Analysis

We first observed the relationship of obesity rate versus the other independent variables individually using scatter plots and their trendlines. The results show that the relationships of obesity rate and unemployment rate and SNAP recipient rate are a positive one. The relationships are negative when observing obesity rate with income per capita, some college and high school graduate percentages by county. The results of the first multiple regression model shows multicollinearity issues with negative sign on the unemployment rate coefficient. We performed a few algorithms of the model redefined by removing one or more variables at a time. The final prediction model of obesity as explained by SNAP recipient rate and some college percentage resolved the multicollinearity. The significant F-test and P-value of the final model provides evidence for us to conclude that the obesity rate may be determined by SNAP recipient rate and some college percentage.