

HOMEWORK ANSWERS: Extending Knowledge of Confidence Intervals and Sampling Error to a Real-World Example

Read the article in the link below and answer the questions that follow:

<https://newsroom.haas.berkeley.edu/research/election-polls-are-95-confident-but-only-60-accurate-berkeley-haas-study-finds/>

1. The article states that although polls report a 95% confidence interval, analysis shows that the poll's result only captures the outcome 60% of the time. Is this because the accuracy has decreased since 2008? Why or why not?

No, Moore and Kotak found no evidence that the accuracy has decreased.

2. Kotak feels that to be 95% confident, polls need to double what measure? What will that do to the width of the confidence interval?

The poll needs to double the margin of error which would make the confidence interval four times as wide.

3. To gauge poll confidence, Kotak and Moore wanted to determine whether the share of the vote was contained within the margin of error the poll reported. They then gave an example of what was meant by this. Give a similar example of your own.

Suppose a poll showed that 59% of voters planned to vote for Candidate A. The poll reported a 6% margin of error. This means that Candidate A would need to win between 53% and 65% of the votes for the poll to be correct.

4. The article said that the confidence level only considers "sampling error". From what you have learned so far, is sampling error bias?

No, sampling error is due to random chance where the sample statistic calculated will differ from the parameter of the population the sample is drawn from.

5. What does the article say will increase the sampling error?

Surveying a smaller subset of voters will increase the sampling error.

6. What types of errors are not included in sampling error according to the article?

Errors that come from choosing a sample of people in a non-random fashion.

7. Can you consider these other types of error as bias?

Yes, when we don't select a sample using randomization, biases are introduced.