A DIFFERENCE IN HEIGHTS AND WEIGHTS BETWEEN RIGHT-HANDED AND LEFT-HANDED BOWLERS AT CRICKET

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Summary.—Right-handed pitchers have been shown to be significantly taller and heavier than left-handed pitchers. An analysis of 113 professional cricketers in England showed a similar difference between right-handed and left-handed bowlers. On average the right-handers were 1.05 in. taller and 8.30 lb. heavier than the left-handers, differences which were close to significance at the 5% level with this small n.

In professional baseball, right-handed pitchers have been shown to be significantly taller and heavier than left-handed pitchers (Coren, 1989; Fudin, Renninger, & Hirshon, 1994). To reproduce this result in another sport and in another part of the world, an analysis of the heights and weights of English professional cricketers was undertaken.

The game of cricket shares the same basic features of baseball. This involves one player projecting a ball at another who tries to hit it in an attempt to score runs. Both the rules and vocabulary of the two games differ considerably; for example, the cricketing equivalent of a pitcher is called a bowler. The heights and weights of bowlers in relation to their handedness would therefore be comparable to a similar study of baseball pitchers. An analysis of bowlers/pitchers is preferred to batters since it ensures that handedness is defined by the throwing hand.

Data on handedness, height (feet and inches), and weight (stones and pounds) were obtained from the 1994 edition of The Cricketers' Who's Who. The heights were converted to inches and the weights to pounds (one English stone equals 14 lb.). The data on heights and weights were self-reported and therefore subject to error; however, any inaccuracies would presumably affect right- and left-handers in the same way and therefore be unlikely to bias a comparison. A cricket team consists of 11 players, five or six of whom would normally be expected to bowl (pitch) during a game; however, the remaining players, selected for their batting abilities, may occasionally be called upon to bowl, although usually for only short periods. To limit the comparison as much as possible to the specialist bowlers, only those players who captured 10 or more wickets during the season were retained for the analysis, a wicket being roughly equivalent to an "out" at baseball. This cut-off point is often taken as qualification for inclusion in published bowling averages and would certainly exclude the majority of nonspecialist...

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bowlers. The restriction was based on the performances of the players in all games in the 1993 County Championship, the main annual competition for the 18 professional English county teams. Each team is allowed one "overseas" player. These players, from New Zealand, South Africa, Pakistan, and the West Indies, were excluded to ensure that the analysis was as free as possible from confounding factors such as ethnic origin.

The results are shown in Table 1. A standard two-tailed $t$ test was used to assess the differences between the means of the right- and left-handers. The right-handed bowlers were, on average, 1.05 in. (2.67 cm) taller than the left-handers ($t_{111} = 1.86, p = 0.06$). The right-handers were also heavier, by an average of 8.30 lb. or 3.76 kg ($t_{111} = 1.96, p = .05$). The absolute differences in heights and weights are almost twice as large as those found for the baseball pitchers over all eras but very similar to those in the post-1970 period (Fudin, et al., 1994). However, the cricket differences are only marginally significant, a reflection on the much smaller sample. As in a previous report (Pollard, 1987), left-handers were more common among slow (spin) bowlers in comparison to fast and medium-fast bowlers. However, the differences in height and weight were evident for each type of bowler.

<table>
<thead>
<tr>
<th>Handedness</th>
<th>$n$</th>
<th>Height (in.)</th>
<th>Weight (lb.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>$M$</td>
<td>SD</td>
</tr>
<tr>
<td>Right-handed</td>
<td>90</td>
<td>73.38</td>
<td>2.42</td>
</tr>
<tr>
<td>Left-handed</td>
<td>23</td>
<td>72.33</td>
<td>2.42</td>
</tr>
</tbody>
</table>

The analysis thus provides some evidence that the difference in heights and weights found between left- and right-handed baseball pitchers applies in a similar way to bowlers at cricket. This lends further support to the hypothesis that perhaps a delayed maturation pattern of left-handers may prevent full growth potential being reached and result in slighter body build (Coren, 1989).

REFERENCES


Accepted September 12, 1995