

Research Problem Identification &
formulation of Problem statement
and objectives

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Objectives

- Define the research problem.
- Recognize the importance of formulating a research problem
- Determine the sources of research problem.
- Determine the criteria for good research problem.
- Demonstrate skills in formulating the research problem.
- Describe meaning, characteristics, needs and types of research objectives.
- Demonstrate the ability to formulate the research objectives.

Nursing Research

It is defined as a formal, systematic, rigorous and intensive process used for solutions to nursing problems or to discover and interpret new facts and trends in the clinical practice, nursing education and nursing administration.
(Waltz and Bausell, 2001)

Research Problem

- Problems for research are everywhere.
- That is why we say that the heart of every research is the problem.
- Research problem is paramount to the success of a research effort.
- According to Powers, Meenaghan & Twoomey (1985), potential research questions may occur to us on a regular basis but the process of formulating them in a meaningful way is not at all an easy task.
- As a beginner, it might be easy to formulate a problem but it requires considerable knowledge of both the subject of interest and research methodology.

Definition

- **Research Problem** – it is an enigmatic, troubling condition or area or topic that needs an enquiry to get better understanding or ultimate solution.
- **Problem Statement** – articulates the problem to be addressed and indicates the need for a study through the development of an argument.

THE IMPORTANCE OF FORMULATING A RESEARCH PROBLEM

- This is more like identifying a **destination prior to beginning a journey.**
- A research problem is like **the foundation of a building.**
- Understand **clear idea** with regard to what it is to find out but not what must find.
- A research problem can begin with **something simple to something very complex**, depending on the nature of the research theme.

THE IMPORTANCE OF FORMULATING A RESEARCH PROBLEM

- The formulation of a research problem is like the “input” for a research work and the “output” refers to quality of contents of the research report and the validity associated is entirely dependent upon it.

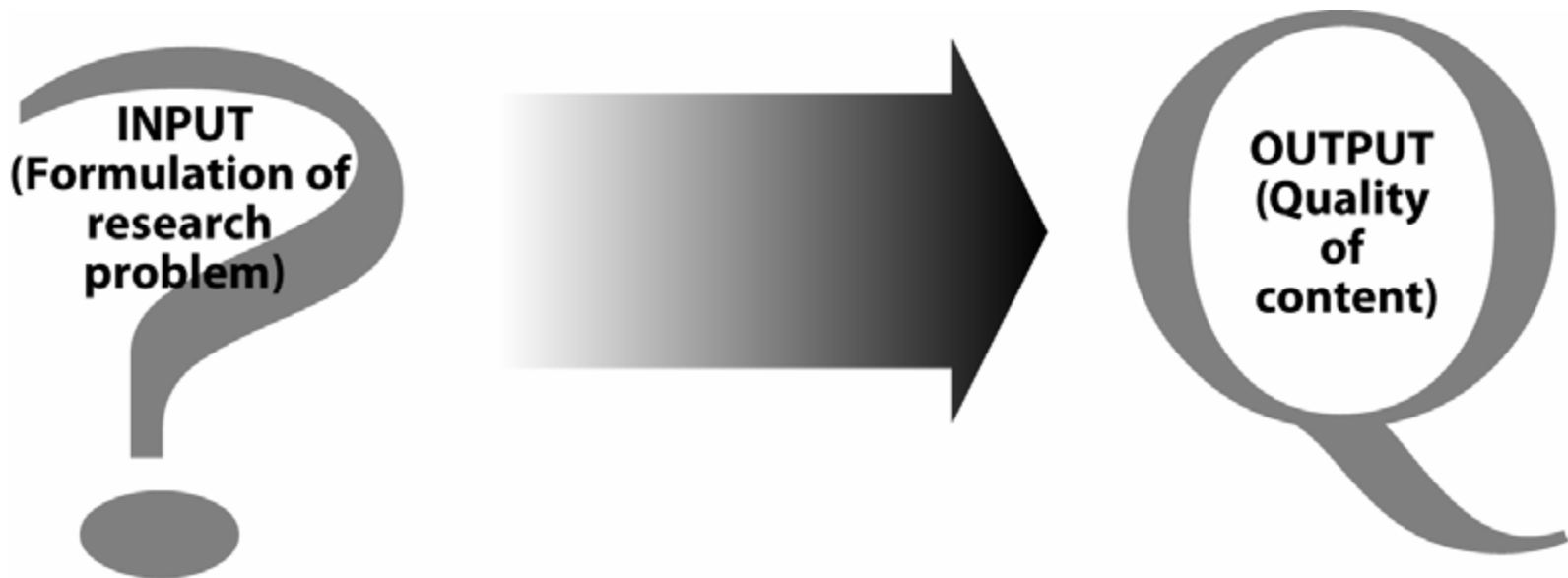


Figure 1: Relationship between research problem (input) and quality of content(output)



