

DrownBaseTM – Identifying At Risk Factors: Strategies and Issues around Māori Practices and Activities towards Water Safety

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Summary

- Māori tend to swim in the sea, rather than rivers, lakes or pools. However, the difference between these waterways is small, with 'lake' being the least preferred place where Māori swim. Additionally, this outcome was not consistent with the youngest age group, 7 to 15, who selected river as their preferred place to swim.
- The activity that Māori mostly do while in, near or on the water is swimming, followed closely by hoe waka, though the latter could be more a result of sampling effect. This outcome is not surprising as the majority of participants (48%) were under the age of 26.
- As age increases so does the frequency of participants engaging in other activities such as fishing, boating, gathering of seafood, scuba diving and surfing. This was to be expected, due to the cost of engaging in such activities and the level of responsibility and competency needed.
- Māori learned how to swim through their whanau and friends rather than school, private lessons or self taught. This result was consistent across all age groups used in this study. Only 14% of participants selected that they learned how to swim through private swimming lessons.
- As age increases so does the percentage of Māori being taught to swim by their whanau and school. Private swimming lessons were higher for the younger age groups.
- Wearing a life jacket, swimming between the flags, supervision and safety behaviours are four main areas of water safety rules recalled by Māori.
- Water Safety around the home was mentioned by only one participant.

Recommendations

- Further research into practices, attitudes and beliefs around water safety for Māori is needed.
- Furthermore, in order to make any future research around Māori and water safety functional and applicable to the diverse communities that make up ngā iwi Māori, the collection of urban/rural data, income distributions, swimming competency, survival strategies and tikanga is needed.
- That Water Safety New Zealand form strategic research alliances with key Māori researchers and agencies, to support and guide future research in this area.
- That future research considers the impact of socio-economic and historical factors when planning and developing strategies and programmes aimed at reducing water related deaths and injuries for Māori.

Background

Aotearoa has some of the most extensive and beautiful waterways in the world. The seas, rivers, beaches, and lakes provide endless opportunities for Māori to enjoy water activities, such as gathering kai, swimming, hoe waka, diving and fishing (Haimona & Takurua, 2003). For Māori, water is one of the greatest taonga (treasures) of this land – both physically and spiritually. Māori

have always been acknowledged as possessing expertise in swimming and aquatic activities pre-European times (Haimona & Takurua, 2003). Early writers such as Best (1976) wrote extensively about Māori games and pastimes while in, on or near the water. These early descriptions illustrate the practice that Māori children were taught to swim at a very early age. The gathering of seafood and the consistent use of waterways as a mode of transport

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were also customary activities for Māori. The traditional beliefs and practices of Māori, demonstrate a great awareness and understanding of water, its dangers and its life-giving properties.

So why are there high numbers of Māori involved in water-related accidents and drownings today? One reason cited by Haimona and Takurua (2003, p.3) and more recently Edwards, McCreanor & Moewaka-Barnes (2007) is the “disruption of traditional social structures”. Social structures changed considerably with the impact of colonisation. For example, Māori no longer have access to traditional knowledge and tikanga (practices) associated with water safety. Additionally, the impact of urbanisation and colonisation on the structure of Māori whanau resulted in a more nuclear family system that Māori were not use to. Unlike the traditional whanau structures, grandparents these days are unlikely to play a central role in the raising and development of mokopuna. This results in more stress being placed on the immediate family to cater to the needs of their young. Furthermore, Māori families are likely to experience added disadvantages constrained by socio-economic conditions (Edwards et al, 2007).

Today, the number of overall drowning in Aotearoa is decreasing (e.g.86 people drowned in 2006 compared to 116 for 2005), however, the number of Māori who are drowning is still growing (Haimona & Takurua, 2003; Water Safety New Zealand, 2007). On average, 27 Māori people drown, while many more are hospitalised every year as a result of water-related injuries (Chalmers, 2004). DrownBaseTM is the official database for Water Safety New Zealand (WSNZ) that records all fatal drowning outcomes in New Zealand and categorizes them in a variety of fields. DrownBaseTM was developed in 1990 and contains records of all fatal drowning incidents in New Zealand since 1980. The statistical information allows for analysis of many criteria including site of drowning, activity, gender, age group, ethnicity, alcohol involvement, rescue attempts and region.

