Surfers Rescue 24/7 National Education Programme
Pilot to assess course effectiveness

Prepared for New Zealand Search and Rescue

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Executive Summary

Our study aimed to evaluate the effectiveness of Surfers Rescue 24/7 and offer suggestions for possible improvements to the programme. Based on feedback from the participants, we discovered that the most valuable takeaways from the course were the board rescue techniques and the significance of rescuer safety.

The survey results revealed that 90% of the respondents felt confident in their ability to apply the board rescue techniques learned during the course in real-life rescue situations. These techniques, which involve using a board as a flotation device, were identified and taught to the participants, who found them easy to understand and implement in a rescue scenario. Additionally, the participants appreciated the emphasis placed on rescuer safety, which was identified by 21% of respondents.

Our findings suggest that the course has met the participants' needs, with the core learning outcomes being well understood. Almost all the respondents (98%) confirmed that they would recommend attending a Surfers Rescue 24/7 program to others. Furthermore, the course content was deemed relevant by all respondents surveyed, indicating that it met their expectations.

It has become clear that surfers play a vital role in preventing coastal drownings, not only in New Zealand but worldwide. Research conducted by Mead (2023) sheds light on the previously unknown details of surfer-conducted rescues in New Zealand. The data collected is reliable and consistent with previous research from multiple countries. This highlights the immense benefit and potential of surfers in providing coverage for coastlines both domestically and internationally.

Mead's research showed a willing population, experienced and capable in aquatic rescue, with the sample population alone saving the lives of 48.4 people per year. Data showed a relationship between increasing years of experience and the number of rescues conducted and most rescuers were advanced to expert in ability. Although rescue training was not identified as a significant influence on rescue quantity, it is undoubtedly important to further develop experienced surfers, as well as 'developing' surfers' rescue skill sets, to support and enable them to safely conduct rescues moving forward.

Surfers tend to perform rescues in areas they are familiar with, as demonstrated by the similarity between their "home break" and rescue locations. Auckland, Waikato, and Bay of Plenty were the regions with the highest density of rescues. The study further highlighted the importance of surfers in performing rescues, especially on unpatrolled beaches or outside patrolled hours, which accounted for 73% of the reported rescues.

An online survey was tested to gather data on rescues performed by the surfing community since there is currently no way to report them. The survey asked for the location and circumstances of each rescue, as well as the contact information of the surfer who completed the survey. It was made available on the Surfing New Zealand website and has recorded a total of thirty rescues so far. With the date, time, and location of each rescue noted, it is possible to use meteorological and oceanographic hind-cast data to analyze the environmental conditions for each incident. This includes determining the swell size, swell period, tide phase, water temperature, wind direction, and water temperature for each rescue recorded. Such information will help identify the environmental conditions present during each rescue.

Surfers Rescue 24/7 has received overwhelming support from members of Boardrider clubs affiliated with Surfing New Zealand and the wider surfing community. Recent research and anecdotal evidence indicate that the course is highly beneficial. Surfing New Zealand has 31 Boardrider Clubs, 3 Regional Associations, and 3 National Organizations with a total membership of 3000. However, the majority of the estimated 145,000 surfers in New Zealand do not belong or affiliate with a Surfing New Zealand

Boardriders club. To reach these surfers, a targeted campaign is needed to create greater awareness of Surfers Rescue 24/7. Social media channels, such as the Surfing NZ website, Facebook, Instagram, and Twitter, could be utilized to promote the course.

While some participants believed that the course was already excellent and required no further modifications, two-thirds believed there was room for improvement. The key feedback received highlighted the need to extend the course duration and provide more attention to board rescue techniques, such as using different surfboard types and saving patients of varying sizes. Participants also requested more practical experience in rescue scenarios and an increased focus on first aid, specifically CPR and onshore patient care.

Surfers Rescue 24/7 delivery should be based at home surf breaks, linking in with the local surfing community, whether boardrider club affiliated or not. Initially, the focus should be on affiliated boardrider clubs, with courses to follow that target specific home breaks. Local instructors who are respected within their respective surfing communities should be involved in championing and facilitating courses. A train-the-trainer strategy is necessary to build instructor capacity across New Zealand.

A research project is being considered to explore ways for surfers to join Surf Life Saving New Zealand as patrolling lifeguards or for placement on Search and Rescue squads.

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Introduction

Background

It is a startling fact that every year, drowning claims the lives of 236,000 individuals worldwide, amounting to approximately 27 drownings per hour (World Health Organization, 2021). Any body of water, whether it be coastal beaches, rivers, lakes, or pools, can pose a risk of drowning. The World Health Organisation has identified beaches and coastal areas as particularly hazardous, ranking them among the leading high-risk locations (World Health Organization, 2014). Unlike still water or a pool, beach hazards are ever-changing, with tidal shifts, wind patterns, wave size and period, as well as beach user activity constantly in flux (Brewster et al., 2019; Short & Hogan, 1994). It is unfortunate that many beachgoers lack the knowledge and skills required to remain safe, and even more tragic outcomes can result when ill-equipped bystanders attempt to provide assistance (Petrass & Blitvich, 2018; Pitman et al., 2021).

According to Franklin et al. (2020), drowning is consistently ranked as the third leading cause of injury-related death worldwide, following road injuries and falls. The seriousness of this problem has prompted the United Nations General Assembly to adopt a resolution on drowning prevention in 2021, with support from over 80 countries worldwide. This is the first time in the organization's 75-year history that it has recognized the scale of drowning as a worldwide problem (Water Safety New Zealand, 2021).

Drowning is a multifaceted social issue, much like other types of disasters. Vulnerability to drowning varies among different groups based on factors such as ethnicity, age, gender, and socioeconomic status (Denny et al., 2019; Willcox-Pidgeon et al., 2020). The World Health Organization's statistical data demonstrate that low- and middle-income countries have three times higher drowning rates compared to high-income countries. Despite limited prevention strategies that effectively target drowning (World Health Organization, 2014), many countries have not observed a decline in drowning rates over time, and some have even experienced an increase in recent years.

New Zealand is a country where beach activities are deeply ingrained in the culture. Its coastline is the 9th longest in the world, spanning approximately 15,000 kilometres (Coasts - Te Ara Encyclopaedia of New Zealand, 2005). Unfortunately, beaches also have a higher estimated drowning mortality rate compared to other natural waterways and are a leading location for fatal drownings (Koon et al., 2021). In fact, more than a fifth of fatal drownings that occurred in New Zealand between 2012-2021 happened at surf beaches (Water Safety New Zealand, 2022). Despite this, over 12 million individuals visited New Zealand's coast between May 2020 and April 2021, according to Surf Life Saving New Zealand (Surf Life Saving New Zealand, 2021). However, research suggests that as beach usage increases, so does the public's risk (Short and Hogan, 1994). This was evident in 2021, when there was a 10% increase in recorded outdoor visitations, including beaches, compared to the same period in 2022 (Department of Conservation, 2022). Unfortunately, this led to the worst summer period for coastal drowning in six years, with a 180% increase in fatal coastal drownings compared to the previous five-year average, the worst coastal fatal drowning record since 1996 (Radio New Zealand, 2022; Water Safety New Zealand, 2022). Shockingly, the average annual fatality frequency due to coastal drownings is higher than the collective fatalities from all natural-hazard-related disasters in New Zealand over the past decade (Ministry for Culture and Heritage, 2020).

