Data Analysis

To best analyze our data we divided the surveys into three groups:

1. children who are generally well behaved
2. children who are well behaved, but tend to be disruptive of hyperactive sometimes
3. children who were frequently hyperactive and disruptive.

To best set up the groups we established a rubric to determine whether the child would be in the mild group, the intermediate group, or the extreme group. Both the teachers and the parents rated several of the child’s behaviors on a scale of 1-3, one being the child rarely exhibits the disruptive behavior, 2 being the child sometimes exhibits the behavrior, and 3 being the child often exhibits the behavior. The child would be placed in the mild category if they had three or less 2’s and absolutley no 3’s. The child would be placed in the intermediate category if they had 4-5 2’s and/or one 3. If the child was rated with more than six 2’s and/or more than 2 3’s they would be placed in the extreme group. In all we had eight children in the mild group, 8 in the intermediate group, and only 4 in the extreme group.

After separating the surveys we focused on three major behaviors, that specifically related to out hypothesis: temper outbursts, excitability, and frustration. We then performed chi-squared tests, and proportion tests, to see if there were a significant amount of children who ate high-additive diets and corresponded to these behavior.

Mild Behaviors

|  |  |  |  |
| --- | --- | --- | --- |
|  | high additive diet | low additive diet | total |
| temper outbursts | 0 | 0 | 0 |
| no temper outbursts | 3 | 5 | 8 |
| total | 3 | 5 | 8 |

Because row 1’s total is equal to 0, we were unable to perform a chi squared test. Instead we did a two proportion z test.

The results of this test was a z-score of –1, with a p-value of .159. This means that there is a 15.9% chance that with a random survey we will get the numbers that we got. Therefore the results are insignificant and we fail to reject our Ho.

|  |  |  |  |
| --- | --- | --- | --- |
|  | high additive diet | low additive diet | total |
| excitable | 1 | 1 | 2 |
| not excitable | 2 | 4 | 6 |
| total | 3 | 5 | 8 |

For this set of data we were able to perform a chi squared test.