INUTRODUCTION TO NURSING RESEARCH

UNIT 1
LEARNING OBJECTIVES
INTRODUCTION TO NURSING RESEARCH

At the end of this chapter the student should be able to :

- Define nursing research
- Identify the importance of research in nursing
- Become aware of Nursing Research: Past, Present and Future
- Identify various Sources of evidence for nursing practice
- Identify Paradigms for Nursing Research
- Become aware of the Purpose of Nursing Research

NURSING RESEARCH IN PERSPECTIVE

In today´s world:

- Nurses must become lifelong learners
- Capable of reflecting on, evaluating, and modifying their clinical practice based on new knowledge
- Expected to become producers of new knowledge through nursing research

WHAT IS NURSING RESEARCH?

Research is systematic inquiry that uses disciplined methods to answer questions or solve problems

Goal of research is to develop, refine, and expand a body of knowledge

Nurses are increasingly engaged in disciplined studies that

- Benefit the profession and its patients
- Contribute to improvements in the entire health care system

WHAT IS NURSING RESEARCH?

Nursig Research is systematic inquiry designed to develop knowledge about issues of importance to the nursing profession, including nursing practice, education, administration and informatics

Clinical Nursing Research designed to generate knowledge:

- To guide nursing practice
- To improve the health and quality of life of nurses´clients

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 et al 2001)

How do adults with acquired brain injury perceive their social interactions and relationships (Paterson & Stewart 2002)

THE IMPORTANCE OF RESEARCH IN NURSING

Nurses adopt evidence-based practice (EBP)

EBP: Defines as the use of the best clinical evidence in making patient care decisions

Research findings from rigorous studies constitute the best type of evidence for informing nurses´decision, actions and interactions with clients

THE IMPORTANCE OF RESEARCH IN NURSING

Accepting the need to base specific nursing actions and decision on **evidence** indicating that:

- the actions are clinicly appropriate,
- cost effective
- results in positive outcomes for clients
- identify of nursing as a profession

THE IMPORTANCE OF RESEARCH IN NURSING

Research enables nurses to

- Describe the characteristics of a particular nursing situation about which little is known
- To explain phenomena that must be considered nursing care
- To predict the probable outcomes of certain nursing decision
- To control the occurance of undesired outcomes
- To initiate activities to promote desired client behavior

EXAMPLE OF AN EBP PROJECT

Developed and tested an evidence-based protocol for :

- urinary incontinence in women and then designed procedures to facilitate the protocol´s implementation into clinical practice (Samselle et al 20a, 2000b)

- Neonatal skin care and also instituated procedures for implementing (Lund 2001)

THE CONSUMER-PRODUCER CONTINUUM IN NURSING RESEARCH

Every nurse´s responsibility to engage in one or more roles along a continuum of research participation

At one end of the continuum are those nurses whose involvement in research is indirect

Consumers of nursing research read research reports to develop new skills and to keep up to date on relevant findings that may affect their practice

THE CONSUMER-PRODUCER CONTINUUM IN NURSING RESEARCH

At the other end of the continuum are the procedures of nursing research: nurses who actively participate in designing and implementing research studies

Nurses engage as a way of improving their effectiveness and enhansing their professional lives

THE CONSUMER-PRODUCER CONTINUUM IN NURSING RESEARCH

Activities include the following:

Participating in **a journal club** in a practice setting, which involves regular meetings among nurses to discuss and critique research articles

Attending **research presentations** at professional conferences

Discussing the implications and relevance of research findings with clients

THE CONSUMER-PRODUCER CONTINUUM IN NURSING RESEARCH

Giving clients information and advice about **participation** in studies

Assisting in **the collection of research information** (e.g. Distributing questionnaires to patients)

Reviewing a proposed research plan with respect to its feasibility in a clinical setting and offering clinical expertise to improve the plan

Collaborating in the development of an idea for a clinical research project

THE CONSUMER-PRODUCER CONTINUUM IN NURSING RESEARCH

Participating on an institutional committee that reviews the ethical aspects of proposed research before it is undertaken

