Developing a first principles approach to educating water skills for life to children

INFORMATION SHEET FOR PARENTS / LEGAL GUARDIANS ETC.

Thank you for showing an interest in this project. Please read this information sheet carefully before deciding whether or not you provide consent for your child to participate. If you decide to consent for your child to take part we thank you. If you decide you do not wish your child to take part there will be no disadvantage to you or your child and we thank you for considering our request.

What is the Aim of the Project?

The aims of the project are: 1) to quantify the water survival competencies of children, and 2) to examine the influence of teaching water survival skills to children. Specifically we wish to address the question of whether teaching survival skills within a range of environmental aquatic contexts improves general awareness of risk and physical competency of children.

The relative risk of drowning involves far more than just whether someone can swim, yet many learn-to-swim programmes focus heavily on swimming proficiency developed in a swimming pool potentially at the expense of acquiring other important survival skills. We will measure the effectiveness of a survival skills-focussed teaching programme that incorporates activities in natural, open water environments (i.e. sea, river, harbour) upon children's behaviour, their perception of risk, and swimming ability. We will contrast swimming and survival behaviours of children before and after the survival skills-focussed teaching programme programme. We will also compare findings with data previously collected on a pool based survival programme and a traditional learn-to-swim pool based programme. The study findings and implications will be disseminated amongst the water safety sector to help contribute to efforts to reduce drowning in New Zealand.

What Type of Participants are being sought?

We are seeking New Zealand Primary School children between the ages of 7-11 years old (born between 1st Jan 2007 and 31st Dec 2011). The children must be healthy and able to participate in a 10-hour survival skills-focused programme that will take place in January 2018 and also participate in a 1-hour retention test approximately 3 months after the completion of this programme. Ideally, the children should have at least a basic level of swimming proficiency but we are willing (and expect) to accommodate for children with a wide range of swimming competencies i.e., non-swimmers to club
swimmers. It is anticipated that approximately 120 participants will take part in the study.

Children will be recruited to the study via advertisements and a follow up invitation letter. Posters advertising the programme will also be posted widely around Dunedin and local suburbs (e.g., swimming pools, sport clubs, schools).

The following exclusion criteria will apply to all individuals asked to participate in the study:

- Individuals will not be allowed to take part if they have include any recognised learning difficulties, or existing health conditions (e.g., injuries, severe asthma) that may put them or others at risk during testing.
- Must be available to attend three designated testing sessions (scheduled in January and April, 2018) and also the training programme (January, 2018).
- Must have passed a health and fitness screening test administered by the experimenters to demonstrate their competency to carry out the water survival skills tests.
- Must provide written informed consent and may withdraw from testing at any time.

Children who meet one or more of the exclusion criteria set out above may not participate in this project, because in the opinion of the researchers and the University of Otago Human Ethics Committee, it involves unacceptable risk to them.

It is expected that participants will benefit in a number of ways from taking part in this study, i.e.,:

1) Improved awareness of water survival skills competency
2) Training to help improve water survival skills ability
3) Experience of fun, yet challenging test scenarios
4) Direct involvement in a research project of national and international significance

**What will Participants be Asked to Do?**

Should you and (your child) agree to take part in this project, you will be asked to bring your child to one of two week-long programmes running during the summer holidays (either 15-19 January or 22-26 January, 2018). The programme will run for two hours a day across Monday to Friday. On Monday and Friday, you should bring your child to attend a session being held at Otago Boys’ High School (OBHS) indoor swimming pool. On Tuesday to Thursday your child will need to attend daily sessions at an open water venue in Dunedin. Confirmation of venues and full travel advice will be provided prior to the commencement of the programme. Your child will also need to attend a further testing session a swimming pool (venue TBC) approximately three months after the holiday programme (April 2018). The exact scheduling of testing sessions can be done at your convenience either through an on-line booking system or over the phone. Please note that it will be your responsibility to ensure your child is transported safely and promptly to and from the testing venues.

For each session your child should bring their typical swimming clothes, some old, light cotton pyjamas (that will be worn in the water), a towel and warm clothes for after the session. For the open water sessions, children may also be asked to bring a wetsuit, rash vest or polyprop top. Areas for changing will be available at each venue. Please ensure
your child refrains from having a heavy meal or undertaking strenuous exercise for at least one hour prior to each of his/her sessions.