Despite the efforts of organizations like Water Safety New Zealand and Surf Life Saving New Zealand to decrease the number of drowning incidents through public education and initiatives like the 3R campaign, rip current-related fatalities in New Zealand are still increasing. In fact, New Zealand's coastal fatal drowning rate per capita (per 100,000 pop.) over the past decade is 44% higher than Australia's, according to Surf Life Saving New Zealand (2021).

Each year, there are many fatal drownings, but there are also many successful rescues performed by both formal and informal rescuers. According to a study from Brazil, for every fatal drowning, there are five successful rescues (Barcala-Furelos et al., 2021). Surf Life Saving New Zealand records over 1,100 rescues and 113,631 preventative actions annually (Surf Life Saving New Zealand, 2021). In Australia, bystanders may perform just as many rescues as surf lifeguards each year, as suggested by Attard et al. (2015).

In New Zealand, information regarding bystander rescues is limited. Nevertheless, it is estimated that 70% of such rescues take place outside of lifeguard patrolled areas and times, according to Surf Life Saving New Zealand in 2021. This percentage closely aligns with the findings of Uebelhoer et al.'s research in 2021, which showed that 73% of the 136 coastal drowning deaths in Australia between July 2020 and June 2021 occurred under the same circumstances. This is why agencies such as the World Health Organization, Water Safety New Zealand, and Surf Life Saving New Zealand are increasingly acknowledging the importance of bystander rescues, as they are often the only chance for rescue outside of patrolled areas and times, as stated in the World Health Organization's 2017 report, Water Safety New Zealand's 2020 report, and Surf Life Saving New Zealand's 2021 report.

Understanding the Capabilities of Surfers in Community-Based Emergency Response

In recent years, a community group has emerged that specializes in informal rescue response through their knowledge and expertise. This group comprises skilled surfers, particularly those with extensive experience, who possess the necessary skills and understanding to perform rescues safely (Attard et al., 2015; Mead, 2023). Surfers are well-versed in identifying beach hazards, particularly at local surf spots. They can easily spot dangers such as rip currents, which account for 11% of beach drowning fatalities in New Zealand between 2011 and 2020. Surfers often use these currents to access waves further out by paddling with less resistance through the surf zone (Surf Life Saving New Zealand, 2021; Short & Hogan, 1994). Pitman et al.'s (2021) study on Muriwai, a high-energy surf beach with distinct rip currents, found that only 22% of respondents could identify rip currents in situ. However, 62% of those who could were surfers or body-boarders, indicating that surfers have a higher understanding of rip currents.

Experienced surfers possess a level of comfort in the ocean due to their familiarity with local hazards and their ability to navigate increased wave height, as noted by Pitman et al. (2021). As wave size increases, so do rip velocity and the power of the waves, resulting in greater risk for beachgoers. Moderate wave sizes between 1-2 meters are particularly risky for vulnerable beach users, as evidenced by the frequency of rescues reported by Attard et al. (2015). However, surfers are drawn to larger waves for the thrill of intense and longer rides, and their experience and comfort in these conditions set them apart from the average beachgoer who may be at increased risk. Surfers also have the advantage of being equipped with a flotation device (i.e. a surfboard), which is shown to be a crucial factor in bystander rescues. In a study conducted by Brander et al. (2019), none of the fifty-three bystander drowning victims in Australia between 2004 and 2017 had a flotation device with them. Similarly, Surf Life Saving New Zealand (2021) found that between 2011-2021 100% of individuals who perished while attempting a bystander rescue had no form of flotation.

According to a recent news article ("Man Drowns at Mt Maunganui", Newshub, 2022), surfers have a unique advantage in identifying and assisting individuals in distress while in the water. Due to the time-sensitive nature of drowning, with cardiac arrest occurring within seconds to minutes of immersion (Barcala-Furelos et al., 2016; Tipton & Montgomery, 2022), surfers' quick response time can be critical. Moreover, as surfers are often closer to drowning victims than official water safety organizations such as lifeguards, they are in an ideal position to intervene and prevent drowning.

According to international research, surfers could play a crucial role in reducing coastal drowning incidents in their communities. However, this comes with some risks, especially for less experienced surfers who may end up needing rescue themselves. For experienced surfers, the risk of Aquatic Victim Instead of Rescuer syndrome (AVIR) is significantly reduced, as they possess the necessary skills and knowledge to avoid drowning. These skills include familiarity with local hazards, ability to handle moderate to large waves, and a flotation device. Surfers often surf outside of flagged areas and patrolled times, such as dawn to dusk, providing rescue assistance in areas where lifeguard services are not available. Considering the significant amount of time spent by surfers at beaches worldwide, they could serve as an ideal resource in preventing coastal drowning incidents.

According to the International Surf Association, there are approximately 17 to 35 million surfers worldwide (Brander et al., 2019). In New Zealand, an estimated 145,000 individuals engage in surfing, frequenting both patrolled and unpatrolled beaches, expanding their reach throughout the country (Surfing New Zealand, 2022). Research conducted overseas has also shown that surfers are open to receiving training in rescue and resuscitation, indicating an opportunity to enhance their skills (Berg et al., 2021). This highlights the potential for surfers to play a significant role in reducing coastal drownings throughout New Zealand, positioning them as an important and informal group (Mead, 2023).

Surfers Rescue 24/7 - Providing the Solution

Surfing NSW has developed Surfers Rescue 24/7, a free CPR and board rescue course aimed at reducing deaths from drowning. The program was created to bridge the gap between patrolled and remote beaches. Surfers Rescue 24/7 offers valuable training for recreational surfers who might find themselves in an ocean emergency. The course teaches board rescue techniques to help conscious and unconscious patients in the water (Figure 1), along with basic CPR skills. Participants must be skilled in handling, paddling, and surfing on a surfboard/bodyboard/SUP, and have the ability to swim 100m in open water unassisted. Safety is prioritized in this innovative program (Surfers Rescue 24/7, 2022), ensuring the rescuer is safe while providing assistance.

Figure 1: Here are some techniques for rescuing a person with a surfboard.

In 2020, Surf Life Saving New Zealand and Surfing New Zealand collaborated to introduce Surfers Rescue 24/7 in New Zealand. The initiative was prompted by the recognition that, like in Australia, surfers in New Zealand are likely playing a role in reducing the number of fatal coastal drownings. Since its inception, Surfers Rescue 24/7 has been attended by 600 surfers from 15 locations across the country. The program aims to upskill the surfing community in water rescue techniques and CPR skills, with the ultimate goal of reducing the number and severity of drowning incidents.

Now that Surfers Rescue 24/7 has been introduced in New Zealand and the surfing community has expressed interest in improving their water rescue and CPR skills, it's time to evaluate the success of the program and determine the most effective way to implement it throughout the country. The project goals are to measure the effectiveness of Surfers Rescue 24/7, establish a system for recording surfer-led rescues, and provide recommendations for delivering the program to the wider New Zealand surfing community.

Output 1 - Assessing the effectiveness of Surfers Rescue 24/7

Background

Surf Life Saving New Zealand and Surfing New Zealand collaborated in 2020 to launch Surfers Rescue 24/7 in New Zealand. The main objective of this initiative is to lower the occurrence of fatal coastal drownings on New Zealand's beaches by educating surfers on how to rescue individuals in distress in the water. The program has been a success, with 600 surfers from 15 locations across the country attending to learn water rescue techniques and CPR skills. Given the continued interest from the surfing community, it is fitting to evaluate the effectiveness of Surfers Rescue 24/7 in New Zealand. For a succinct summary of Surfers Rescue 24/7 refer to the promotional video developed by Surfing New South Wales (Refer Surfers Rescue Overview).