Evaluating completed research for its possible use in practice, and using it when appropriate

NURSING RESEARCH: PAST, PRESENT, AND FUTURE THE EARLY YEARS: FROM NIGHTINGALE TO THE 1950S

Florence: ***Notes on Nursing (1859)-*** environmental factors that promote physical and emotional well being

Data collection relating to factors affecting soldier mortality and morbidity during the Crimean War

NURSING RESEARCH: PAST, PRESENT, AND FUTURE THE EARLY YEARS: FROM NIGHTINGALE TO THE 1950S

Goldmark report: identified inadequacies in the educational backgrounds of the groups studied and concluded that advanced educational preparation was essential

Studies concerning nursing students- their differential characteristics, problems and satisfactions became more numerous

NURSING RESEARCH: PAST, PRESENT, AND FUTURE THE EARLY YEARS: FROM NIGHTINGALE TO THE 1950S

1950- nurses studied themselves:

- who is the nurse?
- What does the nurse do?
- Why do individuals choose to enter nursing?
- What are the characteristics of the ideal nurse?
- How do the groups perceives the nurse?

The American Journal of Nursing first published 1900

NURSING RESEARCH: PAST, PRESENT, AND FUTURE
NURSING RESEARCH IN THE 1960S

Conceptual framework, conceptual model, nursing process, theoretical base of nursing practice began to appear in the literature

The International Journal of Nursing Studies began published 1963

The Canadian Journal of Nursing Research 1968

NURSING RESEARCH IN THE 1970S

Additional Journals including:

Advances in Nursing Science, Research in Nursing & Health, The Western Journal of Nursing Research, The Journal of Advanced Nursing

Research: improvement of client care-signifying a growing awareness by nurses of the need for a scientific base from which to practice

Cadre of nurses with earned dictorates increased

Research program: identification and assessment of children at risk of developmental and health problems such as abused and neglected children and failure to thrive children (Barnard 1973, 1976)

NURSING RESEARCH IN THE 1980S

Availability of computers for the collection and analysis of information

1986- Establishment of the National Center for Nursing Research (NCNR) at the National Institutes of Health (NIH) by congressional mandate

1980- Evidence Based Medicine, shift for medical education and practice and has a major effect on all health care professions

1989- in US Agency for Health Care Policy and Research

NURSING RESEARCH IN THE 1980S

Supporting research to improve the quality of health care, reduce health costs, enhance patient safety

E.g. Development and testing of a model of site transitional care- follow up services for very low birth weight infants who were discharged early from the hospital and later expanded to other high risk patients

NURSING RESEARCH IN THE 1990S

National Institute of Nursing Research (NINR) was born

Several research journals were established during 1990s including Qualitative Health Research, Clinical Nursing Research, Clinical Effectiveness, Outcome management for Nursing Practice

1993: Cochrane Colaboration, an international network of instituations and individuals, maintain and updates systematic reviews of hundreds of clinical interventions to facilitate Evidence Based Practice (EPB)

NURSING RESEARCH IN THE 1990S

The priorities established by the first conference on research priorities-1994 included low birth weight, human immunodeficiency virus (HIV) infection, long term care, symptom management, nursing informatic, health promotion and technology dependence

The area of psychoneuroimmunology, which has been adopted as the model of mind-body interactions

FUTURE DIRECTIONS FOR NURSING RESEARCH

Increased focus on outcomes research

- Outcome research is designed to assess and document the effectiveness of health care services
- The need for cost-effective care that acheive positive outcomes without compromising quality

Increase focus on biophysiologic research

Journal called biological research for nursing was launched 2000

FUTURE DIRECTIONS FOR NURSING RESEARCH

Promotion of evidence-based practice- translate research findings into practice- evidence based patient care

Developmantal of a stronger knowledge base through multiple, confirmatory strategies

Confirmation is needed through **deliberate** replication (repeating) of studies with different clients, in different clinical settings and at different times to ensure that the findings are robust

FUTURE DIRECTIONS FOR NURSING RESEARCH

Strengthening of multidisciplinary collaboration

Which could lead to nurse researchers playing a more prominent role in national and international health care policies

