

CAT 4 RESOURCE DEVELOPMENT

Group 4-016
Project Veteris

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1 ABSTRACT

Project Veteris aims to guide HCI students who live with elderly on how to better care for them by providing them with informative resources. These resources aid in educating students on first aid and nursing, and help them better understand the common injuries and illnesses that the elderly suffer from. In doing so, they can successfully reduce the elderly injury and illness rate by employing precautionary measures. The resources consist of an informative website, Instagram page, tutorial videos, and an emergency handbook. These resources help students gain knowledge and skills to better care for the elderly.

2 INTRODUCTION

2.1 Rationale

In an ageing population, information regarding first aid and elderly care is vital, and providing people with sufficient knowledge could help prevent accidents from happening. Through our research, we had found that according to the Singapore Heart Foundation and Health Promotion Board, 1 in 2 Singaporeans aged 60 and above suffers from high blood pressure, and in 2018, almost 650 Singaporeans died due to high-blood-pressure-related diseases, while one-third of Singaporeans aged 60 and above suffer from recurring falls. This shows that the elderly in Singapore are vulnerable to various injuries and diseases, which can lead to undesirable consequences.

2.2 Objectives

- Raise awareness of common injuries and illnesses that the elderly suffer from
- Help target audience gain basic first aid and nursing knowledge specific to aiding the elderly, especially in emergencies
- Help reduce elderly injury rate and severity of injuries should accidents happen

2.3 Target Audience

Secondary 1-4 students from HCI who live with an elderly family member.

2.4 Resources Created

2.4.1 Instagram Page

An Instagram account was created to disseminate various health-and-safety-related information. This was done in the form of infographics, primarily focusing on symptoms, treatments, precautions and preventive measures.



2.4.2 Website

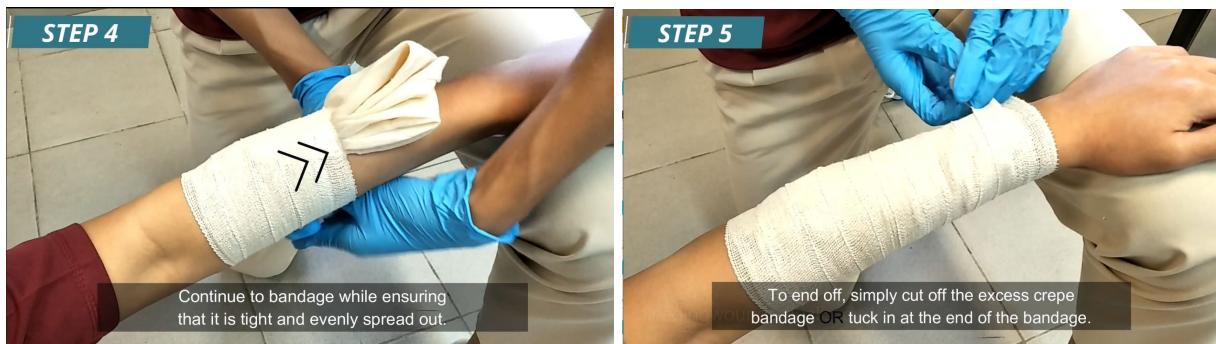
A website was created using Wix to provide in-depth information on first aid and elderly care. Detailed articles were posted, after undergoing many layers of fact-checking. Contents include definitions, statistics, treatment, symptoms and preventive measures.

The image shows two screenshots of a website:

- Homepage (Left):** A blue-themed page with a landscape background. Text: "Welcome to Project Veteris", "you could save a life one day!". Buttons: "Useful Tips" (with a heart icon), "More About Us" (with a person icon).
- Blog Section (Right):** A blue-themed page with a sidebar and three main article cards:
 - Managing Fractures**: "Fractures are a common injury that can occur to anyone of any age, and is especially common in people who have a medical history of osteo...".
 - Osteoporosis**: "Osteoporosis is a condition that becomes increasingly common with age, as well as other factors, in this article, we will be covering whi...".
 - Coronary Heart Disease**: "Coronary Heart Disease a condition that has been becoming increasingly common in society, due to various factors such as increased stress...".