Surfers Rescue 24/7 is in its infancy in New Zealand and further research is sought to establish the efficacy of the course and its outcomes. There is broad consensus that increasing knowledge of hazards, rescue techniques, and resuscitation training among bystanders will lead to fewer fatal drowning incidents (Koon et al., 2021; Moran, 2010; World Health Organization, 2017).

The Surfers Rescue 24/7 program, which was brought over from Australia, was implemented in New Zealand without much input from the local surf community. Because of licensing restrictions, the program's content cannot be altered, which means that it may not be entirely appropriate for New Zealand's specific needs (Mead, 2023). This kind of approach, where decisions are made from the top down without engaging local surfing communities, has been a common practice among Water Safety and Disaster Risk Management organizations. Unfortunately, this has often resulted in the dismissal of valuable local knowledge as insignificant or inferior (Gaillard & Mercer, 2012).

Despite this, the knowledge of the local surfing community has proven to be crucial in preventing many fatal drownings and has provided significant value. Therefore, incorporating the insights of local surfers into water safety initiatives may be more effective in ensuring suitable training.

The purpose of this section is to evaluate the effectiveness of Surfers Rescue 24/7 and suggest possible modifications to its content.

Methods

An online survey was conducted for surfers in Aotearoa New Zealand who have attended Surfers Rescue 24/7. The questionnaire was developed with the collaboration of Surf Life Saving New Zealand and Surfing New Zealand to assess the effectiveness of the course.

A survey URL link (https://www.Surfers Rescue 24/7 Participant Survey) was distributed through email to 600 surfers listed in Surfing New Zealand's database of previous course participants. The inclusion criteria for the survey were to be a surfer who attended the course and aged 16 years or older. The survey was open from 28th April to 31st May 2023. The survey yielded 128 participants with a response rate of 21%.

The survey consisted of multiple-choice, open-ended, and sliding rating scale questions. Multiple-choice questions provided structured data that can be analyzed quickly, whereas open-ended questions aimed to gain a deeper understanding of the participants' learning experience and how the course could be improved. The sliding rating scale allowed respondents to choose a number that best represented their response.

Surfers Rescue 24/7 Survey

Thanks for attending the Surfers Rescue 24/7 course we would love to hear some feedback on your experience!

1. How applicable did you find the course content? (Multi-choice question)
    - Not relevant
    - Relevant
    - Very relevant
    - Loved it!

2. What was the most important thing you learned? (Open-ended question)

3. What was one thing you liked about the Surfers Rescue 24/7 course? (Multi-choice question)
    - The venue
    - The content
    - The presenter
    - The price
    - All of the above

4. What was one thing you thought could be better? (Open-ended question)

5. How confident are you in implementing the techniques learned? (Sliding rating scale)
    - Not confident 0/100 Very confident 100/100

6. Have you performed a rescue yourself using any of the techniques shown in this course? (Multi-choice question)
    - Yes
    - No

7. Would you recommend the course to others? (Multi-choice question)
    - Yes
    - No
    - Unsure

Convenience sampling was used. It is well recognized that convenience sampling cannot be used to 'generalize' a population or to draw inferences but can have high validity if the findings are deemed trustworthy (Etikan et al., 2016). The following section presents the results of the questionnaire-based survey.

Results

Question 1 Surfers Rescue Course Content

All 126 respondents surveyed believed that the content presented in Surfers Rescue 24/7 was relevant. Out of those, 75 individuals (60%) found it to be "extremely relevant", 37 (29%) believed it to be "very relevant", and the remaining 14 (11%) rated it as simply "relevant". These findings indicate that the course content aligns with the expectations of the participants.

Question 2 Participant Learnings

Feedback from 124 participants who attended Surfers Rescue 24/7 revealed that the two key learning outcomes were board rescue techniques and rescuer safety. According to the results, 98 individuals

(79% of the respondents) considered learning different surfboard rescue techniques to be their primary takeaway. These techniques, which involve using the board as a flotation device, were identified and taught to participants. The respondents found the practice of these techniques to be valuable in building confidence to assist and rescue someone with a surfboard.

The importance of rescuer safety was also emphasized as a crucial take-home message. 26 individuals (21% of the respondents) highlighted the significance of prioritizing rescuer safety when undertaking a rescue. Participants appreciated the simplicity of the techniques and felt that they should be capable of implementing them if they were ever in a rescue situation. One participant even credited the Surfers Rescue course for enabling them to manage risks and execute a rescue during a surf lesson two days later.

Question 3 Course delivery

Based on the responses of the participants, it was found that 77 out of the total respondents, which is 61%, believed that the successful delivery of Surfers Rescue 24/7 was dependent on a combination of factors such as the venue, course content, and the presenter. Out of the total respondents, 36 participants, which is 28%, stated that they were most satisfied with the course content. Meanwhile, 8 participants (6%) appreciated the presenter and 6 participants (5%) liked the venue the most.

Question 4 Course improvements

A total of 121 participants were surveyed to obtain feedback on how to enhance the Surfers Rescue 24/7 course. The results revealed that 31% of the respondents (37 individuals) recommended extending the duration of the course and giving more attention to board rescue techniques. They expressed an interest in learning rescue techniques using different surfboard types and saving patients of different sizes. In contrast, 30% (36 individuals) believed that the course was already excellent and required no further modifications.

Furthermore, 11% of the participants (13 individuals) opined that the course could be improved by increasing the focus on first aid, specifically CPR and onshore patient care, and requested more practical experience in rescue scenarios.

9% of the respondents (11 individuals) suggested making training resources available on social media platforms, such as short videos and pamphlets, to refresh their knowledge of board rescue techniques, CPR, and patient care. These digital resources could be advertised and easily accessed on popular platforms like Facebook, Instagram, Twitter, YouTube and the Surfing NZ website.

The survey also highlighted other feedback on how to enhance general safety within the surfing community. Some participants mentioned identifying hazards at local surf breaks, while others emphasized the need to improve the relationship between the surfing community and Surf Life Saving New Zealand to make Aotearoa's beaches safer.

