

# Eye and hand dominance in golf

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## PURPOSE

The role of eye and hand dominance in the development of sporting expertise has received considerable attention in the literature. Mann, Runswick & Allen<sup>1</sup> found that professional cricket batsmen were 7.1 times more likely to adopt a reversed stance (i.e. a right-handed athlete playing in a left-handed style and vice versa) than inexperienced batsmen. This was independent of the position of the dominant eye and whether the player batted right- or left-handed. The purpose of this study was to investigate whether eye and hand dominance are related to expertise in golf.

## METHODS

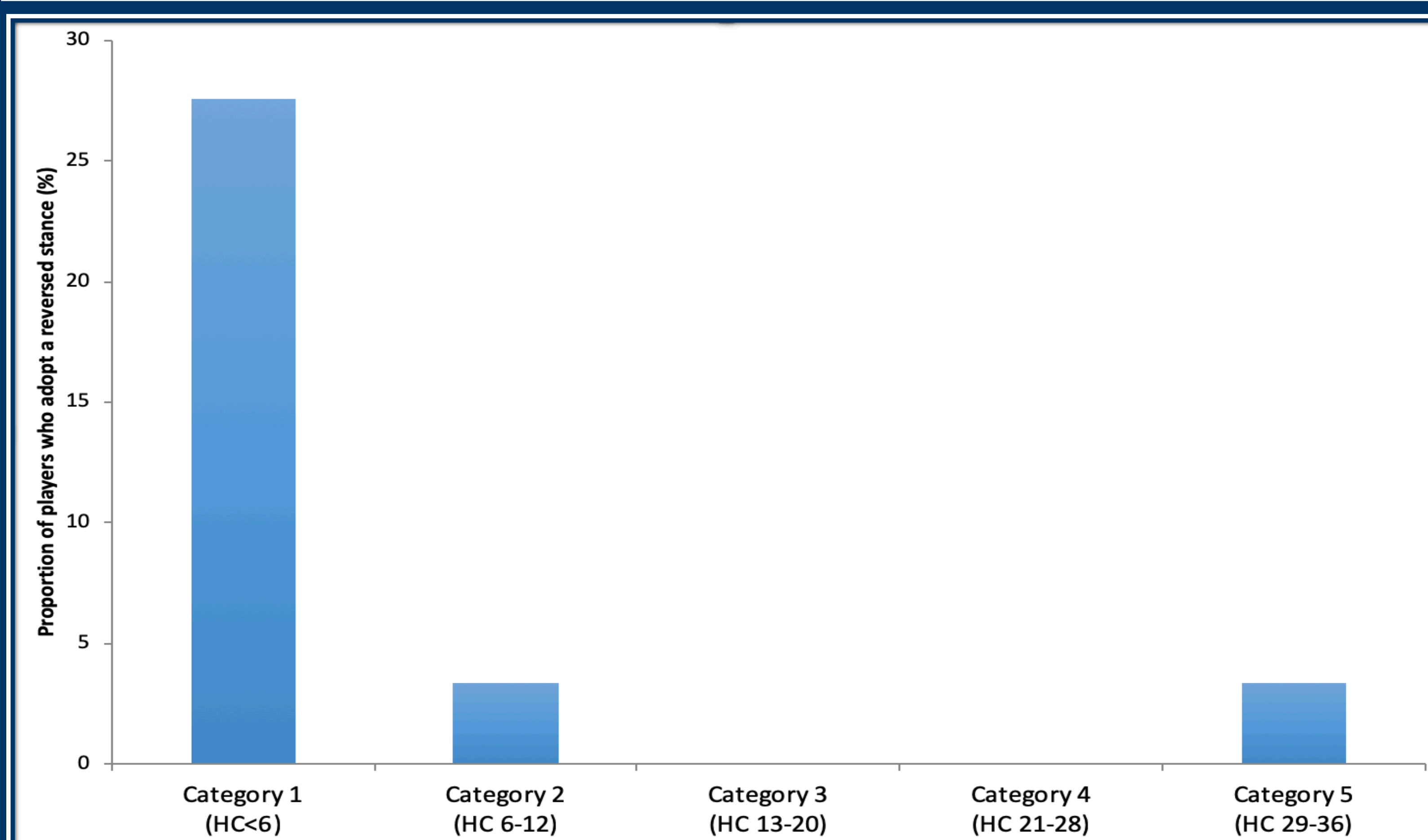
One hundred and fifty golfers with handicaps participated in the study.

The participants were divided into groups according to the five established categories of handicap (category 1 = handicap of 5 or less, including professional golfers; category 2 = handicap of 6-12 inclusive; category 3 = handicap of 13-20 inclusive; category 4 = handicap of 21-28 inclusive; category 5 = handicap of 29-36 inclusive).

