

Homework Assignment, HESP 724

Which statistical analysis would you use for each of these research questions? (and why?)

1. Researchers want to know whether girls are more likely to successfully complete a laboratory perception task (a dichotomous variable – success or failure) than are boys.
2. Researchers wonder whether children are better able to learn new words when those words have more common phonological pattern than when they contain rarer phonological patterns. They teach each child 2 new words, one of each type, and examine the proportion of time the child spends looking at the appropriate object (out of 100%) when they hear the name.
3. Researchers wonder whether children who stutter tend to stutter on words beginning with some phonemes more than others. They take the first 100 words stuttered by each participant, and examine the distribution of initial phonemes in those words as compared to those in the language as a whole.
4. Researchers are interested in how an individual's self perception of handicap (measured on the Hearing Handicap Inventory for the Elderly) relates to ability to perceive speech in noise (accuracy score).
5. Researchers are interested in salary differences among HI and non-HI individuals. They find 10 people with HI, match them with 10 age- and education-matched individuals without, and measure salaries for comparison.
6. What color/flavor jelly beans do people prefer? In a taste test, participants gave each of 6 flavor/colors (purple, red, orange, yellow, black & green) a rating on a 6-point scale, and these were compared to one another to see which differed.
 - a. In a second variant of the study, participants selected their single favorite flavor, and these proportions were compared to chance.
7. How good are the math estimation skills of SLP students vs. AUD students vs. HESP faculty? To test this, researchers used a common carnival game, guessing the number of jelly beans in a bottle. (*hey, they started having Easter candy at the grocery store last night, and I needed inspiration*). Students in both the AUD & SLP program and the faculty members made guesses as to the total number. The difference between their guess and the true # was used as final data.
8. Peeps are often made many months in advance of Easter. Does the quality deteriorate? Groups of 10 subjects rated the quality of Peeps; one group rated Peeps made 9 months earlier, one rated Peeps made 6 months earlier, and a third rated Peeps made only 3 months earlier.
9. Do people who spend more time watching TV have lower I.Q.s?

10. Are individuals with C.I.s happier than those without? Researchers give surveys to 20 people, half with CIs and half with hearing aids (and at least a profound hearing loss).

11. A researcher believes that people who like rootbeer **MUST** be smarter than those who do not. She divides people into two groups (those who like rootbeer, and those who do not), and then gives them a bunch of math problems to do. The number done correctly serves as the actual data.