DrownBaseTM protocols require that the New Zealand Police and Coroners records be used to capture all drowning related deaths. It is also relied on by external organizations such as the New Zealand Department of Statistics and the Accident Compensation Corporation (ACC) for benchmarking and recording indicators. Up until 1996 Māori who drowned were only categorized as Māori if they had a Māori surname otherwise they were identified as Caucasian or Unknown. DrownBaseTM data has now been researched with cross analysis to identify a range of ‘at risk’ factors associated with Māori drownings from 1999 – 2006.

In 2003, Water Safety New Zealand undertook a proactive approach to establishing a water safety strategy for Māori. ‘Kia Maanu, Kia Ora – Stay Afloat, Stay Alive’ is a water safety strategy, which aimed to integrate Māori language and tikanga to reduce the number of Māori water accidents and drownings (Haimona & Takurua, 2003). Since its inception, a number of resources and strategies aimed at promoting and encouraging water safety for Māori have been developed and distributed to key agencies such as kōhanga reo and kura kaupapa Māori.

The current study commissioned by Water Safety New Zealand, extends on this previous work by exploring four key principal areas of research;

1. Which waterways Māori tend to frequent and use;
2. What activities are undertaken by Māori while in, near or on the water;
3. Who are the primary teachers of water safety and swimming for Māori; and
4. What are the safety rules that are recalled in, near or on the water?

Participant Characteristics

The final number of usable surveys for this research was 172. Of this group, 112 (65.5%) were female and 59 (34.3%) were male, with one participant not responding to this question at all. The age groups of participants ranged from 7 years to over 50 years, with the majority of participants

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coming from the 26-45 yrs (n=58 - 33%), followed by the 7-15yrs (n=46 - 26.7%) and 16-25 (n=37 – 21.5%) age brackets (see Figure 1).

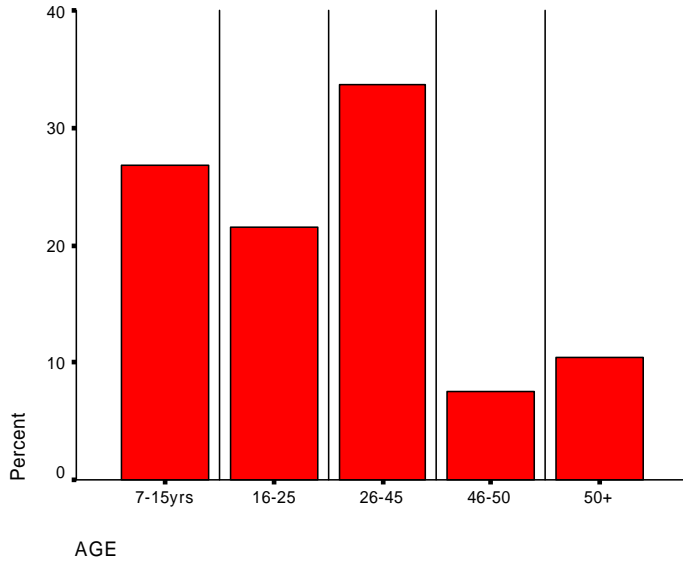


Figure 1. Age of participants who participated in this study

Findings

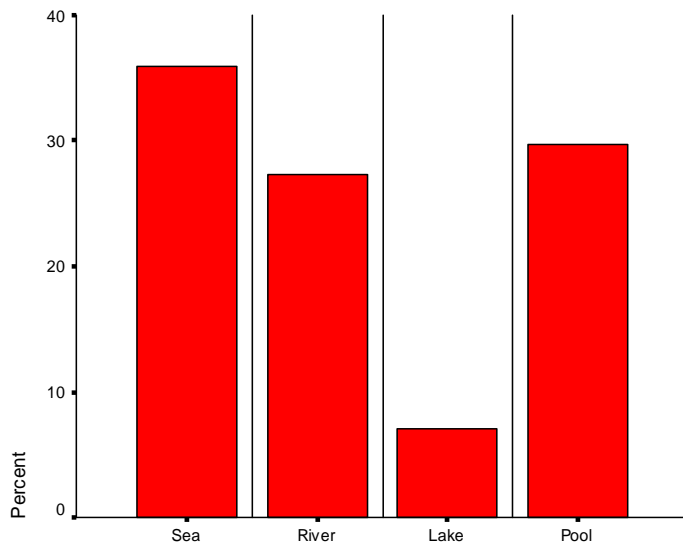


Figure 2. Percentages of participant responses when asked where they mostly swim

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Where do Māori tend to swim?