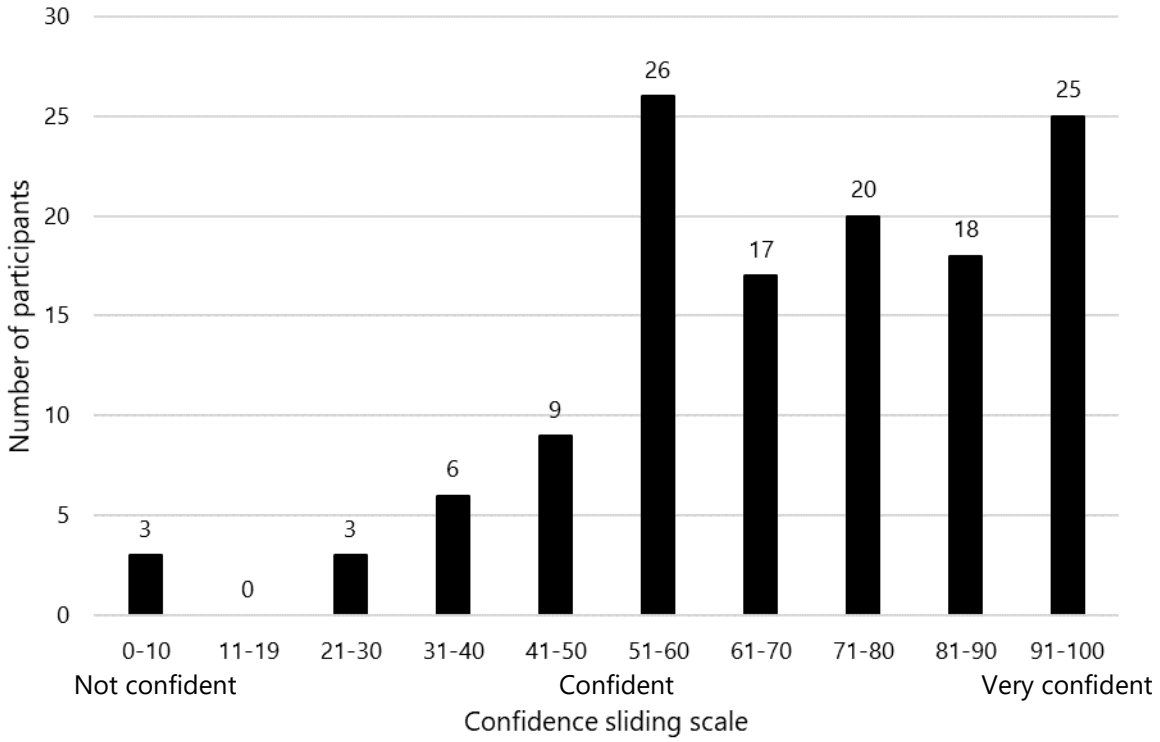
The feedback received has given significant insights that can be utilized to enhance the course and make it more advantageous for the attendees.

Question 5 Assessing participant confidence to use board rescue techniques

After finishing the Surfers Rescue 24/7 course, participants were given the option to rate their perceived rescue capability on a sliding scale of 0 to 100. The scale ranged from 0, indicating no confidence, to 50, indicating confidence, and 100, indicating high confidence. Out of the total respondents, 115 individuals, which accounts for 90%, reported feeling either confident or very confident in their ability

to use the board rescue techniques learned during the course in a rescue situation (as shown in Figure 2).

Figure 2: Participant confidence to use board rescue techniques.



Question 6 Using board rescue techniques

Out of the respondents who completed Surfers Rescue 24/7, 25 individuals, or 20% reported having performed a rescue using the techniques they learned from the course. On the other hand, 103 participants, or 80% have not yet utilized board rescue techniques during a rescue.

Question 7 Recommending Surfers Rescue 24/7

Out of the total respondents, 125 individuals (98%) confirmed that they would recommend attending a Surfers Rescue 24/7 program to others. Only 2 individuals (2%) were unsure about their recommendation, while 1 respondent (1%) reported that they would not recommend Surfers Rescue 24/7 to others.

Discussion

Our study aimed to evaluate the effectiveness of Surfers Rescue 24/7 and offer suggestions for possible improvements. Based on feedback from the participants, we discovered that the most valuable takeaways from the course were the board rescue techniques and the significance of rescuer safety. Our main objective was to determine if the course adequately taught participants how to conduct a safe rescue.

The survey results revealed that 90% of the respondents felt confident in their ability to apply the board rescue techniques learned during the course in real-life rescue situations. These techniques, which

involve using a board as a flotation device, were identified and taught to the participants, who found them easy to understand and implement in a rescue scenario. Additionally, the participants appreciated the emphasis placed on rescuer safety, which was identified by 21% of respondents.

Our findings suggest that the course has met the participants' needs, with the core learning outcomes being well understood. Almost all the respondents (98%) confirmed that they would recommend attending a Surfers Rescue 24/7 program to others. Furthermore, the course content was deemed relevant by all respondents surveyed, indicating that it met their expectations.

While some participants believed that the course was already excellent and required no further modifications, two-thirds believed there was room for improvement. The key feedback received highlighted the need to extend the course duration and provide more attention to board rescue techniques, such as using different surfboard types and saving patients of varying sizes. Participants also requested more practical experience in rescue scenarios and an increased focus on first aid, specifically CPR and onshore patient care.

To enhance the course, participants suggested making training resources available on social media platforms, such as short videos and pamphlets, to refresh their knowledge of board rescue techniques, CPR, and patient care. These digital resources could be advertised and easily accessed on popular platforms like Surfing New Zealand's social media accounts and website, which would also help promote Surfers Rescue 24/7 to the surfing community.

While Surfers Rescue 24/7 is in its infancy in New Zealand, Surf Life Saving New Zealand and Surfing New Zealand look towards Surfing New South Wales as the benchmark for delivery and resourcing of Surfers Rescue 24/7. For examples of the digital resource provided by Surfing New South Wales Surfers Rescue 24/7 refer to the links below.

- Surfers Rescue Website https://www.surfersrescue247.com/
- Upcoming courses https://www.surfersrescue247.com/courses
- Online courses https://www.surfersrescue247.com/online-courses
- Report your rescue https://www.surfersrescue247.com/report-your-rescue
- News https://www.surfersrescue247.com/news
- Videos https://www.surfersrescue247.com/videos
- Trauma videos https://www.surfersrescue247.com/surf-trauma-techniques-2

The feedback obtained has provided valuable insights that can be used to improve the course and make it more beneficial for the participants.

Recommendations

To improve the quality of the training program, we suggest the following changes:

1. Increase the duration of the course and provide more attention to board rescue techniques. This includes using different surfboard types and rescuing patients of varying sizes.
2. Increase practical experience in rescue scenarios and focus more on first aid, specifically CPR and onshore patient care.
3. Make training resources easily accessible on social media platforms such as short videos and pamphlets. These resources will help refresh knowledge of board rescue techniques, CPR, and patient care.
4. Increase promotion of Surfers Rescue 24/7 by utilizing Surfing New Zealand's social media accounts and website.

Output 2 - Establish a system for recording surfer-led rescues

Background

It's saddening that many people lose their lives due to drowning while enjoying coastal beaches every year. To avoid such tragic incidents, the World Health Organization has recommended that all countries adopt drowning prevention measures that involve improving the precision of data used to inform these strategies (World Health Organization, 2014).

Data is at the heart of all research, and research on drowning prevention is no exception. It is the eyes and ears of drowning prevention initiatives. The data gathered - and its quality - will make a massive difference to how successful the research is, how accurate the findings are, and the structure and impact of the drowning prevention strategies. As a result, data collection is arguably the most critical research stage. It can make or break the rest of the process, so it's vital to do everything you can to make this stage run smoothly and successfully.

Tracking the number of surfer rescues and gathering statistical data on them can be difficult as many incidents go unreported if medical attention is not required. A study by Mead in 2023 revealed that 86% of people rescued by surfers in New Zealand did not need further treatment and were able to walk away. This suggests that surfers may have prevented drowning outcomes by stabilizing the victim and preventing water aspiration, as found by Tipton & Montgomery in 2022. However, the high number of unreported surfer rescues means that there is a lack of meaningful data available for research and to direct the implementation of drowning prevention strategies.

The prevalence of unreported surfer rescues across New Zealand explains why surfer bystander rescues have not received much recognition or exploration, and why there is a dearth of meaningful data available. Disaster Risk Reduction advocates for community involvement and utilization of local resources, as demonstrated by Aitsi-Selmi et al. in 2016, Cutter in 2018, and UNISDR in 2015. Mead's study highlights the significant amount of scientific data that is currently not being captured and presents an opportunity to develop a system to record these occurrences in the future.

