

CAT 4 RESOURCE DEVELOPMENT

MEDICAL BOOKLET FOR TEENAGERS

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ABSTRACT

Medical Booklet for Teenagers is a booklet, coupled with a website aiming to help teenagers learn more about medical information so that they are able to self-medicate and self-treat their illnesses and injuries without having to visit the doctor. It provides concise information on common illnesses, injuries as well as basic treatment methods. There are also comics and quizzes to help facilitate the understanding of such medical information, allowing the teenagers using this booklet to better understand the medical information.

1 INTRODUCTION

1.1 Rationale

In 2018, research has shown that for the first time the number of people over 65 years old will equal the number of people under 15 years old. This will increase the dependency ratio, as adults in the working force will have to work harder to support both the people above 65 years old who have retired and the people who are still studying in school. Therefore, the teenagers, who are still able-bodied, should learn basic medical information so as to assist their elderly grandparents or to treat their own illnesses and injuries on their own to lighten the burden of their parents. In addition to this, there is also the increasingly common phrase “strawberry generation” being mentioned which paints the current generation of teenagers to be weak and unable to care for themselves. With the medical information obtained, teenagers will be able to prove that their generation is neither weak nor spoilt.

1.2 Objectives

The objectives of Medical Booklet for Teenagers were to

- Equip teenagers with basic medical knowledge so that they are able to treat themselves and/or others eg. their grandparents or their parents in time of emergency
- Enable students be able to become more independent to provide first aid to the victims
- Enrich people with the basic knowledge and the ability to self-treat without having to go to the doctor for common illness eg. flu, minor cuts etc.
- Prevention of illnesses and injuries in the future

1.3 Target Audience

The target audience was teenagers with an age range of 13-18 years old.

1.4 Resources

The resources created for this project were a booklet with medical information on common illnesses like cough and flu and common injuries like cuts, abrasions etc., symptoms and treatment methods that do not involve having to go to the doctor, a website which has medical information which is more detailed compared to the booklet, with additional resources like links to other medical websites and videos. There was also an app which can be accessed easily through the phone, for the convenience of those who choose not to carry the booklet around with them.

Website

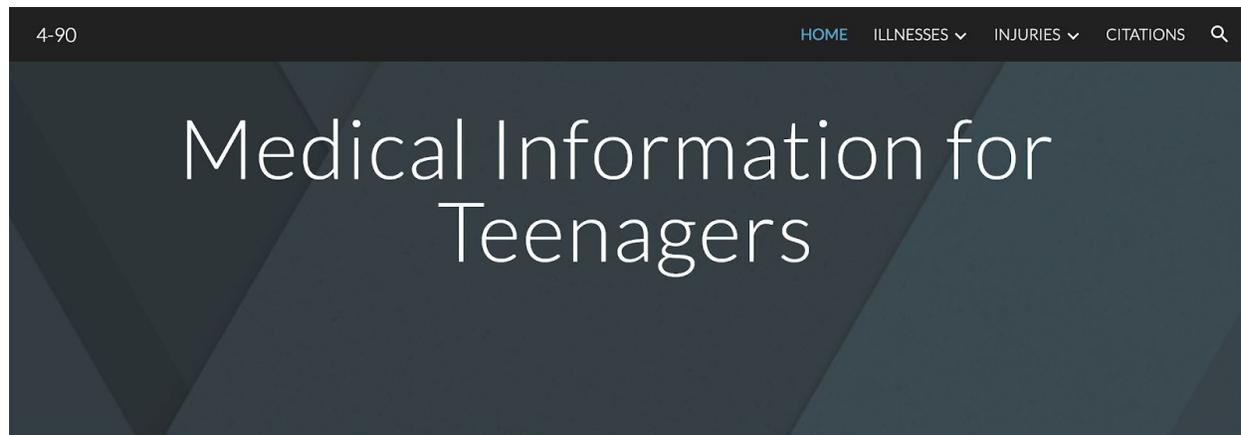


Important note for food allergies:

- Not to be confused with food intolerance
- Food allergies and their symptoms tend to be more serious as compared to food intolerance
- If you experience these symptoms for food allergies, it is highly recommended to visit the doctor regardless of the severity of your symptoms

Common food allergies:

- Milk
- Peanuts
- Eggs
- Fish
- Wheat
- Tree nuts
- Shellfish
- Soy



Medical Booklet for Teenagers is a booklet, coupled with a website aiming to help teenagers learn more about medical information so that they are able to self-medicate and self-treat their illnesses and injuries without having to visit the doctor. It provides concise information on common illnesses, injuries, how to identify them based on visual symptoms as well as basic treatment methods.

