Weston Hanks
5th Period
10/10/12

Cereal Marketability Based on Sugar Content

Supposedly grocery stores put their cold breakfast cereals containing the highest sugar content on the second shelf from the top, the "eye level" shelf, so that people will buy those cereals more. But is this really true? From the data that we collected at Smith's Grocery Store, we have concluded that this is not true.

Based on the median, the sugar content was very similar in the 2nd shelf, the middle shelf, and the 4th shelf. All of the shelves had a median of 10 grams of sugar per serving. An interesting thing that occurred was that both the bottom and the top shelves had lower medians. The top shelf had a median of 7.5 grams per serving and the bottom shelf had a median of only 6.5 grams per serving. Because the three shelves in the middle had the same median, however, it suggests that there was not a specific preference of sugar content that the stores used to display their cold breakfast cereals.

The range of the sugar content was fairly interesting. The top shelf ranged from 4 to 15 grams of sugar per serving; a fairly average amount. The 2nd shelf ranged from 1 to 12 grams; the same as the top shelf. The middle ranged from 0 to 19 grams; the biggest range that was displayed. The 4th shelf had a range from 3 to 18 grams; which was not that much less than the middle shelf. Finally, the bottom shelf had a range from 2 to 10 grams; the smallest range of all of them. Based on these observations, the middle shelf, not the shelf on eye level, had the largest range and had the cereal with the largest sugar content. This is conclusive with our other observations that the shelf at eye level is not necessarily the prime target for grocery stores to put their cereals with the greatest sugar content.

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The shape of the data was fairly similar for the most part, with a few exceptions. The top shelf had a shape that was almost symmetric, maybe a little bit skewed to the left. The next two shelves down and the bottom shelf were also skewed to the left, suggesting that the sugar content was typically higher. The middle shelf did, however, have 2 outliers; one under the lower fence, and one above the upper fence. The 4th shelf was interesting because the first quartile, median, and third quartile were all the same value. This shelf had 4 outliers and was symmetric, suggesting that the majority of sugar values were 10 grams per serving. Based on the spread, one can conclude that the grocery stores did not specifically place the most sugary cereals on the eye level shelf because three of the five shelves had the same spread, including the eye level shelf.

The spread of the data was also very similar for a few of the shelves. Bot the 2nd shelf and the middle shelf had 50% of their sugar contents between 10 and 12 grams per serving. The top shelf had 50% between 7.5 and 15 grams. The 4th shelf had mostly cereals with 10 grams with a few outliers and the bottom shelf had 50% of their sugar content between 6.5 and 10 grams per serving. Again, because the shelf at eye level has almost the same spread as another shelf, it is unlikely that Smith's marketed cereals with high sugar content on the shelf at eye level.

The data that was collected let us conclude that the cereals that were in the grocery store were not put in any specific order based on sugar content. The cereals on the eye level shelf are almost the same to another shelf in one way or another. They do not have an outstanding amount of sugar in them and therefore are not put there so that people will buy more sugary cereals.