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EXPLORATORY ANALYSIS OF FACTORS INFLUENCING CHILDREN'S AQUATIC LITERACY LEVEL IN WALLONIA, BELGIUM.

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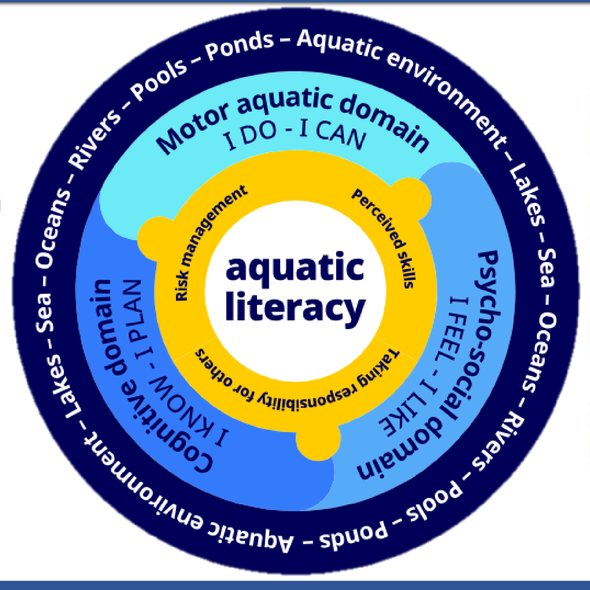
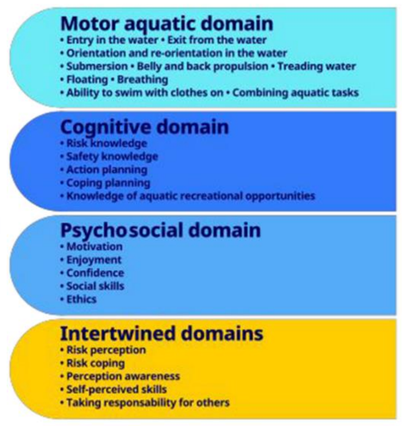
Introduction

- ✓ Aquatic literacy (AL), which encompasses aquatic skills, safety knowledge as well as confidence in water, is critical for drowning prevention and lifelong engagement in aquatic activities (Mekkaoui et al., 2022).
- ✓ Although drowning remains one of the leading causes of accidental mortality among children in Europe (ref), regional disparities in AL level remain understudied. The EU-funded ALFAC project addresses this gap by assessing AL in children (aged 6–12 years) across seven European countries, including Belgium and the region of Wallonia.
- ✓ The ALFAC protocol offers a range of tools to better understand the differences between individuals and to analyse the factors that could influence the level of aquatic literacy.
- ✓ Preliminary measurements collected from primary school children were analyzed with the aim of **investigating factors that may influence aquatic literacy in Wallonia**