Figure 2 shows that more Māori tend to swim in the sea rather than rivers, lakes and pools. However the differences between participant responses for these three categories are small. Of the 256 (multiple responses) received for the question, “where do you mostly swim”, 35.9% (n=92) of participants said they mostly swim in the sea, a further 29.7% (n=76) said they tend to swim in the pool, while 27.3% (n=70) stated that they swim in the river. Only 18 (7.0%) participants said that they mostly swim in lakes.

What activities do Māori usually do in, near or on the water?

The following graph (Figure 3) shows that the main activity undertaken by Māori, in, near or on the water is swimming. Of the 359 responses (multiple responses) received for this question, 145 (40.4%) selected swimming as the activity they tend to do most. This is followed closely by a further 79 (22.0%) participants who selected ‘hoe waka’ as the activity that they usually do on, in or near the water. A further 40 (11.1%)

participants said that they usually gather seafood while in, on or near the water. Responses for each of the ‘other’ six categories were under 10%. However, when interpreting these results in conjunction with the demographics of participants, the reader must consider a number of issues before making conclusive judgements. Firstly, 48.3% (n=83) of participants are below the age of 26, with 46 (26.7%) of these participants being under the age of 15 years. This would account for why higher responses were received for the option, ‘swimming’ and ‘jumping off the bridge’ than for fishing, scuba diving, surfing and boating options. Additionally, results for the category ‘hoe waka’ is not surprising given the fact that 74 of the participants were recruited at the National Waka Ama Championships at Lake Karāpiro. Furthermore, we can also assume that those participants recruited from Te Matatini- National Kapa Haka Festival, are more likely to be involved in other Māori events and activities such as hoe waka. Though again, this is not conclusive.

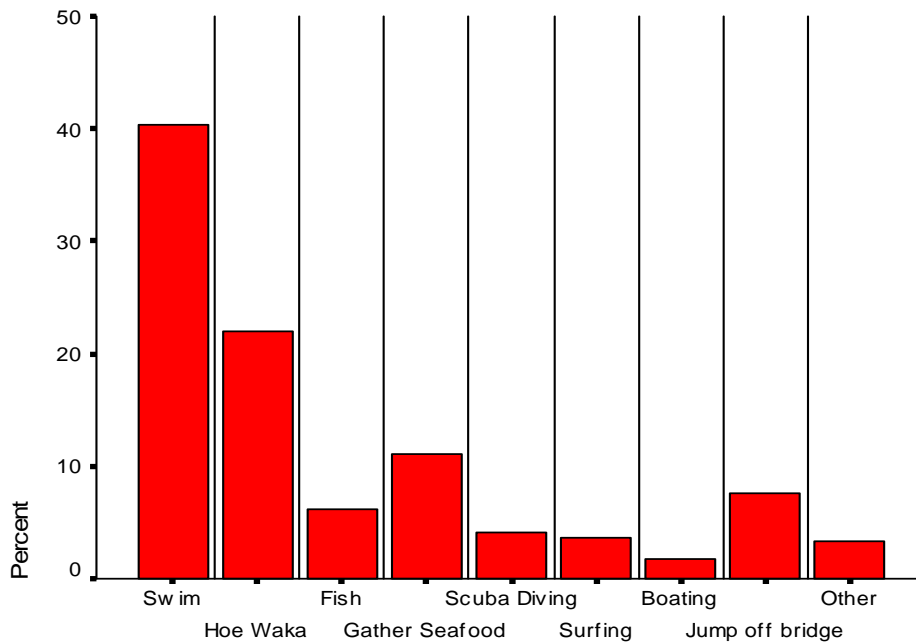


Figure 3. Percentages of participant responses when asked what activity they do in, near or on the water.

