

CAT 4 RESOURCE DEVELOPMENT

GROUP 4-060 PROJECT BPAWARE

Siew Shui Onn (4P1)
Yeoh Zhi Xin (4I2)
Samuel Chan Wen Jie (4A1)
Ng Kai Xiang (4A1)

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ABSTRACT

BPAware is an initiative aimed towards educating and raising awareness among high school students on the seriousness and consequences of BPA. After conducting surveys and interviews, we noticed that many students are oblivious of the presence of BPA in containers and food, as well as its harmful effects. Hence, we established our project. Our resources are designed to provide valuable and applicable information to students, explaining to them the grave impacts of ingestion of BPA, as well as feasible strategies as to how they can mitigate it themselves.

1 INTRODUCTION

1.1 Rationale

The usage of BPA in products around the world is a major problem and has multiple negative impacts both to the environment and to human health. Some people may not know the large extent in which BPA can affect their lives and hence might not try to reduce their usage of it.

1.2 Objectives

The objectives of our project are to:

- Educate target audience on the impacts of the use of plastics, and the harmful effects of BPA and its alternatives present in plastics
- Raise awareness on the usage of plastics, especially plastic food containers
- Convince and show students the many harmful effects of BPA and how to reduce use of BPA via our resource package
- Encourage people to reduce their usage of products containing BPA
- Encourage the use of reusable containers

1.3 Target Audience

Our target audience is students in Hwa Chong Institution, from the age of 13-16. We picked this group mainly because it is easier to reach out to our peers in the same school. We will also be able to relate closely to our target audience since we are in their same shoes, and thus come up with a resource package and initiatives that are relevant and relatable. Furthermore, our plan of creating an online resource package would be fitting for people of this age group as they are receptive to change and are familiar with the Internet and social media.

1.4 Resources

The resources created for this project were an integrated online platform consisting of a website, posters and a short animation which provided our target audience with information on BPA and alternatives that can be used.

2 REVIEW

More students in Hwa Chong would be inclined to order takeaways as compared to pre-COVID times as there was an introduction of a takeaway system as the school had to adhere to Safe Management Measures (SMM). Even after students could eat at the canteen, many students still continued to order takeaway as it was convenient and some stalls such as the Pasta stall only provided plastic takeaway containers. Consistent use of plastic containers could pose a danger to students' health as letting hot food sit in plastic containers for too long may cause chemicals such as BPA to leak onto the food and therefore inevitably be consumed.

Although there are many easily accessible websites on BPA, they were unconsolidated or too dull and difficult to understand, making it difficult to engage a large audience especially with a seemingly uninteresting topic like BPA. There is also a lack of local studies and research done on BPA, so we were unable to understand the effects of BPA

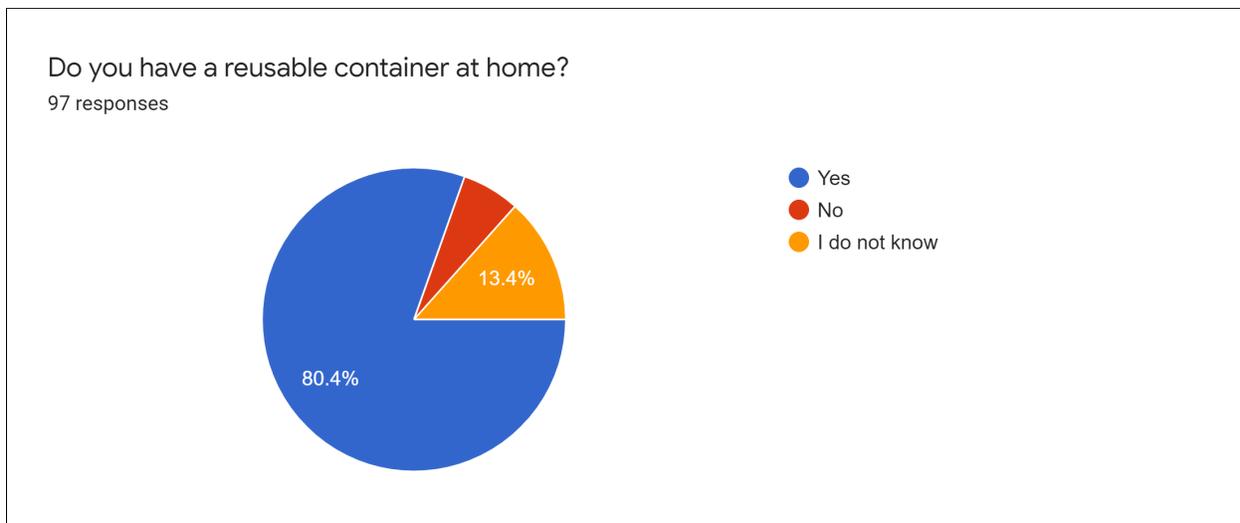
in the local context. Lastly, we wanted to make a resource package to cater specifically to the needs of Hwa Chong students.

