Universidade de Brasília
IE - Departamento de Estatística
Análise de Dados Categorizados – 1/2024

Lista Exercícios 2

Estude o tópico 2.7 do ***capítulo 2*** *do livro –texto e as notas de aula e resolva os seguintes exercícios:*

1. Resolver os exercícios 33 e 34, página 63, da 2ª edição do livro-texto (2007).

> **2.33** In murder trials in 20 Florida counties during 1976 and 1977, the death penalty was given in 19 out of 151 cases in which a white killed a white, in 0 out of 9 cases in which a white killed a black, in 11 out of 63 cases in which a black killed a white, and in 6 out of 103 cases in which a black killed a black (M. Radelet, *Am. Sociol. Rev.*, **46**: 918–927, 1981).
>
> **a.** Exhibit the data as a three-way contingency table.
>
> **b.** Construct the partial tables needed to study the conditional association between defendant's race and the death penalty verdict. Find and interpret the sample conditional odds ratios, adding 0.5 to each cell to reduce the impact of the 0 cell count.
>
> **c.** Compute and interpret the sample marginal odds ratio between defendant's race and the death penalty verdict. Do these data exhibit Simpson's paradox? Explain.

> **2.34** Smith and Jones are baseball players. Smith had a higher batting average than Jones in 2005 and 2006. Is it possible that, for the combined data for these two years, Jones had the higher batting average? Explain, and illustrate using data.

2. Resolver os exercícios 8 e 9 do capítulo 3 da 1ª edição do livro-texto *(1996).*

> **3.8.** Table 3.5 refers to the effect of passive smoking on lung cancer. It summarizes results of case-control studies from three countries among nonsmoking women married to smokers. Test the hypothesis that having lung cancer is independent of passive smoking, controlling for country. Report the P-value, and interpret. (*Note:* Weak associations in observational studies are suspect. With relatively small changes in the data, perhaps representing effects of misclassification or other bias, the association could disappear. See, for instance, R. L. Tweedie et al., Garbage in, garbage out, *Chance*, *7*: no. 2, 20–27 (1994)).
>
> **Table 3.5**
>
Country	Spouse Smoked	Cases	Controls
Japan	No	21	82
	Yes	73	188
Great Britain	No	5	16
	Yes	19	38
United States	No	71	249
	Yes	137	363
>
> *Source*: Blot and Fraumeni, *J. Nat. Cancer Inst.*, *77*: 993–1000 (1986).

3.9. Refer to the previous problem. Assume that the true odds ratio between passive smoking and lung cancer is the same for each study. Estimate its value, and use software to find a 95% confidence interval. Interpret. Analyze whether the odds ratios truly are identical.

Bom Estudo!!!!