

Category 4 Resource Development

Group 4-95

Prevention of diabetes in HCI

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Abstract

In recent years, Singapore has seen a rapid increase in diabetics. Diabetes is becoming increasingly prevalent in our society, and can be seen as a national health problem. As such, our project, prevention of diabetes in HCI, aims to foster the development of necessary skills and knowledge in Hwa Chong students to counter this serious health issue.

Our resource is an easy to use, interactive e-portal with critical information about diabetes and how to prevent it. It is also specifically directed to Hwa Chong students, providing information about their environment and how they can prevent diabetes as a Hwa Chong student.

This information includes exercise areas and food choices, exclusive to them in the school compound.

With students being more tech-savvy nowadays, our e-portal will serve as a valuable resource against the prevention of diabetes.

1. Introduction

1.1 Rationale

Why should students be educated on diabetes?

This is because it can aid in the prevention of the disease since young, and students can understand the lifestyle of diabetic patients, and its implications on leading a normal life.

1.2 Objectives

The objectives of our project is to:

- Educate HCI students on the prevalence of type 2 diabetes
- Encourage them to adopt healthy lifestyles
- Spread awareness regarding Singapore's worrying diabetes problem

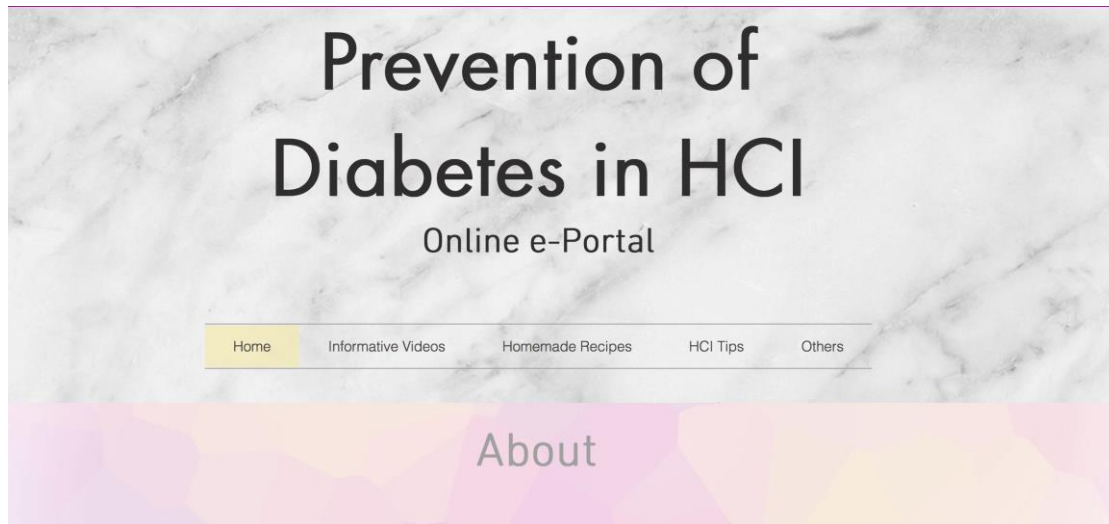
1.3 Target Audience

Our target audience are secondary 1-4 students from Hwa Chong Institution who:

- Lack knowledge about diabetes
- Lack knowledge on how to prevent diabetes

1.4 Resource

Our resource consists of an interactive online E-Portal which educates students on the diabetes issue as well as teaches them how to prevent the disease. This resource includes informative videos about the disease, healthy homemade recipes to encourage self-directed healthy eating and specific tips for Hwa Chong students. It is also mobile friendly and it features a forum discussion platform.



2. Review

Firstly, we researched on the basis of our project, how prevalent diabetes was in our society.

During Prime Minister Lee Hsien Loong's National Day Rally on August 20, 2017, PM Lee cited that roughly 1 in 9 Singaporeans suffer from diabetes. According to a report in 2015 by the International Diabetes Federation (IDF), Singapore was ranked second only to the USA in having the highest proportion of diabetics among developed nations.

We then conducted research on existing resources.

After examining other resources, we found that many sources only display information that were either complicated or very wordy. They also lack the extensive features that our e-portal offers.

One such example is HealthHub.sg by the Ministry of Health. Our e-portal is a more feasible resource as it features short concise videos, healthy recipes and most importantly, information and tips specifically to the students of Hwa Chong.

3. Methodology

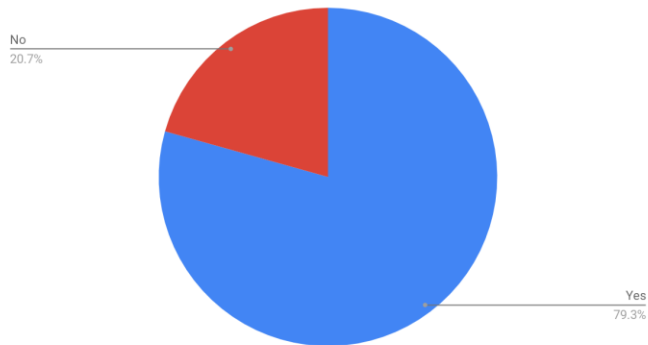
3.1 Needs Analysis

A needs analysis was conducted to ascertain the relevance of such a project. We conducted an online survey on 92 students from Hwa Chong Institution to find out about the awareness of the diabetes issue among Singaporean

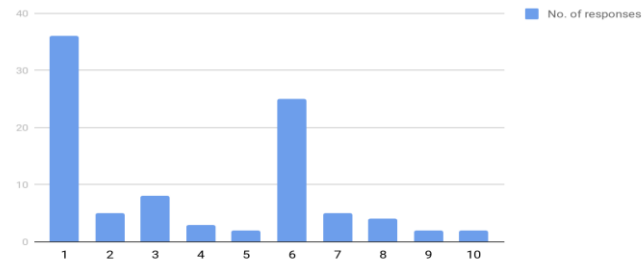
youths, their knowledge about diabetes prevention and how they want to learn about the disease and its prevention. The students' response highlighted the feasibility of our project.