Expanded dissemination of research findings internet and electronic communication has a big impact on the dissemination

On line journal of knowledge synthesis of nursing

FUTURE DIRECTIONS FOR NURSING RESEARCH

Nurse reserchers must market themselves and their research to proffesional organization, consumer organization, and corporate world to increase support for their reseach

Need to educate upper-level managers and corporate excutive about the importance of clinical outcomes research

FUTURE DIRECTIONS FOR NURSING RESEARCH

The four broad goals are:

1. To identify and support research opportunities that will acheive scientific distinction and produce significant contribution to health

2. To identify and support future areas of opportunity to advance research on high quality, cost effective care and to contribute to the scientific base for nursing practice

3. To communicate and disseminate research findings

4. Enhance the development of nurse research through training and career development opportunities

FUTURE DIRECTIONS FOR NURSING RESEARCH

Topic identified

- Chronic illness (management of chronic pain, care of children with asthma, adherence to diabetic self management)
- Behavioural changes and interventions (research in informal caregiving, disparities (skilnader) of infant mortality, effective sleep in health and illness)
- Responding to compelling (tvingande) public health concerns (reducing health disparities in cancer screening, end to life/palliative care)

SOURCES OF EVIDENCE FOR NURSING PRACTICE

Tradition or custom facilitates communication by providing a common foundation of accepted truth

Tradition poses (utgör) some problems-many traditions have never been evaluated for their validity

Research on ritualistic practices in nursing suggests that some traditional nursing practice as temp, pulse , resp. may be dysfunctional

Many intervantions are based on tradition, custom and unit culture than on sound evidence

SOURCES OF EVIDENCE FOR NURSING PRACTICE

Authority: trust in the judgment of people who are authoritative on an issue by virtue (effect) of specialized training or experience

Authorities are not infallible معصوم(no body is inffalible), particularly if their exeprtise is based primarily on personal experience like tradition their knowledge often goes unchallenged (ifrågasättas)

SOURCES OF EVIDENCE FOR NURSING PRACTICE

Nursing practice would flounder (gör misstag) if every piece of advice from nursing educators were challenged by students

Nursing education would be incomplete if students never had occasion to pose (put in special attitude) such questions as :

How does the authority (the instructor) know? What evidence is there that what i am learning is valid?

CLINICAL EXPERIENCE, TRIAL AND ERROR, AND INTUITION

Our own clinical experience represent a familiar and functional source of knowledge

The ability to generalize, to recogniz regularities, and to make prediction based on observations is an important characteristics of the human mind

Despite the obvious value of clinical expertise, it has limitation as a type of evidence

Each individuals experience is fairly restricted

CLINICAL EXPERIENCE, TRIAL AND ERROR, AND INTUITION

First limitation: A nurse may notice for example that two or three cardiac patients follow similar postoperative sleep patterns

This observation may lead to some interesting discoveries with implications for nursing interventions, but does one nurse´s observations justify broad changes in nursing care?

CLINICAL EXPERIENCE, TRIAL AND ERROR, AND INTUITION

A second limitation of experience is that the same objective event is usually experienced or perceived (understood) differently by two individuals

Related to clinical experience is the method of trial and error. Alternatives tried successively until a solution to a problem is found

Trial and error may offer a practical means of securing knowledge, but is is fallible (felbar)

CLINICAL EXPERIENCE, TRIAL AND ERROR, AND INTUITION

This method is haphazard (slumparted) and the knowledge obtained is often unrecorded and inaccessible (unavailable) in subsequent clinical situations

Intuition is a type of knowledge that cannot be explained on the basis of reasoning or prior instruction

Intuition and hunches (föraningar) undoubtedly play a role in nursing practice- it is difficult to develop policies and practices for nurses on the basis of intuition

LOGICAL REASONING

Solutions to many perplexing (förvirrande) problems are developed by logical thought processes

Logical reasoning as a method of knowing combines experience, intellectual faculties and formal (conventional) systems of thought

Inductive reasoning is the process of developing generalization from specific observation

Example , nurse may observe the anxious behavior (specific) hospitalized children and conclude that (in general) a children´s separation from their parents is stressful.