3 METHODOLOGY

3.1. Needs analysis

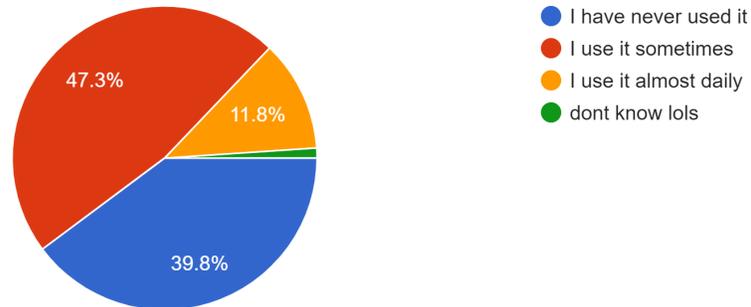
A needs analysis was conducted to ascertain the relevance of such a project. This was done through a Google Forms which had close to 100 respondents. We could infer that many respondents had reusable containers but most of them did not use them frequently, hence implying that they are likely to have used plastic containers with BPA substances when they take away food. Most respondents also felt that a website and posters could help to increase the awareness of the negative effects of BPA and encourage the use of reusable containers.

3.2 Survey results



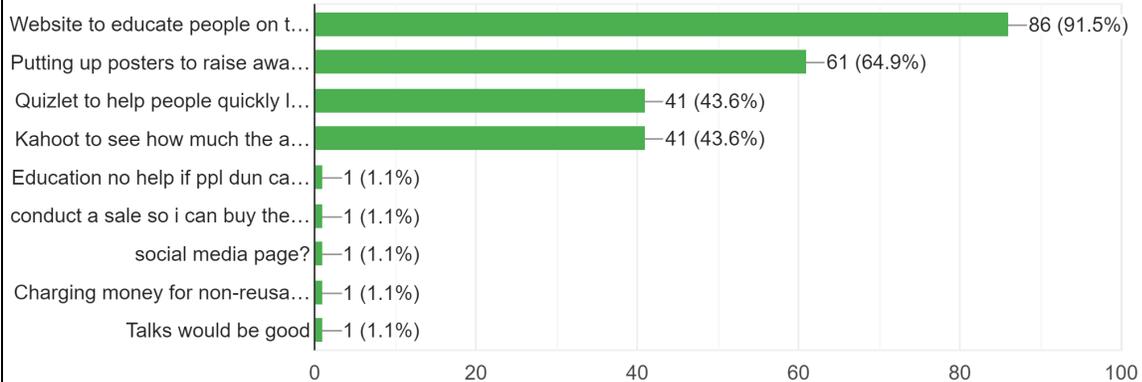
If you answered yes for the previous question, how frequently do you use it, if at all?

