Elaboration of a water familiarization testing battery adapted for young children

INTRODUCTION

The degree of development required to learn a swimming style is not reached before the age of five to six years old (1,2).

⇒ Before that age, it is very interesting to discover the aquatic environment to develop specific skills (2,3):

Entering into the water – Immersion – Floatation – Breathing – Propulsion

Between three to eight years old, measuring the level of these different skills should be interesting for pedagogical applications. Since 2010, we are working on such a testing battery. The aim of this paper is to present the different steps of its elaboration.

METHODS

* Initial testing battery

- Quick: 30 minutes for a group of 5 children
- Complete evaluation: 5 skills evaluated through 20 subtests
- Playful: Based on a “frog story”

○ Testing battery with 20 subtests was identical for all children.
○ According to children performance, a score is attributed for each subtest.
○ The sum of all scores gives a total score, representing the water familiarisation level.

* Critical analysis permitted to change progressively and improve the initial testing battery.

- Initial version of the testing battery (2010)
  Results: we observed that very well familiarized children obtained nearly maximal scores.
  ⇒ We decided to add swimming style assessment.

- 2nd version of the testing battery (2014)
  Results: we have added 3 tests of swimming style, so the testing battery was composed of 23 items. This second version was too much time-consuming. Moreover, it required time video analysis.
  ⇒ We decided to carry out a “biplot analysis” in order to simplify the testing battery. The “biplot analysis” selected the 10 most relevant tests.

- 3rd version of the testing battery (2015)
  Results: Simplifying the testing battery was successful and the tests execution time was reduced to 15 minutes for 3-5 children. This last version is better adapted to the field condition as it is short and it could be done without any video recording.

RESULTS

• The purpose of our studies was to make evolve a water familiarization testing battery in order to have one which is successful and also as adapted to the field reality as possible.

• Experts are now analysing this final version of battery to make it validated...

CONCLUSION

References:
1. VANDERMEULEN Mary1,2, SCHETTECATTE Delphine1, DELVAUX Anne1, MORNARD Manhattan1,2, CLOES Marc1, JIDOVTSEFF Boris1,2
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