The selection of illnesses and injuries was based on what is most commonly gotten by people in our everyday lives.

Illnesses are defined to be sicknesses or diseases that reside within the body;

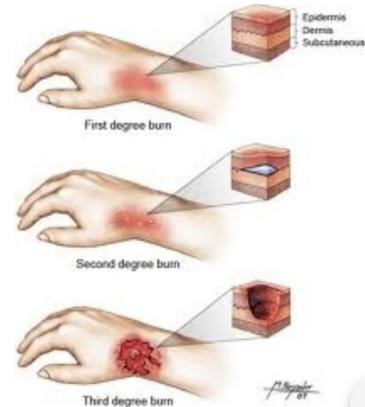
Injuries are defined to be ailments that exude physical damage on the body.

By: Derek Tay, Ho Choong Ren, Kieran Heng

Burn

There are three different types of burns, of which only the first two are treatable from home:

- First-degree burns (treatable from home)
- Second-degree burns (treatable from home but recommended to go to the hospital/doctor)
- Third-degree burns (should immediately go to the hospital for treatment)



Prevention

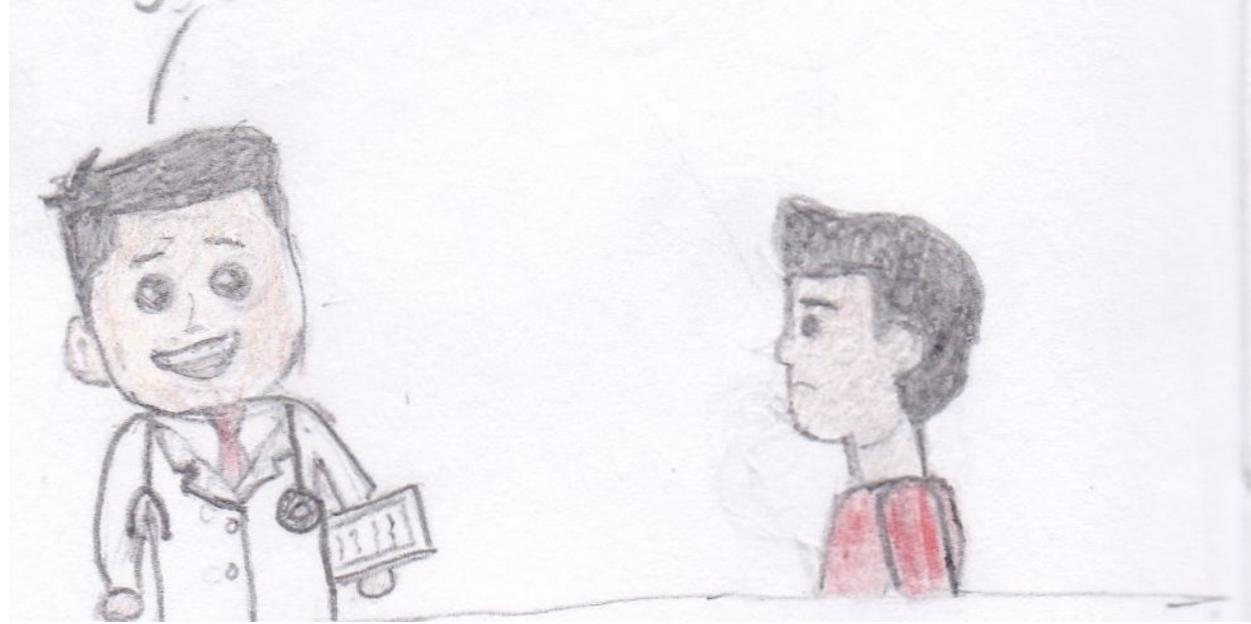
General tips for Prevention of illnesses:

- Sleep-produces cytokines and other infection fighting antibodies
 - Exercise-reduces risk of many diseases and makes you feel healthier
 - stay away from sick people-prevents you from being infected with contagious illnesses
 - Get vaccinated-Vaccines help to strengthen immunity, decreasing vulnerability towards illnesses
 - Wash your hands-gets rid of harmful bacteria, viruses and germs which can cause infections
 - eat healthy
- A small circular icon with a pencil is located in the bottom right corner of the page.

