INFLUENCE OF OPTICAL ANALYSER ON EXECUTION OF KATA IN KARATE

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Introduction
In the execution of kata in karate, the sight is a very important factor for the correct execution of techniques and the correct orientation of the athletes in space. Our research had two main purposes:
1 – to value the differences of performance between kata executed with open eyes and closed eyes.
2 – to verify if a training based on kata executed with closed eyes may influence positively the results of kata performed with open eyes.

Method
The experimentation was performed by a group of 20 athletes of the same level (male and female), divided into two groups: 10 ones formed the experimental group (EG) and 10 ones the control group (CG). At the beginning (pre-training) every athlete performed the standard kata Heian Nidan, before with open eyes and after with closed eyes (Test), with a referee who gradually gave the score from 1 to 5 for every analysed parameter: rhythm, rapidity, balance, technique, posture, conclusion. After one day, every athlete repeated all sequence (Retest). After there was the training phase organised into 10 sessions. In every session the EG repeated the kata 3 times with open eyes and 3 times with closed eyes, while the CG 6 times with open eyes. After the end of 10 sessions (post-training) all the 20 athletes performed again the kata with open and closed eyes with referee’s judgement, with the same modalities of the beginning phase.

Results
The test meets fully to the characteristics of reliability (r always between 0.67 and 1.00 with p<0.05). The results shows that the performance of the kata with closed eyes induces a reduction of the performance until 20% compared with the form normally executed. The CG hadn’t important improvements on the post-training with open eyes (+6%) and closed eyes (+8%), while the EG obtained good results in both cases (+17% open eyes, p<0.01; +22% closed eyes, p<0.01).

Conclusion
In conclusion, after the training phase, important differences were registered in the EG in the performance with close and open eyes. The research shows that effect of training with closed eyes influence positively the results of kata performed with open eyes.

References
Kata and kumite competition rules WKF (integrated with FI-JLKAM rules), 2007

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