

# Chapter 1

## Introduction to Nursing Research in an Evidence-Based Practice Environment

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## What Is Research?

### ▶ Research

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

### ▶ Nursing research

- ▶ Systematic inquiry to develop knowledge (trustworthy evidence) about issues of importance to the nursing profession

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## The Importance of Research to Evidence-Based Nursing

- ▶ Nurses are increasingly expected to **understand and undertake research** and to base their practice on evidence from research—that is, to **adopt an evidence-based practice (EBP)**.
- ▶ Changes to nursing practice are happening every day because of EBP efforts.



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## What is Evidence-Based Practice?

- ▶ Evidence-based practice (EBP) is the use of the **best clinical evidence** in making patient care decisions



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## Roles of Nurses in Research

- ▶ Nurses are **consumers** of research findings → they read research reports to keep up-to-date on findings that may affect their practice.
- ▶ Nurses are **producers** of research → nurses who actively design and undertake studies
- ▶ Both **consumers** and **producers** play a **key role in EBP**

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## Roles of Nurses in Research

- ▶ **How can a nurse contribute to research?**
  1. Contribute an idea for a clinical inquiry
  2. Assist in collecting research information (research data)
  3. Offer advice to clients about participating in a study
  4. Search for research evidence
  5. Discuss the implications of a study in a journal club (*A group that meets in clinical settings to discuss and critique research articles appearing in journals*) in your practice setting

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## History of Nursing Research

- ▶ Pioneered by Florence Nightingale, 1850s
  - ▶ **Florence Nightingale** is often seen as the very first nurse researcher.
  - ▶ Her research in the 1850s focused on **soldiers' morbidity and mortality** during the Crimean War.
  - ▶ she was successful in bringing about changes in nursing care and in public health
- ▶ 1950s → First journal on research (*Nursing Research emerged*)
- ▶ 1980s → Nursing research was strengthened and given more visibility. Clinical research became increasingly important,
- ▶ 1986 → National Center for Nursing Research (NCNR) established at NIH
- ▶ 1993 → National Institutes of Nursing Research (NINR) established,
  - ▶ NINR budget exceeds \$100 million, 2000s

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## Future Directions for Nursing Research

- ▶ Focus on **Evidence-Based Practice**
- ▶ Multiple **confirmatory** strategies (e.g., replication and multisite studies)
- ▶ Stress on systematic reviews (*cornerstone of EBP*)
- ▶ Expanded **local research** in health care settings (Small studies designed to solve local problems)
- ▶ More multidisciplinary collaboration
- ▶ Expanded dissemination of research findings
- ▶ Greater focus on cultural issues and health disparities

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## What are the Sources of Evidence for Nursing Practice?

- ▶ **Tradition** (customs, culture, etc.)
- ▶ **Authority** (a person with specialized expertise. However, they are not infallible)
- ▶ **Clinical experience; trial and error; intuition** (Trial and error involves trying alternatives successively until a solution to a problem is found. Trial and error can be practical, but the method tends to be haphazard, and solutions may be idiosyncratic)
- ▶ **Logical reasoning** (inductive & deductive)
- ▶ **Assembled information** (example: rates of cesarean deliveries)
- ▶ **Disciplined research** (the best method of acquiring reliable knowledge)

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## Paradigms for Nursing Research

- ▶ **What is a Paradigm?** a world view; a general perspective on the complexities of the real world, with certain **assumptions about reality**
- ▶ Two key paradigms for nursing research:
  - ▶ **Positivist paradigm**
  - ▶ **Naturalistic paradigm**

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## What are the assumptions of Positivism and Naturalism, in relation to the Nature of Reality?

- ▶ An **assumption** is a principle that is believed to be true without verification.
- ▶ **Positivist assumption** → there is a **reality out there** that can be studied and known.
- ▶ **Naturalist(Constructivist) assumption** → Reality is multiple and subjective, **constructed by individuals**.

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## How Is the Inquirer Related to Those Being Studied?

- ▶ **Positivist assumption**: The inquirer is **independent** from those being studied.
- ▶ **Naturalist(Constructivist) assumption**: The inquirer **interacts** with those being studied; findings reflect the interaction.

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## Question



Is the following statement True or False?

- ▶ Application of the positivist paradigm involves viewing reality as being driven by natural causes.

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## Answer

- ▶ True
  - ▶ The positivist assumption is that reality exists and there is a real world driven by natural causes.
  - ▶ Example: If a person has a stroke, it is assumed that there must be health conditions that caused it.

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## What Is the Role of Values in the Inquiry?

- ▶ **Positivist assumption:** Values are held in check. **Objectivity** is sought.
- ▶ **Naturalist(Constructivist) assumption:** **Subjectivity** and values are inevitable and are even desirable. → Naturalists take the position of relativism: there are multiple interpretations of reality in people's minds

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## How Is Knowledge Obtained (How are the Research Methods)?

