

TODAY

- In your own study...
 - the research problem?
 - Population of interest?
 - hypothesis/questions?

Research Problems & Hypothesis

M.E.F.Highfield
CSU/Northridge

Why do I need to know this stuff about research problems & hypotheses?

To Judge the Quality of your study
(To critique)!

- Relationship between variables?
- Population?
- Testability?
- Significance & Feasibility?



Research problem:
Perplexing issue about which one is curious



Source of Research Problems

- Practical experience?
- Social issues?
- Inconsistent or conflicting literature?
- Gaps in literature?
- Untested theory/framework?
- Brainstorming?



Choosing type of study...

- | | |
|--|--|
| ■ If well understood;
Lots of info, then....? | ■ If poorly understood;
Little info, then.....? |
| ■ QUANTITATIVE;
Maybe even
hypothesize | ■ QUALITATIVE; Can
ask only questions; no
hypothesis |
| ■ Deductive logic | ■ Inductive logic |

Research Question

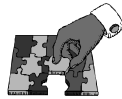
- The specific thing one hopes to find out.
- Can be worded as
 - A question
 - An answer (hypothesis)

3 Levels of research questions

1. Descriptive: Have only one variable. ("What is....?")
2. Exploratory: Minimum of 2 variables. ("What is/are the relationships.....?")
3. Explanatory: Minimum 2 variables that specify a cause & an effect. A hypothesis!! ("Why....?").

What is a hypothesis?

- Expected outcome!
 - Only in quantitative studies
 - Not in qualitative study
- 3 parts: IV, DV, population
- Derived from theory



Types of hypotheses

- Research *versus* Null/statistical
- Simple *versus* Complex
- Directional *versus* Non-directional



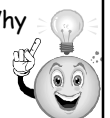
Practice #1: Generate a Hypothesis

Orem values individuals' abilities to care for themselves, without intervention from health care professionals, except when actual or potential self-care deficits arise. Further Orem expects people to be self-reliant and responsible for themselves and to seek help when they cannot maintain therapeutic self-care or dependent care. Orem does not expect nursing care to be based solely on the nurse's view of the patient's situation....Although Orem emphasized that nursing care is appropriate especially when the person experiences a self-care deficit, she did note that primary prevention is also appropriate, to help the person maintain self-care agency. (Fawcett, 1984, p. 190-191).



Practice Point #2

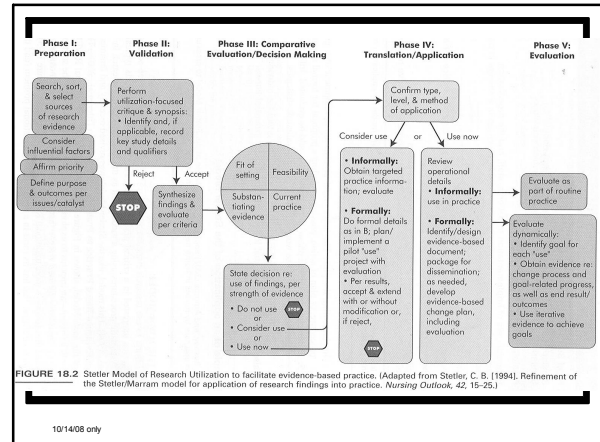
- Identify a focus or broad area for research (e.g., pediatric meds, infection prevention)
- Identify a research problem
- Formulate research questions or hypotheses at 3 levels of investigation:
 1. descriptive (level 1), What exists
 2. exploratory (level 2), What is the relationship
 3. explanatory (level 3; hypothesis) Why (if variable A occurs, then we can expect variable B to follow)



Stetler 5-Step Model of EBP

- Phase I: Identify the problem/question (*Preparation*)
- Phase II: Find & Critique the most useful research to address problem/question (*Validation*)
- Phase III:
 - Identify whether fits the setting &
 - Make a Recommendation for practice (*Comparative evaluation & decision*)
- Phase IV: How does it apply to your setting (*Translation*)
- Phase V: Evaluate the outcomes (*Evaluation*)

10/14/08 only



10/14/08 only

Rules for Questions & Hypotheses

(Brink & Wood, p. 22)

1. All variables must be written so that they vary.
2. Descriptive: Have only one variable in the topic and be sure it varies.
3. Exploratory: Have a minimum of 2 variables
4. Explanatory: there must be two variables that specify a cause and an effect.



5. If you have a cause or effect in your question, rewrite the question as Exploratory or Explanatory.
6. If the words "cause," "effect," or any of their synonyms appear in your question, either eliminate those words or specify what they are and how they vary. (Explanatory).
7. If you have written an Explanatory "why" question, make sure that it is both ethical and possible to manipulate the causal variable. (If not, rewrite the question as Descriptive or Exploratory.)