

Dissertation Workshop: Exercise 2 Solutions
Johns Hopkins Bloomberg School of Public Health OpenCourseWare

1. A hospital record review shows:

Abortion Cases	Number	Percent
Literate	12	30%
Illiterate	280	70%
Total	400	100%

- A. No relationship between abortion and education - **Incorrect**
- B. Not enough information - **Correct**
- C. Abortion is more common among literate women - **Incorrect**

2. This analysis shows

	Population	Cases	Cases per Thousand
Urban	9,266	50	5.40
Rural	4,351	33	7.58

- A. Cases are more likely in rural areas - **Correct**
- B. Not enough information - **Incorrect**
- C. Cannot compare the populations - **Incorrect**

3. If the clinical record you are reviewing does not directly ask questions about potentially related variables, one possible way to solve this problem would be to:

- A. Find each patient and reinterview them - **Incorrect**
- B. Create a proxy variable - **Correct**
- C. Assume that the data would not be useful - **Incorrect**
- D. Use other data - **Incorrect**

4. A bio-social mechanism is a **Proximate Determinate** or **Intervening Variable**.

5. A series of questions relating symptoms to a particular condition is called a **Diagnostic Algorithm**.

6. True or False

- A. Diagnostic algorithms are used when you cannot ask directly about an event or condition. - **True**
- B. Diagnostic algorithms are 100% accurate. - **False**
- C. Diagnostic algorithms are confirmed by research. - **True**
- D. Diagnostic algorithms can be used in research to confirm a case of measles. - **True**
- E. Diagnostic algorithms should not be used when interviewing people. - **False**

Selection of Variables and Conceptual Models

I. Terminology and Definitions

There were a number of technical terms introduced in this lecture. It is important that these are completely understood. Below are listed many of the terms that were introduced. You should review the lecture and be prepared to define and discuss the meaning of each of these terms.

Dependent Variable

Independent Variable

Intervening/Proximate/Intermediate Variable

Biosocial Mechanisms

Case-Control Study

Matched Control

Relative Risk

Conceptual/Analytical Framework/Model

Diagnostic Algorithms

Validation Study

Summative Scale

Interactions

II. Identifying Variables

A variable is a characteristic of a person, object or phenomenon which is a measurable and, thus, can take on different values. Variables can be quantitative and measured numerically (for example, age, height, weight, blood pressure, etc.) Or qualitative and measured in terms of categories for example sex (male or female), outcome of disease (recovery, chronic illness, disability or death), mode of transport (foot, bus, car, other). As noted in the lecture, in order to ensure that all data relevant to the research objectives are collected, variables must be carefully identified. Ordinarily, it is easiest to derive the variables from a conceptual model or diagram of factors influencing the problem under investigation.

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