**Findings**

 When analyzing the quantitative data from the activities delivered to the eight different Headstart locations, a Chi-Squared test, a Pearson’s correlation test, and a statistical regression test were performed. These 3 tests were performed to test if the parent/child activities had a positive effect on parental engagement and the rating of parent/child relationship status.

A Chi-Squared test was run to test for differences in whether or not the mother was a household member and if the activity’s effectiveness at engaging the child/children. The Chi-Squared test generated a p-value of 0.0005, which indicated that there is a significant difference, between whether or not there was a mother in the household and the activity’s effectiveness at engaging the child/children, as shown in the table below.

**Table 1**

*Chi-Squared test for Differences in Whether or Not the Mother was a Household Member and the Activity’s Effectiveness at Engaging the Child/Children*

Groups Yes No Unsure

Mother in Household 9 31 2

No Mother in Household 0 1 1

*Note.*  \* The calculated value was then compared to the critical values of \*p < .05. \*\*p < .01. and \*\*\*p < .001. P-value = 0.0005, *df* = 1, $χ=12.1$

 Next, a Pearson’s Correlation test was run on variables that indicated how parents rated their current relationship with their child/children had a relationship and was predicted by how many hours in a day they get to spend interacting with their child/children. Both variables were asked on a 1-10 scale. Findings indicate that there is a weak positive correlation (r = 0.289) between the parents’ rate of their current relationship with their child/children and how many hours in a day they get to spend interacting with their child/children. In other words, when parents spent more time interacting with their child/children, they rated their relationship higher. The researcher does not know if this would be true in a larger population.

 Then a statistical regression test was performed, that measured how parents rated their current relationship with their child/children and were predicted by how many hours in a day they get to spend interacting with their child/children. It was demonstrated that parent’s rank of their relationship with their child decreased by 0.1940 united for every one unit increase in time spent with their child/children. Therefore, it appears that subjective relationship status and interacting time are inversely related. However, this finding is not significant (p = 0.58). The $R^{2}$statistic is 0.007918, meaning that this model explains 0.7 percent of the variation in the dependent variable (interaction time). No relationship can be discerned between self-ranked family relationships and time spent interacting with the child/children.

 Overall, the statistical tests run indicate that the parent/child engagement and involvement activities have an overall positive effect on parental engagement and the rating of parent/child relationship status.

**Conclusion**

The quantitative data gathered from parent surveys to run analyses to see if there was a significant finding of a positive affect the parent/child activities had on parental engagement and the rating of the parent/child relationship status. A Chi-Squared Test was run and showed a significant difference between whether or not having a mother in the household and the effectiveness of the activities in engaging the child/children. The Pearson’s Correlation test was run to find any correlation between how much time a parent interacts with their child/children and how they rated their relationship with their child/children. A positive correlation was found, meaning that when parents spent more time interacting with their child/children, they rated their relationship higher.

Lastly, a Statistical Regression was run to see if there is a significant difference between how the parent rated their relationship with their child/children and how many hours in a day they spend interacting with their child/children. It was found that there could be a significant difference, but it may only be slight. Thus, through this research, a significant difference between how the parent rated their relationship with their child/children and how many hours in a day they spend interacting with their child/child cannot be reported.

In conclusion, it was determined that activities like these are effective at increasing involvement and enjoyment between parents and children. These types of activities can be used in many forums to increase parental involvement because they target what is needed for healthy child development.