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27. Answers will vary. For example: A confounding factor is related to both study variables, making it more challenging to determine the actual relationship between the two variables without controlling for the confounding factor. In this example, the significantly positive correlation between noise and heart rate may mean that there is more noise when providing direct patient care and that heart rate goes up while providing direct patient care. Once the role of direct patient care is controlled (for example, looking at the relationship between noise and heart rate only among nurses providing direct patient care), the researchers may not find a significant relationship between the noise level and heart rate.

CHAPTER 12

REGRESSION ANALYSIS

QUANTIFYING AN ASSOCIATION TO PREDICT FUTURE EVENTS

OBJECTIVES

By the end of this chapter students will be able to:

- Identify the conditions under which regression is an appropriate statistical technique.
- Compare and contrast linear regression, multiple regression, and logistic regression.
- Explain how quantifying an association with a regression equation helps a researcher infer or predict future events.
- Use regression coefficients to interpret how a change in the independent variable affects the predicted value of the dependent variable.
- Contrast positive and negative regression coefficients.
- Discuss when reporting an adjusted *R*-squared is more appropriate.
- Interpret the Statistical Package for the Social Sciences (SPSS) output utilizing multiple regression, determine whether the model as well as the independent variables are significant, and interpret these results in statistical terms and in plain English.
- Critique an article from current nursing research that utilizes a regression technique, determine whether statistical significance is present, and debate whether clinical recommendations should be made.