Name(s)	Project Number
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Project Title

NBA Prime Time: Determining the Age When NBA Players Reach Their Peak

Abstract

Objectives/Goals
The goal of my science project was to determine the age at which NBA players peak. I believed that the average NBA player would peak around the ages of twenty-four and twenty-five.

Methods/Materials
I used retired NBA players who had a career lasting at least 950 games, starting after 1949 and before they turned twenty-six. I used Player Efficiency Rating, Basketball Win Shares, and Basketball Defensive Win Shares to draw conclusions.

I collected the PER, Win Shares, Games Played, Age, and Defensive Win Shares statistics for each player from basketball-reference.com. I separated the players by position into categories, and divided each category into two groups. One group used two-thirds of the players, and the other group used the remaining third. I then sorted their seasons by their age on February 1 of that season, and I calculated the means, medians, and bivariate correlations.

Results
According to PER, the overall peak was between the ages of twenty-four and thirty-one,. and both Win Shares and Defensive Win Shares stated that they peaked between the ages of twenty-five and twenty-nine.

Conclusions/Discussion
My hypothesis was incorrect; NBA players peak between the ages of twenty-five and twenty-nine. There was little difference between my two groups. I noticed that centers typically play longer and sometimes peak earlier than guards. I believe they have longer careers because they are harder to replace, and they peak earlier because they are more predisposed to injury. I also noticed something I call the Wave Effect, where players' statistics tend fluctuate in alternate directions for at least three years. The Wave Effect is a very common phenomenon amongst guards. If I were to further this experiment, I would probably expand my analysis and study the Wave Effect more closely.

Summary Statement

The goal of my experiment was to determine the average age at which NBA players peak.

Help Received

My mom proofread my work and helped me with my project display assembly (She cut; I glued). My science teacher leant me SPSS and answered my questions.