

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

Chapter 2

Frequency Distributions: Tabulating and Displaying Data

- 2.1. A major purpose of constructing a frequency distribution with sample data is to:
- Estimate a population parameter
 - Test a research hypothesis
 - *c. Get an organized view of an entire set of scores
 - d. Get experience with statistical software
- 2.2. In a frequency distribution, the two key informational components are:
- *a. Score values (X), frequencies (f)
 - b. A horizontal (X) axis, a vertical (Y) axis
 - c. Frequencies (f), percentages (%)
 - d. Participant ID number (id), score values (X)
- 2.3. In a frequency distribution, which of the following is true?
- a. $\Sigma N = \%$
 - b. $\Sigma N = f$
 - c. $\Sigma f = \%$
 - *d. $\Sigma f = N$
- 2.4. In the equation $\Sigma \% = 100.0$, the symbol Σ signifies:
- a. A percentage
 - *b. The sum of
 - c. A data value
 - d. A frequency
- 2.5. In a frequency distribution, percentages are sometimes called:
- a. Proportions
 - b. Relative proportions
 - *c. Relative frequencies
 - d. Cumulative proportions
- 2.6. Data for which of the following variables is most likely to be presented in a grouped frequency distribution?
- a. Nursing specialty area
 - *b. Daily cholesterol intake
 - c. Number of abortions
 - d. Number of pets owned
- 2.7. The level of measurement for data appropriately presented in a bar graph is:
- a. Interval or ratio
 - b. Nominal only
 - c. Interval only
 - *d. Nominal or ordinal

2.8. In a frequency distribution graph, frequencies are typically presented on the ____ and data values are presented on the _____. (Fill in the blanks.)

- *a. *Y* axis, *X* axis
- b. *X* axis, *Y* axis
- c. *f* axis, *N* axis
- d. *N* axis, *f* axis

2.9. Which of the following sets of data is *not* unimodal?

- *a. 1, 1, 1, 2, 2, 2, 2, 2, 2, 2, 3, 3, 4, 5, 5, 5, 5, 5, 5, 5, 5
- b. 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 2, 2, 2, 2, 3, 3, 3, 4, 4, 4, 4
- c. 0, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 3, 3, 4, 5
- d. 1, 1, 2, 2, 3, 3, 4, 4, 5, 5, 5, 5, 5, 6, 6, 7, 7, 8, 8, 9, 9

2.10. Which of the following variables is most likely to be negatively skewed in a general population?

- a. Number of times arrested
- *b. Age at retirement
- c. Number of times married
- d. Age at birth

2.11. A normal distribution is *not*:

- a. Skewed
- b. Leptokurtic
- c. Platykurtic
- *d. All of the above

2.12. A wild code is:

- *a. A value that is impossible given the coding scheme
- b. An outlier or high value
- c. A code for which there is a very low frequency
- d. A code for which there is a very high frequency

The next eight questions pertain to the following table (Table 2):

Table 2

Number of Pregnancies of Study Participants	Frequency	Percentage	Cumulative Percentage
0	24	11.1	11.1
1	29	13.5	24.6
2	78	36.3	60.9
3	46	21.4	82.3
4	22	10.2	92.5
5	11	5.1	97.6
6	4	1.9	99.5
7	1	0.4	100.0
Total	215	100.0	