

Swimming competence among Norwegian children aged 9-10 and transfer of skills in different aquatic environments

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Introduction

Water represents a vivid playground and source for enjoyment for many children, and has the capacity to promote lifelong physical activity in, on and around water environments. Swimming capability in children has potentially a drowning preventive capacity. In Norway, swimming and water safety is a part of the physical education (PE) curriculum in primary school, with several learning outcome objectives. Children are expected to be able to swim after 4th grade by:

falling into deep water, swim 100 meters on your front, dive and pick up an object with your hands during swimming, stop and rest for 3 minutes (while floating on your front, orienting yourself, rolling over, floating on your back), then swim 100 meters on your back and get ashore.

Assessment of goal achievement for the swimming competence learning outcome, has traditionally been carried out in an indoor quasi-static environment (e.g. a swimming pool). Recent studies report a lack of basic swimming skills among Norwegian children aged 9-10 years old, and it is possible to argue that little is known about the transfer of swimming skills in different aquatic environments. This study aims to explore the role of different aquatic environments regarding swimming competence.

Methods

Sample consist of 156 children ($M_{\text{age}} = 9,87 \pm 0,35$, range 9 to 10; girls = 51,10 %), and were selected for this study from 5th grade of three public primary schools in central Norway. All children had participated in a compulsory community-level learn-to-swim programme for 4th grade. Measurement of children's swimming skills were conducted on two different occasions in 2022, using the Swimming Skill Assessment Scale (SCAS) based on the 4th grade learning objective in swimming from the PE curriculum for primary school (KRO01-05). Tests consisted of water entry, frontstroke, surface dive, floating, backstroke and water exit. Both swimming tests were carried out in quasi-static water environment, indoor (27°C pool) and outdoor (~18°C freshwater lake).

Results and discussion

In process, data will be analyzed fully in fall 2022. Results will be presented at the 4th Conference on Ecological Dynamics in Sports, hopefully accompanied by a lively discussion.