LOGICAL REASONING

Deductive reasoning is the process of developing specific prediction from general principles

Example, if we assume that separation anxiety occurs in hospitalized children (in general), then we might predict that (specific) children in Memorial Hospital whose parents do not room-in will manifest symptoms of stress

However, reasoning in and of itself is limited because the validity of reasoning depends on the accuracy of the information

ASSEMBLED (COLLECT, GATHER) INFORMATION

In making clinical decisions, health care professionals rely on information that has been assembled for a variety of purposes

For example local, national and international bench (domare, rätt) marking data provide information on such issues as the rates of using various procedures (e.g., rates of cesarean deliveries) or rates of infection (e.g., nosocomial pneumonia rates) can serve as a guide in evaluating clinical practices

ASSEMBLED (COLLECT, GATHER) INFORMATION

Cost data- information on the costs associated with certain procedures, policies or practices are sometimes used as a factor in clinical decision-making

Quality improvement and risk data such as medication error reports and evidence on the incidence and prevalence of skin breakdown can be used to assess practices and determine the need for practice changes

DISCIPLINED RESEARCH

The current emphasis on evidence-based health care requires nurses to base their clinical practice to the greatest extent possible on research based findings rather than on tradition, authority, intuition or personal experience

PARADIGM نموذج FOR NURSING RESEARCH

Paradigm is a world view, a general perspective on the complexities of the real world

Paradigms for human inquiry (investigation) are often characterized in terms of the way in which they respond to basic philosophical questions:

- Ontologic: What is the nature of reality?علم الوجود
- Epistemologic: what is the relationship between the inquirer المستعلمand that being studiedنظرية المعرفة
- Axiologic: what is the role of values in the inquiry?علم القيم
- Methodologic: how should the inquirer obtain knowledge?

TERMS

ontology - the metaphysical study of the nature of being and existence metaphysics - the philosophical study of being and knowing

Epistemologic:the theory of knowledge with developing scientific thought

Axiology: is the broad study of ethics

Methodologic: A system of principles, practices, and procedures applied to a specific branch of knowledge

THE POSITIVE PARADIGM

Positivism:

rooted in 19th century thought

Guided by such philosophers as Comte, Mill, Newton and Locke

Positivism is a reflection of a broader cultural phenomenon that in the humanities, is referred to as modernism, which emphasizes the rational and the scientific

THE POSITIVE PARADIGM

The fundamental ontologic assumption of positivists is that there is a reality out there that can be studied and known (an assumption refers to a basic principle that is believed to be true without proof or verification)

THE POSITIVE PARADIGM

The related assumption of determinism

- حتمي refers to the belief that phenomena are not hapazard or random events but rather have (antecedent tidigare, föregående) causes

If a person has a cerebrovascular accident

scientist in a positivist tradition assumes that there must be one or more reasons that can be potentially identified and understood

THE NATURALISTIC PARADIGM

Began as a counter movement to positivism with writers such as Weer and Kant

Reflects the cultural phenomenon of modernism that burgeoned (To begin to grow or blossom) in the wake of the industrial revolution

Naturalism is an outgrowth of the pervasive تفشي

cultural transformation that is usually referred to as postmodernism

- For the naturalistic inquirer, reality is not a fixed entity (unit) rather a construction of the individual participating in the research, reality exists within a context and many constructions are possible

The knowledge is maximised when the distance between the inquirer and the participants in the study is minimized

PARADIGMS AND METHODS: QUANTITATIVE AND QUALITATIVE RESEARCH

Research methods are techniques used by researchers to structure a study and to gather and analyze information relevant to the research question

Quantitative research which is most closely allied with the positivist tradition

Qualitative research which is most often associated with naturalistic inquiry

SCIENTIFIC METHOD AND QUANTITATIVE RESEARCH

Use deductive reasoning to generate hunches that are tested in the real world

Typically move in an orderly and systematic fashion from the definition of a problem and the selection of concepts on which to focus , through the design of the study and collection of information, to the solution of the problem