Given the alarming number of drowning incidents across New Zealand beaches, it is crucial to conduct more research to close the current gap in data on surfer rescues. This data can be used to develop effective prevention strategies, which were previously lacking. Surf Life Saving New Zealand and Surfing New Zealand support and advocate for this research, as it provides evidence of surfers' rescue contributions, which can be used to secure funding for future prevention efforts. The results of this research are based on solid evidence, rather than anecdotal evidence, which was previously used for funding applications.

This aligns with New Zealand's Disaster Resilience Strategy and the Sendai Framework, which support a science-based approach to policy-making and community empowerment to enhance resilience, as stated by MCDEM in 2019 and UNISDR in 2015. The purpose of this section is to identify practical solutions and implications to better document surfer rescues throughout New Zealand.

Methods

Two methods were utilized to better understand how surfers in New Zealand document their rescues. Firstly, Mead conducted a nationwide Surfer Survey in 2023, which explored surfers' characteristics and the role they play in rescuing individuals in the surf. This research, supported by Surf Life Saving New Zealand and Surfing New Zealand, provided valuable data and insights, making it the first of its kind in New Zealand.

To build upon the findings of the Surfer Survey, a workshop was organized in April 2020, with the participation of surfers who took part in the survey. The workshop, facilitated by Auckland University of Technology, received support from Surfing NZ and Surf Life Saving New Zealand and is discussed further in the next section of the report.

In addition to Mead's research, an online survey was created to test and offer surfers a platform to log their rescues. The survey, titled "Have you performed a rescue in the surf? Let us know!" was placed on the main page of Surfing New Zealand's website (refer https://surfingnz.co.nz/). The survey included six straightforward questions.

1. Where did your rescue take place?

2. When did your rescue take place?
    - Date
    - Time

3. Most relevant rescue description (check all relevant to the rescue)
    - Patient caught in a rip
    - Multiple people caught in a rip
    - Patient lacked swimming ability
    - Patient lacked ocean awareness
    - Injured swimmer
    - Injured surfer
    - Conditions - small swell (under 3ft)
    - Conditions -large swell (over 3ft)
    - Patrolled Beach
    - Unpatrolled beach

4. Have you participated in a Surfers Rescue 24/7 course before?
    - Yes
    - No

5. How many years have you been surfing?
    - <5 years
    - >5 years
    - >10 years
    - >20 years

6. Please provide your contact information (this is required for demographic analysis)
    - Name
    - City Town
    - Postal Code
    - Email address

Results

Nationwide Surfer Survey

Mead's research is summarized in the provided abstracts, highlighting key findings. It's important to mention that the second abstract, titled "The Unexplored Role of Surfers in Drowning Prevention: Aotearoa New Zealand as a Case Study," has been accepted for publication in the academic journal

Environmental Hazards. Mead's innovative research has been acknowledged and endorsed by Surf Life Saving New Zealand and Surfing New Zealand.

Mead, J. (2023). *The Un-Explored Potential Role of Surfers in Reducing Drowning on New Zealand Beaches* [Master's thesis, Auckland University of Technology]. Tuwhera. https://openrepository.aut.ac.nz/items/9ddcd24c-63c0-4fba-90a0-23b237e5d040

Abstract

Drowning is the third leading cause of injury-related death globally. The financial and social burden of drowning on society has become so significant that, in 2021, the United Nations General Assembly, backed by over 80 countries worldwide, adopted a resolution on drowning prevention for the first time in the organisation's 75-year history. Beaches and coastal environments are prominent locations for drowning, however, research examining the causes and processes of drowning at beaches has been neglected, leading drowning to become an invisible disaster globally. A handful of studies conducted in Australia and Europe suggest surfers (as bystanders) might play a critical role in rescuing people from drowning and thus acknowledge surfers' rescue capabilities. However, research about the role of surfers in rescuing people from drowning remains scarce and no data has been gathered in New Zealand, leaving a knowledge gap surrounding rescues being conducted by surfers. Water safety organisations seek to broaden prevention strategies, as New Zealand's 10-year average coastal fatal drowning rate per capita is now 44% higher than Australia and rates of fatal coastal drowning continue to rise. This research aimed to provide original scientific data to quantify surfer rescues and identify the trends and characteristics associated with these. A quantitative, cross-sectional study was conducted, involving a questionnaire-based survey that was disseminated through the Surf Life Saving New Zealand and Surfing New Zealand social media networks. A total of 418 surfers took part in the survey. The survey provided data on rescuer and victim demographics, the respondent's rescues over their lifetime and their most recent rescue on New Zealand beaches. The results indicate that an average of 48 lives are saved annually by this group of surfers, with a total of 1,274 rescues conducted. The potential impact surfers can make in reducing coastal drowning is evident by the volume of rescues performed by this group. The sample population was only 0.28% of the estimated 145,000 surfers in New Zealand. If only 1% of New Zealand's surfers were currently conducting one lifesaving rescue per year, the prevention of the economic and social outcomes of drowning on New Zealand beaches would be immeasurable. Prominent male representation amongst rescuers was evident, however, no significant difference was witnessed between gender, regarding rescue frequency or confidence. There was no association found between having undergone rescue training and an increased frequency of rescues. Conversely, associations were found between increased years of surfing experience and frequency of rescue, as well as participating in formal rescue training. Rip currents clearly emerged as the leading hazard associated with rescue and were often coupled with poor swimming skills and lack of hazard awareness. Rescues were most frequently performed outside of patrolled areas and times and there were clear associations between where surfers conduct most of their rescues and their home break. Results from this study identified an experienced population of surfers that possess knowledge and ability, contrary to that of the statistical primary drowning victim or bystander rescuer. This study is pioneering work in New Zealand and calls for more attention towards the important role surfers play in coastal drowning prevention. Their role has long been unrecognized and/or invisible. This research begins to fill an important gap as it highlights surfer's role in drowning prevention, by providing a quantification of the rescues they performed on New Zealand beaches. This work has strong implications for disaster risk reduction policies and practice, including developing drowning prevention and water safety strategies that cater for surfers' skills, knowledge and resources. It calls for a shift of approach in drowning prevention toward building upon local capacities, where historically drowning prevention focused exclusively on lifeguards in patrol areas.

Mead, J., Le De, L., Kearney, M., & Kennings, B. (In Press). The unexplored role of surfers in drowning prevention: Aotearoa New Zealand as a case study. *Environmental Hazards*.

Abstract

Every year people drown while visiting coastal beaches. Increasingly, studies indicate that bystanders might play a critical role in rescuing people from drowning. However, very limited research has explored the contribution surfers make to reducing fatal drowning. The objectives of this research were to examine aquatic bystander rescues conducted by surfers in Aotearoa New Zealand and understand their characteristics and conditions under which they take place. The study draws upon an online survey disseminated through several social media platforms which gathered a total of 418 complete responses. The findings indicate that male and female surfers conducted an average of three rescues across their surfing career. The survey shows no association between having completed rescue training and frequency of rescues. Surfers typically perform rescues at their local surfing spot. Three quarters of the rescues were completed either at unpatrolled beaches or outside patrolled hours. A total of 70% of the rescues involved males, 60% being aged between 10 and 29 years old. In 46% of the rescues, surfers felt they had saved the person's life. Three quarters of the respondents were surfing when they encountered the victim and over 73% felt confident in their ability to conduct the rescue. The survey indicates that 14% required medical attention and 86% of people rescued were able to walk away without further treatment required. Overall, the research emphasises the significant, yet under-estimated, role of surfers in coastal drowning prevention and water safety. It concludes that organisations involved in drowning prevention should work closely with surfers on ways to reduce fatalities at coastal beaches.

