

Exercise 2–1

Name That Method

Answer the following questions for each study described below. (1) Is the study primarily a quasi experiment, a correlational study, or an experiment? Why do you give the answer you did? (2) What are the variables involved in the study? For experiments, specify the independent and dependent variables. (3) What might be the hypothesis that the researchers are trying to test?

1. A researcher is interested in the relationship between caffeine consumption and level of stress. She has participants keep a diary for one week during which they count the number of cups of coffee, tea, and cola-based soft drinks they consume, as well as recording consumption of chocolate and medications that have caffeine as an ingredient. In addition, participants complete a measure of “daily hassles” experienced during the week.

_____ Quasi Experimental _____ Correlational _____ Experimental Variables:

2. A pair of psychologists are interested in the effects of mood on helping (based on Isen & Levin, 1972). They go to shopping malls and set up observation near telephone booths. Their participants are individuals who use the phone booths when the vicinity is otherwise unoccupied. For half of the participants, the researchers leave a dime to be found in the coin slot of the pay-phone. For all of the participants, when the phone call is completed and the person leaves the telephone booth, a confederate walks by the booth, and drops a file folder full of papers. The researchers watch to see if the participants help pick up the dropped papers.

_____ Quasi Experimental _____ Correlational _____ Experimental Variables:

3. Researchers (Reifman, Larrick, and Fein, 1988) were interested in the factors causing aggression. They looked at an entire baseball season’s worth of news reports. For each game, they recorded the temperature of the locale, and the number of batters who were hit by pitched balls.

_____ Quasi Experimental _____ Correlational _____ Experimental Variables:

4. Researchers are interested in influences on self-esteem. Half of the participants used in this study are male, and half are female. Participants are given a set of anagram problems to solve in a five minute time limit. Half are randomly assigned to receive very easy anagrams, and half are given difficult ones. After completing as many of the anagrams as they can, participants are given a questionnaire labeled “Thoughts and Feelings Questionnaire” that is really a measure of self-esteem.

_____ Quasi Experimental _____ Correlational _____ Experimental Variables:

5. Researchers are interested in what determines how easily people are persuaded. Half of the participants used in this study are male, and half are female. During the session, participants rate their attitude towards an increase in fees that has been proposed at their school. Following this, they listen to a persuasive message providing strong arguments in favor of the fee increase. Finally, they re-rate their attitude towards the proposed fee.

_____ Quasi Experimental _____ Correlational _____ Experimental Variables:

Name That Method

Time to Complete: 10–15 minutes, in class

In Class: The exercise in the handout will allow students to try their hands at determining the type of methodology used based on a brief description of a study. Have students work on the problems first on their own, and then in a small group, and then review in a general class discussion.

Discussion: Answers to the problems follow.

1. This is a correlational study examining the association between caffeine consumption and the number of daily hassles experienced. The only question that the researcher can examine is whether or not there is a correlation between these two variables. You can use this example to drive home the idea that correlation does not equal causation by asking students to generate the three possible explanations for any correlation between two variables. If there is a correlation, it could be due (1) to daily stressors leading people to consume more caffeine, (2) to caffeine either actually causing people to make more minor errors and thus experience more daily hassles or causing them to perceive more events as daily hassles, or (3) to some third variable, e.g., number of hours spent at work in a week, which independently leads people both to consume more caffeine and to experience more daily hassles.

2. This is an experiment. The independent variable is whether or not the participant finds a free dime in the phone booth (in those days, enough to place a free local call). This is an operationalization of the mood variable, since the researchers presumed that people who find the free dime will feel happy about it. The dependent variable is whether or not the participant helps. The hypothesis is that subjects who are put in a good mood by finding a dime will be more likely to help. This example provides a good opportunity to introduce the concept of operationalization, and to discuss the relationship between theory and data. Also note for the students that this exemplifies an experiment conducted in the field rather than in the laboratory. Additional discussion could center on other ways that the mood could be manipulated and that helping could be measured. Also ask students what possible problems could occur in conducting research in the field. Most objections students will raise center around the lack of control in the field setting, giving you the opportunity to stress that variability in events in the field adds to error variance and thus make it harder to find an effect. The variability itself doesn't invalidate the experiment. You could also ask students to design a laboratory experiment to test the same hypothesis, and have them compare and contrast the advantages of the field experiment and the lab experiments.

3. This is a correlational study. Some students may get confused and say that it is an observational study, since archival analysis is described under this section in the textbook. This example provides you the opportunity to stress that even though this study is archival, it is primarily correlational because it focuses on the relationship between two variables, and not just on describing the pattern of one variable. The hypothesis is that there is a positive correlation between ambient temperature and aggression, measured by the number of batters hit by pitched balls. Some students may wish to argue with this operationalization of aggression—again, a good opportunity to discuss the idea of operationalization and the relationship between theory and data. If students argue that this is not a good operationalization of aggression because some of the hits are really just accidents, you can explain that although that is certainly true, those accidents are really just adding to error variance. Other complaints that students might raise are that the “hits” do not measure aggression of the pitchers, but instead measure poor control of the ball by the pitcher or slow reaction times by the batter. If these are mentioned, then ask students what their interpretation of the finding would be, and what better operationalization of aggression they might choose instead.

4. This is an experiment, since one of the two independent variables is manipulated and randomly assigned. The two independent variables are sex (male/female) and performance (success/failure), and the dependent variable is self-esteem. The hypotheses being tested might be something like: women, but not men, will show lower self-esteem after failure, while both sexes will show higher self-esteem after a success. Having students generate hypotheses for this study will allow you to mention briefly that this is a factorial design and that the researchers are interested in the interaction of the variables, that is, the way that one independent variable affects the dependent variable, depending upon the level of the other independent variable.

5. This is primarily a correlational study, since both variables are measured rather than manipulated. (Specifically, it is an ex-post facto study.) Some students will be misled into thinking that it is an experiment based on similarities to study #4. Emphasize that it is not a true experiment because participants are not randomly assigned to the gender condition. The association being measured is that between gender and persuasibility (as measured by the amount of attitude change after exposure to a persuasive message).