

Chapter 1

Introduction to Nursing Research

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Source of nursing knowledge (Sources of Evidence)

- 1. Tradition: handle knowledge from generation to another.**
(inherited custom and tradition)
- 2. Authority (experts, and authoritative).**
- 3. Trial and error**
- 4. Logical reasoning**
 - Inductive reasoning is the process of developing generalizations from specific observations.
 - Deductive reasoning : is the process of developing specific predictions from general principles
- 5. Scientific research: to generate most credible evidence based practice.**

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Sources of Nursing Knowledge

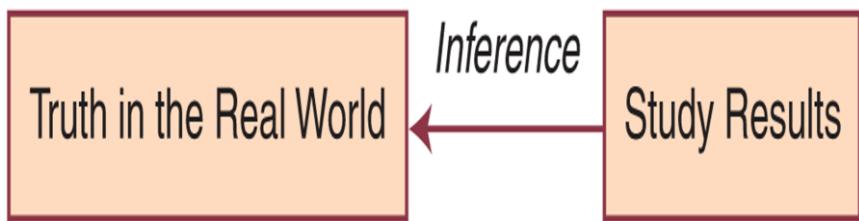


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Research



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Definition of Nursing Research

Research

- Systematic inquiry using disciplined methods to solve problems or answer questions

Nursing research

- Systematic inquiry to develop knowledge about issues of importance to the nursing profession
- “Systematic, objective process of analyzing phenomena of importance to nursing”.

Nieswadomy,(2008)

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Nursing Research

- **Provides the foundation for evidence-based nursing practice**
- **Evidence-based practice is the” The process of systematically finding, appraising, and using research findings as the basis for clinical practice - for making decisions about patient care”.**

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The purposes of Nursing Research

- To validate and refine existing knowledge and develop new knowledge.
- Provide a foundation on which practice decisions and behaviors are laid
- Create a strong scientific base for nursing practice and application of results demonstrates professional accountability to insurers and health care consumers.

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Goals of nursing research

- The ultimate goal of nursing research is to develop, refine, and expand a body of knowledge.
- And
- TO improve quality of care

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Research Examples



Examples of nursing research questions:

- What are the factors that determine the length of stay of patients in the intensive care unit undergoing coronary artery bypass graft surgery (Doering, Esmailian, Imperial-Perez, & Monsein, 2001)?
- How do adults with acquired brain injury perceive their social interactions and relationships (Paterson & Stewart, 2002)?

Characteristic of scientific research

- **Systematic**
- **Orderly**
- **Objective (un biased)**
- **Use of empirical data: data gathered through the sense organs**
- **Control**

Purpose of nursing research

First: Basic research

(Pure research)

- Concerned with generation new knowledge.
- Used to test theory Generate new theories.

Second: Applied research

- Concerned with using knowledge to solve immediate problem.
- Used to seek solution to immediate problem

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Research Purposes

- Research enable nurses to describe a nursing situation, to explain phenomena, to predict outcomes and control the occurrence of undesirable outcomes.

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Research Purpose

PURPOSE	TYPES OF QUESTIONS: QUANTITATIVE RESEARCH	TYPES OF QUESTIONS: QUALITATIVE RESEARCH
Identification		What is this phenomenon? What is its name?
Description	How prevalent is the phenomenon? How often does the phenomenon occur? What are the characteristics of the phenomenon?	What are the dimensions of the phenomenon? What variations exist? What is important about the phenomenon?
Exploration	What factors are related to the phenomenon? What are the antecedents of the phenomenon?	What is the full nature of the phenomenon? What is really going on here? What is the process by which the phenomenon evolves or is experienced?
Explanation	What are the measurable associations between phenomena? What factors cause the phenomenon? Does the theory explain the phenomenon?	How does the phenomenon work? Why does the phenomenon exist? What is the meaning of the phenomenon? How did the phenomenon occur?
Prediction	What will happen if we alter a phenomenon or introduce an intervention? If phenomenon X occurs, will phenomenon Y follow?	
Control	How can we make the phenomenon happen or alter its nature or prevalence? Can the occurrence of the phenomenon be prevented or controlled?	

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Goals for Conducting Nursing Research

1. Promote evidence based practice (EBP)

EBP: make clinical decision based on the best research evidence for improving nursing care
1. Ensure credibility of nursing profession
2. Document cost effective nursing care

Example on EBP

PICO IS A Guidelines for EBP

Evidence-based practice: Step 1 - Asking questions

PICO can be used to formulate a focused clinical research question.

P	I	C	O
Population Patient Problem	Intervention OR Exposure	Comparison	Outcome
Who are the patients? What is the problem?	What do we do to them? What are they exposed to?	What do we compare the intervention with?	What happens? What is the outcome?

Adapted from: Purnell 2011

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Role of Nurses in Research

1. Principal investigator
2. Member of research team
3. Evaluator of research finding
4. Research consumer
5. Advocator during studies
6. Subject in studies

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Research Approach

1. Quantitative Research

• Quantitative research

- Research that concerned with objective, tight controls over the research situation, and ability to generalize findings.



Quantitative example of exploration:

Reynolds and Neidig (2002) studied the incidence and severity of nausea accompanying combinative antiretroviral therapies among HIV-infected patients, and explored patterns of nausea in relation to patient characteristics.

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Research Approach

2. Qualitative Research

• Concerns with subjective meaning of an experience to an individual.

- Studying phenomena about which little is known.
- Studying a phenomenon which needs to be clearly identified or named or has been inadequately defined.
- Needs an in-depth probing of a problem.



Qualitative example of identification:

Weiss and Hutchinson (2000) investigated people with diabetes and hypertension to discover the basic social problem that affects their adherence to health care directives. Through in-depth interviews with 21 clients, the researchers identified that *warnings of vulnerability* was the basic problem undermining adherence.

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Examples



Quantitative example of explanation:
Resnick, Orwig, Maganizer, and Wynne (2002) tested a model to explain exercise behavior among older adults on the basis of social support, age, and self-efficacy expectations.



Quantitative example of prediction:
Lindeke, Stanley, Else, and Mills (2002) used neonatal data to predict academic performance and the need for special services among school-aged children who had been in a level 3 neonatal intensive care unit.

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Examples



Qualitative example of description:
Bournes and Mitchell (2002) undertook an in-depth study to describe the experience of waiting in a critical care waiting room.



Qualitative example of exploration:
Through in-depth interviews, Sadala and Mendes (2000) explored the experiences of 18 nurses who cared for patients who had been pronounced brain dead but kept alive to serve as organ donors.

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Triangulation



QUANTITATIVE + QUALITATIVE

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Nursing Research
Priorities
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Priorities for future nursing research

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