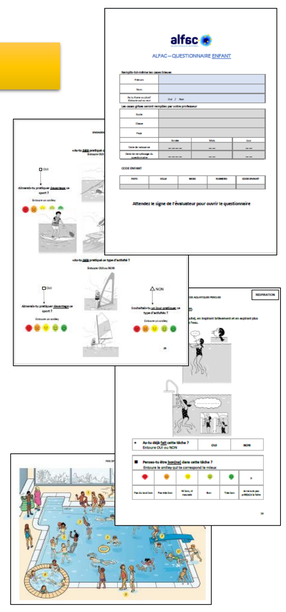
Methods

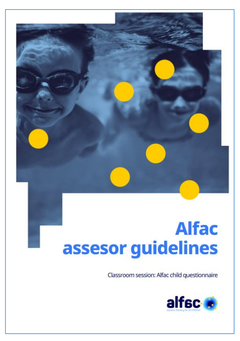
Population

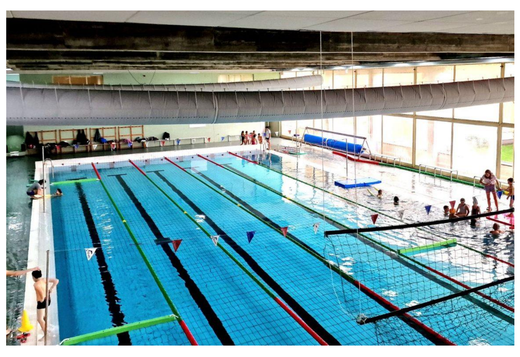
- ✓ 206 children, aged 6 to 12, from Wallonia, Belgium
- ✓ From schools with contrasting socio-economic status(high, medium, low)
- ✓ 45% Male – 55% Female

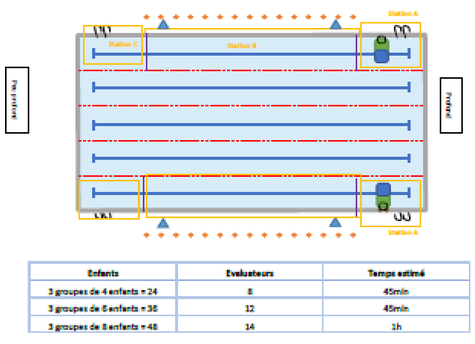
The standardized cross-national ALFAC test protocol

1. ALFAC child questionnaire (self-reported, organized in classroom)
   - ✓ Perceived water competence (PWC)
   - ✓ Motivation toward aquatic activities
   - ✓ Experience of aquatic activities
   - ✓ Risk perception in swimming pool ad in open water
2. ALFAC parental questionnaire (self-reported, to fill at home)
   - ✓ Socio-economic information and levels education
   - ✓ Ability to swim 100m
   - ✓ Information on their child (date and place of of birth, height, weight, gender …)
   - ✓ Number of aquatic lessons (at and outside school) and rate of water activities with family
   - ✓ Confidence in the child's ability to swim in deep water
3. ALFAC Aquatic skills assessment (deep water swimming pool)
   - ✓ Isolated actual aquatic skills (AAS) [enter water, exit water, buoyancy, breathing, rotation, treading water, propulsion on the front and on the back, submersion]
   - ✓ "Parcours" test for the most advanced children.

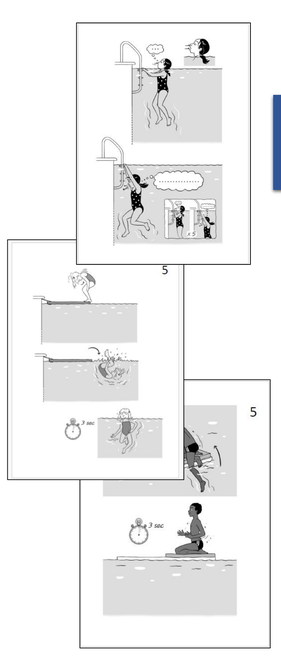






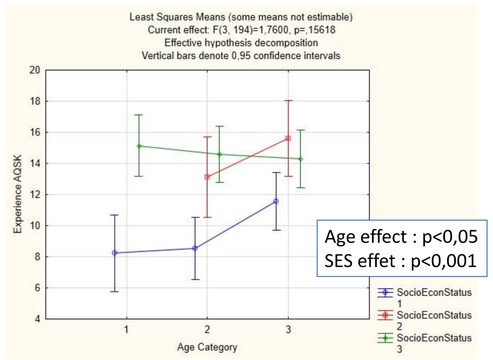


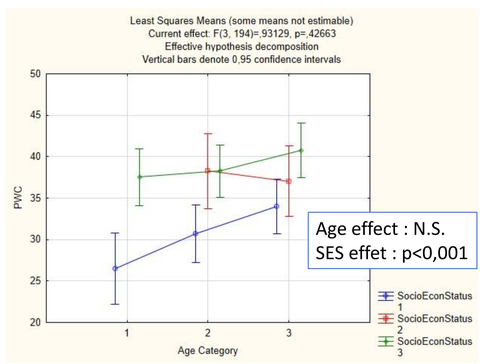
Enfants	Evaluateurs	Temps estimé
3 groupes de 4 enfants = 24	8	45min
3 groupes de 6 enfants = 36	12	45min
3 groupes de 8 enfants = 48	14	1h