SOURCES OF RESEARCH PROBLEM

- **Personal Experiences –**
 - Smoking
 - Environmental Pollution
 - Alcohol
- **Clinical Field Work –**
 - Change of position reduces bed sore
 - Use of humidifier and its effects

SOURCES OF RESEARCH PROBLEM

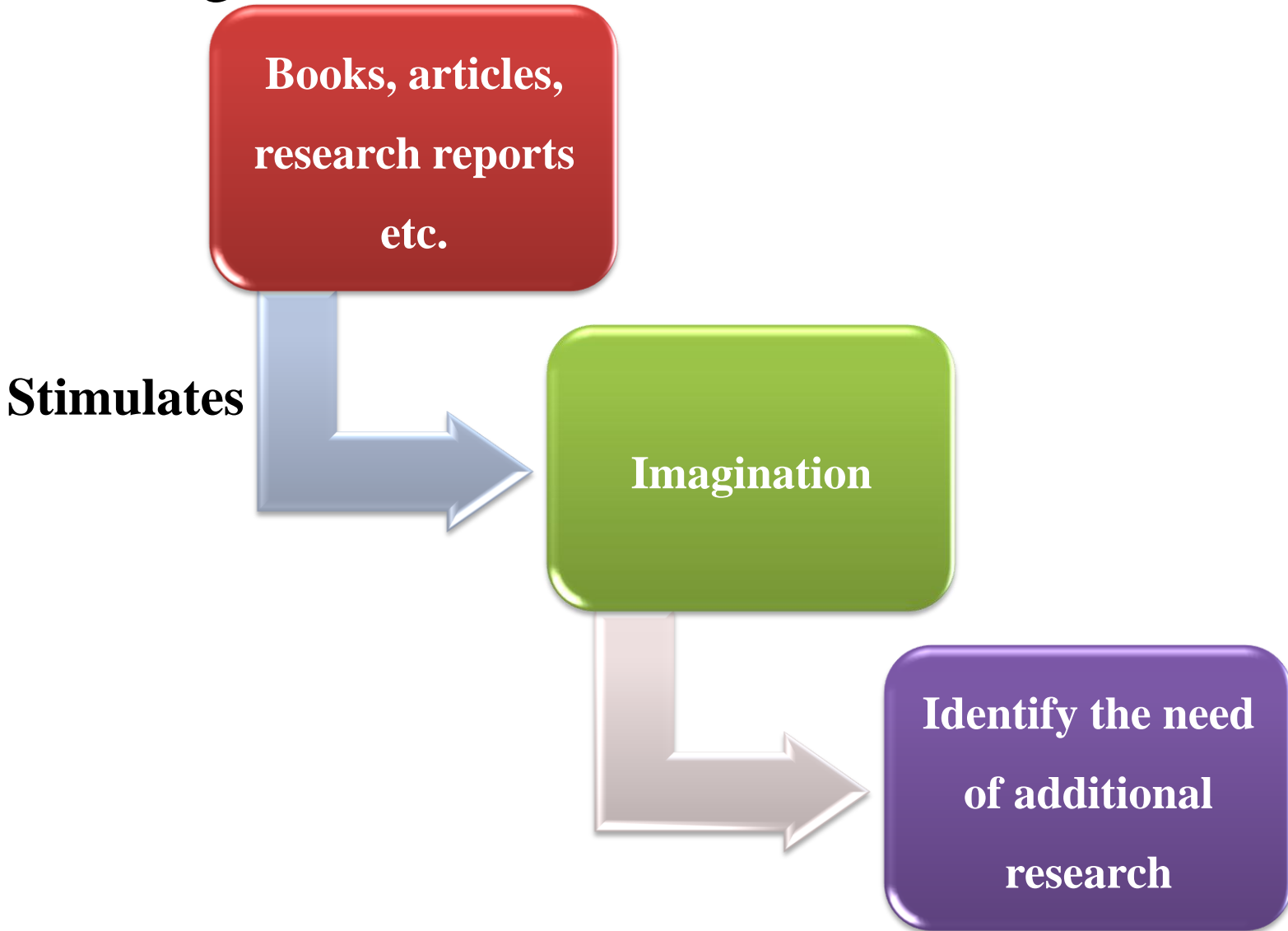
Nursing Literature

Books, articles,
research reports
etc.

Stimulates

Imagination

Identify the need
of additional
research



SOURCES OF RESEARCH PROBLEM

- **Social Issues** – (social or political issues)

Relevance to health care community

Eg. The feminist movement – Sexual harassment, domestic violence, gender equity.

Eg. Civil rights movement – Health care accessibility, minority health problems

- **Theory**

Test through researches about their applicability to hospitals, clinics and other nursing environments.

