Findings

After conducting different statistical analyses, the results show that parental involvement has a positive effect on child academic achievement. Using the statistical tests Pearson’s Correlation and Basic Linear Regression, my hypothesis that high parental involvement has a positive relationship with child engagement in academics was supported. The independent and dependent variables used for both tests were continuous on the scale of 0-10 based on the parent or other relative’s relationship with their child and how much help the child needed to complete the activity.

In the Pearson’s Correlation test, I tested the variables from the Noodle Necklace Activity if the families’ relationship with their child was predicted by how much help the child needed to complete the activity. The results indicate a weak negative correlation (r=0.087) between the relationship with the child and the amount of help needed to finish the activity. In other words, this means that the parent or other family member’s bond with the child had little to no effect when the child needed assistance. Therefore, the child can likely succeed academically with parental involvement and not decrease the quality of their relationship. However, this result cannot be fully determined as true in a larger population.

In the Basic Linear Regression test, I tested the same variables from the Noodle Necklace Activity. My hypothesis that positive family relationships have an inverse relationship with the amount of assistance required for the child to complete the activity was proven. The rank of help needed by the child decreases 0.09 units for every one unit increase in the rank of parent-child relationship as shown below in Table 4. This result appears to show an inverse relationship between the variables. However, the finding is not statistically significant (p=0.58). Since the R2 statistic is 0.007608, this means the model explains 0.7% of the variation in the dependent variable (self-score of assistance required). The relationship of these variables cannot be fully determined in a larger population.

Table 4

*Regression of Parent Relationship and Child Assistance*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | B | Std. Error | t-value | p-value |
| (Intercept) | 8.94720 | 1.34348 | 6.660 | 5.6e-08 |
| Self-Score of Help Needed | -0.09733 | 0.17576 | -0.554 | 0.583 |

Note: R2 =0.007608

Conclusion

While the findings of the statistical analyses support my hypothesis, they do not support it completely. In other words, the tests I used show that parental involvement has an effect on child academic success but not greatly. The Pearson’s Correlation coefficient indicated that relationship quality does not affect the child’s academic success. However, the Linear Regression did not prove that parental involvement and child achievement were significant.

Despite the decent response rate, there are limitations from this study that may have an effect on the statistical analyses. Much previous literature has shown a positive relationship between high parental involvement and children’s learning. However, our findings indicate that there is a relationship between these variables but are not statistically significant. This result could be due to our small sample size, time constraint for collecting data, and the missing data from our sample. Since our sample was convenient and limited, we have no way of knowing if my hypothesis can be proven in a large population. It should be noted that other errors, such as miscalculations, in this analysis are possible. Future research should consider a larger sample size, adding more activities, and creating more educational objectives. I believe that research in the future will reflect similar or better results that support my hypothesis.