



CAG

Citizen consumer and civic Action Group



SINGLE-USE PLASTICS

**A study to understand prevalence of SUP use
within a community**

October 2023

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Acknowledgments:

The authors would like to thank the consultant, Mr. Mohan Munuswamy who administered the consumer survey in Chennai, Tamil Nadu. Sincere thanks to S. Saroja (CAG) for providing good counsel, detailed reviews, and suggestions on the report. Her inputs enhanced the rigour of the analysis and increased the effectiveness of the message. Our thanks also to the communications team for their support in reviewing the report and disseminating it.

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About CAG

CAG is a 38-year-old non-profit and non-political organisation that works towards protecting citizens' rights in consumer, civic and environmental issues and promoting good governance processes including transparency, accountability and participatory decision-making.

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Executive summary

Single-use plastics (SUP) comprise one of the most damaging non-biodegradable waste products in today's world. Capable of persisting in the atmosphere and environment for hundreds of years, these plastics break down into tiny units called micro-plastics which are being discovered in everything from breast milk to the water bodies of the world. Plastics in its macro form are responsible for the death of millions of water life as well as land animals. Despite the ban on single-use plastic, these are still easily available and commonly used commodities across Tamil Nadu. To better understand the compulsions behind the continued usage of plastic products and the perceived reliance on this material, CAG conducted a survey among 200 households of a low-income community in Chennai. The baseline survey had 18 questions in the form of multiple choice answers and was answered by 201 respondents.

Some interesting insights from the survey include the fact that while 99% of the respondents were aware of the plastic ban, a good proportion of the respondents claimed that the ready availability of single-use plastic and poor enforcement of the ban contributed to their continued use of plastic products. Along with this, about half the respondents identified forgetfulness, disinterest in carrying one's own bag, unavailability of refilling options, and learnt habits as the reasons why they continue to use single-use plastic products. This indicates that consumers' reliance on SUPs is also a learnt behaviour and one that will need to be broken over time. In fact, consumers in the study claimed that widespread and sustained awareness campaigns will help them to reduce the use of single-use plastics. The findings of better enforcement, and consistent awareness building exercises needs to be borne in mind by policy makers if the reliance on SUP plastics is to be addressed.

1 Introduction

Single-Use Plastics (SUP), is one of the most commonly used packaging materials in the world. It is derived from petrochemicals, which originate from fossil fuels. Invented in the late nineteenth century, it wasn't until the mid-twentieth century that SUPs attained popularity and began replacing glass and paper in everyday usage. Since the 1950s, 8.3 billion metric tons of plastic have been produced, half of that in the past 15 years alone. The increasing penetration of single-use plastics in today's world, has resulted in it being discovered in almost all consumables. Plastic breaks down into microplastics, and in this form has been found in human blood and breast milk even. It affects not just humans but also sealife and wildlife. The entry of plastics in the food cycles of animals has resulted in the death of thousands of animals, apart from now becoming a part of the human food cycle too. These need to be addressed on an urgent basis.

This report aims to understand consumers' attitudes to plastics, and why use of plastics remains prevalent, despite its known effects on human health and the environment.

1.1 Single-Use Plastics and its Detrimental Effects

The exponential growth of single-use plastics has become a serious threat to humanity and the ecosystem. As consumers and manufacturers prioritise versatility and ease, it is calculated that we produce nearly 300 million tons of plastic each year. Half of the plastics produced are single-use plastics. SUPs, by virtue of their composition, are typically not recyclable. Under these circumstances, they do not decompose, but rather they just break up into microplastics given the agents of sun and time.

These microplastics tend to be a major predicament when it comes to human and marine health. In humans, there has been some evidence indicating that they could lead to infertility, birth defects, cancer and other ailments. On the other hand, in marine animals, it could lead to intestinal blockages and punctured organs (World Economic Forum, 2016). Marine habitat encroachment is also a scenario of concern. There are many cases of giant marine animals being found dead, having ingested plastics. It also exercises a chain reaction, entering the human food chain via sea food (or even milk, when plastic enters a cow's digestive system) The situation is so abominable, that it has been stated in the World Economic Forum's Report that by 2050 there will be more plastic weight than fish weight in the oceans (World Economic Forum, 2016).

The use of disposable plastics also causes adverse effects on the climate. From the report of CIEL⁴(Centre for International Environmental Law), it can be understood that there is a hand-in-hand growth between plastic production and the emission of greenhouse gases (Kistler and Muffet:2019).

