identified by managers or decision-makers. The originality of the work is required unless there is a gap in the previous works. The repetition of works results only in wastage of resources. It is preferred that the selected topic to be relevant to the researcher's interest and in line with his/her personal and departmental expertise. The feasibility of the work is a balance between the complexities of the problem and the available and expected resources. Other factors that should be considered in selecting a topic include the applicability of the research results, ethical, political, and socio-cultural acceptability of the work.

II.2. Preparing a research proposal

The initial step in designing a study is to write the research proposal, which is a written document of the concept, programme and expenses of the research work. The proposal serves as a basis of discussion with other experts directly or peripherally involved with the work such as academic supervisors, granting bodies, clinicians, statisticians, and administrators. It is needless to mention that the style of writing a proposal should be clear, logical, and direct in approach with minimal jargons. Below are the different components of the research proposal.

II.2.1. Title (Title page)

It should be accurate, informative, and free of abbreviations or jargons. It should contain the key words relevant to the proposal objectives (specific enough to tell the reader what exactly the study is about).

II.2.2. Introduction

This section (800 words, and 6-8 references) should include:

II.2.2.1. Statement of the problem.

II.2.2.2. Brief background information about the problem.

II.2.2.3. Rationale

The rationale of a research work indicates the background and events leading to the need of the study. It is a “sales document” designed to convince the readers that the proposed work should be considered for endorsement and support.

Writing a good study rationale depends on the preliminary readings on the topic and indicates the researcher’s full understanding and knowledge of the previous works in the study field. The proposal writer is advised to use clear facts that support his ideas. Using too broad or incorrect information will not be helpful. As well, writing too lengthy reviews results in that the reader cannot find out the main message of the work and then less convinced with its rationale. The rationale should make clear how the problem is relevant to the national needs.

II.2.3. Objectives

The objective of a certain research summarizes what to be achieved by the study. It should clearly define the question for which a solution is being sought. The proposal writer should consider the following points on stating his research objectives, to be clearly related to the statement of the problem and to cover the different aspects of the problem.

The research objectives classified into two types, general and specific:

- i. **General objectives:** these will define what is expected to be achieved by the study in general terms.
- ii. **Specific objectives:** here the general objective is broken down into smaller and logically connected units to address the various aspects of the problem and the key factors that are assumed to cause or influence the problem. The specific objectives of a research work should focus on the following points:
 - i. To identify the distribution and patterns of a problem.
 - ii. To examine the possible factors that may influence the problem.
 - iii. To indicate how the research results will be used.

Specific objective should be “smart”:

- i. **Simple:** clearly stated, clearly phrased in operational terms specifying exactly what you are going to do, where and for what purpose.
- ii. **Measurable:** then the researcher should use action verbs such as " to determine , to identify, to verify, to describe , to calculate" and to avoid vague non-action verbs such as", , to appreciate, to

understand".

- iii. Attainable:** that can be achieved.
- iv. Realistic:** feasible concerning local conditions and available resources (fund, materials and personnel).
- v. Timely:** then can be conducted within a time frame.

In addition to objectives, a hypothesis can be formulated in some studies. A hypothesis is a suggested explanation for the research problem that can be tested. It is a prediction for a relationship between one or more factor, and the problem under study.

II.2.4. Methodology

The methodology of a research proposal documents how and when the research will be conducted and how best to analyze and interpret the results. It is the most detailed part of the proposal and includes:

- i.** Study design.
- ii.** Study area.
- iii.** Study population.
- iv.** Study instruments: should show the frame of tools that will be used to collect data about the study population in the study. e.g. Questionnaires, focus group discussions, clinical case sheet...etc.
- v.** Sampling: (design, frame, size): The number of subjects/ objects should be key to the minimum necessary for valid results.
- vi.** Criteria of selection of subjects (inclusion and exclusion criteria and stratification if needed).
- vii.** Variables: a variable is a characteristic of a person, object or phenomenon that can take different values and can be measured.

- viii.** Analysis and presentation
- ix.** Ethical considerations: An ethical research design is that which respect the autonomy of the subjects and cause no harm (non-maleficence) or minimal harm and maximal benefit (beneficence).

The researcher should address the following points:

- a) Informed consent is needed for any study that involves human subjects.
- b) Attaching a copy of the consent form.
- c) Declaring if has conflict of interests.

Approval of your institute research board and the national ethics Committee.

NB. In case of experimental studies, the researcher should prepare a detail protocol, to describe what will occur from the time of the start of proposal until it is completed, in accordance to the specified objectives. The protocol is necessary for clarity of ideas and matters of feasibility, resource implications and ethical considerations. It should be ready before commencing the practical aspects of the programme.

II.2.5. Organization work plan

The researcher has to set clearly the organizational issue of his research work.

- i. Institutional profile:** The researcher should not only name the place of his study but also the available facilities including technical and secretarial help and approval of the study place administrators.
- ii. Schedule:** It is important to set a time when the study is to commence, how long to last and whether it will be in phases (and if so, the time schedule for each phase).
- iii. Collaborators:** The researcher should include a list of the names of all the collaborators in his work with their positions, consents, and curriculum vitae.
- iv. Dissemination plan:**

Researches should propose in his research protocol his endeavor to disseminate his research results. The plan should identify the audiences, the

Endeavour

II.2.6. Budget

The budget of a research work is essentially a document of it expenses, the research is required to outline the capital and running costs together with the hidden costs such as the use of already existing laboratories, libraries and computer facilities and technical and secretarial help, in addition to the costs of travel of researchers and subjects. A portion of the proposed budget should be reserved for the unforeseen costs. A fully itemized budget is necessary, as the granting bodies require a detailed breakdown of the costs of the projects. The golden rule is not to ask for too much or

too little. It is wise to find out in advance the likely figure a particular granting authority will allow for a work of the type proposed (which provide a ceiling for the budget).

A narrative portion of the budget is used to explain any unusual items in the budget. (If the costs are straightforward, no explanation is needed). If the narrative is needed it can be structured in two ways.

- i. To create “notes to the budget” with footnote –style numbers on the line items in the budget keyed to the numbered explanations.
- ii. Or if extensive or more general explanation is required, the budget narrative can be structured as straight text.

II.2.7. Work plan:

II.2.7. References

A numbered list of recent references matching those cited in the text is needed (optimum number of 6-8). The Vancouver style is preferred in biomedical research. (for full details, refer to *Annals of Internal Medicine* 1997; 126 (1): 36-47), freely accessed at [www.smj.org.sa/ Instructions to authors](http://www.smj.org.sa/Instructions%20to%20authors)).