Southpaw or Orthodox: How does Handedness Affect Home Runs Hit and Batting Average?

First Version
Final Version

Summary

In sports, a slang term used for left-handedness is southpaw, while right-handedness is called orthodox. Does an unorthodox left-handed player have an advantage in one to one sports like baseball, boxing, cricket, and softball? This Tableau workbook presents an overview of two key baseball statistics (home runs and batting average) and handness in a large sample of baseball players to reveal that left-handed batters may have a slight advantage in both home runs and batting average compared to their right-handed counterparts.

Design

Upon initially examining the data, I saw there was information for each player about the baseball statistics home run and batting average. Initially, I created two simple graphs with this information in them. Next, I considered using height and weight to find a connection between the size of each player and their baseball statistics. After a cursory examination in story point 2, “Home Runs and Batting Average for Each Player Compared to Height and Weight and Sorted by Home Runs and Batting Average,” I didn’t see a strong connection between the size of a player and their statistics. Next, I looked a the statistics of individual players. This is when I noticed the players with the two highest numbers of home runs had different handedness. This connection lead me to compare the handedness and the statistics of each player.

I began my work on the Tableau workbook with the third story point, “Home Runs and Batting Average for Each Player.” The third story point presents an overview of home run and batting average information by player. These two bar graphs give context for the home run and batting average values. Also, the story point allows for filtering on the top 10 players in each category so that the range of values can be more clearly communicated. Also, hovering over each bar displays the name, handedness, and statistic for each player, providing an initial glimpse of forthcoming information.

The fourth story point, “Number of Players by Handedness,” shows the number of players by handedness. I did not add this story point until I began to write the summary section of this report. I realized the Tableau workbook needed a story point which showed the vast difference in count between the number of players who are right-handed and the number of players who are left or both-handed. Story point four highlights the vast number of players who are right-handed compared to the few number of players who are either left-handed or both-handed. Also, the colors for the handedness filter are introduced: purple, blue, red. These colors were chosen to show the differences in the colors and to show how both-handedness (purple) is a combination of left-handedness (blue) and right-handedness (red). Originally, handedness was designated with the use of shapes: purple used a plus sign, blue used a circle, and red used a square. After presenting my Tableau story for feedback, my reviewer suggested I use colors instead of shapes to designate handedness.

The fifth story point, “Home Runs compared to Batting Average for Each Player and Their Handedness,” was originally the sixth story point. The fifth story point was originally the sixth story point because the fifth story point presents the largest amount of data. The fifth story point includes information on handedness, home runs, batting average, and player name. The reason I moved this story point from the sixth story point to the fifth story point is because the sixth story point (previously the fifth story point) provides the most succinct summary of my conclusion that left-handed batters may have a slight advantage in both home runs and batting average compared to their right-handed counterparts. Story point five shows most clearly the relationship between home runs hit and batting average for each player. There appears to be no distinct connection between home runs hit and batting average. Much like other story points, story point five allows the viewer to filter and hover. The viewer may filter based on the player’s inclusion in the top 10 of home runs and batting average. Hovering provides similar information as is presented in story point two and four: the player’s handedness, name, batting average, and home runs.

The sixth story point, “Home Runs and Batting Average for Each Handedness,” presents a succinct summary of the conclusion that left-handed batters may have a slight advantage in both home runs and batting average compared to their right-handed counterparts. As such, the sixth story point was moved from the fifth story point position as previously discussed. The sixth story point includes three data visualizations: two horizontal bar graphs and one scatter plot. The purple, blue, and red designations for both, left, and right, respectively, as suggested by my reviewer, continue to be used in story point six. Originally, the two horizontal bar graphs were vertical bar graphs, but this caused layout issues when creating a story point therefore

the bar graphs were rotated 90º. These three graphs clearly and simply support my conclusion that left-handed batters may have a slight advantage in both home runs and batting average compared to their right-handed counterparts. This is done with the bar graphs that show the left-handed bar always longer than the right-handed bar. Similarly, the scatter plot shows the left-handed point further to the left than the right-handed point, designating a higher batting average per player, and shows the left-handed point further up than the right-handed point, designating a higher number of home runs per player.

Feedback

My reviewer is a professional graphic designer who owns her own business and has experience branding other businesses. Her first comment was, “Perfect and wonderful.” She is also my wife. Her primary feedback was to change the handedness designation from shapes to colors. Originally, handedness was designated with the use of shapes: purple used a plus sign, blue used a circle, and red used a square. After presenting my Tableau story for feedback, my reviewer suggested I use colors instead of shapes to designate handedness. The colors for the handedness are purple, blue, red. These colors were chosen to show the differences in the colors and to show how both-handedness (purple) is a combination of left-handedness (blue) and right-handedness (red).

My reviewer also recommended the bar graphs on story point six (then story point five), “Home Runs and Batting Average for Each Handedness,” be arranged so that they are in a consistent order, i.e. alphabetically by handedness not numerically by home runs or batting average. As you can see in story point six, this suggestion was also utilized.

Resources

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