

3.2 Sampling Good and Bad Part 2: How Sample Poorly Voluntary Response Samples

Many websites have polls that ask visitors to express their opinions. These polls, along with other call-in or write-in polls, are not reliable because they use **voluntary response samples**.

A **voluntary response sample** consists of people who choose to be in the sample by responding to a general invitation. Voluntary response samples are sometimes called *self-selected samples*.

Ann Landers once asked the readers of her long-running advice column, "If you had to do it over again, would you have children?" She received nearly 10,000 responses, almost 70% saying "NO!" Can it be true that 70% of parents regret having children? Not at all. People who feel strongly about an issue, particularly people with strong negative feelings, are more likely to take the trouble to respond. Ann Landers' results are misleading...the percent of parents who would not have children again is much higher in her sample than in the population of all parents.

Example: The athletic department at El Dorado Community College wants to learn more about the physical fitness of students at the school, including the number of push-ups that students can perform. To obtain their sample, the athletic department sets up a booth in the center of campus with a sign that says "Free Physical Fitness Testing!"

a.) Explain why this sampling method is biased.

People who are physically fit are more likely to volunteer.

b.) Is the mean number of push-ups for the members of their sample likely to be greater than or less than the mean number of push-ups for the entire student body?