Impact of Player Age on Team Statistics in the National Football League

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We composed a model using dependent and explanatory variables in an effort to determine the correlation between player age and the performance of the team in various statistical departments. The regression model that we developed has determined that a correlation between age and statistical impact does exist. The statistics that showed statistical significance in relation to age included team turnovers, injuries, touchdowns, as well as team passing and rushing yards. After obtaining these explanatory variables, we conducted a regression using the snap weighted age of the team as our independent variable.

In sports, there is a mindset that older players do not affect a team as much as younger players. Older players are considered to have less of an impact on their teams on the court or on the field. On the other hand, there are players below the average age that may not be able to contribute as much as an older teammate. In order to be able to determine the impact of age, we conducted the following research. This report will seek to assist in determining the accuracy of the hypothesis which states that player age has a significant impact on the statistical performance of a team in the National Football League.

The main focus for us was the snap weighted average and if it was a significant factor in the amount of wins a team had in a season. Overall the snap weighted average only account for 3% of the variation of wins a team had. This was surprising to us because we were expecting the age of the teams to account for more than this low percentage. We added other variables that would improve what affected the wins per team. The magnitude of the coefficients are smaller than we originally expected, when we started the research.

The overall impact from our research only accounted for 53.79% of wins in a season by teams. For future studies we would recommend finding more independent variables that would increase the total variance provided from the research conducted. By improving the variance there would be a better understanding of the number of wins in a season. If there is a way to grade a team’s chemistry during games, then that might play a very significant impact on the total variance for the regression output.