

Chapter 2

An Overview of the Research Process

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1

Key concepts and terms

- Subject or study participant (the persons who are being studied).
- Researcher or investigator is person who carry out the study.
- Setting the place where data collection occur.
 - Lab
 - Naturalistic setting
 - Field work



Example of a study in a naturalistic setting:

Carlisle (2000) studied the search for meaning in the caregiving experience among informal carers of people living with HIV and AIDS. The researcher gathered in-depth information from carers in their homes and in HIV/AIDS volunteer organizations.



Example of a study in a laboratory setting:

Pierce and Clancy (2001) studied the effects of hypoxia on diaphragm activity in anesthetized rats.

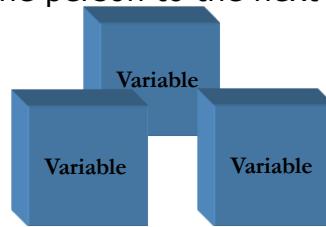
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2

Variables

- Variable is Concept.
- A characteristic or quality that takes on different values, i.e., that varies from one person to the next
- **Examples:**
 - Blood type
 - Weight
 - Length of stay in hospital
- The term “**variable**” is used almost exclusively in quantitative research.



Dependent vs. independent variable

- **Independent V.**
- The “cause” or the variable that is thought to influence the dependent variable
- Example smoking
- Study hours

- **Dependent V.**
- The “effect” the variable that influenced by the independent variable
- (out come)
- Example Lung Cancer
- Grade

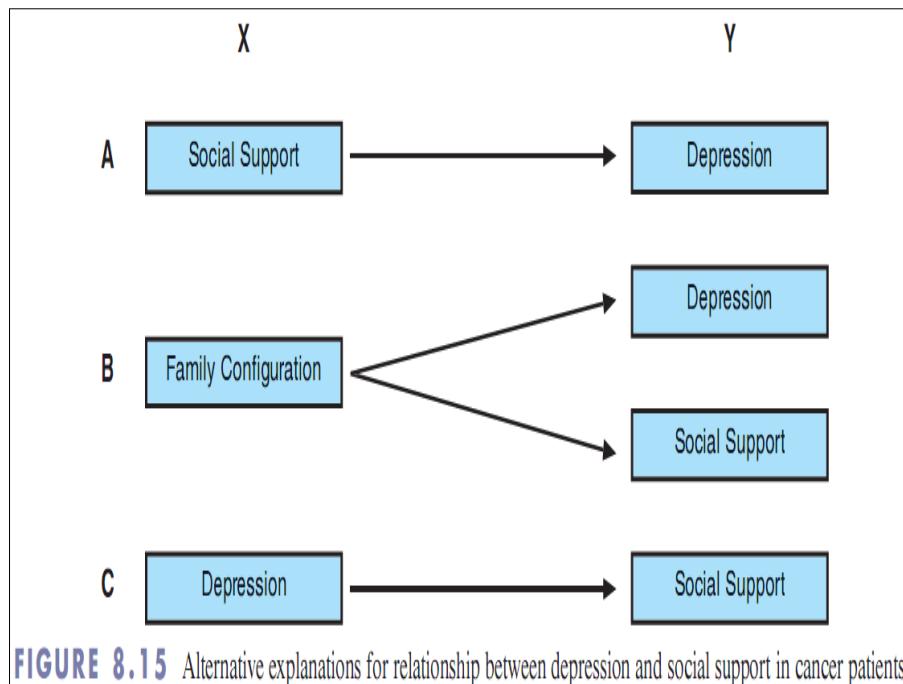


Example



Example of independent and dependent variables:

Varda and Behnke (2000) asked, What is the effect of the timing of an initial bath on temperature in newborns? Their independent variable was timing of the infant's initial bath (1 hour versus 2 hours after birth). Their dependent variable was axillary temperature.



Example



Example of a study of causal relationships:
Keller and Treviño (2001) studied whether a regimen of walking (and different frequencies of walking) caused reductions in cardiovascular risk factors, such as obesity and high blood lipids, in Mexican-American women.

Steps in the research process

1

•Identify the problem (*what???*)

- A broad topic area is selected
- The topic is narrowed down to a specific one sentence statement of the problem
- Can be stated as problem
- Specify the population and variable

Steps in the research process

2

•Determine purpose of the study

- Answer *why*??? The study will be conducted.
- **Justification**
- Provide rational for the research study.

