

Homework Answers:

1. E
2. B
3. A
4. D

Day 7 - Issues with census', sampling and bias


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First, let's review the issues that go along with a census. Briefly explain the issue with each idea below.

1. Completion - cumbersome (lots of info. to compile and collect)
2. Populations don't "stand still" it takes time to complete census; life goes on as normal
3. Incorrect counts some parts of population may be hard to track/count/reach.

Second, sample size and representation issues

1. Too small of a sample will nullify how well you choose the sample. So, sample size is important.

 Failing to get a sample that accurately represents your population is even more critical. Consider the following:

Sample Badly, but Conveniently

Another sampling method that doesn't work is convenience sampling. As the name suggests, in convenience sampling we simply include the individuals who are convenient for us to sample. Unfortunately, this group may not be representative of the population. A recent survey of 437 potential home buyers in Orange County, California, found, among other things, that

All but 2 percent of the buyers have at least one computer at home, and 62 percent have two or more. Of those with a computer, 99 percent are connected to the Internet (Jennifer Hieger, "Portrait of Homebuyer Household: 2 Kids and a PC," Orange County Register, 27 July 2001).

Later in the article, we learn that the survey was conducted via the Internet!

Many surveys conducted at shopping malls suffer from the same problem. People in shopping malls are not necessarily representative of the population of interest. Mall shoppers tend to be more affluent and include a larger percentage of teenagers and retirees than the population at large. To make matters worse, survey interviewers tend to select individuals who look "safe," or easy to interview.

- undercoverage
- response bias



Explain the type of bias that is present in the comic above and why you chose it.

Response Bias - question is written
to favor the king's performance

List and describe 2 other types of bias below

1. Voluntary Response Bias - people choose to participate (or not). Don't know non-responders opinions.
2. Non-Response Bias - people chosen to be part of sample but do not participate
3. Undercoverage
4. Response Bias

Homework:

Page 238 #15, 16, 17

Use attached chart

changed

Homework 9-7

pg. 28

Statistics Chapter 9: What did they do? Organizer – KEY

Use the chart below to organize your answers to exercises 9-16.

	Population	Population parameter	Sampling frame	Sampling method; randomization used	Potential sources of bias and generalization problems
14. Consumers Union	All U.S. adults	Proportion who have used and benefited from alternative medical treatments	All Consumers Union subscribers	Not specified, but probably a questionnaire mailed to all subscribers	Voluntary response bias. Those who respond may have strong feelings one way or another.
★ 15. Marijuana					
★ 16. Bar					
★ 17. Voters					
18. EPA					
19. Roadblock					
20. Snacks					
21. Milk					