- ▶ **Research methods** are the techniques used **to structure** a study and **to gather, analyze, and interpret** information
  - ▶ **Positivism** → Quantitative research
  - ▶ **Naturalism** → Qualitative research

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## Key Differences in Research Methods:

### Positivist

- ▶ **Deductive processes** → hypotheses testing
- ▶ Emphasis on discrete, **specific concepts**
- ▶ Focus on the **objective** and **quantifiable**
- ▶ **Corroboration** of researchers' predictions
- ▶ **Fixed**, prespecified design
- ▶ **Controls** over context
- ▶ **Measured**, quantitative information
- ▶ **Statistical** analysis
- ▶ **Seeks generalizations**

### Naturalist

- ▶ **Inductive processes** → hypothesis generation
- ▶ Emphasis on **the whole**
- ▶ Focus on the **subjective** and **nonquantifiable**
- ▶ **Emerging insight** grounded in participants' experiences
- ▶ **Flexible**, emergent design
- ▶ Context-bound, **contextualized**
- ▶ **Narrative** information
- ▶ **Qualitative** analysis
- ▶ **Seeks in-depth understanding**

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## Question

Which of the following characterizes **naturalistic research methods**?

- Fixed design
- Deductive processes
- Qualitative information
- Seeking of generalizations



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## Answer

### c. Qualitative information

- ▶ **Naturalistic** research methods involve **qualitative information, flexible design, inductive processes, and seeking patterns.**

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## Purposes of Nursing Research

- ▶ **Quantitative research** → researchers begin with a phenomenon that has been previously studied or defined.
  - ▶ *Example:* “The purpose of this study was to explore **depression** among persons newly diagnosed with HIV”. (Depression is a phenomenon already defined)
- ▶ **Qualitative research** → study phenomena about which little is known. In some cases, so little is known that the phenomenon has yet to be clearly identified or named or has been inadequately defined.
  - ▶ *Example:* “The purpose of this study was to investigate the **experience** of men with advanced cancer in relation to their **perceptions of masculinity**”

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## Specific Purposes of Nursing Research

|                          | <u>Quantitative</u> | <u>Qualitative</u> |
|--------------------------|---------------------|--------------------|
| ▶ Identification         | –                   | X                  |
| ▶ Description            | X                   | X                  |
| ▶ Exploration            | X                   | X                  |
| ▶ Prediction and Control | X                   | –                  |
| ▶ Explanation            | X                   | X                  |

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## Specific Purposes of Nursing Research—EBP Framework

- ▶ **Treatment, Therapy, Intervention**
  - ▶ Studies with a therapy **purpose** seek to identify effective treatments for improving or preventing health problems.
- ▶ **Diagnosis, Assessment**
  - ▶ Studies with purpose to develop and test instruments to screen, diagnose, and assess patients and to measure clinical outcomes.
- ▶ **Prognosis**
  - ▶ Studies with purpose to examine the consequences of a health problem, explore factors that can modify the prognosis, and examine when (and for which types of people) the consequences are most likely.
- ▶ **Harm and Etiology(causes)**
  - ▶ Studies with purpose to determine factors and exposures that affect health
- ▶ **Meaning, Process**
  - ▶ Studies with purpose to investigate what health and illness mean to clients

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## Question

Is the following statement **True** or **False**?

- ▶ **Quantitative research** attempts to identify a phenomenon.



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## Answer

- ▶ **False**
  - ▶ **Qualitative research**, not quantitative research, would be used to **identify a phenomenon**.

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## So, what is/are the takeaway message(s) from Chapter 1?

- **Research is very important in Nursing Profession-**
  - through disciplined research a solid base of evidence for Nursing practice will be established.
  - Nurses' clients are those who would be **best served by the development of a scientific base for nursing practice.**
- **A fundamental belief of those who hold to the positivist paradigm** is that the researcher is objective and independent of those being studied
- **Statements of purpose in Qualitative Studies** → the researchers begin with a phenomenon that has been previously studied or defined (objective investigation)
- **Statements of purpose in Qualitative Studies** → the studies purpose to investigate experiences, perceptions (subjective). Heavily focused on understanding the human experience as it is lived

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## So, what is/are the takeaway message(s) from Chapter 1?

- **Quantitative studies involve** measured, numeric information. Data is quantified. Statistics are used to analyze the data.
- **Qualitative studies involve** in-depth, narrative information. Data analyzes is qualitative, not measured, not using statistics.
- Although authorities (experts), clinical experience, and assembled information (local, or national, or international data) can be **sources of evidence for nursing practice**, **Disciplined Research** is considered the best method of acquiring reliable knowledge.
- **Quantitative researchers** gather **empirical evidence**—evidence that is rooted in objective reality and gathered directly or indirectly through the senses rather than through personal beliefs or hunches.
- **Qualitative researches** (Constructivist studies) yield rich, in-depth information.

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## So, what is/are the takeaway message(s) from Chapter 1?

- **Quantitative studies data** are gathered systematically, using formal instruments to collect needed information
- **Qualitative studies data** use narratives, subject information