Essay on mandm color distribution studyintroduction

Business, Customers

This paper dwells on a study conducted by Josh Madison on the color distribution exhibited by M&M candies to try and reveal the an-uniformity of the color distribution. M&M candies are made of plain Milk Chocolate and come in different varieties having containing some peanuts. M&M are sold at retail and are packed in a cardboard box that contains 48 packages of the M&M's. He compared what information he had picked with what was indicated by the Consumer Affairs Office regarding the color distribution and his own study. The paper will also contain some comparison between the Madison' s results with that of the spring 2012 class results and with the results obtained from the Consumer Affairs Office. A deduction will be then set in regards to the color distribution.

The information picked from M&M Consumer Affairs Office and their color distribution predictions gave in results for each colour. M&M packs their products and sells them retail in cardboard boxes that contain 48 packages of M&M's in each box. From the Consumer Affairs Office, it is stated that there should be some uniform proportions for all the colors in the M&M products. Their predictions are as tabulated below.

Josh Madison also undertook his own study in regards to color distribution in the candies. He acquired a full case containing 48 packages of the M&M's. He then counted each color and recorded the results. He then compared the total sum of the colors contained in each pack to pack's total as a measure of error checking. He had initially opted for random sampling methods on the packs by taking many packs from various locations. He later ruled out this option due to the fact that, there was a higher chance of getting packages that could give varying percentages from the indicated values M&M .

Another reason is that, it would have taken more skewing on the numbers during the different production runs taken to attain the true representation. He opted to buy a single pack to ensure uniformity in the production run. All the numbers were keyed into a database to be able to allow ease analysis of the investigated data. Below is a table of the results.

Taking a look at Spring 2012 and their color distribution predictions, we may chose to compare it with the Madison's results percentage-wise. The results obtained by the Spring 2012 in relation to the color distribution is closely related to the hypothesis obtained from Madison. It surely depicts that; the prediction's by M&M Customer Office was untrue. Below is figure representing the obtained value during the Spring 2012 activity. Having their values as;

406 blue; 232 brown; 363 green, 369 orange; 239 red; 243 yellow= 1852

Taking the 3 results into consideration and for comparison purpose, there was the need of converting the listed results into a percentage representation (the ones that had been expressed otherwise). With that it was easy and effective to draw a comparison bar graph as shown below. It is then that easy comparison of the represented figures on the graph can be analyzed. Below is Fig 4. A comparison bar graph figure

Conclusion

It can be deduced from the three activities that, there are some overlying difference in content to what is predicted by M&M Customer Office. It was found out that, the real color distribution the M&M's was not uniform for each respective and individual color. This is evidently shown by the statistical methods and data calculated by Josh. In conclusion, we can therefore state

that, the supplied data was sufficient evidence to the contradicting the null hypothesis that had the prediction by the M&M Customer Office as uniform. This shows that, the proportions posted by the M&M's were inaccurate.

We can also deduce that Josh avoided the limitations that may have presented if he had chosen a different sampling method during the analysis. If he had opted on taking multiple bags from various locations, there would be a high probability of finding a better population presentation as had been mentioned earlier. If there need for another research to analyze and deduce the color distribution of the M&M's, larger sampling representing the variable interest would have generated more and accurate results. That is, if more samples of smaller packages would have been collected, there would have been more evidences to help support the prediction.

Works Cited

M&M editorial. M&M Customer Care Office. n/a n/a n/a. 1 April 2014 .

Madison, Josh. M&M's Color Distribution Analysis. 2 December 2007. 1 April 2014 .