

Birth weight

Albert Cobos

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Introduction

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

Methods

Data are summarised as mean (SD) and n (%) as appropriate. For comparisons between groups the t-test and chisquare test with Yate's continuity correction were used, for quantitative and categorical variables respectively. The analysis was carried out with the R language (version 4.0.4).

Results

Birth weights ranged from 709 to 4990 grams, with mean (SD) of 2944.6 (729.2) grams. The histogram birth weights, with overlaid density, shows a bell-shaped and quite symmetrical distribution (figure 1).

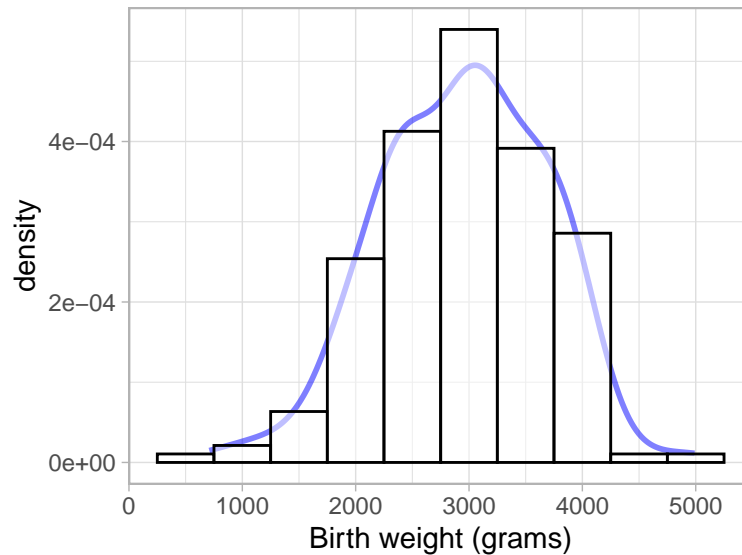


Figure 1: Distribution of birth weights

The boxplots of birth weights in smoking and non-smoking mothers are displayed in figure 2. A shift to lower values is apparent in smoking mothers.

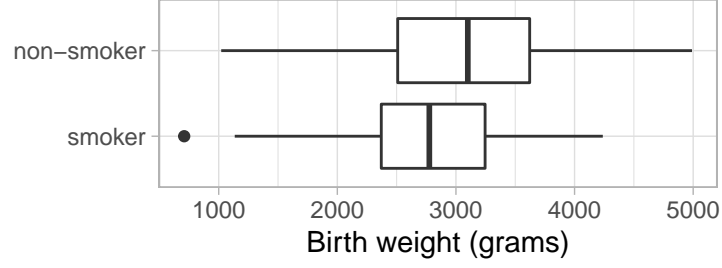


Figure 2: Boxplots of birth weight by smoking status

Table 1 shown the results of comparing several dataset variables in smoker and non-smoker mothers. As well as descriptive summaries, the p-value of the relevant test (t-test for quantitative variables, and chi-square for categorical variables) is shown as **p.overall**.

Table 1: Summary descriptives table by groups of 'smoke'

	smoker N=74	non-smoker N=115	p.overall
Birth weight (grams)	2772 (660)	3056 (753)	0.007
Birth weight, categorized:			0.040
low	30 (40.5%)	29 (25.2%)	
normal	44 (59.5%)	86 (74.8%)	
Race:			<0.001
white	52 (70.3%)	44 (38.3%)	
black	10 (13.5%)	16 (13.9%)	
other	12 (16.2%)	55 (47.8%)	
Arterial hypertension	5 (6.76%)	7 (6.09%)	1.000
Uterine irritability	13 (17.6%)	15 (13.0%)	0.519