Objectives

1. What is a critique of the research?
2. Why is it important?
3. What is the process?
What is a critique???

1. It is the process for **synthesizing knowledge into practice**.

2. It is a “systematic, unbiased, careful examination of all aspects of a study to judge the merits, limitations, meaning and significance based on previous research experience and knowledge of the topic”.

Burns, N. & Grove, S., 2005
Why are critiques important?

Critiques are necessary to **broaden understanding**, **summarize knowledge for use in practice**, and provide a knowledge base for conducting other studies.

Essential for implementing an **evidence-based nursing practice**.

Encourages nurses to participate in **clinical inquiry and appraisal of the most credible, and significant empirical evidence for use in practice**.
The Process of Critiquing...

1. Begin with purposeful reading
2. Determine if the article is worth reading by using the following criterion:
   a. usability
   b. completeness
   c. consistency
Usability...

Before reading the entire article scan the abstract, conclusions and recommendations.

Ask: Can I use these findings?
Scan the article for key terms:

a. Problem statement
b. Theoretical framework
c. Purpose
d. Design
e. Sample
f. Methods
g. Findings
h. Analysis
i. Protection of human rights (informed consent & confidentiality)
j. Conclusions
Consistency...

Does the study have any gaps or areas left out... Rescan if necessary!
Look for comprehensive, logical progression using the key terms throughout the study report.

If the answer is YES to usability, completeness and consistency the article is worth reading!!!
• To perform a true objective critique of a research report the entire study should be read and the following questions considered...
Components of Appraisal Tools...
Problem and Purpose

- Was the problem statement introduced early?
- Is the problem significant to nursing and is the significance described?
- Has the purpose for conducting the research been explained?
- What are the research variables and are research variables explained?
- Will an answer to the problem provide insight into clinical applicability of the problem?
Theoretical/Conceptual Framework

• Is a conceptual framework described? If not, does it detract from the research?
• Are the concepts to be studied identified and defined?
• Are measures for each of the concepts identified and described?
• Does the research problem flow naturally from the conceptual framework?
Protection of Human Rights

• Is there evidence of an IRB?
• Has the study been designed to minimize risk and maximize benefits to participants?
• Is there an indication that participants gave voluntary, informed consent?
• Is there evidence in the study that individuals can be identified?
Research Questions/Hypotheses

• Are research questions or hypotheses formally stated?
• Do the research questions and hypotheses naturally flow from the research problem and theoretical framework?
• Does each research question or hypothesis contain at least two variables?
• Are the research questions or hypotheses worded clearly and objectively?
Research Design

- What design has been used for the study?
- Is the design appropriate for the research question and purpose?
- Has enough information been given to permit replication?

**Design permits the examination of the research variables.**

Variables are qualities, or characteristics of persons, things, or situations being studied.

**Dependent variable** - response, behavior, or outcome the research wants to explain. (Relies on something)

**Independent variable** - treatment or experimental variable manipulated by the researcher to create an effect on the dependent variable. (Stands alone)
Sampling

- Is the target population carefully described?
- Are sample selection procedures clearly defined?
- Does the sampling method fit the research design?
- Are potential sample biases described?
- Is the sample size sufficiently large? Has size been justified?
- To whom can the results be generalized?
Data Collection

• Describe the instruments used for data collection. Time frames, where data collected, how questionnaires, scales and/or interviews used in the study.

• Has rationale been given for the selection of instruments?

• Are instruments congruent with the research question?

• Have procedures for testing the reliability and validity of instruments been described?

• Reliability measures consistency of results obtained each time the instrument is used.

• Validity measures how accurately the instrument reflects the variables in the study.
Analysis

• Summarizes and describes the data in a logical, understandable format; the numbers!!!
• Use of inferential statistics - tests the research questions using T-tests, ANOVA, multiple regressions, etc.
• Descriptive statistics using frequency distribution, mean, median, mode, range, etc.
• DON’T LET STATISTICS SCARE YOU!!
• Look at charts, tables and graphs to examine sample. Make sure they are simple and accurate.
• Is the statistical result presented in text and numerically?
• TAKE SMALL STEPS!!!
Conclusions/Nursing Implications/Recommendations

- What are the assumptions, limitations of the study?
- Are they listed or do you have to infer?
- Are results of the data analysis clearly explained in relationship to the research question, hypotheses and theoretical framework?
- Has there been generalization of significant findings beyond the study sample to the population?
- What recommendations for nursing practice and future research studies have been made? Does the data support recommendations?
Final Thoughts...

- Remember all research is subject to critique
- You have no way of knowing if a study is based upon good research principles until you, the reader, has critiqued the report.
- **Use the Critique Steps to TEST the STUDY!!!**
References