Drawings featured in the booklet



I'm sorry Johnny,
but you're not
allergic to brocolli



Screenshots of the soft copy booklet

COUGH

Causes:

Irritation in airways

- Phlegm
- Dust
- Smoke



Allergic reactions

Symptoms:

"Dry cough"

- Tickly feeling in the throat

"Chesty cough"

- Phlegm produced
- Phlegm colour indicates severity:
White < Yellow < Green

Dry or itchy throat

Hoarseness

Short of breath

Treatment:

Rest

Drink more fluids

Take lozenges

Humidify the air

Wear a mask to prevent spread

Homemade

remedies:

- Honey lemon
- Gargle saltwater (to clear phlegm)

Contact your doctor if:

Cough stays more than 3 weeks

Cough is particularly severe or is getting worse

Blood is coughed up

Shortness of breath, breathing difficulties or chest pain is experienced

A HEALTHY LIFESTYLE:

Keeping a healthy lifestyle is important as it reduces the risk of us getting sick and injured.

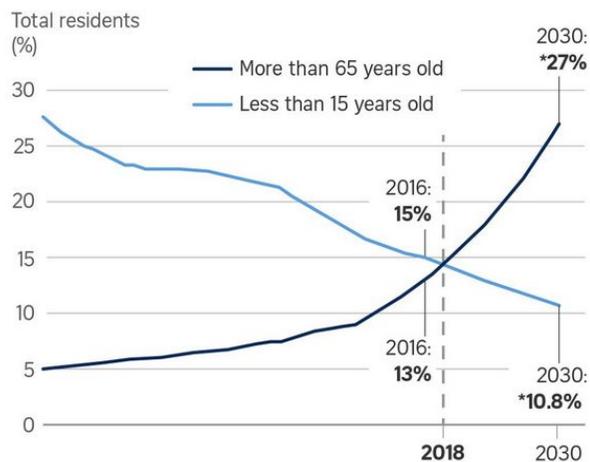
These are the main things to keep track of!

1. Stay physically active – keep your body fit and strong. Get at least 3 hours of moderate physical activity a week.
2. Hydration – Drink up! Drink water throughout the course of the day, and drink more if you're sweating or feeling hot.
3. Diet & Nutrition – Maintain a balanced diet. Consume meats, carbs, veggies, and dairy products, and eat less fatty and oily foods. A well-fed body is a good body.

2. Review

According to the Straits Time article (Singapore's demographic time bomb: Number of old people will match number of young for first time next year, says UOB analyst), with the increasing dependency ratio and aging population, there are not enough adults to take care of the senior citizens in Singapore as they are busy working.

Singapore's resident population



NOTE: * UOB's forecast.

As such, it falls on the children to take care of their grandparents and other older relatives. Apart from this, research (Number of seniors with complex care needs set to rise in Singapore: AIC) has also shown that there is an increasing number of senior citizens with illnesses and/or healthcare needs, therefore there is a need for youth to have basic medical knowledge.



By Chan Luo Er
@ChanLuoErCNA

Singapore

Number of seniors with complex care needs set to rise in Singapore: AIC

02 Jul 2016 06:57PM



To help seniors manage their conditions better and reduce unnecessary hospital admissions, the Agency for Integrated Care has a two-year pilot that sees teams of healthcare professionals visiting seniors with multiple chronic conditions regularly.

There is also the factor of money, in which when a person has a common illness, there is no need for visits to the doctor and simply self-medicating is enough (More people self-medicating to ease aches and pains from Straits Times), allowing people to save money.



More people self-medicating to ease aches and pains



Pharmacists say the trend of self-medication is driven by the ease of online self-diagnosis and availability of more non-prescription painkillers. THP FILE PHOTO

© PUBLISHED JUL 15, 2017, 5:00 AM SGT



"Self-medication is useful to prevent and treat simple ailments," said Ms Boon Choon Pei, senior pharmacist at the National University Hospital. "When done right, it reduces unnecessary medical consultations."