Considering the significant and long term damage caused by SUPs, we now have to work to ensure that a suitable plastic-alternative ecosystem is created. This needs to work hand in hand with consumer awareness, where consumers understand the dangers of plastic and the possible plastic alternatives.

2 STUDY METHODOLOGY

The study was done by deploying a [questionnaire](#) targeting consumers who were chosen using random sampling from a low-income community in the Chennai district of Tamil Nadu.

2.1 Sample Information

2.1.1 Age of the respondents

The age range of the respondents lie between 16 to 75 years. Out of this the highest proportion of respondents lie between 20-36 years of age.

Age (வயது)

201 responses

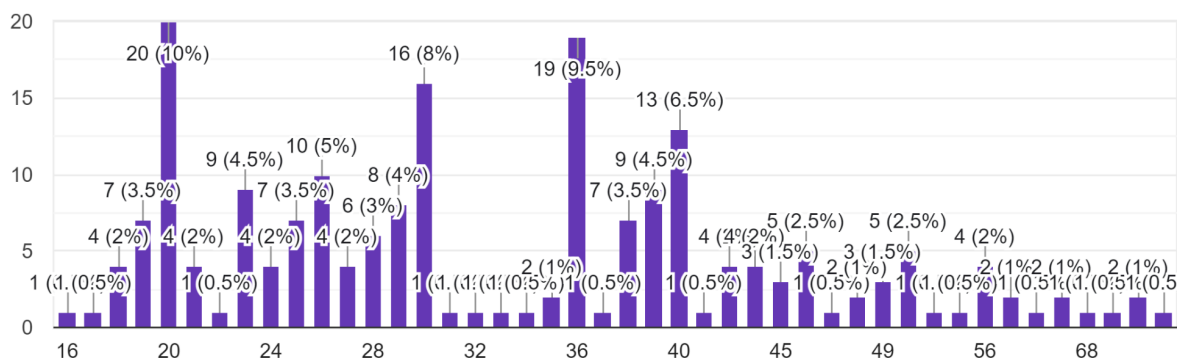


Figure 1 - Age distribution of respondents

2.1.2 Gender of the respondents

Out of the 201 respondents, 58.7% were females while 41.3% were males.

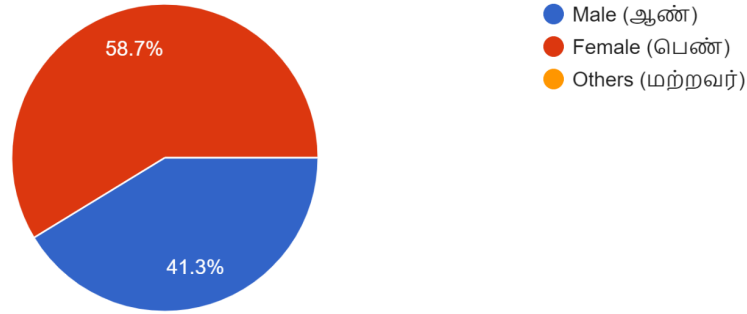


Figure 2 - Gender of respondents

2.1.3 Qualifications

As per the study, the highest proportion of people have higher secondary education while the second highest proportion have completed high school.

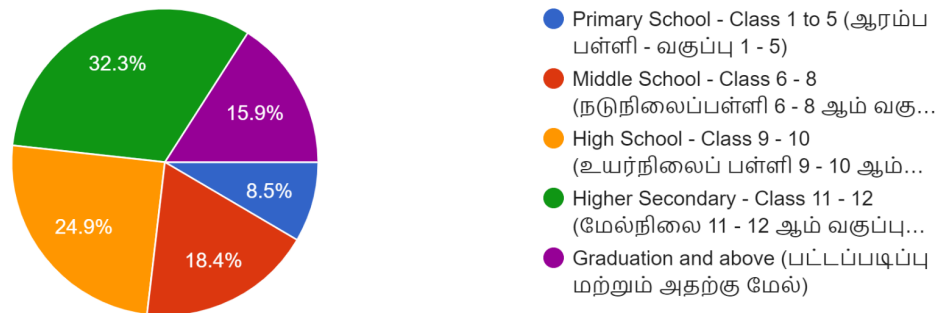


Figure 3 - Educational qualification among respondents

2.2 Survey Findings

2.2.1 Frequently visited shops

The survey revealed that the local grocery shop is the most visited shop among the respondents followed by garment stores and supermarkets as indicated in the graph below:

