Programming in R DL

Question8 Exam part 1 (15/12/2023)

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Section 1

Introduction

Description

In this presentation we will analyze the dataset flying. This is a modified version of the Flying Etiquette Survey data behind the story: 41 percent of flyers say it's rude to recline your seat on an airplane.

Format

The dataset flying is

- a dataframe 1040 obs. and 28 columns, which are:
- we will focus on the connection between:
  - gender: gender of the respondent
  - baby_on_plane: the question is: in general, is it rude to bring a baby on a plane?

Section 2

Analysis

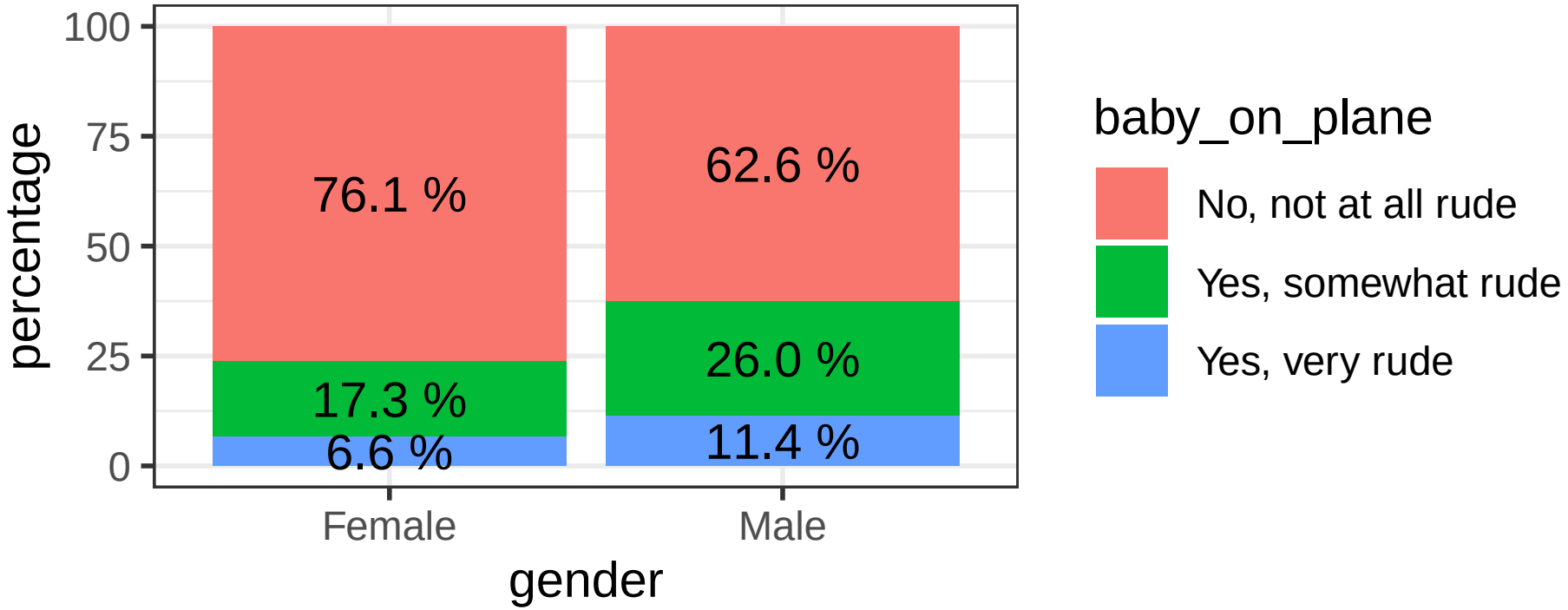
Response by gender

The next table shows how people answered the question by gender.

gender	baby_on_plane	n	percentage
Female	No, not at all rude	255	76.119403
Female	Yes, somewhat rude	58	17.313433
Female	Yes, very rude	22	6.567164
Male	No, not at all rude	214	62.573099
Male	Yes, somewhat rude	89	26.023392
Male	Yes, very rude	39	11.403509

Graphical representation

The next graph shows the same information as the table above.



Section 3

Hypothesis Tests

Test Statistic

The next table shows the test statistic for the hypothesis test that gender and baby_on_plane are independent.

```
##
##  Pearson's Chi-squared test
##
## data:  flying.df$gender and flying.df$baby_on_plane
## X-squared = 14.789, df = 2, p-value = 0.0006148
```

Graphical representation

The next graph represents the position of the test statistic in the chi-square distribution.

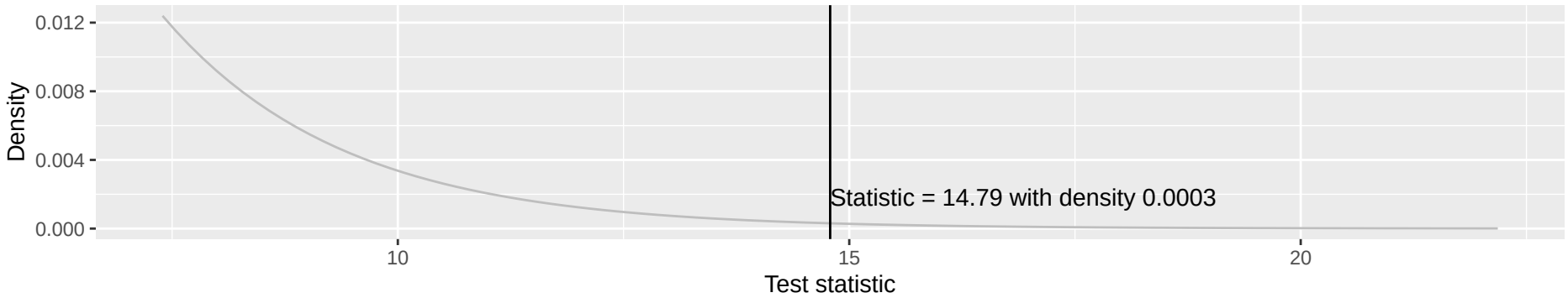


Figure 1: Figure 7.1