The format of the Monday and Friday session and the retention test will be the same on each occasion, as follows:

- Your child will first undergo a brief health and fitness screening test involving a few simple questions\* and measurements, such as age, height and weight (up to 10 minutes)
- They will then be asked to carry out a series of 6 supervised tests in the swimming pool to identify water survival skills competency (up to 45 minutes, see Table below for details)
- You and your child may debrief with experimenters and ask questions (approximately 5 minutes)

<table>
<thead>
<tr>
<th>Behavioural challenge</th>
<th>Task description</th>
<th>Variables to be measured</th>
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| 1. Perception of risks in different aquatic environments | A range of open water scenarios photos associated with set questions (e.g., what risks can you observe here, what would you do in a situation like this) | - Self-reported awareness of potential risks  
- Awareness of appropriate survival behaviours |
| 2. Safe entry and exit to/from water | Check and enter deep water safely, float on back for 1 minute, return to edge and exit | - Controlled entry  
- Time spent floating  
- Completion of task |
| 3. Swim underwater, retrieve an object and return it to surface | Submerge and recover an object, return it to side of pool | - Time to complete task  
- Number of support touches required  
- Completion of task |
| 4. Bouyancy | Tread water for up to 5 minutes and signal for help | - Time taken  
- Number of support touches required  
- Completion of task |
| 5. Floatation aids and partner work | Navigate an obstacle course, fit a buoyancy aid, perform a simulated rescue, safely exit pool | - Qualitative analysis of strokes  
- Number of support touches required  
- Completion of task |
| 6. Controlled swim or propulsion test | Swim for up to 100m or for 5 minutes continuously without touching the pool floor or sides | - Distance and time of swim  
- Qualitative analysis of stroke/s used  
- Completion of task |

Table 1: Series of behavioural challenges to be presented to participants before and after training and then in a 3 month retention test.

The Tuesday, Wednesday and Thursday education sessions will involve:

1. Discussion with experts about potential dangers survival techniques, environmental conditions and what to do in an emergency across different contexts (e.g., river, ocean, harbour)
2. A number of fun, supervised water based activities in natural aquatic environments that will enable them to develop an awareness of how such strategies can be employed in practice.

There are comprehensive health and safety processes in place to deal with any adverse physical or psychological risks associated with the testing and education sessions. Comprehensive risk assessment and management procedures will be undertaken prior to each session. In addition, sessions will be run and monitored by experts who will also have first aid and lifesaving qualifications at a ratio or at least one expert per 10 children. Also, a number of individuals with current first aid and open water lifesaving qualifications will be present at each venue.

In all sessions, your child's safety and comfort will be the instructors’ priority at all times. Furthermore, should your child begin to experience any negative feelings associated with testing (i.e., unwell, tired, anxious, cold) they will be withdrawn from that testing session immediately. During the open water sessions, parents or legal guardians are welcome to stay and watch the activities and will be able to comfort their child for any unanticipated reason. During the Otago Boys' High School sessions parents will be able to wait in the gymnasium next to the swimming pool in case their child requires comforting for any unanticipated reason.

Please be aware that you or your child may decide not to take part in the project without any disadvantage to yourself of any kind.

*Background ethnicity information will be collected to describe the group of participants that are involved although ethnicity is not a primary factor under consideration in this study. Therefore it is your choice whether you consent to providing this information.*

**What Data or Information will be Collected and What Use will be Made of it?**

The following information will be recorded during the health and fitness screening: name, gender, ethnicity, height, weight, and self-reported swimming competency. During the testing assessments we will measure actual swimming distance and duration, a range of other behavioural measures associated with the survival tasks (e.g., time taken, task completion, number of support touches required) and self-reported answers to survival situations presented on laptop (e.g., number of risks identified, perceived distance and confidence). Various aspects of the water survival tests may be video-recorded at times to help us to confirm the accuracy of our subjective measurements. This information is necessary to allow us to describe the participants involved in the study, to determine your child’s water survival skill competency and also how/whether they change after the period of swimming training.

The information and data collected will be securely stored in such a way that only the principal experimenters (i.e., research staff and assistants) involved in the project will have access to it. Data obtained as a result of the research will be retained for at least 5 years in secure storage. Any personal information held (e.g., anthropometric data, contact details, video tapes) will be destroyed at the completion of the research even though the data derived from the research will, in most cases, be kept for much longer or possibly indefinitely.
The funding body (Water Safety New Zealand) may request access to some of the personal information and data for educational and promotion purposes. However, no information will be released without the prior permission of the child involved and the parent or legal guardian of that child. With your consent, there may be some cases where it would be preferable to attribute contributions made to individual participants.

The results of the project may be published and will be available in the University of Otago Library (Dunedin, New Zealand) but every attempt will be made to preserve yours and your child’s anonymity. At the conclusion of the project you will be given the opportunity to see the information / data recorded from your child. You will also be given the opportunity to read the general results of the study if you so wish in 2018.

**Can Participants Change their Mind and Withdraw from the Project?**

You and/or your child may withdraw from participation in the project at any time and without any disadvantage to yourselves of any kind.

**What if Participants have any Questions?**

If you have any questions about our project, either now or in the future, please feel free to contact:-

*Associate Professor Chris Button*
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This study has been approved by the University of Otago Human Ethics Committee. If you have any concerns about the ethical conduct of the research you may contact the Committee through the Human Ethics Committee Administrator (ph +64 3 479 8256 or email gary.witte@otago.ac.nz). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.