Original research papers

EFFECTS OF VERBAL FEEDBACK ON MOVEMENT EFFICIENCY DURING SWIMMING ERGOMETRY

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Abstract

Introduction. The aim of the study was to ascertain the physiological effects of verbal feedback on changes in the movement efficiency of a dry-land swimming ergometry task (butterfly stroke). ***Material and methods.*** The study involved 100 healthy and physically active males (1st year university students majoring in physical education) that were untrained in swimming (19.56 ± 1.32 years of age, 181.23 ± 4.35 cm in height, and 70.54 ± 8.6 kg in weight). The sample was randomised into two groups (control and experimental). In the first trial, both groups executed the butterfly stroke on a Weba Sport swim ergometer with no augmented feedback. In a second trial, the experimental group was provided with verbal cues relating kinesthetic information on task execution. Trial duration was 10 min, with the first 5 min devoted to the swimming task and the remaining 5 min serving as a cool-down. Variables under consideration included physiological cost, rate of recovery, heart rate recovery, estimated recovery time, and work output. ***Results.*** No improvement in the variables related to the physiological cost was observed in the verbal feedback condition although a significant increase in work output was observed in the experimental group ($p < 0.05$). ***Conclusions.*** An improvement in work output without modulating the physiological cost of work suggests that appropriately prepared verbal cues may enhance performance in a swimming ergometry task.

Key words: swimming, verbal information, kinesthetic information, physiological cost, work output