3 METHODOLOGY

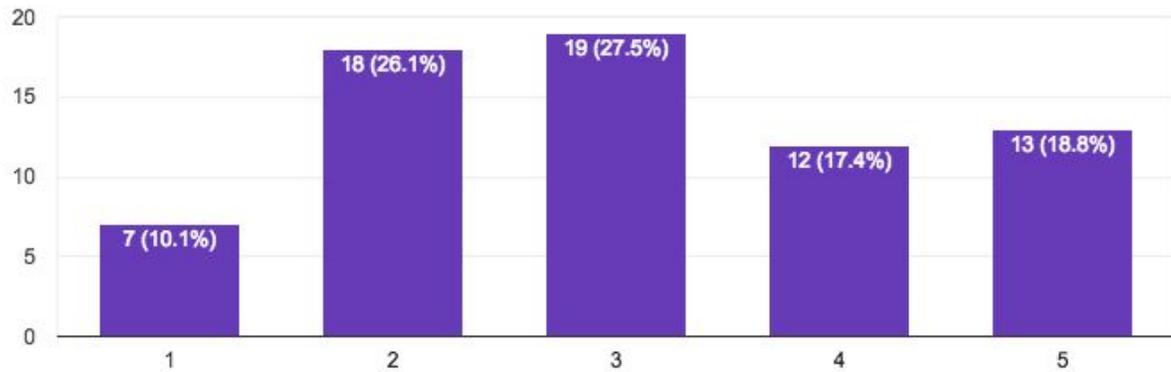
3.1 Needs Analysis

A needs analysis was conducted to ascertain the relevance of such a project. A survey was conducted to find out how knowledgeable students were on treating their own illnesses and injuries without having to go to the doctor's. Out of the 74 respondents, more than 50% of them indicated that they were not confident in treating their own illnesses or injuries. A majority of over 80% also indicated that they felt the resources with medical information would help in treating their own illnesses and injuries. In the same survey, respondents were also asked about the status of their grandparents, such as whether the respondents helped their grandparents with their daily tasks, in which 68.4% of respondents who have grandparents living with them indicated that they did not.

3.2 Survey Results

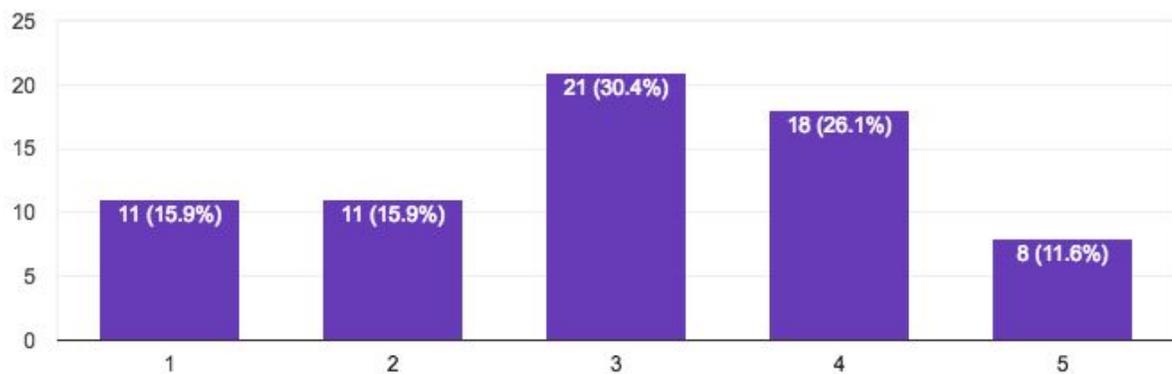
How well do you think you can treat your own injuries? Injuries refer to physical damage on your body, e.g. Deep cuts, bruises.

