Cereal Dataset

There is evidence that merchandise stocked at an eye level gets purchased more than others. Consequently, manufacturers pay to get their merchandise stocked at a specific location. The data is manipulated to create categorical variables "Low", "Medium", "High" where the "Medium" shelf is assumed to be at the eye level. The hypothesis is there is no difference in sugar/serving by shelf.

Table 1. summarizes the findings of the Simple Linear Regression which looks at mean amount of sugar/serving on each shelf along with the 95% Confidence interval. Fig 1. visualizes the results obtained and it is evident ($F_{2,73}$=6.60, p<0.0023) that the amount of sugar on the "Middle" shelf with mean estimate of 9.62 g/serving (7.84,11.39) is different than on the "Low" shelf with a mean estimate of 5.11 g/serving (3.24, 6.97). Besides the difference in the mean analysis, the difference in the mean is evident because the Confidence Intervals do not overlap

Despite of the findings, the linear model is adequate to answer the state hypothesis because the position of a shelf is of a categorical rather than of continuous nature where shelf in between do not exist. Also this analysis doesn't take into account different amount of observations on each shelf.

Table 1. Mean amount of sugar estimate with 95% CI

Shelf	Mean g of sugar	Lower 95% CI	Upper 95% CI
Low	5.11	3.24	6.97
Mid	9.92	7.84	11.40
High	6.53	5.17	7.88

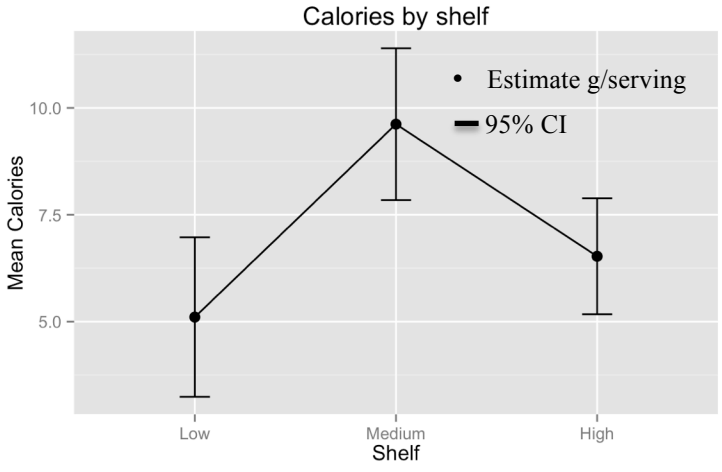

Figure 1. Sugar content by shelf