Online Survey

Surfing New Zealand has taken steps to gather data on rescues undertaken by surfers. This will aid in identifying the current contributions of surfers in reducing fatal coastal drownings in New Zealand and analyzing the important characteristics of these rescues.

Rescues logged by surfers have been summarized in the results sections highlighting key findings. There have been thirty rescues logged at time of writing.

Survey Questions

1. Where did your rescue take place? and
2. When did your rescue take place?

- Date
- Time

SURFING NEW ZEALAND - SURFERS RESCUE 24/7 SURFERS SAVE LIVES
Answered 31
Skipped 1

RESPONDENT ID	RESPONSE DATE	RESPONSES
118335982749	Jun 03 2023 04:39 PM	Mount Maunganui (Sutherland Ave)
118319417114	May 15 2023 08:04 PM	Gisborne
118306023394	Apr 28 2023 04:20 PM	Pataua North
118305764375	Apr 28 2023 08:10 AM	Mount Maunganui
118304098115	Apr 26 2023 04:24 PM	Manu Bay Raglan
118297118578	Apr 18 2023 06:42 PM	West End, Ohope

118296986354	Apr 18 2023 01:54 PM	Mount Maunganui
118295966250	Apr 17 2023 08:43 PM	Oakura Beach Taranaki
118295815954	Apr 17 2023 02:47 PM	Back Beach New Plymouth
118271671137	Mar 18 2023 02:52 PM	Waipu Cove
118265481712	Mar 11 2023 05:36 PM	Piha Beach
118263196208	Mar 09 2023 01:03 PM	Mount Maunganui
118262031957	Mar 08 2023 10:11 AM	Fitzroy, New Plymouth
118261191918	Mar 07 2023 02:29 PM	Taylors Mistake
118260220654	Mar 06 2023 04:02 PM	Whagamata
118260143107	Mar 06 2023 12:42 PM	90-Mile Beach
118260124401	Mar 06 2023 11:43 AM	Lyall Bay
118260092528	Mar 06 2023 10:11 AM	Caroline Bay, Timaru
118259961406	Mar 06 2023 04:07 AM	Mangamaunu
118243453830	Feb 14 2023 05:49 PM	Arataki Beach in Mount Maunganui
118240650897	Feb 10 2023 10:33 AM	Whangamata
118231279232	Jan 30 2023 10:06 AM	Muriwai
118230519758	Jan 28 2023 03:27 PM	Mount Maunganui
118229472740	Jan 27 2023 01:33 PM	Lyall Bay
118213883340	Jan 06 2023 11:01 PM	Pakiri Beach Northland
118210160941	Dec 30 2022 01:34 PM	Mount Maunganui and Whangarei Heads
118210009789	Dec 30 2022 06:39 AM	Te Arai
118209777002	Dec 29 2022 07:25 PM	Papamoa
118209653731	Dec 29 2022 11:47 AM	Fitzroy
118201621712	Dec 15 2022 08:46 PM	Mount Maunganui
118201380411	Dec 15 2022 12:15 PM	Omanu Beach

3. Most relevant rescue description (check all relevant to the rescue)

ANSWER CHOICES	RESPONSES	
Patient caught in rip	56.25%	18
Multiple people caught in rip	46.88%	15
Patient lacked swimming ability	37.50%	12
Patient lacked ocean awareness	65.62%	21
Injured swimmer	0%	0
Injured surfer	6.25%	2
Conditions - small swell (under 3ft)	46.88%	15
Conditions -large swell (over 3ft)	31.25%	10
Patrolled Beach	31.25%	10
Unpatrolled beach	43.75%	14
TOTAL		117

4. Have you participated in a Surfers Rescue 24/7 course before?

ANSWER CHOICES	RESPONSES	
Yes	28.12%	9

No	71.88%	23
TOTAL		32

5. How many years have you been surfing?

ANSWER CHOICES	RESPONSES	
<5 years	3.12%	1
>5 years	9.38%	3
> 10 years	28.12%	9
> 20 years	59.38%	19
TOTAL		32

6. Please provide your contact information (this is required for demographic analysis)
100% of informants provided their Name, Residence and email address.

Confidential, however, 100% of participants have provided full contact information.

Discussion

It has become clear that surfers play a vital role in preventing coastal drownings, not only in New Zealand but worldwide. Research conducted by Mead (2023) sheds light on the previously unknown details of surfer-conducted rescues in New Zealand. The data collected is reliable and consistent with previous research from multiple countries. This highlights the immense benefit and potential of surfers in providing coverage for coastlines both domestically and internationally.

Mead's research showed a willing population, experienced and capable in aquatic rescue, with the sample population alone saving the lives of 48.4 people per year. Data showed a relationship between increasing years of experience and the number of rescues conducted and most rescuers were advanced to expert in ability. Although rescue training was not identified as a significant influence on rescue quantity, it is undoubtedly important to further develop experienced surfers, as well as 'developing' surfers' rescue skill sets, to support and enable them to safely conduct rescues moving forward.

This research also provided data on the victim demographics and circumstances of the rescue. Although this data appears common in drowning research, it can also be useful to further guide water safety organisations in their strategies to prevent drowning early in the sequence.

Surfers tend to perform rescues in areas they are familiar with, as demonstrated by the similarity between their "home break" and rescue locations. Auckland, Waikato, and Bay of Plenty were the regions with the highest density of rescues, in line with Surf Life Saving New Zealand's report. The study further highlighted the importance of surfers in performing rescues, especially on unpatrolled beaches or outside patrolled hours, which accounted for 73% of the reported rescues.

Fatal drownings often occur outside patrolled areas, emphasizing the need for surfers as a primary source of rescue response. The study also found that the wave size during rescues was usually moderate (2-4 foot), which poses an increased risk for beachgoers. Rip currents were the main hazard associated with rescues, indicating the lack of public understanding of coastal risk. This presents an opportunity to place surfers as a backstop in drowning prevention, especially as the number of advanced surfers drawn to larger waves increases. Overall, the National Surfer Survey emphasizes the significant role surfers play in water safety and response.

Most surfer rescues conducted are not reported formally, leaving data up until this point to be anecdotal. This opens the door to an opportunity moving forward. For example, The National Incident Database is an online database that is currently managed by the New Zealand Mountain Safety Council. Its main objective is to keep track of outdoor incidents and provide organizations with relevant statistics that can help improve their practices. The purpose of the National Incident Database is to record incidents that occur outdoors and allow organisations to see occurrences and statistics that may inform their practice.

An online survey was tested to gather data on rescues performed by the surfing community since there is currently no way to report them. The survey asked for the location and circumstances of each rescue, as well as the contact information of the surfer who completed the survey. It was made available on the Surfing New Zealand website and has recorded a total of thirty rescues so far. With the date, time, and location of each rescue noted, it is possible to use meteorological and oceanographic hind-cast data to analyze the environmental conditions during the incident. This includes determining the swell size, swell period, tide phase, water temperature, wind direction, and water temperature for each rescue recorded. Such information will help identify the environmental conditions present during each rescue.

It is noteworthy that nearly 30% of the individuals who have reported performing a rescue have undergone a Surfers Rescue 24/7 training course. Moreover, close to half of these rescues have taken place on an unpatrolled beach. Additionally, 60% of the surfers who performed rescues have been surfing for over two decades. This uncomplicated data offers valuable insights into the nature of surfer rescues and helps enhance our comprehension of the actions taken by surfers in such situations.