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Where did Māori learn to swim?

We asked participants the question, ‘how did you learn to swim’. Participants then had the choice of choosing one of the following categories, 1) school, 2) mum or dad, 3) private swimming lessons, 4) whanau or friends, or 5) self taught. On analysing the data for this question, we felt that there was very little difference between ‘mum or dad’ and ‘whanau or friends’ and decided to merge these two categories together. Figure 4 shows that 38.6% (n=85) of Māori who responded to this question indicated that they learned how to swim from their whanau and friends. A further 25.9% (n=57) said that school is where they learned to swim, while 21.4% (47%) participants identified that they taught themselves to swim. Only 14.1% (n=31) of participants said that they learned how to swim through private swimming lessons.

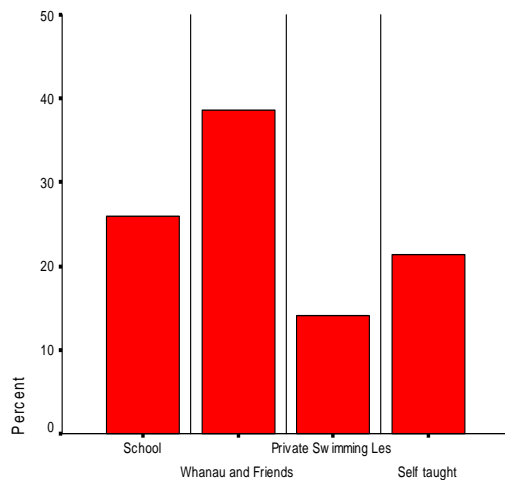


Figure 4. Percentages of participant responses on where they learned to swim

Findings across age groups

We decided to explore the findings within and between the five different age categories used in this study. Our aim here was to investigate the data for possible trends or deviations within or between these five age groups. As Figure 5 shows, the 7 to 15 year age group mostly swim in the river (39%). This was followed closely by swimming in the pool (28%) and sea (26%). The 16 to 25 year age group selected that they mostly

swim in the sea (40%). This finding was also consistent across age groups 26 to 45 (36%), 46 to 50 (43%) and 50 plus (43%). Interestingly, the age group 26 to 45 displayed little difference between mostly swimming in the sea (36%) and mostly swimming in the pool (35%). Only 21% of participants in this age group stated that they mostly swim in the river. The majority of participants in the 46 to 50 age bracket stated that they mostly swim in the sea (43%), while a further 30% of participants said that they mostly swim in the river. This age group had the lowest percentage of responses across all age groups, for ‘mostly swim in the pool’ (17%). The 50 plus age group showed that the majority of participants in this age group mostly swim in the sea (49%). This was followed closely by 32% of participants in this group who selected that they mostly swim in the pool, while a further 21% chose the river as the place they mostly swim. Participants who selected the lake as their most likely place to swim was small across all five age groups.

As shown in Figure 6, the primary activity that people undertake while in, near or on the water is swimming. This result was found for four of the five age groups used in this study. Overall, as the age of participants increased so to did the frequency of fishing, boating, gathering of seafood, scuba diving and surfing. As one would expect, frequency for jumping off the bridge decreases as age increases. Interestingly, the gathering of seafood for age group 26 to 45 was the second highest activity selected by participants in this age group. Age group 46 to 50 revealed hoe waka as the activity they are mostly likely to undertake while in, near or on the water, followed closely by swimming then fishing and the gathering of seafood.

