**Research Strategies, Hypotheses, and Operational Definitions**

Indicate the following for eachstudy described below:

1. Identify the research strategy being used experimental or non-experimental (i.e., descriptive, correlational, quasi-experimental).
2. Specify the construct being measured and the operational definition of that construct.
3. State the hypothesis, if there is one. Remember, that a hypothesis is a statement, and not a question. Hypothesis can also be directional or non-directional.
4. Identify and label the variables of interest.
5. Dr. Smith wanted to test whether practicing Yoga results in greater flexibility in comparison to practicing Pilates. Dr. Smith randomly assigned participants into two groups. One group completed a month-long Yoga class and the other group completed a month-long Pilates class. Before and after the month-long class, each participant took a sit and reach test to determine their flexibility. Dr. Smith then compared the two scores, before and after, to assess the amount of flexibility gained.
6. Experimental Research
7. Flexibility is operationally defined as participants’ scores on the sit and reach test. For example, reaching to 18 inches or above means that people are flexible.
8. Participants taking yoga will have a greater increase in flexibility than participants taking Pilates.
9. The independent variable is the form of exercise with levels (i.e., Yoga versus Pilates). The dependent variable is flexibility (i.e., score on sit and reach test).
10. Researchers wanted to test the comfort level of Nike versus Adidas shoes. Participants who were running in a local marathon were invited to participate. After the race, researchers recorded the type of running shoe participants were wearing. Additionally, each participant rated the shoes on quality of arch support, ankle support, and cushioning as indices of comfort.
11. This is non-experimental research, possibly quasi-experimental because two groups are being compared and participants self-selected themselves into these groups. No random assignment was used.
12. Comfort is operationally defined as quality of arch support, ankle support, and cushioning.
13. There will be a difference in comfort level of Nike and Adidas shoes. This is a non-directional hypothesis, because there is no information regarding which type of shoe is predicted to be more comfortable.
14. The quasi-independent (i.e., subject) variable is the type of running shoe (i.e., Nike versus Adidas). The dependent variable is comfort as measured by quality of arch support, ankle support, and cushioning
15. Imagine that researchers are interested in measuring risk-taking in people. Describe two ways that risk-taking could be operationally defined.
16. Risk-taking can be defined as the number of thrill seeking activities individuals have performed in the past year. Give participants a list of thrill-seeking actives (e.g., skydiving, high speed driving, mountain climbing, gambling). Participants indicate each of the activities they have performed. Checking five or fewer activities would indicate a low level of risk-taking and checking six or more would indicate a high level of risk taking.
17. Risk-taking could be defined as the decision to engage specific activity on a camping trip. Participants have the choice of going a) cliff diving, b) repelling off a cliff, c) whitewater kayaking, d) canoeing on a calm river, e) hiking, or f) sitting back at camp. Choices a through c are considered high risk activities. Choices d through f are considered low risk activities.
18. Risk-taking could be defined as how close children get to animals at a zoo. The closer children are to animals the higher their level of risk-taking.
19. Risk-taking could be defined as the amount of money people bet at a horse/dog track or at a casino. People could be observed while engaging in these activities or approached after leaving these establishments to find out how much they bet.
20. Imagine that researchers are interested in identifying ‘good students’. Describe two ways that a good-student could be operationally defined.
21. Students who earn As in their classes could be defined as ‘good students’. Researchers could collect past report cards or transcripts from students and then count the number of As each student earned.
22. Researchers could ask students to report their current college GPA. Students with a 3.0 or higher could be labeled as a good student.
23. Good students can be defined as students who do not cheat. Participants could be put in a room in which they have to take a test. The administrator of the test gives everyone the answer key “by mistake”. Participants who tell the administrator that they have the answer key will be considered good students.
24. A good student can be defined as the number of honors classes taken. A student that is taking 3 or more honors classes is defined as a good student.
25. Imagine that researchers are interested in identifying a careful driver. Describe two ways that a careful driver could be operationally defined.
26. A careful driver can be defined as someone who does not drive through yellow lights. A researcher could sit on the side of the road at a stoplight and observe the number of drivers that drive through yellow lights.
27. A careful driver can be defined as someone who drives the speed limit. A researcher could use a driving simulation to assess the number of times that participants exceed the speed limit.
28. A carful driver can be defined as someone who does not tailgate. A researcher could use a driving simulation to assess the number of instances in which participants gets too close (i.e., within a car length or less) of the simulated car in front of participants.