Chapter 1

*Introduction to Data Analysis in an Evidence-Based Practice Environment*

1.1. Statistical skills can play an important role in nursing because they help nurses to:

a. Calculate appropriate doses and clinical measurements

b. Generate clinical questions

\*c. Evaluate and generate research evidence for nursing practice

d. Make better use of computers and the Internet

1.2. In the context of a quantitative study, a concept is called a(n):

a. Operational definition

\*b. Variable

c. Statistic

d. Parameter

1.3. An example of a variable is:

\*a. Systolic blood pressure

b. Pi (π)

c. 52.5 kilograms

d. Number of seconds in a minute

1.4. An example of a datum is:

a. Systolic blood pressure

b. Pi (π)

\*c. 52.5 kilograms

d. Number of seconds in a minute

1.5. Which of the following is *not* a component of a research question?

a. An independent variable

b. A population

\*c. A sample

d. A dependent variable

1.6. Identify the dependent variable in the following: In elderly men, what is the effect of chronic fatigue on level of depression?

a. Age

b. Sex

c. Chronic fatigue

\*d. Depression

1.7. Which of the following is a continuous variable?

a. Number of pages in a book

\*b. Age at death

c. Falls during hospitalization

d. Number of times married

1.8. Measurement is the assignment of numbers to characteristics of people or objects according to specified \_\_\_\_\_\_\_\_\_ . (Fill in the blank.)

\*a. Rules

b. Definitions

c. Concepts

d. Parameters

1.9. The measurement level that classifies attributes, indicates magnitude, and has equal intervals between values, but does not have a rational zero, is:

a. Nominal

b. Ordinal

\*c. Interval

d. Ratio

1.10. The measurement level that is sometimes called *categorical* or *qualitative* is:

\*a. Nominal

b. Ordinal

c. Interval

d. Ratio

1.11. It is not meaningful to calculate an arithmetic average with data from which of the following?

a. Nominal measures

b. Ordinal measures

\*c. Nominal and ordinal measures

d. All measures can be meaningfully averaged.

1.12. Degree of pain measured as *none, a little*, or *a lot* is measured on which of the following scales?

a. Nominal

\*b. Ordinal

c. Interval

d. Ratio

1.13. Body temperature is measured on which of the following scales?

a. Nominal

b. Ordinal

\*c. Interval

d. Ratio

1.14. Type of birth (vaginal or cesarean) is measured on the:

\*a. Nominal scale

b. Ordinal scale

c. Interval scale

d. Ratio scale

1.15. Which of the following is a ratio-level measure?

\*a. Dietary cholesterol intake (mg)

b. Cognitive impairment on a 50-item scale

c. Pain on a 10-point scale

d. Military rank

1.16. Ratio-level measures are different than any other level by virtue of which property?

a. Classification

b. Equal intervals between values

\*c. A true, rational zero

d. Indication of magnitude

1.17. Which level of measurement communicates the most information?

a. Nominal

b. Ordinal

c. Interval

\*d. Ratio

1.18. Researchers typically collect data from a \_\_\_\_\_\_\_\_ and hope to generalize their results to a \_\_\_\_\_\_\_\_\_\_\_\_\_. (Fill in the blanks.)

a. Population, sample

b. Statistic, parameter

c. Sample, statistic

\*d. Sample, population

1.19. If the average amount of sleep for all people in the United States was 7.6 hours per night, this average would be a(n) \_\_\_\_\_\_\_\_\_ of the population of U.S. residents. (Fill in the blank.)

a. Variable

\*b. Parameter

c. Statistic

d. Datum

1.20. If a nurse researcher measured the anxiety level of 100 hospitalized children, the children’s average score on an anxiety scale would be a(n):

a. Variable

b. Parameter

\*c. Statistic

d. Operational definition

1.21. Statistical methods that are used to draw conclusions about a population are called:

\*a. Inferential statistics

b. Descriptive statistics

c. Univariate statistics

d. Multivariate statistics