3.2 Survey Results

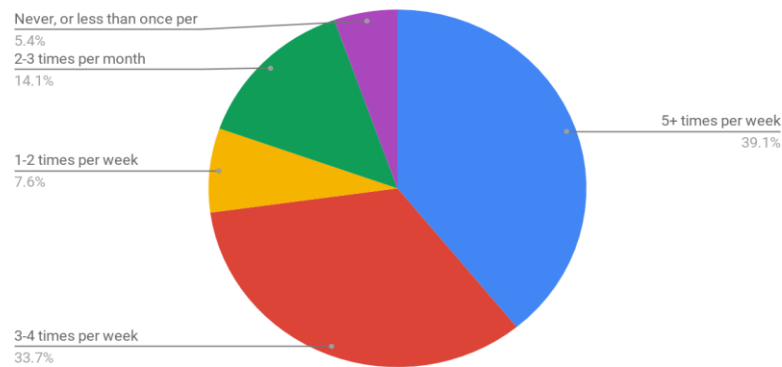
Q.1 Are you aware of the diabetes health problem in Singapore?



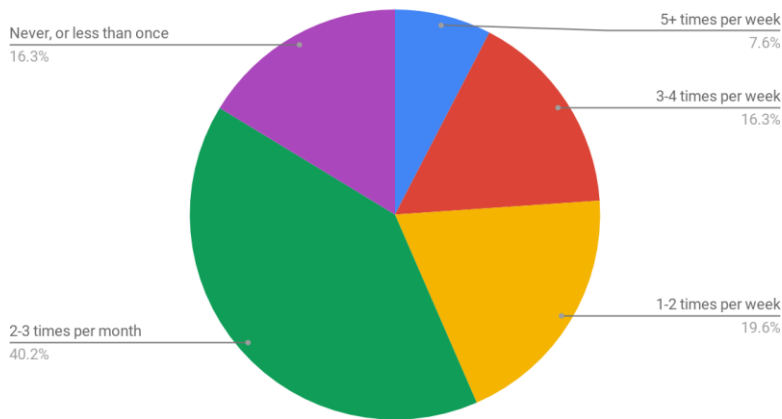
Q.2 From a scale of 1 to 10, how much do you understand about diabetes and its prevention?



Q.3 How often do you consume sugary products? (E.g sweet drinks, chocolate, sweets)



Q.4 How often do you exercise?



Our online survey revealed that Hwa Chong students generally lack knowledge about diabetes, have a high-sugar diet, and fail to exercise regularly. This proves that our resource is highly feasible.

3.3 Development of resources

Our resource, an e-portal features informative videos about diabetes, healthy homemade recipes as well as tips for Hwa Chong students. To create the informative videos, we sourced for information online before using online-video makers to create the videos. As for the healthy recipes, we brainstormed for creative, healthy food choices before coming up with the recipe and trying to cook the dishes ourselves.

Finally, for the tips for Hwa Chong students, we spent time to review the general diet and lifestyle of the student population, before creating videos and resources to cater to their needs. These resources include a guide to where and what sports can be conducted in Hwa Chong, healthier food options in our school canteen as well as an exercise timetable.

3.4 Pilot Test

We conducted our first pilot test on several secondary 4 students. We allowed them to use our portal, and gain information about diabetes. They also learnt how to cook the healthy homemade dishes and how they can take measures to prevent diabetes as a Hwa Chong student.

After the pilot test, we managed to collect their valuable insight on our resource package.

We generally received positive reviews, but also received negative ones. We built on the positive points and took into account the negative points to improve our resource.

Here are some reviews from our schoolmates:

A. "The e-Portal is easy to use. It also feels like its directed towards helping students like us tackle the problem of diabetes." -Yeo Zi Feng 4O1

B. "I find the informative videos short and concise. They have increased my knowledge about the diabetes issue in Singapore, and has taught me how to

take action against it” -Brian Lim 4B1

C. “The informative videos are effective in conveying its message, but some of them appear blur and could be re-uploaded in higher quality” -Jason Niow 4S2

D. “I think a forum page can be included to encourage discussions regarding living healthily among students, instead of a one-way suggestion page” - Nicholas Tan 4H1

4. Outcome and discussion

Even though our project received positive reviews, we decided that it was vital to make improvements such that it would be better received by the student population.

Firstly, we worked on publicizing our project more by creating an instagram page for it. This allowed us to raise awareness on our resource.

Besides, we edited the interface of our e-portal, making it mobile-friendly, hence enhancing its accessibility.

We also decided to add a open-discussion forum to our e-portal, fostering effective and useful conversations surrounding the topic of diabetes.

Lastly, we enhanced the content of our e-portal by adding new sections, such as an exercising schedule specific to the needs of Hwa Chong students.

5. Conclusion

Prevention of diabetes in HCI has been a challenging yet fulfilling project to embark on. Our group put much effort into creating the e-portal and the resources inside it, including videos, recipes and specific tips catered to the student population.

To create the resources inside our interactive e-portal, we had to use skills such as critical thinking, creativity and perseverance.

Even though this project was tough, we were glad to see its impact on the student population and how it has aided in our schoolmates understanding more about the diabetes issue, and what they can do in their power to prevent the disease.

6. References

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