1. Which of the following shops do you visit frequently? பின்வரும் எந்த கடைகளுக்கு நீங்கள் அடிக்கடி செல்வீர்கள்?

201 responses

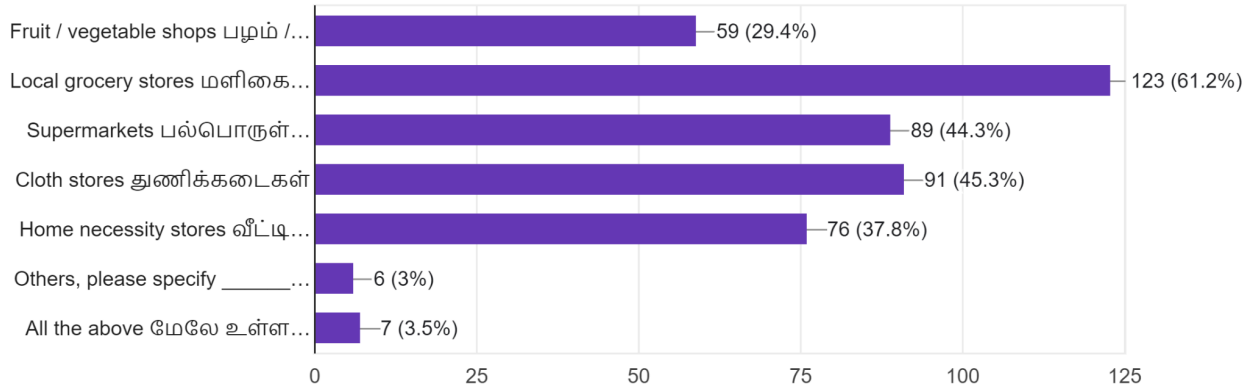


Figure 4 - Frequently visited shops

2.2.2 Frequency of visiting the shops

Question: How often do you visit these shops?

Most of the people visit a shop twice or thrice a week while the second highest proportion visit once or twice a month.

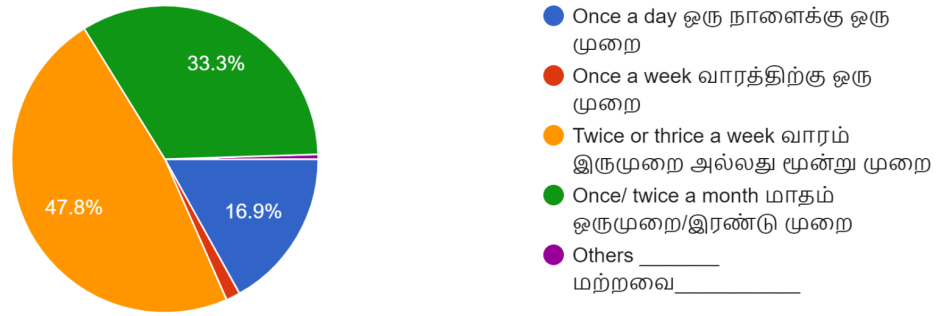


Figure 5 - Frequency of shopping

2.2.3 The bags used to carry purchased items

Question: What do you normally use to carry your purchased items?



Figure 6 - Shopping bags used

The highest proportion of respondents, which is 41.8%, use a combination of plastic and their own cloth bags while going out for purchase. Nearly 37% of respondents remain dependent on the bag provided by the store, whether plastic or paper or fabric. Which is 19.9%, carry a bag with them whenever they leave the home.

2.2.4 Frequently used single -use plastic products

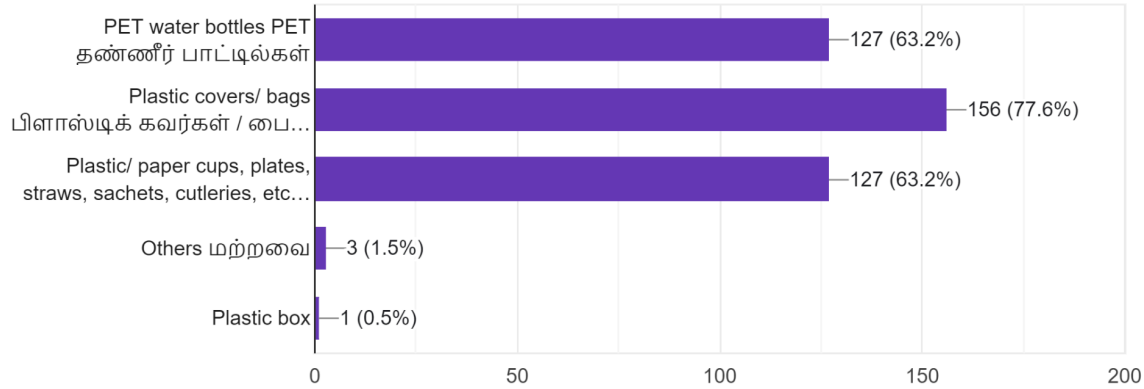


Figure 7 - Frequently used SUPs

As per the results of the survey, the most frequently used single-use plastic is plastic covers and bags with second position held jointly by PET water bottles and plastic cups and plates.

