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DSC 530

Exercise 2-1

Based on the results in this chapter, suppose you were asked to summarize what you learned about whether first babies arrive late. Which summary statistics would you use if you wanted to get a story on the evening news? Which ones would you use if you wanted to reassure an anxious patient?

To get a story on the evening news, I think it needs to be concise and understandable to a non-technical audience. These days, the news needs to be a soundbite essentially. The summary statistic I would use to get on the news would be the mean since most members of a non-technical audience would understand that in general, or on average since they might use those interchangeably, first babies tend to arrive later than the babies of subsequent pregnancies.

If I were trying to reassure an anxious patient, I would want to provide them with as much information as possible. I would let them know about the central tendency of the data, but also provide them with the spread and the tail to let them know which range of possibilities they might expect. I would not mention any outliers unless directly questioned about them because I do not really see how that would be helpful.

Imagine that you are Cecil Adams, author of *The Straight Dope* and your job is to answer the question, "Do first babies arrive late?" Write a paragraph that uses the results in this chapter to answer the question clearly, precisely, and honestly.

Analysis was done using data from the National Survey of Family Growth to answer the question "Do first babies arrive late?" The data resulted from a survey of individuals between the ages of 15 and 44 between January 2002 and March 2003 that consisted of questions regarding their pregnancies. The response regarding the lengths of their pregnancies and the order of each pregnancy was used to perform this analysis. These values were divided into first babies and non-first babies. The mean pregnancy length was determined for each group and then Cohen's d was used to measure the effect size. The mean pregnancy length for first babies was 38.601 weeks and the mean pregnancy length for non-first babies was 38.523 weeks. This means there is a different of roughly 13 hours between the pregnancy length of first babies and non-first babies. Cohen's d was determined to be 0.029 which means there was a small effect. This means that yes first babies do typically arrive later than non-first babies, but the effect size and difference in means are so small that there is no real clinical difference or real-world impact.