



Motricidade

ISSN: 1646-107X

motricidade.hmf@gmail.com

Desafio Singular - Unipessoal, Lda
Portugal

Costa, M.J.; Bragada, J.A.; Marinho, D.A.; Reis, V.M.; Silva, A.J.; Barbosa, T.M.
Longitudinal assessment of swimming performance in the 200-m freestyle event

Motricidade, vol. 5, núm. 3, 2009, p. 63

Desafio Singular - Unipessoal, Lda

Vila Real, Portugal

Available in: <http://www.redalyc.org/articulo.oa?id=273020560032>

- How to cite
- Complete issue
- More information about this article
- Journal's homepage in redalyc.org

redalyc.org

Scientific Information System

Network of Scientific Journals from Latin America, the Caribbean, Spain and Portugal

Non-profit academic project, developed under the open access initiative

Longitudinal assessment of swimming performance in the 200-m freestyle event

M.J. Costa ^{1,2}, J.A. Bragada ^{2,3}, D.A. Marinho ^{2,4}, V.M. Reis ^{1,2}, A.J. Silva ^{1,2},
T.M. Barbosa ^{2,3}

1 - Department of Sport Sciences, University of Trás-os-Montes and Alto Douro, Vila Real, Portugal

2 - Research Centre in Sports Science, Health and Human Development, Vila Real, Portugal

3 - Department of Sport Sciences, Polytechnic Institute of Bragança, Bragança, Portugal

4 - Department of Sport Sciences, University of Beira-Interior, Covilhã, Portugal

Several studies have been carried out in order to identify the factors that can predict swimming performance. However, all these studies only analyzed determinant factors in a single time moment. It was not taken into account the longitudinal stability and change, as a result of individual development, new training methods and technological sophistication. The aim of this study was to track and analyze the stability of the 200-m freestyle performance throughout the swimmer's career, from children to adult age.

Twenty nine Portuguese male swimmers were analyzed for seven consecutive seasons between 12 and 18 years old.

Swimming performance was collected using the best personal time in the 200-m Freestyle event in each season. Performances were collected from official competitions, on a short course pool (regional, national or international level). The official times were consulted on rankings tables provided by the Portuguese Swimming Federation and in an internet database (www.swimrankings.net, March 2009). At the age of 18, 7 were international level swimmers, 15 national level ones and 7 regional level.

Longitudinal assessment was made based in two approaches: (i) mean stability; (ii) normative stability. For mean stability quartiles, means plus standard deviations were computed for each chronological age.

There was a trend for a performance improvement throughout the swimmer's career from children to adult age. Significant variations in the mean swim performance were verified [$F(1,28) = 11815.908$; $p < 0.01$]. Post-hoc test verified significant variations between all chronological ages analyzed ($p < 0.01$) except for the pair wise comparison between 16-17 years old and 17-18 years old that were not-significant.

As a conclusion, the prediction of adult swimmer's performance level, based on children performance is moderate. However, it seems that the change from 13 to 14 years old can be a milestone. At moment the ability to predict the swimmer's performance level increases strongly.

Key words: swimming, performance, evaluation