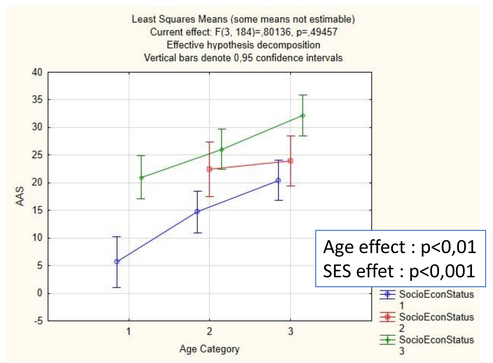


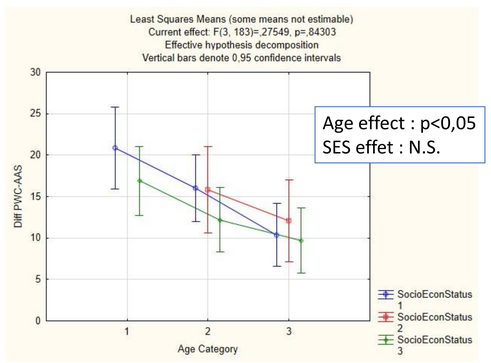
Results

Infuence of AGE and socio-economicl status (ANOVA)

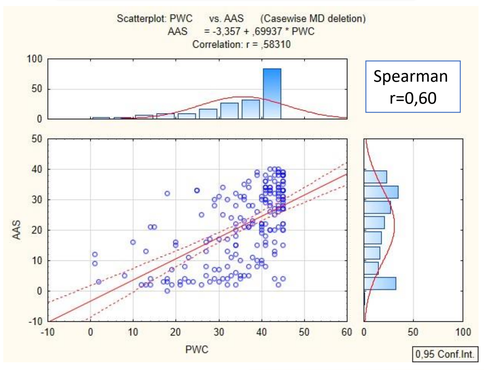








Correlation between AAS and PWC



Linear regression to explain AAS

Regression Summary AAS
R= ,79106620 R^2= ,62578574 Adjusted R^2= ,58620538
F(11,104)=15,811 p<,00000 Std.Error of estimate: 7,8067

	b*	b	t(104)	p-value
N=116				
Intercept		**-26,69**	**-4,69**	**0,000**
SocioEconStatus	0,04	0,56	0,47	0,642
EducLevel	-0,03	-0,33	-0,35	0,725
Parents Swim	0,11	3,21	1,58	0,118
Gender	0,10	2,55	1,62	0,109
Age	**0,27**	**1,87**	**3,73**	**0,000**
Swim@School	**0,15**	**1,15**	**1,99**	**0,049**
Swim Lessons	**0,16**	**1,14**	**2,18**	**0,032**
Swim Familly	0,12	1,26	1,83	0,071
PWC	**0,29**	**0,33**	**3,06**	**0,003**
Experience of AAS	0,19	0,39	1,77	0,079
Exp Diverse Aqu Act	0,04	0,22	0,58	0,561

+ Low perception of danger at all ages

Discussion and conclusion

These findings are in accordance with previous studies (D'Hondt et al., 2021; Jidovtseff et al., 2024; Pharr et al., 2018) and underscore the **interplay of psychological, environmental, and physical factors in aquatic skills as one part of AL development**. Swimming at school and extra-scholar swim lessons are critical for AAS and AL development.

This research provides a better understanding of the correlates of AL level in Walloon children. Such knowledge allows to put forward proposals for appropriate action, which include paying particular attention to :

- ✓ **equitable access to swimming programs;**
- ✓ **reinforcing the perception of aquatic competence;**
- ✓ **develop water safety education.**

References available upon request from the author : b.Jidovtseff@uliege.be