69 responses



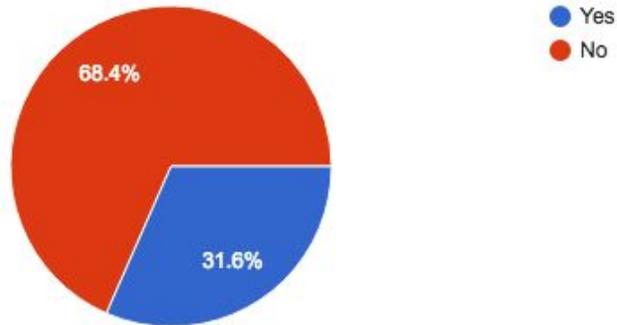
How well do you think you can treat your own illnesses? Illnesses refer to sicknesses and diseases within your body, e.g. flu, fever.

69 responses



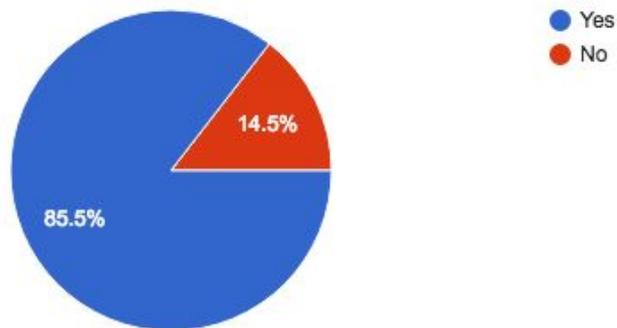
If yes, do you help them with these daily tasks?

38 responses



Do you think that a booklet with basic information on various illnesses and injuries would let you know how to treat them?

69 responses



Through the survey results it can be seen how there is a need for our project to help people learn more on how to treat various illnesses and injuries.

3.3 Development of Resources

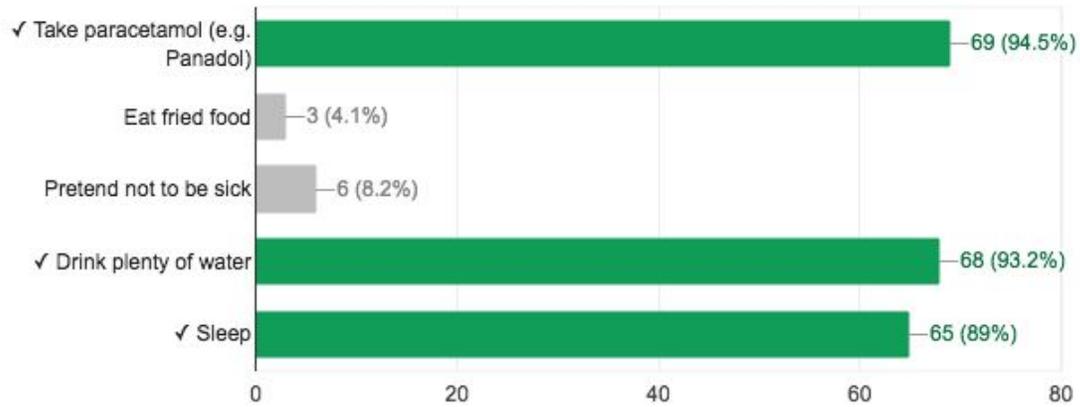
We focused on illnesses and injuries which were the most common and the most easily treated from home. Information was collated from various certified medical websites like mayoclinic.org, National Institute of Health, Cleveland Clinic, NHS Inform to get accurate medical information which could be put into our booklet. Our resources are centred around identifying the illnesses and treating them. These resources were then verified by certified doctors. Drawings which were not excessively graphic were also used to provide visual support and cater to the target audience of 13-18 year olds who may still be uncomfortable with graphic images. Apart from our booklet, there is also an online booklet and app to make our resources more convenient to access. There are also quizzes and comics to test and refresh the knowledge of readers.

3.4 Pilot Test

A pilot test was administered to 73 students of the Hwa Chong Institution High School Section. Amongst these 73 students, there are some which have previously taken our needs analysis. We sent the link to our website containing medical information to these respondents and asked them to look through it. Afterwards, we sent them a quiz and got them to answer questions on treating various illnesses to see if the website was effective in helping them learn more about treating illnesses and injuries. In general, for those who took the needs analysis beforehand and had indicated that they were not confident in treating their own illnesses and injuries, good results were observed when they took the questionnaire. Overall, the respondents had indicated that the online version of the medical booklet had helped them in their understanding of the identification and treatment of illnesses and injuries.

