Analysis of birth weights

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Introduction

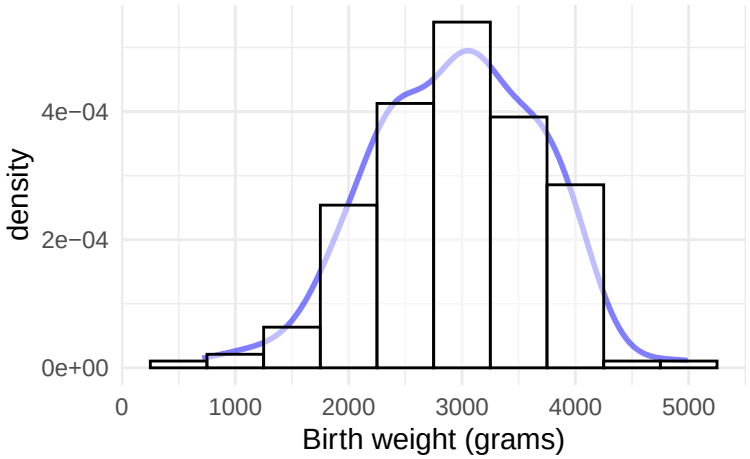
We analysed the birth weight of 189 newborns recorded in the Baystate Medical Center, Springfield, Mass during 1986, and its associations with demographic characteristics of mothers.

Methods

Data are summarized as mean (SD) and n (%) as appropriate. For comparisons between groups the t-test and chi-square test with Yate's continuity correction were used, for quantitative and categorical variables respectively. All tests were two-sided, and a result was declared statistically significant if $p < 0.05$. The analysis was done with the R language (version 4.2.1).

Results

Birth weights ranged from 709 to 4990 grams, with mean (SD) of 2944.6 (729.2) grams. The histogram of birth weights with overlapped density, shows a bell-shaped and quite symmetrical distribution.



The following figure shows the boxplots of birth weights in smoking and non-smoking mothers. A shift to lower values is apparent in smoking mothers.

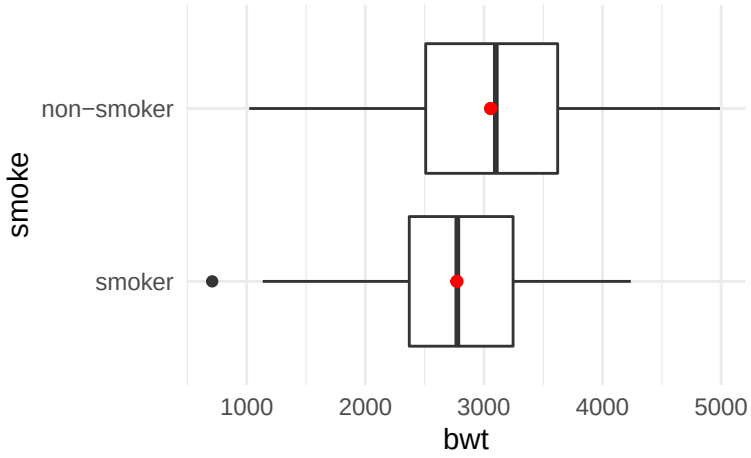


Figure 1: Birth weight according to smoking satus of mothers during pregnancy