- Eye dominance was determined using a modified version of the Porta test<sup>2</sup>
- Hand dominance was determined using the Edinburgh Handedness Inventory Form<sup>3</sup>
- Habitual golfing stance (R or L handed) was recorded

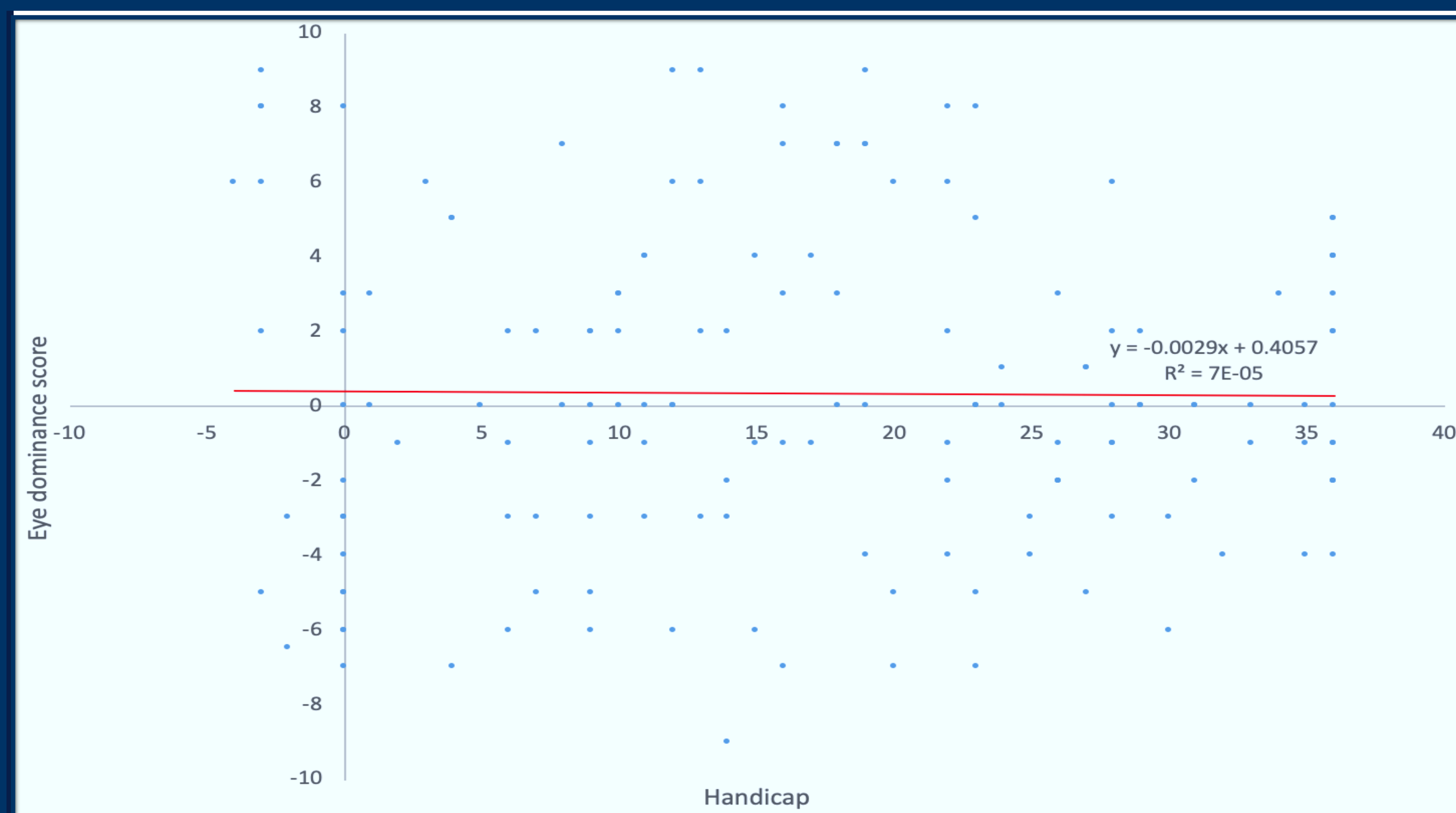
## RESULTS

The best (category 1) golfers were 21.5 times more likely to play in a reversed stance than players in higher handicap categories ( $\chi^2 = 24.6$ ,  $p = .000059$ ; odds ratio = 21.5, 95% CI = 4.3-107.9). Having aligned dominance (e.g. left eye dominant and left handed stance) or crossed dominance (e.g. left eye dominant and right handed stance) was not related to the ability of the players tested. The category 1 group were no more likely to be crossed than players in higher handicap categories ( $\chi^2 = 1.713$ ,  $p = .191$ ; odds ratio = 1.6, 95% CI = 0.6-4.3).



**Figure 1. Proportion of players adopting a reversed stance in the different handicap categories (better golfers to the left hand side)**

**Figure 2. A graph showing a very weak negative relationship between eye dominance and golf handicap**



## CONCLUSIONS

Better golfers are more likely to play golf in a stance opposite to what would be traditionally expected based on their hand dominance. Playing with a 'reversed' stance may provide an advantage by positioning the dominant hand at the top of the grip, and cannot be explained by the position of the dominant eye.



**Figure 3. A golfer playing in a right hand style**

## REFERENCES

1. Mann, D.L., Runswick, O.R., Allen, P.M. Hand and eye dominance in sport: are cricket batters taught to bat back-to-front? Sports Med. 2016; 46: 1355-1363
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3. Veale JF. Edinburgh Handedness Inventory-Short Form: a revised version based on confirmatory factor analysis. Laterality. 2014;19(2):164-77.