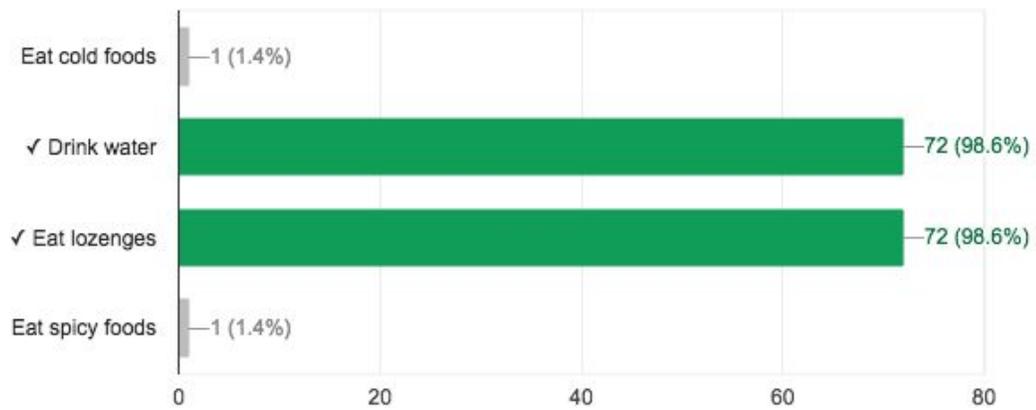
What should you do if you have a flu?

62 / 73 correct responses



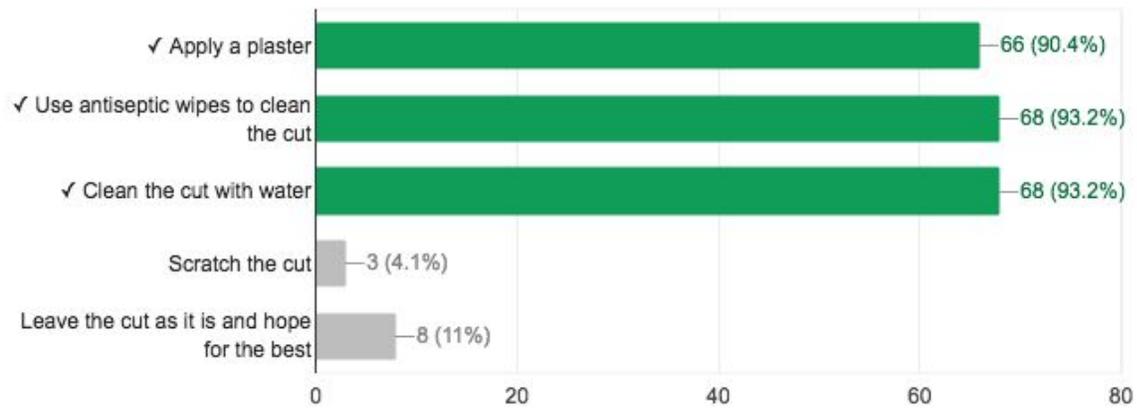
What should you do if you have a cough?

72 / 73 correct responses



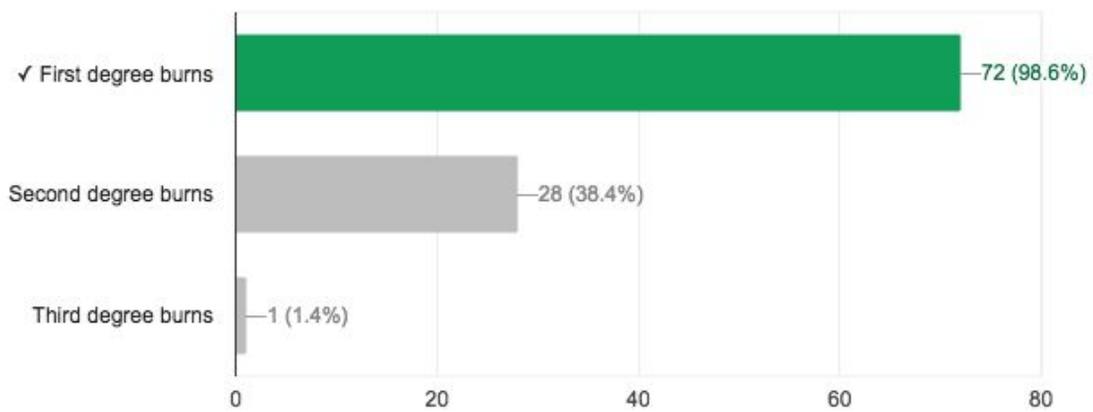
What should you do if you have a cut?