2.2.5 Whether paper cups/plates contain plastics?

About 96% of the respondents said 'yes' while 4% said 'no'.

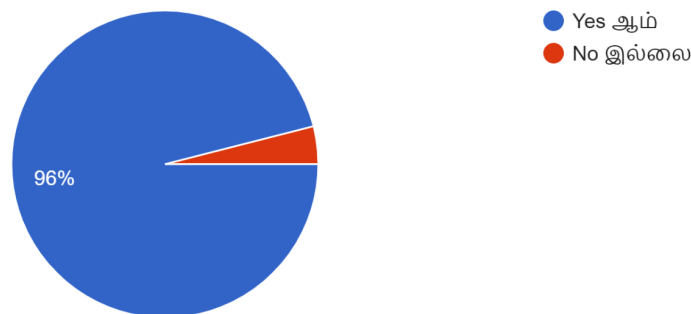


Figure 8 - Knowledge of plastic presence in 'paper' cups and plates

2.2.6 Reasons for using single-use plastic products

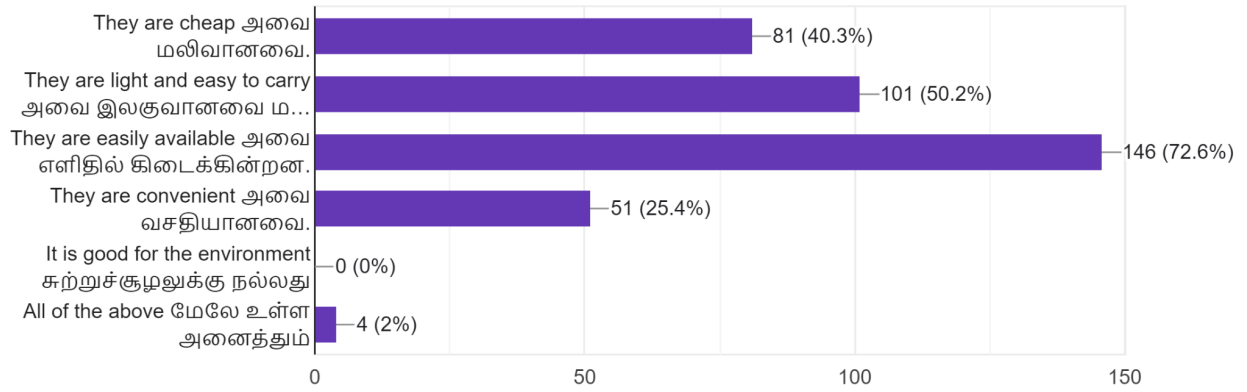


Figure 9 - Internal reasons for SUP use

A good portion of the respondents (72.6%) cited the easy availability of plastics and the ease in carrying them as their reasons for SUP reliance.

2.2.7 Influencing attitudes behind the usage of single-use plastic

Question: What or who do you think influences most of this behaviour?

