Table 3

*Chi Squared Test*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Not African American | African American | Chi Square Statistic | Degrees of Freedom | P-Value |
| Thankful Turkey Activity was effective in engaging child | 7 | 35 | 18.667 | 1 | 0.0001557 |
| Thankful Turkey Activity was not effective in engaging child | 0 | 0 |  |  |  |

Note: This is an example created using Rstudio; p<.05\*, p<.01\*\*, p<.001\*\*\*

This is the information someone needs in order to complete a two-way Chi Squared test. A two-way Chi Square test allows researchers to test if there are significant differences in crosstabs. In this example we used the effectiveness of the Thankful Turkey Activity in engaging the children as our dependent variable and ethnicity as African American or not as the independent variable. RStudio outputs the values for Chi Square statistic, degrees of freedom, and the P-value. The P-value is compared to 0.05, 0.01, and 0.001. The P-value is 0.0001557 which is much smaller than all of the critical P-values. With the P-value being so much smaller we would reject the null hypothesis that there is no significant difference between being African American or not and the Thankful Turkey Activity being effective in engaging the children. Another way to determine if there is significance or not is to use the table on page 282 to determine the critical Chi Square statistic and compare it to the chi square statistic given by RStudio. In the back of the book the highest level of significance we can use is 0.01. With this the critical Chi Square Statistic is 6.635 which is much smaller than the calculated Chi Square Statistic of 18.667, proving that we would still reject the null hypothesis.