

28th ECSS Anniversary Congress, Paris/France, 4-7 July 2023

The relationship between the amount of knowledge in sailing competitions and the factors of gender, age, competitive age, position, and boat type

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INTRODUCTION:

In Sailing competitions, decision-making is more important, which is based not only on a correct assessment of the situation but also on a great deal of correct knowledge. However, how do sailing competitors acquire the correct amount of knowledge? It would be interesting to know whether it is acquired simply by reading books or it is naturally acquired through the experience of sailing a boat under various conditions. Therefore, this study examines the relationship between the amount of knowledge required for sailing competitions and the factors of gender, age, competitive age, position, and boat type.

METHODS:

The knowledge required for sailing competitions is assumed to be: (1) Outfitting (56 items); (2) Sailing (28 items); (3) Racing (16 items); (4) Strategies (10 items); (5) Tactics (14 items); (6) Weather (19 items); and (7) Safety (5 items). Corresponding to these factors, a total of 149 written tests were administered to 165 participants in the 74th National Athletic Meet Sailing Competition in Japan. Apart from that, a) Gender, b) Age, c) Competitive years, d) Boat type, and e) Position were also asked. Multiple regression analysis was performed on the data obtained with dummy transformations for a) Gender, d) Boat type, and e) Position. In addition, explanatory variables were selected using the forward-backward variable selection method.

RESULTS:

As a result of variable selection, a regression equation consisting of b) Age, d) Boat type, and e) Position was chosen, with the multiple correlation coefficient of .259 ($F=3.61$, $df=[3, 151]$, $p=0.0147$), which was a significant correlation at the 5% level. The regression coefficients were 0.038 for Age, 0.848 for Position (skipper; fixed at 0.0 for crew), -1.306 for Boat type (single-seater; fixed at 0 for two-seater), and the constant term was 11.535. The regression coefficient for Boat type was significant at the 1% level ($p=0.005$). In other words, Boat type contributed the most to the acquisition of sailing knowledge, followed by Age and Position.

CONCLUSION:

First of all, the results indicating that two-seater boats contribute the most to the acquisition of sailing knowledge compared to one-person boats can be explained by the fact that participants in two-person boats are more competitive and more knowledgeable than those in one-person boats. Second, it is thought that older participants acquire more sailing knowledge than younger ones possibly because they are able to acquire knowledge in a shorter period of time and in a more theoretical way, due to their higher level of comprehension. Third, skippers contribute the most to the acquisition of sailing knowledge as opposed to their crews because skippers hold the rudder and steer the boat.

Boat type contributed the most to the acquisition of sailing knowledge, followed by Age and Position.

Topic: Statistics and Analyses

Presentation E-poster

European Database of Sport Science (EDSS)

Supported by SporTools GmbH



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