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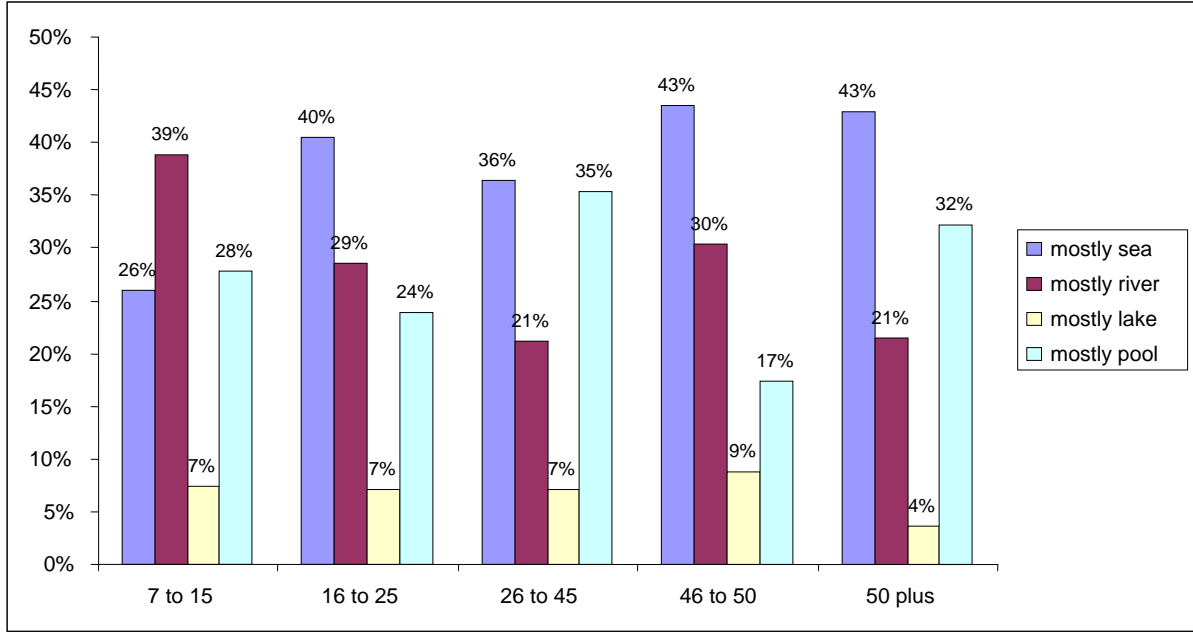


Figure 5. Percentages of participants responses according to where they mostly swim across five age groups used in this study.

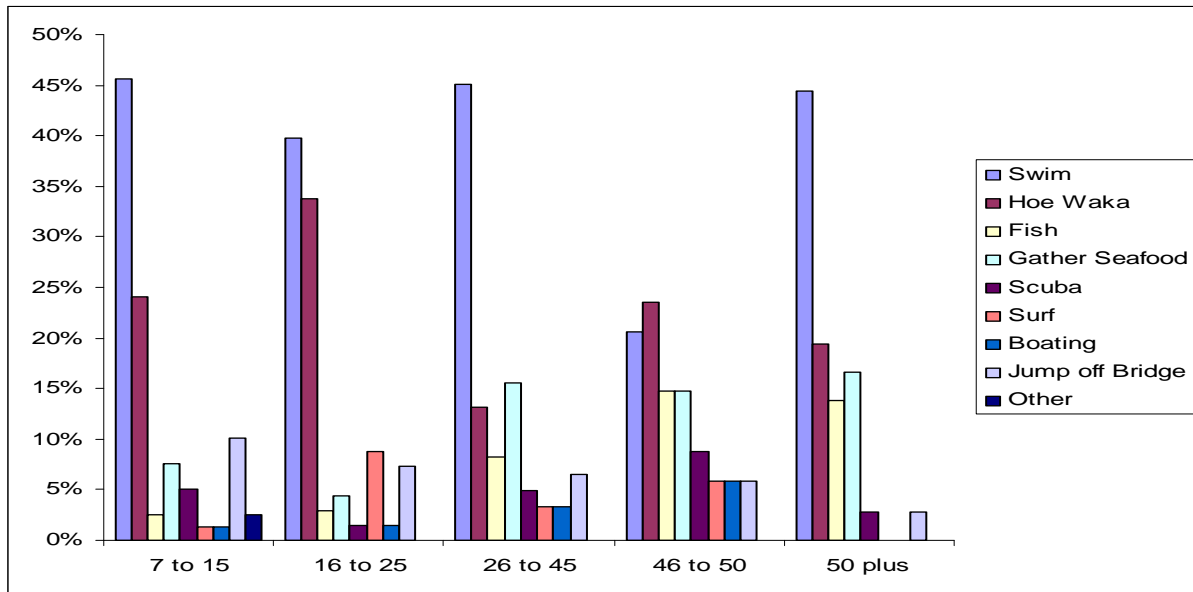


Figure 6. Percentages of participants' responses according to what activities they mostly do while in, near or on the water, across five age groups used in this study.