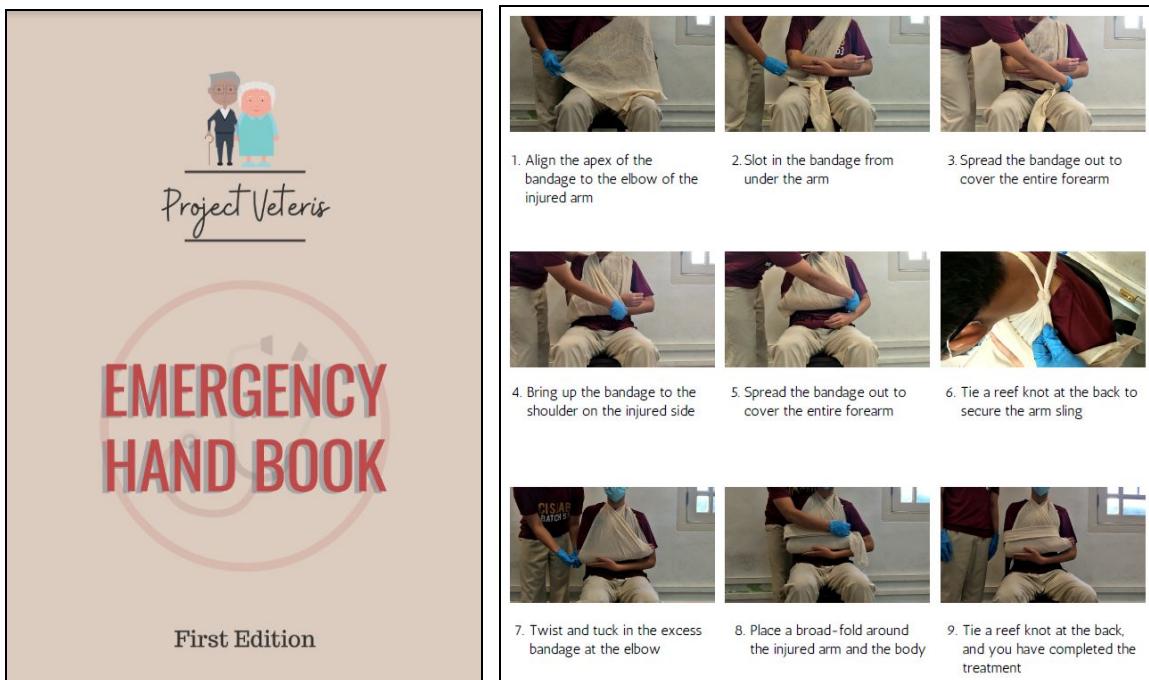
2.4.3 Tutorial Videos

A series of tutorial videos, comprising treatments for arm fractures, bleeding and sprains, was created to educate our target audience on how to conduct proper treatment. These videos consist of step-by-step instructions for the various treatments.



2.4.4 Emergency Handbook

The emergency handbook houses multiple guides to symptoms and treatment for common injuries pertaining to the elderly, and is meant to be used during emergencies. A quick-access directory was coded into our online handbook for easy access to the needed information, and step-by-step guides were included for more complicated treatments (refer below).



3 REVIEW

Although there are multiple existing resources on the Internet, such resources are unlikely to focus on the aspect of elderly care, which is our project's main focus. As such, the information from online sources is not tailored to specifically teach how first aid applies to the elderly. Additionally, they tend to cater to wider audiences, and information may not be concise enough, especially during emergencies. Finally, online sources may even contradict one another, as they follow different first aid standards, whereas our project utilises standardised information from St John Brigade. A negative example is shown below from a website online, which we would like to keep confidential. This source teaches users to press an ice pack onto fractures in order to reduce swelling. However, in most elderly, their bones would be weaker and more susceptible to a condition called complex fractures, which would be severely aggravated should such a treatment be conducted. As such, to prevent these contradictory information from misleading our target audience, we have specifically tailored the information in our resources towards the elderly. Our CCA also allows us to have links with professional doctors and nurses to help us verify our resources and fine-tune the information before publishing them.