SOURCES OF RESEARCH PROBLEM

Ideas from External Sources

- List of topics by faculty member
- Sponsor funded researches – Government agencies, organization.
- Brain storming session – Discussion with peers, advisers, researchers, experts.
- Professional conferences.

CRITERIA FOR SELECTING RESEARCH PROBLEM

➤ **Significance to Nursing Profession**

- Will patients, nurses, or the broader health care community or society benefit from the evidence that will be produced?
- Will the results lead to practical applications?
- Will the results have theoretical relevance? Will the findings challenge (or lend support to) untested assumptions?
- Will the study help to formulate or alter nursing practices or policies?

➤ **Original**

- New and unique

CRITERIA FOR SELECTING RESEARCH PROBLEM

➤ Feasible

- Time
- Cost – Available financial resources
- Equipment and supplies – Resources
 - Type of equipment
 - Availability and condition
 - Qualified operator
- Administrative support
- Peer support
- Availability of subjects
- Researcher's competence
- Ethical considerations

CRITERIA FOR SELECTING RESEARCH PROBLEM

➤ **Researchable/Solvable**

– Avoid ambiguous and impossible to solve.

➤ **Current** – Present problems and needs

➤ **Interesting** – Field of interest

DEVELOPMENT AND REFINEMENT OF RESEARCH PROBLEMS

- **Selecting a Topic**

- Ideas are abstract or concrete, broad or specific, technical or informal. The important point is to put some ideas on paper.
- The ideas can be sorted in terms of interest, knowledge about the topics, and the perceived feasibility of turning the topics into a research project.

DEVELOPMENT AND REFINEMENT OF RESEARCH PROBLEMS

- **Narrowing the Topic**
- Once researchers have identified a topic of interest, they need to ask questions that lead to a researchable problem.
 - What is going on with ...?
 - What is the process by which ...?
 - What is the meaning of ...?
 - Why do ...?
 - When do ...?
 - How do ...?
 - What can be done to solve ...?
- What is the extent of ...?
- How intense are ...?
- What influences ...?
- What causes ...?
- What characteristics are associated with ...?
- What differences exist between ...?
- What are the consequences of ...?
- What is the relationship between ...?
- What factors contribute to ...?
- How effective is ...?

Example

- Suppose you were working on a medical unit and were puzzled by that fact that some patients always complained about having to wait for pain medication when certain nurses were assigned to them and, yet, these same patients offered no complaints with other nurses.
- The general problem area is discrepancy in complaints from patients regarding pain medications administered by different nurses.

Contd.....

- A quantitative researcher might become curious about nurses' dispensing behaviors, based on some interesting evidence in the literature regarding ethnic differences.
- A qualitative researcher who noticed differences in patient complaints would likely be more interested in
 - understanding the *essence of the complaints*,
 - *the patients' experience* of frustration,
 - the *process by which the problem got* resolved, or
 - the full *nature of the nurse—patient* interactions regarding the dispensing of medications.

Formulation of Research Problem

Steps

Selection of Research Topic

Reviewing the literature and theories

Delimiting the research topic

Evaluating the research problem

Formulating the final research problem statement

Example

Pulmonary status of High risk groups

An extensive review of literatures

Pulmonary status of petrol pump workers or traffic police

Evaluation of research problem for feasibility, ethical issues, practical issues, methodological issues.

“A descriptive study to assess pulmonary status of petrol pump workers working at petrol pumps of Aurangabad city”

Evaluating Research Problems

The four most important considerations (parameters) are

- The significance
- Researchability
- Feasibility of the problem
- Its interest to the researcher

Significance of the Problem

- Its significance to nursing - Nursing practice.

Researchability of the Problem

- Not all problems are amenable to study through scientific investigation. Problems or questions of a moral or ethical nature, although provocative, are incapable of being researched.
 - Eg – Should assisted suicide be legalized?
 - The problem is suitable to debate, not to research.
 - What are nurses' attitudes toward assisted suicide?
 - Do oncology nurses hold more favorable opinions of assisted suicide than other nurses?

Feasibility of the Problem

- **Time and Timing – Data collection**
- **Availability of Study Participants**
 - Available and cooperation
- **Cooperation of Others**
 - Children
 - Mentally incompetent people
 - Senile individuals
 - Administrative authorization
 - Panel of reviewers for approval
- **Facilities and Equipment**

Feasibility of the Problem

- **Money**
 - Literature costs
 - Personnel costs (e.g., for conducting interviews, coding, data entry)
 - Study participant costs
 - Supplies
 - Printing and duplication costs
 - Equipment
 - Computer-related expenses
 - Laboratory fees
 - Transportation costs

Feasibility of the Problem

- **Experience of the Researcher**
 - Prior knowledge or Experience
- **Ethical Considerations**

Interest to the Researcher

- Genuine interest and curiosity about the chosen research problem.
- A great deal of time and energy.
- Sense devoting to a project.
- Enthusiasm.