Surfers have managed to record their rescue efforts with very little financial investment or promotion. If given proper resources, this initiative could yield a wealth of data for analyzing surfers' rescue operations. By also conducting more extensive research, such as the study done by Mead in 2023, a more comprehensive understanding of the surfing community's role in preventing drownings in New Zealand can be achieved.

Surfing NSW has invested significant amounts of money and resource into the promotion of Surfers Rescue 24/7, and documenting rescues undertaken by surfers. Surfing NSW has created a tab within their website Surfers Rescue 24/7 website titled “Report Your Rescue” https://www.surfersrescue247.com/report-your-rescue where surfers can log their rescue. To help promote the logging of rescues, Surfing NSW has aggressively promoted this service through their social media platforms, attendees of Surfers Rescue 24/7 and sponsoring of surfing events. Those who log rescues are eligible for monthly spot prizes, creating an incentive for surfers to log rescues. The success of such an initiative would provide high-value data and go further to quantify rescues being conducted by the surf community. It is recognised this would require significant uptake to be meaningful. However, this research has shown the surf community to be an established and effective resource, worthy of investment.

Finally, the need for future research into this topic is paramount. This research merely provides a foundation for further work to build upon and gain a greater understanding of this phenomenon. Drowning is a silent burden that amounts to that of a natural disaster, particularly in New Zealand where annual drowning fatalities exceed that of any natural hazard. Results from this research illustrate the size of this burden is far greater than accounted for and a comprehensive understanding of all factors contributing to the issue is far from complete.

Recommendations

1. Continue to support logging rescues performed by surfers online.
2. Increase the promotion of logging rescues on Surfing New Zealand's social media platforms.

3. Report annually on the rescues logged by surfers.
4. Every three years, conduct a National Surfers Survey similar to the one developed by Mead (2023). This will provide more detailed data analysis on rescues by surfers and allow for a comparison of data trends across years. The survey may also be beneficial for other studies on surfer bystander rescues, both domestically and internationally.

Output 3- Delivering Surfers Rescue 24/7 to the New Zealand surfing community.

Background

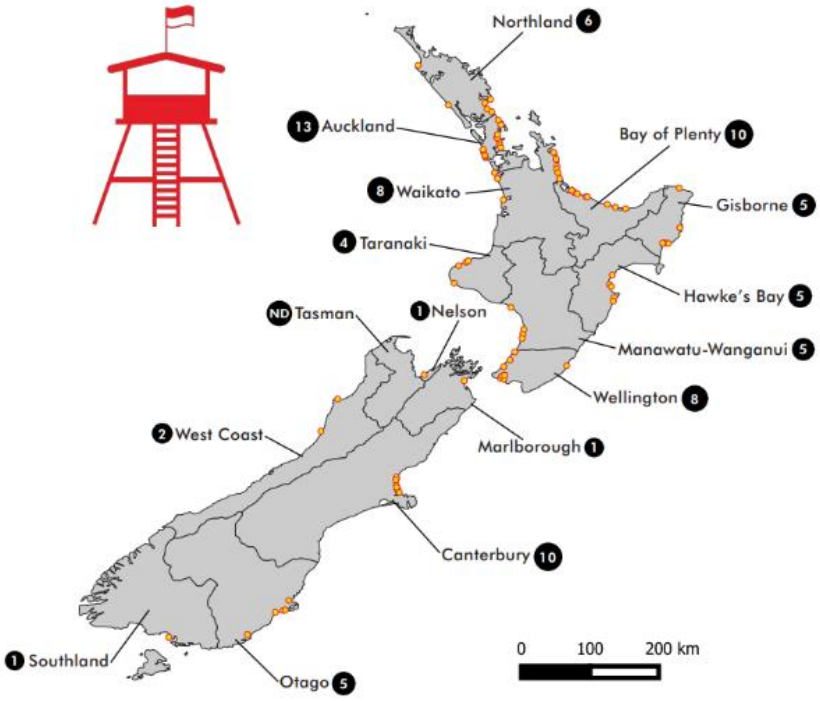
Preventing fatal drownings is crucial, and bystanders play a vital role. However, their lack of training and familiarity with potential hazards can also pose a significant risk. Surfers, on the other hand, have been proven through international research to be skilled rescuers who can significantly reduce coastal drowning statistics. In many instances, the presence of surfers may be the only form of potential rescue for people who find themselves in trouble outside of patrolled areas or patrol times. This is supported by studies conducted by Attard et al., 2015, Brander et al., 2019, Lawes et al., 2020, Uebelhoer et al., 2021, Berg et al., 2021, Omnipoll 2023, and Mead, 2023. Therefore, utilizing surfers nationwide could be a valuable solution to this critical issue.

According to research conducted by Mead in 2023, surfers play a crucial role in preventing coastal drowning across New Zealand and have saved 245 lives in the five years leading up to the study. Although the total number of rescues by surfers in a year is difficult to determine, these reported figures highlight the significant contribution that surfers make in reducing social and financial costs associated with fatal coastal drowning in New Zealand. Among the 418 surfers surveyed (out of an estimated total of 145,000 across the country), the average number of lives saved per year was 48.4.

Surfer Rescue 24/7 is a program that has shown its effectiveness in Australia, where research has indicated that rescue training correlates with increased rescue rates. While the program is still relatively new in New Zealand, respondents in a recent study spoke highly of it and demonstrated a strong interest in training.

While formal lifeguard services are important, it is not practical or financially feasible to provide full coverage along New Zealand's extensive coastline. The disparity in coverage is evident in Figure 3, which shows the limited number of Surf Life Saving Patrols in comparison to the total coastline. Additionally, data from Surf Life Saving New Zealand shows that 70% of known bystander rescues occur outside patrolled areas and times. This highlights a need to empower and support the surfing community as a valuable resource for water rescue.

Figure 3: Surf Life Saving Patrols per Region across New Zealand.



Surfers Rescue 24/7 aims to upskill the surfing community in water rescue techniques and CPR skills with the goal of reducing the number and severity of drowning incidents. The program has proven effective and is widely supported and requested by the surfing community across New Zealand. This section evaluates how the program can be delivered to the surfing community.

Methods

When collecting data, researchers often begin with qualitative research. This type of research focuses on collecting non-numerical data, such as interview transcripts, video recordings, and survey responses. Qualitative data is gathered through first-hand observation, such as focus groups, interviews, and ethnography. By diving deep into ideas and concepts, researchers can gain a better understanding of specific topics.

To determine how best to deliver Surfers Rescue 24/7 across New Zealand, a series of face-to-face and telephone interviews were conducted with a cross-section of the surfing community. Two separate focus groups were created to allow participants to discuss and share their opinions. It is important for everyone to have a chance to speak and contribute to the group, rather than letting one person dominate.

The first workshop was held in person in Mount Maunganui on April 15, 2023 and was facilitated by the Auckland University of Technology. Twelve participants from across the Auckland, Waikato, and Bay of Plenty regions attended. The workshop aimed to gather insights from surfers about how to support them in saving lives and preventing drowning. The workshop lasted about three hours and focused on understanding ways to support surfers for water safety, identifying opportunities and challenges in supporting their role in drowning prevention, and establishing mechanisms for recording surfers' rescues.