SCIENTIFIC METHOD AND QUANTITATIVE RESEARCH

By systematic the investigator progresses logically through a series of steps, according to a prespecified plan of action

Quantitative research use mechamisms designed to control the study

Control involves imposing (dra fördel av) condition on the research situation so that biasis are minimized and precision (Used or intended for accurate or exact measurement) and validity are maximized read page 15 heart disease and diet

SCIENTIFIC METHOD AND QUANTITATIVE RESEARCH

Quantitative researchers gather empirical evidence- that is rooted in objective reality and gathered directly or indirectly through the senses

Empirical evidence consists of observations, gathered through sight, hearing, taste, touch or smell

Observations of the presence or abscence of skin inflammation, the heart rate of a patient or the weight of a newborn infant are all examples of empirical observations

SCIENTIFIC METHOD AND QUANTITATIVE RESEARCH

Using formal instruments to collect needed information- numeric information that analyzed with statistical procedure

Generalizability of the research:the degree to which research findings can be generalized to individuals other than those who participated in the study

NATURALISTIC METHODS AND QUALITATIVE RESEARCH

Naturalistic methods of inquiry attempt to deal with the issue of human complexity by exploring it directly

Researchers who reject the traditional (scientific methods) believe that the major limitation of the classical model is that it is reductionist that is, it reduces human experience to only the few concepts are defined in advance by the researcher rather than emerging from the experiences of those under study naturalistic researchers tend to :

- emphasize the dynamic, holistic and individual aspects of human experience and
- attempt to capture those aspects in their entirely, within the context of those who are experiencing them

NATURALISTIC METHODS AND QUALITATIVE RESEARCH

Flexible, evolving (To develop or achieve gradually) procedures are used to capitalize (To calculate the current value of) on findings that emerge (To rise from) in the course of the study

Naturalistic inquiry always takes place in the field (natuaralistic settings) often over an extended period of time, while quantitative research takes place both in natural as well as in contrived (Obviously planned or calculated; not spontaneous or natural) laboratory setting

NATURALISTIC METHODS AND QUALITATIVE RESEARCH

In naturalistic research, the collection of information and its analysis typically progress concurrently (Happening at the same time as something else), as researchers sift (To examine and sort carefully) through information, insights are gained, new questions emerge and further evidence is sought to amplify (To make larger or more powerful; increase) or confirm the insights

Through an inductive process, researchers integrate information to develop a theory or description that helps explicate (To make clear the meaning of; explain) processes under observation

MULTIPLE PARADIGM AND NURSING RESEARCH FEATURES IN COMMON

Ultimate goals: to gain understanding about phenomena

Seek to capture the truth with regard to an aspect of the world in which they are interested and both groups can make significant contributions to nursing knowledge

External evidence: the word empiricism (The view that experience, is the only source of knowledge) has come to be allied with the traditional scientific approach. Information is gathered from others in a deliberate (Done with or marked by full consciousness of the nature and effects) fashion

Reliance on human cooperation: evidence for nursing research comes primarily from human participants, the need for human cooperation is inevitable (Impossible to avoid or prevent)

MULTIPLE PARADIGM AND NURSING RESEARCH FEATURES IN COMMON

Ethical Constraints:research with the human beings is guided by ethical principles that sometimes interfere with research goals

For example; If researchers want to test a potentially beneficial intervention, is it ethical to withhold the treament from some people to see what happens

Ethical dilemmas often confront researchers

MULTIPLE PARADIGM AND NURSING RESEARCH FEATURES IN COMMON

Fallibility (Capable of making an error) of desciplined research: financial constraints are universal, but limitations exists even when resources are abundant

This does not mean that small, simple studies have no value

It means that no single study can ever definitively answer a research question

Each completed study adds to a body of accumulated knowledge

The selection of an appropriate method depends on researchers´personal taste and philosophy, and also on the research question

MULTIPLE PARADIGM AND NURSING RESEARCH FEATURES IN COMMON

If a researcher asks ” what are the effects of surgery on circadian rhythms (biologic cycles), the researcher really needs to express the effects through the careful quantitative measurement of various bodily properties subject to rhythmic variation