Examples

- A descriptive study to evaluate the quality of life in chronic renal failure patients receiving hemodialysis treatment in selected hospitals of Aurangabad.
- A study to evaluate the effectiveness of Acupuncture among clients with Rheumatoid arthritis in selected hospitals of Aurangabad.

Examples

- Assessment of knowledge and attitude of mothers regarding the importance of play activities for children between 0-3 years of age in a selected rural community at _____ with a view to prepare an information pamphlet.
- Effectiveness of awareness programme on assisted reproductive technology (art) among GNM III year students of selected nursing schools at _____
- Assessment learning styles among nursing students of selected nursing colleges of Aurangabad.

Examples

- A study to assess the prevalence of varicose veins and its knowledge on prevention among nurses in selected hospital at _____ with a view to prepare an information booklet
- A study to assess habit of television viewing and its impact on the weight status and behaviour of school age children in a selected school at _____.

Research Objectives

Research Objectives

“A research objective is a clear, concise, declarative statement, which provides direction to investigate the variables.”

Research Objectives

- Study objectives are formulated to direct implementation of research study.
- Objectives directly originates from the problem statement of the identified researchable issues.
- The objectives reflect the cause-effect identified in the problem tree.

Research Objectives

- Clarity in objectives enhances clarity of hypothesis and research questions, subsequently the conceptual model and data collection needed to address the research issue of concern.
- The objectives define the limits of the research and describe the expected outputs when the objectives are achieved.
- The objectives define the needed data and form the links the problem statement with data collection procedure in the research design.

Research questions & Objectives

- Research questions refer to questions, which the researcher would like to be answered by carrying out the proposed study.
- The only difference between research questions and objectives is that research questions are stated in a question form while objectives are stated in a statement form.
- For an objective to be good, it should be SMART:
 - **S**pecific
 - **M**easurable
 - **A**chievable
 - **R**elevant and
 - **T**ime-bound.

The importance of research objectives lies in the fact that they determine:

- The **kind of questions to be asked**.
- The **data collection and analysis procedure** to be used.
- The **design** of the proposed study.
- Using the study on *teacher parental factors affecting the students' performance in private secondary schools in _____ Municipality* as an example, specific research objectives as follows:
 - To find out the teacher factors influencing the students' academic performance in private secondary schools in _____Municipality.

The importance of research objectives lies in the fact that they determine:

- To find out the parental factors influencing the students' academic performance in private secondary schools in _____ Municipality.
- To determine the extent to which teacher/parental factors affect the students' academic performance in private secondary schools in _____ Municipality.
- To find out what measures can be put in place to improve the students' academic performance in private secondary schools in _____ Municipality.

Why should research objectives be developed?

- The formulation of objectives will help you to:
 - **Focus the study** (narrowing it down to essentials);
 - **Avoid the collection of data which are not strictly necessary for understanding and solving the problem.**
 - **Organize the study in clearly defined parts or phases.**
 - **Directions** - Properly formulated, specific objectives will facilitate the development of research methodology and will help to orient the collection, analysis, interpretation and utilization of data.

How should you state your objectives?

- It is important that your objectives are stated in a **good way**.
- Cover the different aspects of the problem and its contributing factors in a **coherent way and in a logical sequence**; are clearly phrased in operational terms, specifying exactly **what you are going to do, where, and for what purpose**;

How should you state your objectives?

- Are realistic considering local conditions;
- **Use action verbs** that are specific enough to be evaluated (Examples of action verbs are: **to determine, to compare, to verify, to calculate, to describe, and to establish**). Avoid the use of vague non-action verbs (Examples of non-action verbs: to appreciate, to understand, or to study).
- Keep in mind that **when the project is evaluated, the results will be compared to the objectives**. If the objectives have not been spelled out clearly, the project cannot be evaluated.

The characteristics of well stated statements of objectives are:

- **Logical consequence of the background and problem statement**
- **Are achievable with data to be collected from surveys, observations and experiments**
- **Have active verbs such as:**
 - o **Determining...**
 - o **Measuring how much...**
 - o **Identifying...**
 - o **Establishing...**
 - o **Evaluating...**
 - o **Assessing...**

The characteristics of well stated statements of objectives are:

- **Are not statement of the methods:**
 - To carry out a survey...
 - To compare treatments...
- **Declare the relationships to be investigated, identifying independent and dependent variables**
- **Make sense to an informed reader without additional information**

Where do I localize the objectives in my thesis?

- They are always presented in the introductory chapter or section of your thesis.
- Repeat them during the dissertation: you remind the readers of the purpose of your work.

Any questions.....?

THANK YOU