

# Applying Research and Technology to Nursing Practice

DR. ARNEL BANAGA SALGADO, PhD (PMHN), Ph.D. (Psychology), Ed.D., Sc.D., RN, PGD

H/P No.: 050-799-3803; 056 882 7333

URL: [www.ifeet.org](http://www.ifeet.org); [www.arnelsalgado.com](http://www.arnelsalgado.com)

- *Member:* Sigma Theta Tau International – Honor Society of Nursing (*Constituent No. 1628977*)
  - *Member:* American Psychological Association (*APA Roll No. 04438162*)
    - Doctor of Psychology (Psy.D.)
    - Fellow Program in Management (FPM – Psychology)
      - Doctor of Science (D.Sc.)
      - Doctor of Education (Ed.D.)
      - Master of Arts in Nursing (M.A.N)
    - Master of Arts in Teaching – Psychology (M.A.T.)
      - Registered Nurse (PH, MYL, UAE)
        - Licensed Teacher (PH)
        - Certificate in Teaching,
      - Bachelor of Science in Nursing (BSN, PH)



# Valuing Nursing Research #1

## ❖ The Development of Nursing Research

- Began after World War II and has rapidly increased
- Various journals have been available since 1951
- National Center for Nursing Research (NCNR)
- National Institute for Nursing Research (NINR)



# Valuing Nursing Research #2

- ❖ Overview of the Nursing Research Process
  - Develop research question
  - Review the literature
  - Develop hypothesis
  - Design the study
  - Carry out study
  - Analyze data
  - Identify concerns about the study
  - Draw conclusions and determine applications
  - Identify future research needed



# Valuing Nursing Research #3

## ❖ Basic Research Terminology

- Independent variable
- Dependent variable
- Validity
- Reliability
- Population
- Sample
- Participant or subject
- Control group
- Informed consent



# Valuing Nursing Research #4

## ❖ Quantitative Research

- The randomized controlled trial (RCT)
- Other types of quantitative research
  - Longitudinal study
  - Descriptive study
  - Methodologic research
- Analysis of quantitative research
  - Probability
  - Level of significance
  - Clinical significance



# Valuing Nursing Research #5

## ❖ Qualitative Research

- Types of qualitative research
  - Phenomenology
  - Ethnography
  - Case studies
  - Life histories
- Analysis of qualitative research

## ❖ A Staff Nurse's Role in the Research Process

- Identify questions or problems
- Guard welfare of clients



# Question #1

- ❖ Is the following statement true or false?
- ❖ Nursing research has grown and developed since the middle of the 20th century and now it is supported through the National Institute of Nursing Research (NINR), which is part of the National Institute of Health (NIH).



# Answer to Question #1

❖ True

❖ Rationale: Nursing research has grown and developed since the middle of the 20th century and now it is supported through the NINR, which is part of the NIH.





# Evidence-Based Practice in Nursing #1

- ❖ Establishing a Definition of Evidence-Based Nursing
  - Using current research to solve problems while integrating the use of nurse's clinical expertise and client's preference and values
- ❖ Determining Adequate Evidence
  - *See Box 15.3 and 15.4*



# Evidence-Based Practice in Nursing #2

- ❖ The Evidence-Based Practice Process
  - Asking appropriate questions
  - Acquiring information for decision-making
  - Analyzing information for application
  - Applying new information
  - Assessing outcomes of new practices
- ❖ Using Infection Control and Quality Improvement Data to Improve Care
- ❖ Individual Accountability for Evidence-Based Practice



# Evidence-Based Practice in Nursing #3

- ❖ Barriers to Evidence-Based Nursing Practice
  - Access to information resources
  - Lack of time for seeking information resources
  - Lack of background in understanding and valuing research



# Accessing Resources for Evidence-Based Practice #1

## ❖ Strategies for finding information

- National Library of Medicine (NLM), PubMed search site, Medline
- Cumulative Index of Nursing and Allied health Literature (CINAHL)
- Cochrane Library
- Online journals



# Accessing Resources for Evidence-Based Practice #2

- ❖ Evaluating information retrieved
  - Source of information
  - Author or authors
  - Context of resource
  - Consensus of multiple resources
  - Comparison of new information with previous information
  
- ❖ Sharing information retrieved



## Question #2

- ❖ Is the following statement true or false?
- ❖ Evidence-based practice (EBP) uses current research to solve problems while integrating the use of the nurse's clinical expertise and the client's preference and values.



# Answer to Question #2

❖ True

❖ Rationale: EBP uses current research to solve problems while integrating the use of the nurse's clinical expertise and the client's preference and values (Physiopedia, 2021). This definition provides an excellent foundation for both the individual nurse and the institution to establish evidence-based nursing practice.



# Technology in Healthcare #1

- ❖ Computerized client records
  - Early computerization of standardized data
    - International Classification of Diseases (ICD)
    - Current Procedural Terminology (CPT)
  - Computerized nursing care records
  - Computerized physician/provider order entry (CPOE)
  - Client privacy and computerized records
    - HIPAA
  - Advantages of computerized client records





# Technology in Healthcare #2

- ❖ Computerizing Management of Client Care
- ❖ Distance Monitoring Using Technology
- ❖ Handheld Electronic Devices for Nurses
- ❖ Telehealth
- ❖ Clinical Decision Support Systems



## Question #3

- ❖ Is the following statement true or false?
- ❖ Computerized devices increasingly are used to manage the direct care of clients.



# Answer to Question #3

❖ True

❖ Rationale: Computerized devices increasingly are used to manage the direct care of clients, from automatic blood pressure measuring devices to IV controllers to monitoring equipment both locally and from a distance. They are changing the way nursing is practiced.

