



A Review Article On Interrelationship Among Science, Theory, Practice And Research In Nursing: Rising Evidence Based Nursing Practice

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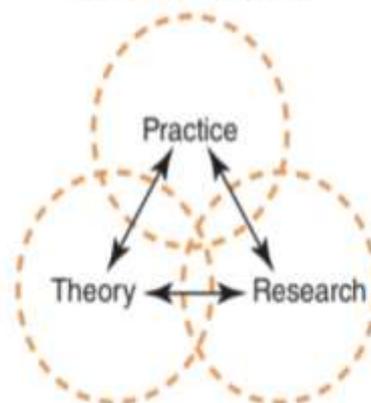
INTRODUCTION :

Practice, research and theory are the cornerstone of the nursing profession. The relationship of these three cornerstone are reciprocal and cyclical. Clinical practice generates research questions and knowledge for theory. Research guides our practice and built knowledge through theory development. Theory guide research and improve practice. This theory is based on science. Science is the result of the relationship between the process of research (inquiry) and theory (the product of knowledge).

Effective nursing practice requires the application of knowledge, skills and art to care for patients in an effective, efficient and considerate way. Practicing nurses focus on unique individuals. Researchers focus on systematically collecting knowledge about samples and populations and theorist focus on abstract and general concepts and their interrelationship. Understanding the different perspectives of each of these groups in knowledge building shows their activities to be complementary. An ongoing challenge to the nursing profession is to keep the important relationship between research, theory and practice in force.

PROCESS OF INTERRELATIONSHIP

Knowledge Development in a Practice Discipline



The above process is dynamic and triple spiral which says the theory, research and practice interact to improve each other.

“ Theory without practice is

sterile and practice without theory is blind”.

RELATION OF SCIENCE AND RESEARCH

- Research is a scientific endeavor. It involves scientific methods and both are closely related.
- The scientific method is based on certain “ article of paths”, these are –
 1. Reliance on empirical evidence
 2. Use of relevant concepts
 3. Commitment to objectivity
 4. Ethical neutrality
 5. Generalizations
 6. Verifiability
 7. Logical reasoning process
 - Inductive reasoning
 - Deductive reasoning
- These characteristics of science are a reference that suggests how nursing research refines, strengthens and increase knowledge of the discipline itself (nursing) and integrates its underpinnings, so as to lay the foundation for nursing practice.
- Science and Research has a mutual relationship between them, Science is applying and studying the facts of logical and diligent research through experimentations and studying of that activity in the physical or natural world and Research is systematic investigation or studying of scientific materials or evidence to establish facts and to reach new conclusions about that science.
- So both research and science complement each other.

CORRELATION OF THEORY AND PRACTICE

- Reciprocal relationship
- Practice is the basis for nursing theory development and nursing theory must be validated in practice.
- Theory is rooted in practice and refined by research and it should be applied in practice.

How does theory influence practice:-

- Organizes nursing care
- Sets standards for practice
- Describes settings in which practice occurs
- Identifies recipients of nursing care
- Sets the nursing process format and content
- Designs systems of nursing care delivery.

Application of theory in practice :

- Application of theory in practice requires an understanding of concepts associated with the needs of a patient.
- Involves recognition of when and how to use these concepts in planning and implementing care.

Methods to enhance theory practice Integration :-

Some of teaching strategies are –

1. Problem based learning

- Students learning is organized around self directed work,
- Makes students responsible for their learning regarding a particular problem.

2. Concept maps

- Depicts concepts and the relationship of concepts visually
- A concept map helps to integrate new knowledge with old by creating a knowledge graph that depicts networks

3. Reflective practice

- A kind of practice develops through personal reflection on one's own practice.
 - Gain in –
 - Personal insight
 - Meaning
 - Growth
 - Guided reflection (one aspect of reflective practice)
- To investigate students' experience of the application of theory to practice.

4. Assignments

that include complex clinical problems.