Steps in the research process

3

•Literature review

- Build the study on previous knowledge
- What knowledge exists in the study topic?
- Source of literature
 - Library
 - Catalog
 - abstract.
- **Computer assisted search**



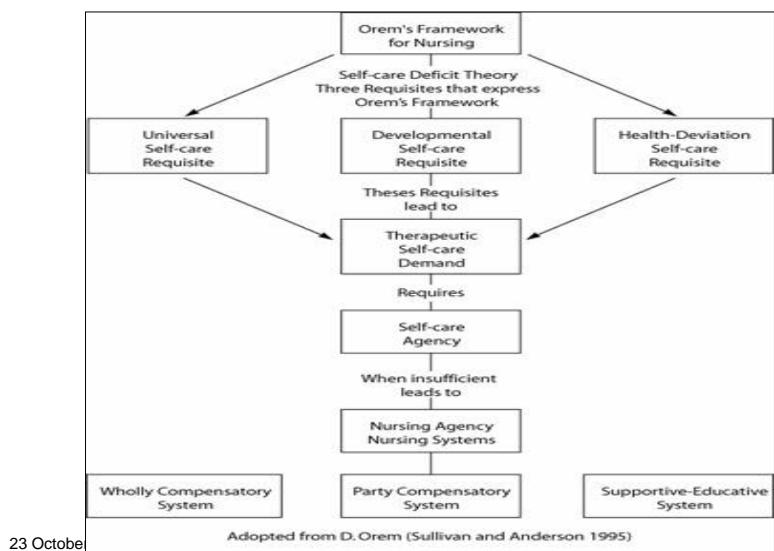
Steps in the research process

4

•Develop theoretical framework

- Theory assist in the selection of the study variable.
- Direct the hypothesis
- Assist in interpretation of the results

Theoretical framework example



Steps in the research process

5

•Formulate hypothesis or research question

- Hypothesis predicts the relationship between study variables.
- Hypothesis contain population and variables
- Variables
 - Independent variable
 - Dependent variable

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13

Steps in the research process

6

•Select a research design

- Design is a plan for how the study will be conducted
- Concerned with the type of data to be collected and the mean.
- Types
 - Experimental
 - Non experimental
 - Quasi experimental
 - Survey
 - Correlation
 - Comparative study

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14

Steps in the research process

7

• Develop method to safeguard the subjects

- Researcher must adhere to ethical principles
- Example; voluntary participation
- Review his rights
- Research plan must reviewed by ethical committee

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15

Steps in the research process

8

• Identify population

- Complete set of individual or objects that possess some common characteristics of interest to the researcher.

• Select the sample

- Sample: is the subgroup of the population
- It is used to represent the population and to make generalization about the population.
- Types
 - Probability
 - Non probability

9.

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16

Steps in the research process

10

• Collect the data to measure variables

- Data are the pieces of information or facts that are collected in scientific investigation
- Measuring the variables through data collection.
 - Biophysiological measurements
 - Self reports
 - Observation

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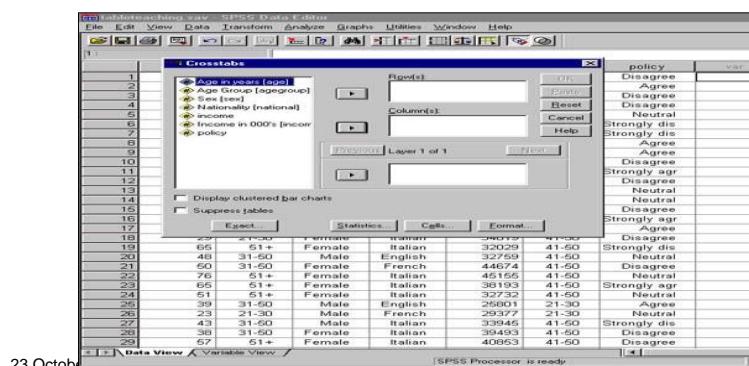
17

Steps in the research process

11

• Organize the data for analysis

- Coding of the data
- Entering data into a statistical software

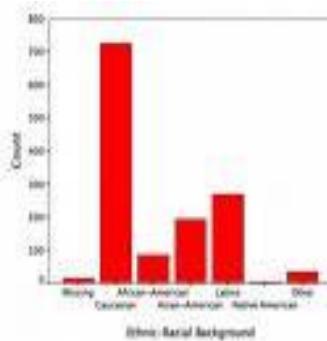
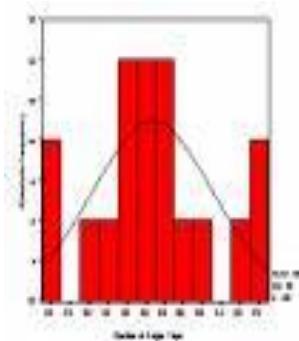


18

Steps in the research process

12

• Analyze the data



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19

Steps in the research process

13

• Interpret the findings

14

• Communicate the findings

- Journal publication
- Presentation & Poster presentation

15

• Putting the evidence to practice

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20