63 / 73 correct responses



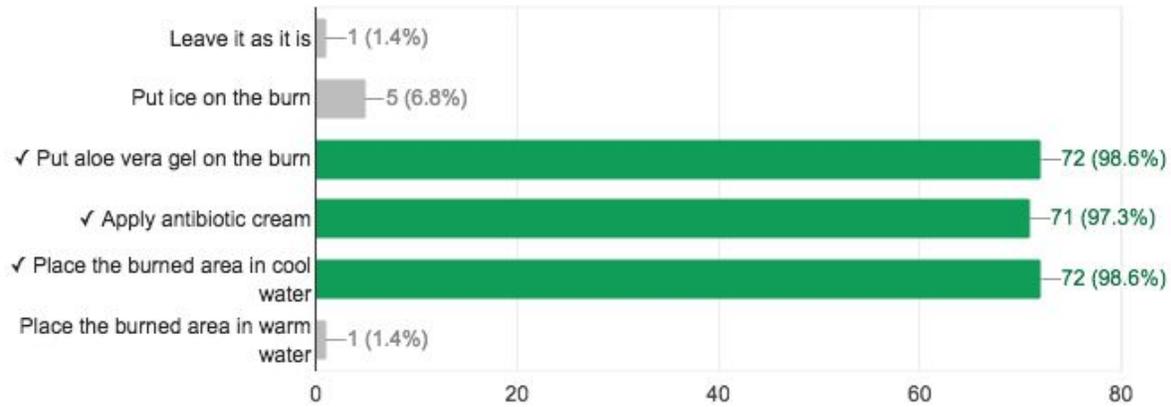
Which type of burns can be safely treated from home?

44 / 73 correct responses



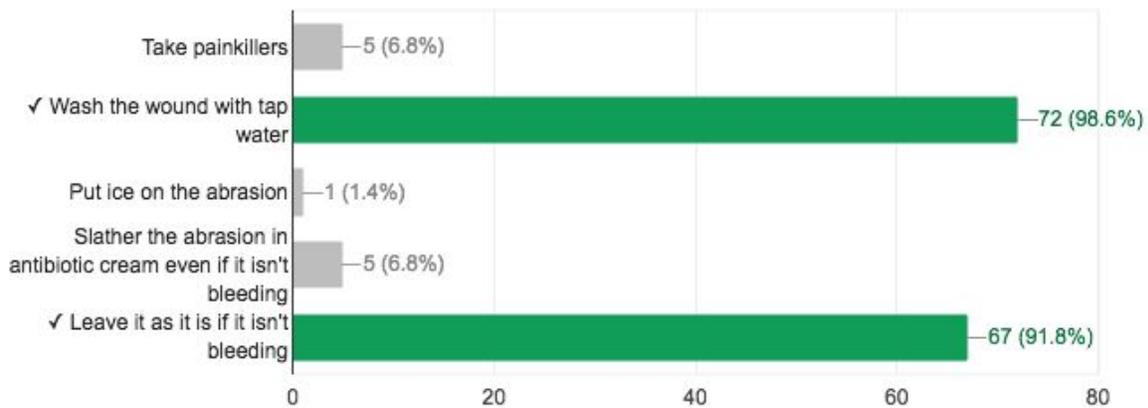
What should you do if you get a burn?

67 / 73 correct responses



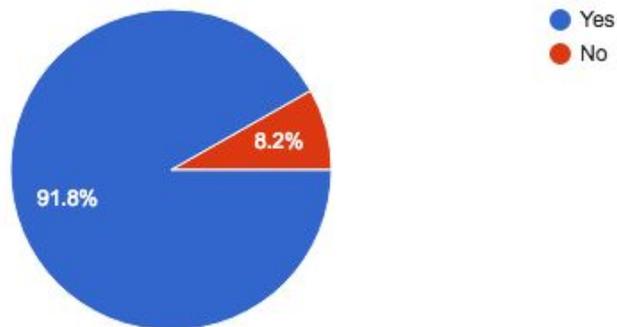
What should you do if you have an abrasion?