5. Group discussion.

THE DYNAMIC RELATIONSHIP BETWEEN THEORY AND RESEARCH

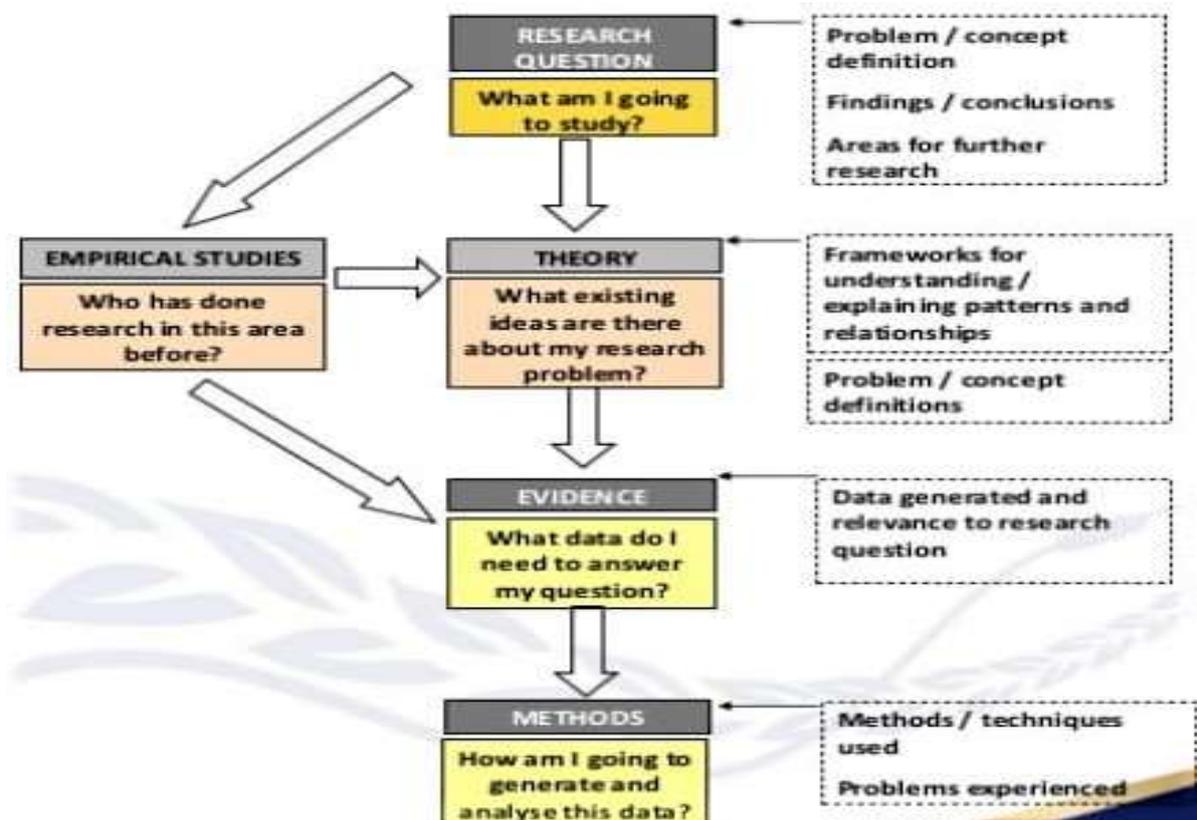
Theory and research are interrelated in the following ways:

- Theory frames what we look at, how we think and look at it.
- It provides basic concepts and directs us to the important questions.
- It suggests ways for us to make sense of research data.
- Theory enables us to connect a single study to the immense base of knowledge to which other researchers contribute.
- It helps a researcher see the forest instead of just a single tree.
- Theory increases a researcher's awareness of interconnections and of the broader significance of data.
- Theories are, by their nature, abstract and provide a selective and one-sided account of the many sided concrete social world.
- Theory allows the researcher to make links between the abstract and the concrete, the theoretical and the empirical, thought statements and observational statements etc.
- There is a two-way relationship between theory and research. Social theory informs our understanding of issues, which, in turn, assists us making research decisions and making sense of the world.
- Theory is not fixed; it is provisional, open to revision and grows into more accurate and comprehensive explanations about the make-up and operation of the social world.

Theory makes the most significant progress by interacting with research findings (empirical data). In adopting a theory-based approach to research, the researcher must adopt the following assumptions :

- Research problems must fit within a larger, logically consistent conceptual framework which incorporates research done to date.
- Variables useful in the explanation and prediction of phenomena become the 'significant' facts.
- To work towards objectivity, empirical testing and replication by others is essential.
- Research findings must be situated within, the theoretical framework in order to identify further research which can continue the process of theory confirmation.

The role of theory in research



CORRELATION OF RESEARCH AND PRACTICE

Introduction :

Evidence-based practice (EBP) is a problem-solving approach to the delivery of health care that integrates the best evidence from studies and patient care data with clinician expertise and patient preferences and values. (Fineout-Overholt E, 2010)

EBP is the integration of clinical expertise, patient values, and the best research evidence into the decision making process for patient care.