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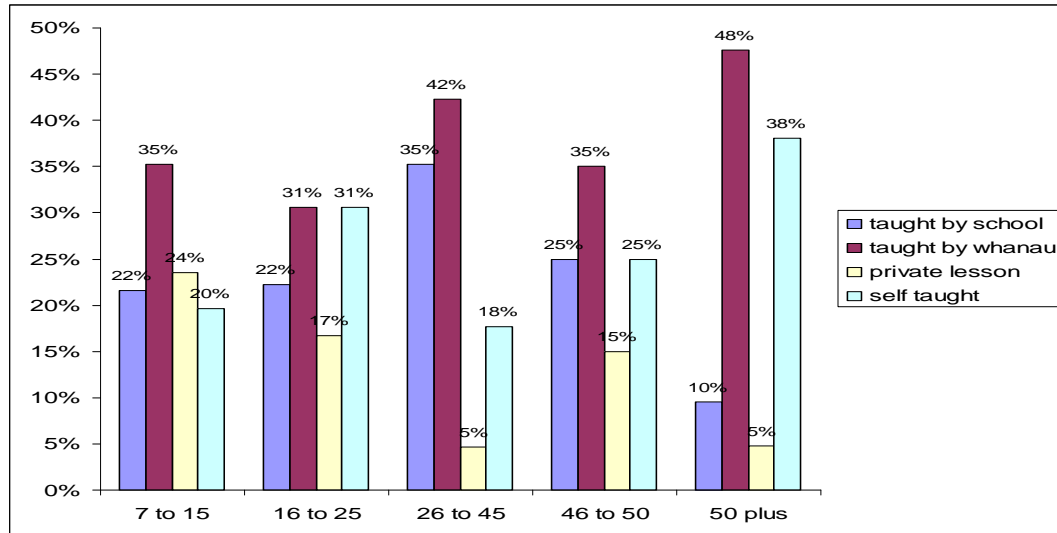


Figure 7. Percentages of participants' responses according to where they learned to swim.

As shown in Figure 7, the majority of participants across all age groups selected learning to swim through whanau and friends. Learning at school was the second highest response category for two age groups (26 to 45 = 35% and 46 to 50 = 25%, equal with self taught), while private swimming lessons were more noticeable for the younger participants in this study, as seen in Figure 7. Furthermore, there is still a lot of Māori who learn to swim through self taught strategies.

Water Safety Rules

The final question asked participants to recall three Water Safety rules. Four main categories emerged from participants' responses to this question; 1) wearing a life jacket, 2) swimming between the flags, 3) supervision and 4) safety behaviours. Thirty six (10.5%) participants recalled needing to wear a life jacket when in, near or on the water. Responses such as, "if in a boat wear a life jacket" were common in this category. A further 79 (21%) stated that you must swim between the flags when in the water - "kauhoe i waenga i ngā haki", while 34 (9.4%) participants recalled supervising young children as important - "mātaki i ngā tamariki i ngā wā katoa". The majority of participants (203 comments - 55.7%) recalled a number of water safety rules that have been coded for this research under a general category called safety behaviours. Five further themes emerged from this category; these are discussed in more detail below.

Safety Behaviours

- *Swim with others, be seen, or tell someone where you are going.*

Three main themes emerged from this category; swimming with others, be seen, tell someone where you are going. A number of participants mentioned "swimming with others", "kaua e kaukau ko koe anake", or "dive with a buddy" as important Water Safety rules. This view was further supported by additional comments made around the importance of swimming in groups as well as within sight and within reach of other people, e.g. "always swim in groups", or "within sight, within reach". Additional comments around needing to inform adults/people where you are going was also mentioned by some participants', as seen in the following quotes, "tell someone where you are swimming before you go" or "always tell someone".