Don't move the person except if necessary to avoid further injury.
Take these actions immediately while waiting for medical help:

- **Stop any bleeding.** Apply pressure to the wound with a sterile bandage, a clean cloth or a clean piece of clothing.
- **Immobilize the injured area.** Don't try to realign the bone or push a bone that's sticking out back in. If you've been trained in how to splint and professional help isn't readily available, apply a splint to the area above and below the fracture sites. Padding the splints can help reduce discomfort.
- **Apply ice packs to limit swelling and help relieve pain.** Don't apply ice directly to the skin. Wrap the ice in a towel, piece of cloth or some other material.
- **Treat for shock.** If the person feels faint or is breathing in short, rapid breaths, lay the person down with the head slightly lower than the trunk and, if possible, elevate the legs.

4 METHODOLOGY

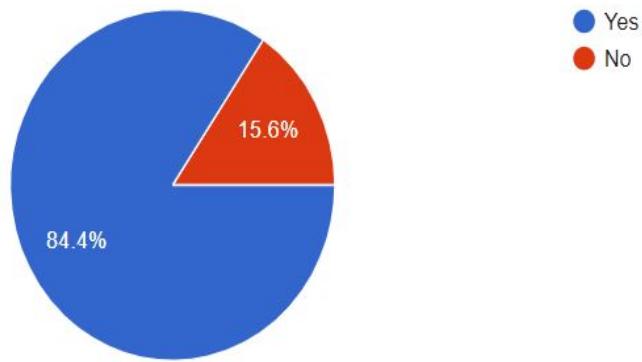
4.1 Needs Analysis

A needs analysis was conducted at the start of our project to establish the need for our project. A survey form was sent out in January to 167 secondary 1-4 students in HCI to find out their knowledge on elderly healthcare and safety. Our survey focused on whether students stay with elderly who suffer from health issues and if students had any prior first aid knowledge sufficient for them to take care of the elderly.

4.2 Survey Results

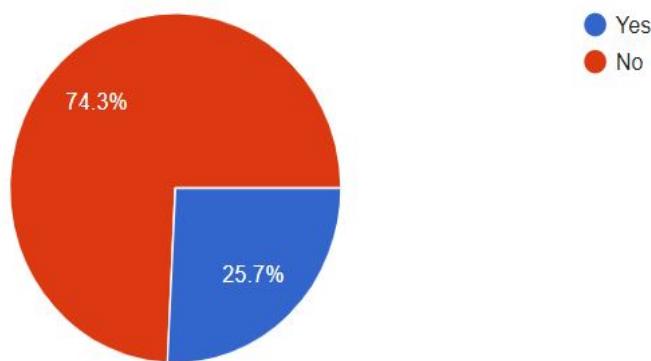
Do you know of any elderly who suffer from any health problems? (falls, high blood pressure, heart attack, stroke, dementia etc.)

167 responses



Do you think you have sufficient knowledge of elderly care to help them confidently should they get injured or face issues with their health?

167 responses



As shown, the majority of students, 84.4%, know of elderly with health problems. However, only a quarter of them believe they have enough knowledge to help the elderly in times of need. This further ascertains the need for our resources which equip students with knowledge required.

4.3 Development Of Resources

A review was conducted across existing resources online to find out about the pros and cons of each resource. Next, we gathered the necessary information and simplified them into infographics and website posts to allow easy understanding. As for our tutorial videos, we conducted filming while safe distancing and edited the videos to ensure our final products were easily understandable. Finally, all resources were sent to professional doctors and nurses, St John alumni whom we have connections with, for verification and improvements.