93 responses



Which of the following ways do you think can increase awareness of BPA and promote the use of reusable food containers

94 responses

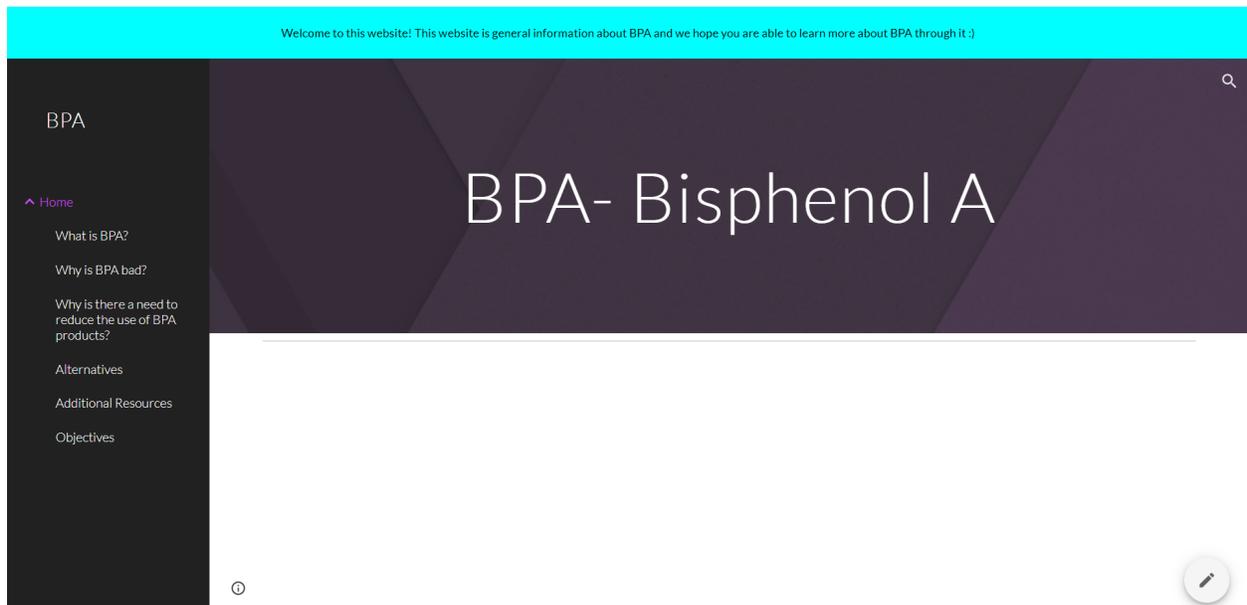


3.3 Development of resources

We reviewed some effective methods for tackling the use of BPA and decided to choose those that were more feasible and simple. Firstly, we made a website via Google Sites to raise awareness among the Hwa Chong student population about BPA. On the website, we included information on BPA, the effects of BPA, reasons on why we had to reduce the use of BPA products and possible alternatives that students could turn to. In order to make the content on the website easily digestible and engaging, we included many pictures and the website was not too wordy so that students would not get bored

reading it. We also created several posters on the effects of BPA, reasons on why we had to reduce the use of BPA products and some suggestions that we had for students to reduce their usage of BPA products. Lastly, we created a short animation using Powtoon that included some facts on BPA so as to raise awareness on BPA and its effects.

- Screenshots of website



- Posters that we made

What is BPA?

Bisphenol-A is an organic compound that is commonly linked to medical concerns such as *heart diseases* and *weaker brain immunity*

Where can BPA be found?

Plastic containers and utensils



Does this mean takeaways are bad for my health?

Yes, consistent use of plastic containers can *pose a danger* to our health as letting hot food sit in plastic containers for too long may cause BPA to leak onto the food and then ingested into the body.

What should I do?

1. Eat on-the-spot if possible
2. Avoid exposing the container to heat for prolonged periods of time
3. Bring your own reusable, BPA-free container



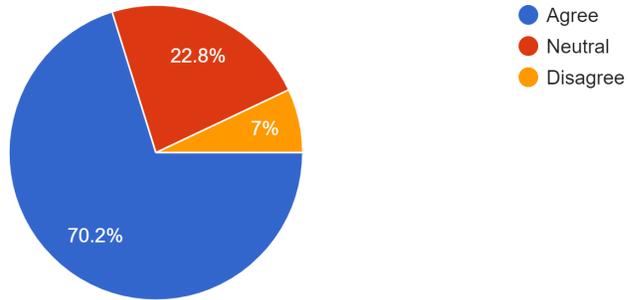
- Link to our infographic created on powtoon: <https://youtu.be/wmFslXOGDAk>

3.4 Pilot Test

We then carried out a pilot test with our resources and created a survey with more than 50 respondents to find out the usefulness of our website, animation and posters, in helping raise awareness of BPA and ways to reduce use of it, and generally the feedback was positive, and most people felt that their knowledge of BPA has been expanded after viewing our resources.

