**Scientific Nursing Research**

Research is a systematic inquiry (examination) into a subject that uses various approaches to answer questions and solve problems.

Research means to search again or examine carefully. It investigate the old knowledge and generate new knowledge. Systematic means carried on in step-by-step procedure, methodical or orderly.

The research process means the series of actions or functions undertaken to carry out research. The word ''process" used with research has the same meaning as it does when used as the nursing process. It is the way of doing it.

The conclusions resulting from this focused chain of examination provide a base upon which to build a practice of care that is centered on tested solutions. It is usually said that they doing a study, and it may refer also to as an investigation or a research project.

Research studies with humans involve two sets of people: those who are doing the research and those who are providing information.

Major types of research

1. In terms of Type of data collection:
2. Quantitative Research: is the traditional scientific method that gathers data objectively in an organized, systematic, controlled manner so that the findings can be generalized to other situations/populations (uses numbers as data)
3. Qualitative Research: is the method based on the assumption that truth is dynamic, gathers subjective data, approach used to describe life experiences and give them meaning. (uses words as data)
4. In terms of use of findings of research:
5. Basic Research: basic or pure , research is a scientific investigation that involves of knowledge for knowledge purpose. It is usually lead or is the basis for applied research.
6. Applied research: is a scientific investigation conducted to answer a clinical question or solve a practice-related problem. Many of the studies that have been conducted in nursing are applied because researchers have chosen to focus on answering immediate clinical questions.

Importance of Research in Nursing

1. The final goal of any professional is to improve the practice of it's members, so that the services provided to it's clients will have the greatest impact.
2. Any profession seeking to enhance its profession image, develop the body of knowledge fundamental to practice.
3. By research nurses become more scientifically accountable, and enable them to make decisions in nursing practice.

Purpose Of Nursing Research:

The general purpose of nursing research is to answer questions or solve problems of relevance to the nursing profession.

The major rational for conducting research is to build a body of knowledge, thereby promoting improvement in patient outcomes. This accomplished by using results of research in the provision of nursing care that is based on scientific data.

As a profession nursing must hold its members accountable for providing safe, cost-effective, and efficient care.

Research can be categorized in terms of it's aims or objectives as:

1. Identification
2. Description
3. Exploration
4. Prediction
5. Control of natural phenomena

Research can also be described in terms of it's utility

1. Basic research: is designed to extend the base of information or knowledge
2. Applied research: focuses on discovering solutions to immediate problems.

**Theory , Research , and Practice**

Theories defined as'' organizing structures of our reflections, observations, projections and inferences (assumptions)''

Research defined as'' a systematic inquiry into a subject that uses various approaches (quantitative and qualitative methods) to answer questions and solves problems.

Research can be considered a specific explanation. When considering the relationship between theory and research , one could conclude that theory gives direction to research, which in turn guides practice.

A framework is an abstract, logical structure of meaning. It guides the development of the study and enables the researcher to link the findings to the body of knowledge using in nursing.

Research Question / Hypothesis:

Hypothesis is a statement of the researcher's expectations about relationships between the variables under investigation. For example: is preeclampsia toxemia in pregnant women associated with stress factors present during pregnancy? This might be translated into the following hypothesis or prediction: pregnant women with a higher incidence of emotionally disturbing or stressful events during pregnancy will be more likely than women with a lower incidence of stress to experience preeclampsia toxemia.

They are the ''who, what, when, where, why and how'' guiding the nursing care provided to patients, so it is essential to assess the following issues

1. Is the research question clearly stated
2. Does it match the purpose of the study
3. Are the decisions made about the research question adequately justified
4. Is there a theory / framework / model discussed that established a relationship with the question?

Variables of the study

1. Independent variable: is the presumed cause
2. Dependent variable: is the presumed effect

Example: does a nursing intervention **cause** more rapid recovery?

Does smoking **cause** lung cancer