Perceived Water Competencies in Danish School Children

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LEARNING TO SWIM
Perceived water competencies in Danish school children

THEME
Swimming and Water Safety

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PURPOSE
In the Danish research project Learning to Swim, launched by the Danish foundation TrygFonden and the Danish Swimming Federation, the main purpose of the research project was to develop, implement and evaluate new innovative types of swimming lesson models that promote efficient learning of basic swimming skills.

METHODS
In the period of 2015 - 2017 about 2200 Danish children 5-12 years of age from 17 municipalities, who offer swimming lessons as part of physical education lessons, participated in the project. The starting point was action research and included an innovative intervention consisting of newly developed swimming courses based on five different approaches to swimming.

Before and after the intervention baseline and follow-up screenings of the children’s swimming skills were covered, and learning outcomes were measured at follow-up:

• SWIMMING SKILLS were measured in a 15 minutes swimming test. The children should swim as long as possible with no assistives.

• LEARNING OUTCOMES of the swimming lessons were registered on a modified and contextually adapted Learning Rating Scale (LRS) from 0-10, measured on four different indicators - Learning, Social, Method and Expectations (illustration 1).

• THE PERCEIVED WATER COMPETENCIES QUESTIONNAIRE was registered on a modified likert-scale. The questions about the children’s perceived swimming skills related to lifesaving and self-rescuing, swimming strokes, aquatic fundamental skills and social competencies (12 questions). The questions were based on the Murcia and Perez’s pictorial scale (2008), but modified to a Danish water and swimming context for the target group of children in 1st to 6th grade (illustration 2).

PERSPECTIVES
1989 children are included in the current results. 1561 children have complete LRS-data; 1189 completed the baseline and follow-up swim test; 1083 children completed both the LRS and the swim test.

The modified Learning Rating Scale and the Perceived Water Competencies Questionnaire both have the potential to examine and gain understanding of children’s water competencies, primarily in combination with a quantitative measurement of children’s swimming skills.

Further development of the scaling in the Perceived Water Competencies Questionnaire is needed though, and caution is in general advised on the use of self-reported estimates of swimming and survival competency in the context of drowning prevention.

HOW DO YOU GET INTO THE WATER?
"I jump in straight away", "I get in quietly", "I do not want to get into the water"

CAN YOU SWIM?
"I can not swim", "I do not swim pretty well", "Yes, I swim smoothly"

IF YOU DISCOVER A PERSON IN AN EMERGENCY, CAN YOU RESCUE THE PERSON TO SAFETY?
"I can not rescue the person", "I’m not so good at rescuing", "Yes I can".

ILLUSTRATION 1
Examples of the Learning indicator in the modified Learning Rating Scale. Statements are translated into English. Range of scale: “I do not learn anything in swimming lessons” (left side of the scale) to “I do learn a lot in swimming lessons” (right side of the scale).

ILLUSTRATION 2
Examples from the pictorial scale in Perceived Water Competencies Questionnaire.