The second workshop was an online event hosted by Surfing New Zealand on June 21, 2023. This workshop aimed to gather feedback from current leaders within the surfing community across New Zealand. The chairpersons from board-riding clubs were invited to participate and were encouraged to provide information on what they believed were the most important issues in the delivery of Surfers Rescue 24/7. No formal discussion guide was used to gain insight into what the surfing community believed was required. Twelve participants representing seven of the Boardrider clubs across New Zealand attended. Boardrider clubs that took part in the Microsoft Teams online workshop:

Hawkes Bay Boardriders – Keri McKenzie
Whangamata Boardriders – Ben Kennings and Justin Rogers
Papamoa Boardriders – Lee Ryan and Gavin Bisman
North Coast Boardriders – Kevin Piper and Dan Westerkamp
North Wai Boardriders – Russell Ritchie
South Island Surfing Association – Roxanne McKerras
Bay Boardriders – James Jacobs

Results

Mount Maunganui workshop (Auckland University of Technology Facilitated)

The results of the initial workshop are currently being compiled into a manuscript for publication in an academic journal. The manuscript is not yet finished, but it is expected to be completed within the next few months. Once it is completed, the relevant stakeholders will receive a copy of the manuscript.

Online workshop (Surfing New Zealand Facilitated)

Below are the key findings from the Surfing NZ online workshop. More detail for each of the key findings are presented in the discussion section:

1. Members found the course to be extremely beneficial.
2. Surf Life Saving New Zealand was commended for their work and appreciated for their support.
3. Repeated visits to clubs would enhance reach.
4. Delivering courses on weeknights during daylight savings were preferred to busy weekends.
5. Tangible resources were deemed important for participants to take away, in line with feedback from Surfers Rescue 24/7 participants.
6. Boardrider clubs with clubrooms could be used as training facilities.
7. Targeting communities beyond boardrider clubs would have a greater impact, but would require greater promotion and awareness.
8. Some clubs expressed interest in becoming course facilitators to serve their community.

Discussion

Surfers Rescue 24/7 has received overwhelming support from members of boardrider clubs affiliated with Surfing New Zealand and the wider surfing community. Recent research and anecdotal evidence indicate that the course is highly beneficial. Surfing New Zealand has 31 Boardrider Clubs, 3 Regional Associations, and 3 National Organizations with a total membership of 3000. However, the majority of the estimated 145,000 surfers in New Zealand do not belong or affiliate with a Surfing New Zealand Boardriders club. To reach these surfers, a targeted campaign is needed to create greater awareness of Surfers Rescue 24/7. Social media channels, such as the Surfing NZ website, Facebook, Instagram, and Twitter, could be utilized to promote the course.

Surfers Rescue 24/7 delivery should be based at home surf breaks, linking in with the local surfing community, whether boardrider club affiliated or not. Initially, the focus should be on affiliated boardrider clubs, with courses to follow that target specific home breaks. Local instructors who are respected within their respective surfing communities should be involved in championing and facilitating courses. A train-the-trainer strategy is necessary to build instructor capacity across New Zealand.

Feedback suggests that the content of Surfers Rescue 24/7 is ideal, with recommendations for more time spent on practical rescue techniques and CPR. Developing a suite of resources that can be accessed online for future reference is recommended. This will allow participants to refresh techniques and skills learnt from the course.

It is crucial to consider barriers to participation in the programme, such as timing, mode of delivery, and financial constraints. Courses could be delivered on weeknights during daylight savings to avoid taking up busy weekends. Delivery methods could vary to meet the needs of each community, with the potential for online delivery of Surfers Rescue 24/7. Surfing NSW has successfully implemented an online version of the course, which could act as a refresher for surfers who have attended a face-to-face course.

Participants in the Surfers Rescue 24/7 program can benefit from free support, but there are costs associated with program management and delivery. The program offers free board rescue and CPR training to surfers and recreational water users, with the aim of minimizing the risks of beach usage. To continue providing this valuable service, financial support is crucial. Fundraising initiatives, such as launching a campaign to raise awareness about the program's mission, can help raise necessary funds. Reaching out to potential donors, including individuals, organizations, corporations, and government

agencies, is also important to secure funding. Diversifying funding sources is key to ensuring the program's long-term sustainability.

Surfing New Zealand staff and senior leaders in the surfing community have praised Surf Life Saving New Zealand's work and support for the Surfers Rescue 24/7 program. The program provides a platform for collaboration between the two organizations, which has not always been easy to achieve.

Research has identified a community group that fills a void in coastal rescue, particularly in the absence of lifeguards. Engaging with surfers offers immeasurable social and economic benefits, as well as potential knowledge to be gained. While drowning is a complex social issue, surfers can play an immediate and effective role in preventing drowning fatalities. Collaboration between stakeholders, including Surf Life Saving New Zealand and Emergency Services, is important for effective drowning reduction strategies. Working from the bottom up with surfers can unlock opportunities for risk communication and tailored drowning prevention initiatives, such as community response. This approach may also lead to pathways for surfers to join Surf Life Saving New Zealand as patrolling lifeguards or for placement on Search and Rescue squads.

Instead of relying solely on official organizations, there should be a focus on empowering communities and creating self-reliance. The New Zealand surfing community has recognized their role in surf rescue and has sought training and collaboration with Surf Life Saving New Zealand to further equip itself with rescue capability. Surf Life Saving New Zealand acknowledges the importance of bystander rescuers in preventing drowning incidents.

The term "capacity building" can be ambiguous, as some view it as a means of increasing the skills of individuals and organizations, while others see it as a condescending way of changing non-profit organizations to meet the standards of outsiders. One interesting aspect of capacity building is the lack of reciprocity, as it tends to focus on building up the weaker side of any partnership. Non-profits may be hesitant to expose their weaknesses, fearing that it may jeopardize funding from grantmakers. They often need to "package" their weaknesses by acknowledging where their organizations need improvement and demonstrating their ability to strategically allocate resources to get the work done.

Surfers play a significant role in preventing coastal drowning. The respondents from Mead’s research (2023) reported saving 245 lives in the five years prior to the study. Although it's impossible to determine the total number of rescues by surfers in a year, the reported figures demonstrate the substantial contribution of surfers in reducing the social and financial costs of fatal coastal drowning in New Zealand. The study surveyed 418 surfers out of an estimated 145,000 across New Zealand, who collectively saved an average of 48.4 lives per year.

The Ministry of Transport NZ has calculated the estimated value of a human life in New Zealand to be $4.42M. Therefore, the study suggests that surfer rescues may prevent an economic burden of approximately $213M+ per year on the local economy. Moreover, considering the average fatal drownings across all water environments, surfer rescues have a significant impact on reducing fatal drowning statistics in New Zealand. Without surfers, it is estimated there would be a 65% increase in annual drowning fatalities, almost reaching 120. If 1% of New Zealand's surfers were conducting one lifesaving rescue per year, it would prevent an economic cost of over $6.4 billion in New Zealand.

Recommendations

1. This program was created by surfers and surf lifeguards, specifically for surfers. To enhance its effectiveness, Surfing New Zealand should facilitate the program while continuing to collaborate with Surf Life Saving New Zealand.

2. To improve the delivery of Surfers Rescue 24/7, recommendations outlined in this report on course structure and delivery should be implemented.

3. Furthermore, a research project is being considered to explore ways for surfers to join Surf Life Saving New Zealand as patrolling lifeguards or for placement on Search and Rescue squads.

Note from NZSAR:
One of the recommendations originally in this section, and an accompanying table with budget figures, have been redacted. For more information please email info@nzsar.govt.nz

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