DSC530

Week 3

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Exercise 2.1

**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 you would want to present statistics that confirm an effect is present. In the study of whether first babies arrive late, you could use the mean to confirm the study results are true. According to the mean of pregnancy length it confirms the fact that firstborn children do arrive later than other births.

To reassure an anxious patient, you could also use the effect size which shows that the mean difference between firstborns and other births is .078 weeks or 13 hours on average which is only 0.2% of the total pregnancy. Seeing how minute it is in comparison to the pregnancy as a whole may help to calm an anxious patient.

**Answer the question “Do First Babies Arrive late?”**

A study was conducted by the CDC using the National Survey of Family Growth during 2002-2003 (Cycle 6) to answer this question among others related to family life, marriage and divorce, pregnancy, infertility, use of contraception, and men’s and women’s health. The cross sectional NSFG Cycle 6 study targeted US Citizens aged 15-44 and was not entirely representative of the population due to overrepresentation of African Americans, Hispanics and teenagers in the study. In the study the questions were primarily directed at pregnancy related issues and one variable tracked was pregnancy length. For analysis it is possible to separate the births into first births and others. In doing this analysis we can determine that the mean pregnancy length for first births is 38.60 weeks and for other births it is 38.52 weeks. A difference of roughly .078 weeks or 13 hours. When calculating the Cohen Effect Size we are able to see that the effect is 0.029. We are able to conclude therefore that first babies do arrive later on average but the small difference in mean and the small effect indicate that it is not a major real-world factor.