Clinical expertise refers to the clinician's cumulated experience, education and clinical skills.

The patient brings to the encounter his or her own personal preferences and unique concerns, expectations, and values.

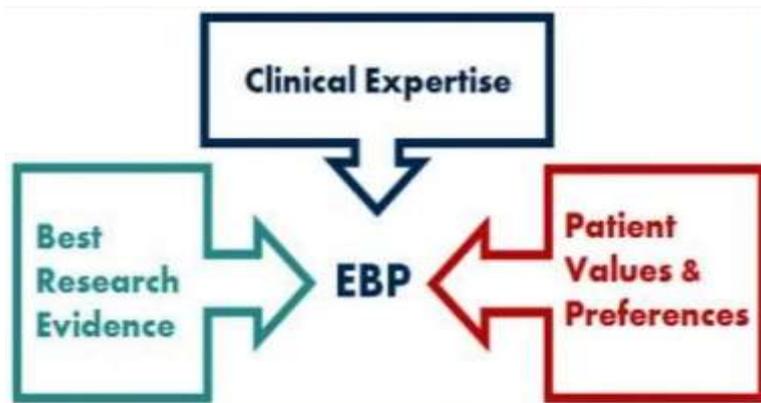
EBP Nursing :

Evidence Based Nursing: " an integration of the best evidence available, nursing expertise, and the values and preferences of the individuals, families, and communities who are served.

Key components of EBP:

- A. Research evidence
- B. Clinical expertise, judicious use
- C. Patient values and circumstances

Health care that is evidence-based and conducted in a caring context leads to better clinical decisions and patient outcomes. Gaining knowledge and skill in the EBP process provides nurses and other clinicians the tools needed to take ownership of their practices and transform health care.



Aims of evidence based practice :

- To provide the high quality and most cost-efficient nursing care possible.
- To advance quality of care provided by nurses.
- To increase satisfaction among patients.
- To focus on nursing practice away from habits and tradition to evidence and research.
- It results in better patient outcomes
- It contributes to the science of nursing
- It keeps practices current and relevant
- It increases confidence in decision-making.

Features of EBP :

- Problem based and within the scope of the practitioners experience.
- It brings together the best available evidence and current practice by combining research with knowledge and theory. So it narrows the research practice gap. It facilitates application of research into practice by including both primary and secondary research findings.
- It concerned with quality of service and is therefore a Quality assurance activity.
- EBP projects are team projects and therefore require team support and collaborative action.
- It support research projects and outcomes that are cost effective EBP de-emphasizes rituals, isolated and unsystematic clinical experiences ungrounded opinions and tradition as a basis of practice. It stresses the use of research findings.

Need for EBP :

- For making sure that each client get the best possible services.
- Update knowledge and is essential for lifelong learning.
- Provide clinical judgement
- Improvement care provided and save lives.

Why is EBP relevant to the nursing practice ?

- There is a gap between what we know and what we do. Nursing practice can and must be changed from tradition - based to science – based.
- Research-practice gap: Much of what is known from research has not been applied in practice. This is known as Research-Practice Gap.

Why is research important in nursing practice ?

Knowledge generated through research is essential to provide a scientific basis for :-

- **Description**
What exists in nursing/practice and discover a new knowledge.
- **Explanation**
Explains the existing knowledge in relation to the effect and the outcome.
Like bed sore occur in the old people due to lack of mobility.
- **Prediction**
A nurse could predict the outcome on the basis of interventions.
- **Control**
Ability to write a prescription to produce the desire result.

Process/Steps of EBP :



Advantages of EBP :

- Provide better information to practitioner
- Enable consistency of care
- Better patient outcome
- Provide client focused care
- Structured process
- Increases confidence in decision-making
- Generalize information
- Contribute to science of nursing
- Provide guidelines for further research
- Helps nurses to provide high quality patient care.

CONCLUSION

“The bringing together or nexus of nursing theory, practice and research creates a true integration of knowledge designed to support the service to clients and the health of society”. In the profession of nursing, theories and research provide an essential foundation for practice and exist to serve the goal of practice. At the same time, practice is the source of questions to be addressed by research. The relationship between theory, research and practice are reciprocal in that each informs the other in the development of disciplinary knowledge. Practice is also the testing ground for theory, where only those theories found helpful to practice survive and evolve. Practice is also a source for new theories. In the same way, the disciplinary knowledge that is nursing knowledge is also dynamic and evolving. As students prepare for practice as nurses, it is easy for them to believe that what is being learned.

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