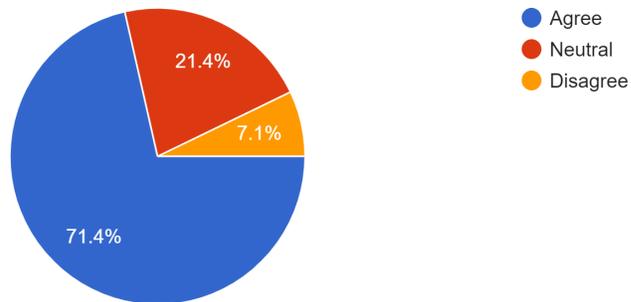
The website has taught me more about BPA

57 responses



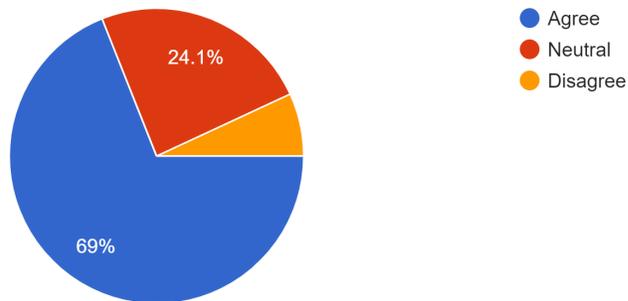
The powtoon and posters have taught me more about BPA

56 responses



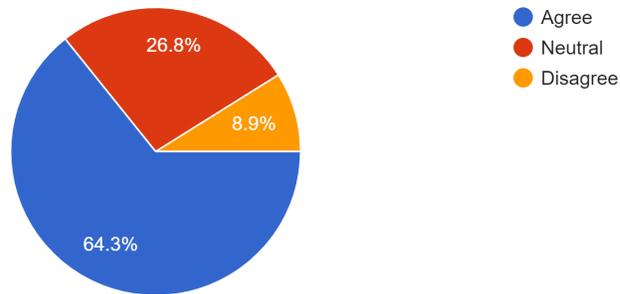
After viewing the resources, I am more aware of the negative effects of BPA

58 responses



After viewing the resources, I am more aware of how to reduce the usage of BPA

56 responses



4 OUTCOME AND DISCUSSION

4.1 Outcome of Project

In conclusion, our resource package consisted of a website, posters, and an animation with the intent of increasing awareness of the negative effects of BPA products and some alternatives to BPA products. The pilot test revealed that both were well-received by the target audience and was able to effectively engage and equip users with knowledge on the negative effects of BPA and some ways of how to reduce usage of BPA.

4.2 Limitations of Project

We were considering doing a collection of unwanted reusable containers so that people who do not have them might consider using them after the collected containers are redistributed to others. However, due to Covid-19, we did not think it would be viable to have a used container passed to the students as this brings about unnecessary health risks.

4.3 Future Developments

For further works, we could work with canteen vendors to come up with various forms of incentives such as discounts when students use their reusable containers to store food instead of disposable ones to encourage people to use reusable containers to takeaway food or dine in at the canteen to reduce use of plastic containers. Another method would be to encourage the vendors to transition to paper food containers when serving takeaways, which is biodegradable, more eco-friendly and hence a better alternative to plastic containers.

5 CONCLUSION

Our project has taught both ourselves and our target audience more about the negative effects of BPA and some ways to reduce the use of BPA. It has also taught us that there are many ways to reduce the use of BPA, and quite often it is not that difficult to make an effort to reduce it. One of the most prominent difficulties for this project was making sure our resources stood out from the other existing resources available, while still making it easy for students in Hwa Chong to understand it.

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