If a researcher asks ”what is the process by which parents learn to cope with the death of achild? The researcher would be hard pressed to quantify such a process

THE PURPOSE OF NURSING RESEARCH

To answer questions or solve problems of relevance to the nursing profession

- Basic research is undertaken to extend the base of knowledge in a discipline, or to formulate or refine نقى

a theory

THE PURPOSE OF NURSING RESEARCH

For example, a researcher may perform an in depth study to better understand normal grieving (The process of feeling distress or sorrow) processes, without having explicit (precisely and clearly expressed or readily observable) nursing application in mind

Basic research is appropriate for discovering general principles of human behavior and biophysiologic processes

THE PURPOSE OF NURSING RESEARCH

Applied research, is designed to indicate how these principles can be used to solve problems in nursing practice

In nursing , the findings from applied research may pose (present) questions for basic research and the result of basic research often suggest clinical applications

The specific purpose of nursing research include identification, description, exploration, explanation, prediction and control

IDENTIFICATION AND DESCRIPTION

Qualitative research sometimes 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 or conceptualized

The nature of qualitative research is well suited to the task of answering such questions as ”what is this phenomenon? what is its name?

IDENTIFICATION AND DESCRIPTION

In quantitative research, by contrast, the researcher begins with a phenomenon that has been previously studied or defined- sometimes in a qualitative study

In quantitative research, identification typically precedes the inquiry (a search for knowledge)

IDENTIFICATION AND DESCRIPTION

Description of phenomena is another important purpose of research

In a descriptive study researchers observe, count, delineate (show the form or outline of) & classify

Phenomens described stress and coping, pain management, adaptation processes, health beliefs, rehabilitation success, time patterns of temperature readings

Quantitative description focuses on the prevalence, incidence, size and measurable attributes

(any object or article used to symbolize the profession of the person being represented)

Qualitative researchers describe the dimensions, variation, and importance of phenomena

EXPLORATION

Investigate the full nature of the phenomenon, the manner in which manifested (An indication of the existence, reality)

Example, a descriptive quantitative study of patients preoperative stress might seek to document the degree of stress patients experience before surgery and the percentage of patients who actually experience it

EXPLORATION

An exploratory study might ask the following: What factors diminish or increase a patient´s stress

Is a patient´s stress related to behaviors of the nursing staff?

Is stress related to the patient´s cultural background

EXPLORATION

Qualitative methods are especially useful for exploring the full nature of a little understood phenomenon

Exploratory qualitative research is designed to shed light on the various ways in which a phenomenon is manifested and on underlying process

EXPLANATION

Understand the underpennings (description of something) of specific natural phemomena and to explain systematic relationships among phenomena

- Explanatory reasearch is linked to theories which represent a method of deriving استنباط, organizing and integrating ideas about the manner in which phenomena are interrelated

EXPLANATION

Descriptive research provides new information, and explanatory research provide promising insights, explanatory research attempts to offer understanding of the underlying causes or full nature of a phenomenon

EXPLANATION

In quantitative research, theories or prior findings are used deductively إستنتاجيا as the basis of generating explanations that are then tested empirically

- How or why a phenomenon existes or what a phenomenon means as a basis for developing a theory that is grounded in rich, in depth, experiential (Derived from, or pertaining to, experience. "It is called empirical or **experiential** . . . because it is divan متكأ to us by experience or observation, and not obtained as the result of inference or reasoning." evidence

EXPLANATION

Inference: the reasoning involved in drawing a conclusion or making a logical judgment on the basis of circumstantial evidence and prior conclusions rather than on the basis of direct observation

PREDICTION AND CONTROL

Many phenomena defy (resist or confront with resistance)

It is frequently possible to make predictions and to control phenomena based on research findings even on the abscence of complete understanding

down syndrom and age of mothers >40

Studies designed to test the efficacy of a nursing intervention are ultimately concerned with controlling patient outcomes or the costs of care

GROUP DISCUSSION

Research example of a quantitative study

Research example of a qualitative study