**Quantitative Analysis**

For the quantitative findings the following variables were examined through descriptive statistics using R-Studio. The independent variable, which examined the number of times that parents of Head Start children communicated with their respective child’s respective teacher at Head Start, this variable served as the independent variable. The dependent variable was represented by the variable that examined the amount that the parental figure assisted the child with the send home activity “Dino buddies” as they completed it.

The independent variable for this study investigated how often the parents interacted with the teachers at Head Start. The descriptive statistics showed that out of 11 parents who participated in this survey, five of those parents communicated with their children's teachers at Head Start on a daily basis or more. With the remaining six parents, five more expressed that they communicate with the teachers on a weekly basis. With the remaining one parent, they expressed that they communicate with the teacher monthly. This data is shown below in *Figure One.*

*Figure One.*

*Chart

Description automatically generated*

The dependent variable for this study was the variable that measured the amount that the parental figure assisted on the send home activity while the child completed it. Out of the eleven respondents that filled out the survey it was found that the mean of assistance on the “Dino Buddies” activity was a seven out of ten. This shows that out of the children that completed the activity parental figures assisted a moderate amount in the completion of it.

*Figure Two.*

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Mean Assistance | 7 |  |
|  |  |  |
|  |  |  |

When comparing the two variables were are trying to find if their parental figures who communicate with the teachers at Headstart regularly assisted less on the send home activity that is being tested. We will find this by using ANOVA, Chi-squared, and T-Test, then interpretating the results to find if there is significance or not between the two variables.

T-TEST

|  |  |  |
| --- | --- | --- |
| Communication | Mean | P-value |
| Group 1 (Daily or More) | 6.4 | .1762 |
| Group 2 (Weekly or Less) | 7 |  |

Note, p<.05\* ,p<.01\*\*, p<.001\*\*\*

Research Hypothesis= There is significant difference between the means.

Null Hypothesis= There is no significant difference between the means.

The research hypothesis is what we are aiming to find, if the p-value is less than the alpha levels then we reject the null hypothesis, retaining the research hypothesis. If the p-value is greater than the alpha levels we reject the research hypothesis, retaining the null hypothesis.

For this T-Test the dependent variable used was how much the parental figure assisted the child on the at home project (v6). The independent variable used was how much the parental figure communicated with the teachers at Headstart (v34). When performing the T-test it is noted that group one is the group of parental figures that communicate with the teachers at head start daily or more, while group 2 is the group of parental figures who communicate with the teachers at head start on a weekly basis or less. The mean for these groups is based off the continuous variable of how much the parental figure assisted the child on the send home activities on a scale of 1-10. The mean for group one of communicating daily or more was a 6.4, this shows that on average parental figures who communicate with the teachers at head start daily or more had to assist on the send home activity a moderate amount. The mean for group two of communicating with the teachers at head start on a weekly or less basis was 7.0, this shows that the parental figure also assisted a moderate amount on the send home activities as well. The p-value for the T-test returned as a .1762. When comparing to the alpha levels of .05, .01, and .001 the calculated p-value was higher than each of the three. This concludes that since the p-value was higher than each of the alpha levels we will retain the null hypothesis stating that there no significance between the means of group one and group two.

ANOVA

|  |  |  |
| --- | --- | --- |
| Communication Amount | Mean Assistance | F-value |
| Daily or more | 6.4 | 6.55 |
| Weekly or less | 7.6 |  |
|  |  |  |

*Note*: p<.05\*, p<.01\*\*, p<.001\*\*\*

The dependent variable for this ANOVA test served as how much the parental figure assisted on the send home activity, this was asked on a 0-10 scale. The independent variable asked how often you communicated with the teachers at Headstart. Respondents were given the option to choose from, “Daily or more”, “Weekly”, “Monthly”, “Less than monthly”, and “Never”. This variable was recoded into two options, “Daily or more”, and “Monthly or less”. The mean assistance for the daily or more 6.4 out of 10. The mean assistance for the group weekly or less was 7.6 out of 10. According to the ANOVA results (F=6.55) there is significance between the means of the two groups. Therefore, the amount of communication to Headstart teachers by parental figure does influence how much that parental figure assists on the send home activity.

CHI-SQUARED

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Moderately assisted | Highly assisted | Chi Squared |  |  |
| Daily or more | 18 | 27 | 13.38 |  |  |
| Weekly or less | 36 | 9 |  |  |  |
|  |  |  |  |  |  |

*Note*: p<.05\*, p<.01\*\*, p<.001\*\*\*

The independent variable served as how much the parental figure assisted on the send home activity on a scale of 1-10. This variable was recoded into two different sections “moderately assisted”, and “highly assisted”. Moderately assisted represented the numbers 0-6 on the scale while highly assisted represented the numbers 7-10 on the scale. The dependent variable represented how often the parental figure communicated with the teachers at Headstart. Respondents were given the option to choose from, “Daily or more”, “Weekly”, “Monthly”, “Less than monthly”, and “Never”. This variable was recoded into two options, “Daily or more”, and “Monthly or less”. Out of the parental figures who communicated daily or more 18 of them were reported moderately assisting, while 27 of them reported highly assisting their child. Out of the parents who communicated weekly or less 36 of them reported moderately assisting while only 9 reported highly assisting. According to the Chi-squared test our calculated value (Chi-squared=13.38) is greater than our critical value there is significant difference between the categories. This means that how much the parental figure communicates with the teachers at Headstart influences how much they assist on the send home activity.

According to the T-Test conducted the amount of communication with the teachers at Headstart does not influence how much the parental figure assists on the send home activity. The ANOVA and Chi-squared state the opposite, saying that how much the parental figure communicates with the teachers at Headstart does influence how much they assist the child on the send home activity. When comparing these results to the research question it is safe to say based upon the results of the tests that how much the parental figure communicates with the teachers at Headstart does influence how much the parental figure assists the child on the send home activity that they were given. This test was only run on the “Dino Buddies” activity and does not pertain to any of the other send home activities that were given to the children at Headstart. ANOVA results state that parents who communicated daily or more with the teachers at Headstart daily or more assisted on the activity more than those of the parents who communicated with the teachers weekly or less. This could mean that those parental figures who take the time to communicate with the teachers know more about their child’s capabilities when it comes to solving problems and following directions. The chi-squared test indicated that those parents who communicated with their teachers at Headstart daily or more assisted more on the send home activities, while those parental figures who communicated weekly or less assisted on the activity less on the activity. This could indicate that those parents who talk with the teachers weekly or less with the teachers at Headstart are not as involved with their child’s school activities in comparison to those parental figures who communicate with the teachers at Headstart daily or more.