57 / 73 correct responses

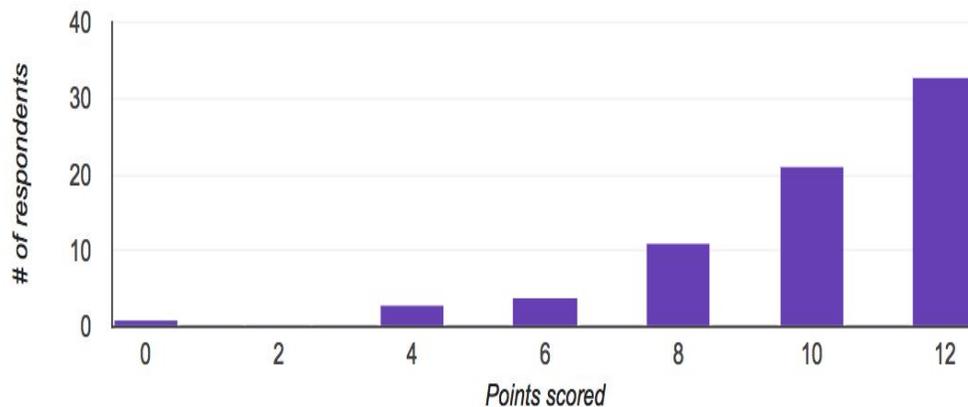


Did the booklet help you to better understand the treatment of your illnesses and injuries?

73 responses



Total points distribution



As can be seen from the results, most of the respondents responded positively to the online version of the medical booklet. There were also some respondents who provided valuable suggestions such as adding pictures to the website to visually support the words, to improve the format of the website as they found it difficult to navigate. Some respondents also asked for information on more specific illnesses and injuries apart from the

common ones like flu and cough because they already knew how to treat those illnesses and injuries.

4 Outcome & Discussion

After the positive reception to the online version of the medical booklet, we initially only planned to print the medical booklet as an offline version so that people could read it at home. However, after discussion, we also decided to release an app which had the medical information from the booklet, along with additional comics, quizzes and videos for treatments of more specific illnesses and injuries so that the users could access the medical booklet on their phones easily if they did not have an Internet connection or the offline version of the medical booklet with them. It works exactly like the website, with different categories and subcategories to make it easy to find the specific illness or injury that they were trying to treat.

5 Conclusion

Medical Booklet for Teenagers had been a tough project to work on right from the start. There were many people who were questioning the need for our project as there were plenty of medical booklets in the market. As a result, we decided to focus on an aspect of medical information that is rarely covered in most medical booklets, which is self-medication. Many hours were put into gathering information from various websites, checking the reliability of the information and putting it into simple, concise sentences so that readers of all ages can understand the ways of treatment. This project allowed all group members to develop various skills. We learnt how to design a website and app without any basic knowledge. We also picked up medical information that we previously did not know before while making the medical booklet. Perfectionism, patience and perseverance were necessary in making the final touches to the project to ensure that there were no flaws in the final products. At the end of the day, when we

presented the final products to the respondents who had used the prototype website and they agreed that the products had improved greatly, all of the group members felt extremely happy and satisfied.

6 Acknowledgments

We would like to acknowledge and extend our deepest gratitude to the following individuals, without whose help the project would never be a success.

Dr Ho Sio Ping and Dr Ho Kok Sun for taking the time out of their busy work schedules to check and verify the resources in our booklet and for giving us the stamp of approval that our resource project would aid readers in self-medicating.

Mrs Koh-Ang Choon Cheng for patiently guiding us throughout the whole journey of this project.

Judges in the Proposal Evaluation who pointed out the various flaws in our project and gave suggestions such as finding a way to make our medical booklet to stand out in the market.

Judges in the Semi-Finals Evaluation who gave positive comments that encouraged the group members to continue on the right track.

The respondents from the Hwa Chong Institution High School Section who took the needs analysis to validate the need for our project and the pilot test to ensure that our products were effective.

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