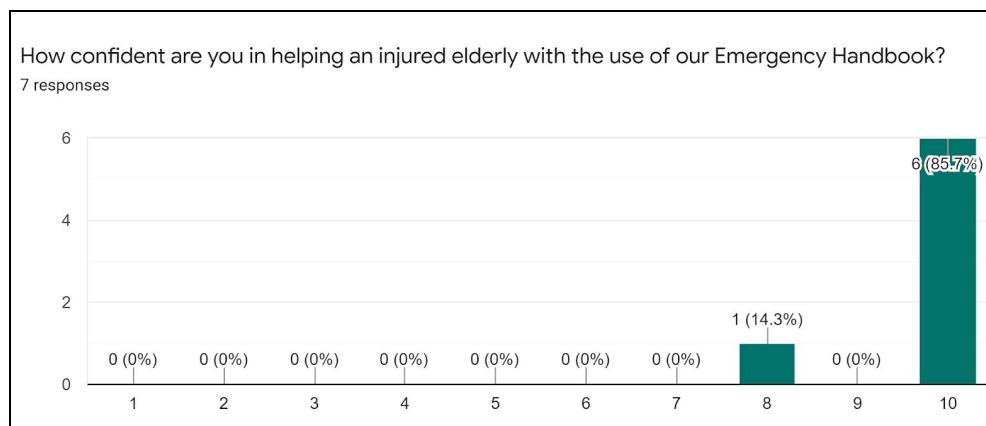
4.4 Pilot Test

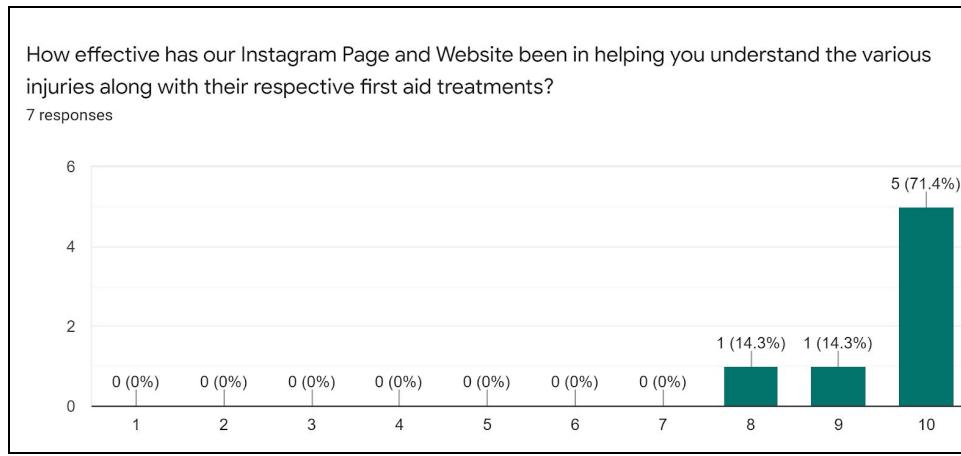
4.4.1 Physical Pilot Test

A physical pilot test was conducted to assess the effectiveness of our emergency handbook. Members of our target audience were asked to conduct basic first aid treatment by solely referring to the handbook, and they managed to do so successfully. This shows that our emergency handbook is effective in helping our target audience to treat the elderly should accidents occur.

4.4.2 Online Pilot Test

An online pilot test was conducted to replace our sabbatical course. During this online lesson, we introduced our resources to our audience, and taught them how to access and utilise them. Afterwards, a feedback form was sent to the participants, asking them to rate the effectiveness of our resources in achieving our objectives. The results were very positive, and showed that our resources were effective.





5 OUTCOME & DISCUSSION

5.1 Final Outcome

Over the course of our project, we posted 10 infographics on our Instagram page, 9 articles on our website, and 3 tutorial videos on both platforms. We also completed our emergency handbook, and further refined it based on feedback from participants of our online lesson by adding in common scenarios that could result in accidents among the elderly.

5.2 Limitations

Due to the COVID-19 pandemic, we were unable to conduct any physical first aid courses. Practice is an integral part of picking up first aid. Thus, this limitation greatly undermined the effectiveness of our resources as we were limited to knowledge-based ones. Users who are fast-learners may still find the resources effective, but there is a high possibility that this would result in fewer of our target audience benefitting from our project.

5.3 Further Extensions

As not many people may have first aid materials with them when in public, a possible further extension to this project would be a new set of tutorials to teach our target audience about makeshift techniques that can be adopted by solely using common day-to-day items, such as clothing or cold drinks.

6 CONCLUSION

Through the project, we have learnt to conscientiously view our resources from different perspectives. Initially, our resources were not successfully tailored to our target audiences' needs as we had failed to view the resources from their perspective. Without formal first aid training, it would be extremely difficult for someone to identify injuries at first glance. This rendered our emergency handbook ineffective initially as the users would be unable to find the correct injury quickly. As such, we have included a "Common Scenarios" section to act as a quick-access directory by narrowing the scope down to possible injuries the elderly may be suffering from. This would allow the user to be able to identify the injury based on the type of accident, and conduct treatment quickly.

Through the project, we have also picked up many skills like video editing and filming, designing infographics as well as public speaking skills.

7 REFERENCES

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