- *Before getting into the water*

A number of participants made comments about strategies and rules for water safety before getting into the water. These focused on three areas; having the correct gear such as "never wear heavy clothes" and "have the right safety equipment e.g. life jackets", warm-up, and being sensible around eating and drinking alcohol before getting into the water. Comments such as, "no swimming immediately after eating", "kaua e kai i mua i te kaukau", "don't drink alcohol and don't wear clothing before and while swimming" and "mau kākahu tika o te kaukau" were

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frequently stated by participants. Furthermore, a small number of participants mentioned the need to “warm up and stretch” before getting into the water.

- *Being sensible while in, near or on the water*

Some participants referred to being sensible or using common sense before, while on, near or in water. Comments such as “don’t turn your back on the water”, “kia tūpato i ngā wa katoa i roto i te wai” or “be sensible and responsible” were a few of the statements provided by participants. Additionally, some participants mentioned the importance of “not running around pools”, “hīkoi, kaula e oma” and “not fooling around” while on, near or in the water.

- *Checking conditions*

Three main areas from this category were mentioned by participants as important water safety rules. These are checking for; hidden objects, rips/tidal conditions and depth of water before getting in. Over 30% of participants who responded to this question made comments around needing to check conditions before going out on the water or getting into the water. Comments such as, “check before you dive in”, “mātaki i ngā kauere” and “make sure you know what’s under the water” were common in this category. Very few rules and strategies around weather conditions were mentioned by participants in this study.

- *If you find yourself in trouble*

Finally, a small number of participants mentioned the importance of implementing strategies when in trouble. These responses were generally around; “raise your hand if in trouble”; “when you are in danger put your hand up”, or “if you are in trouble, don’t panic”.

- *Safety around the home*

Only one participant from 172 mentioned the need for safety with water, in and around the home. This was surprising given the statistics for injury and deaths around water for Māori when they are at home.

Conclusion

There are a number of limitations to the present study that are discussed in the full report (Karapu &

Takurua, 2007). The extent to which generalisation of findings can be made to the general Māori population is limited by the fact that the sample group used in this study did not involve a random recruitment of participants. In other words, only those Māori who attended Te Matatini and Waka Ama Nationals were recruited to participate in this study. Despite these limitations a number of interesting generalisations are possible. Māori tend to swim in the sea rather than rivers, lakes or pools. However, the difference between these waterways is small, with ‘lake’ being the least preferred place where Māori swim. Further research into this finding can help determine if this outcome is due to geographical location or family/individual preference. Additionally, this outcome was not consistent with the youngest age group, 7 to 15, who selected river as their preferred place to swim. The activity that Māori mostly do while in, near or on the water is swimming, followed closely by hoe waka, though the latter is more a result of sampling effect. This outcome is not surprising as the majority of participants (48%) were under the age of 26. We also found that as age increases so does the frequency of participants engaging in other activities such as fishing, boating, gathering of seafood, scuba diving and surfing. This result is likely to be related to other factors such as ‘cost’, ‘difficulty’ or ‘access’ to resources that can enable participation in these activities. Further research in this area will help to ascertain the accuracy of this finding. Māori tend to learn how to swim through their whanau and friends rather than school, private lessons or self taught. This result was consistent across all age groups used in this study. Only 14% participants stated that they learned through private swimming lessons. Additionally, we found that as age increases so does the percentage of Māori learning to swim by their whanau and school. Moreover, younger participants were more likely to take part in private swimming lessons than older participants. This maybe as a result of ‘access’ issues (e.g. the closure of pools at school) as opposed to other factors. Further research into this area can help provide a more accurate picture.

A number of water safety rules and strategies were found to be recalled by participants, these focused on wearing a life jacket, swimming between the flags, supervision of young children and safety strategies

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aimed at keeping yourself safe, before, during and while in the water. One area that was mentioned only once in this project, but is of concern for Māori, is water safety around the home. Future research into

water safety and injuries for Māori needs to consider the socio-economic and historical impacts which can serve to strengthen any water safety strategy aimed at reducing water related deaths and injuries for Māori.

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