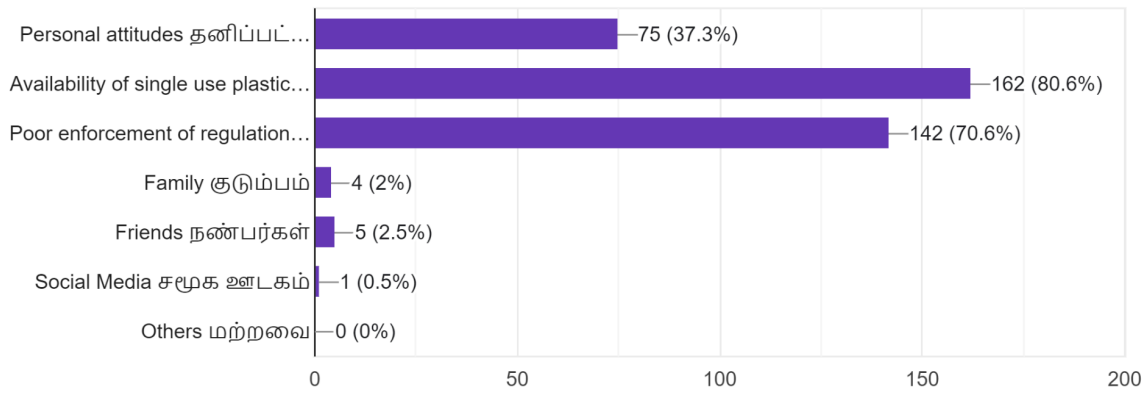


Figure 10 Stakeholders influencing SUP use

When respondents were offered other options for SUP use apart from their own personal attitudes (2.2.6), the ready availability of single-use plastic despite the ban and the poor enforcement of regulations were

identified as the main reasons behind the continued usage of plastic materials. This points to the government and manufacturers as key stakeholders (apart from the general public themselves) in solving the plastic crisis.

2.2.8 Difficulty associated with using reusable bags

Question : Why do you think it's hard/difficult for you to use reusable bags while shopping?

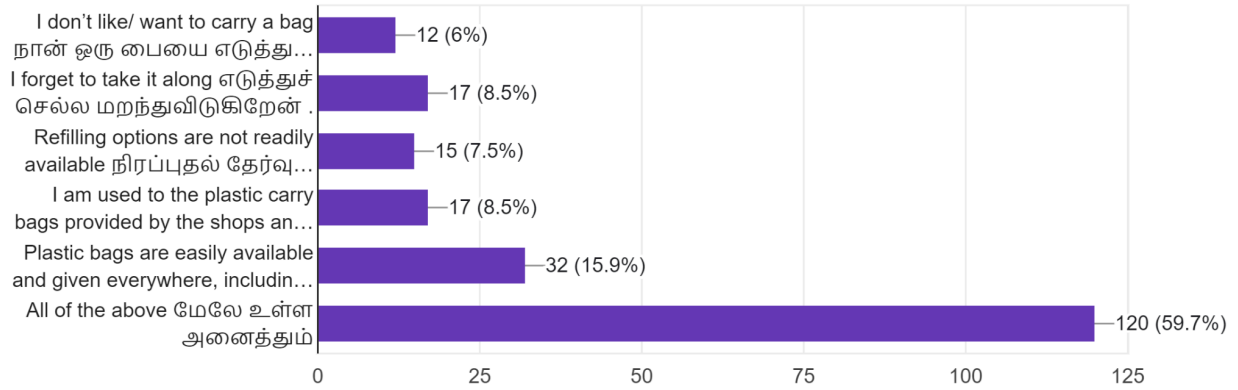


Figure 11: Why is reuse difficult

Respondents were asked about their reasons for not choosing reusable bags. About 59.7% of the respondents identified a combination of factors that drove their plastic reliance - forgetfulness, disinterest in carrying one's own bag, unavailability of refilling options, habits and the easy availability of plastic bags. This again points to the need for creating a re-use ecosystem with better enforcement of the ban, and better refill options.

2.2.9 Disposal of plastic bags

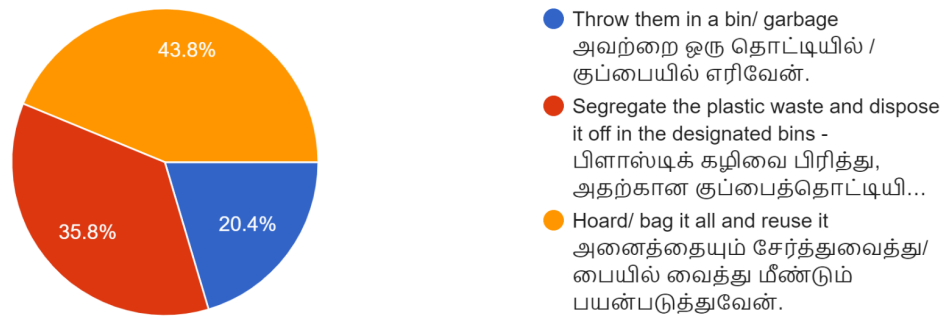


Figure 12 - Segregation of plastic bags when disposed in waste

About 43.8% of the respondents save their plastic bags and reuse them . 35.8% segregate their plastic waste and dispose of it, while the rest just throw it away without segregation.

2.2.10 What do you think are the results of using plastics?

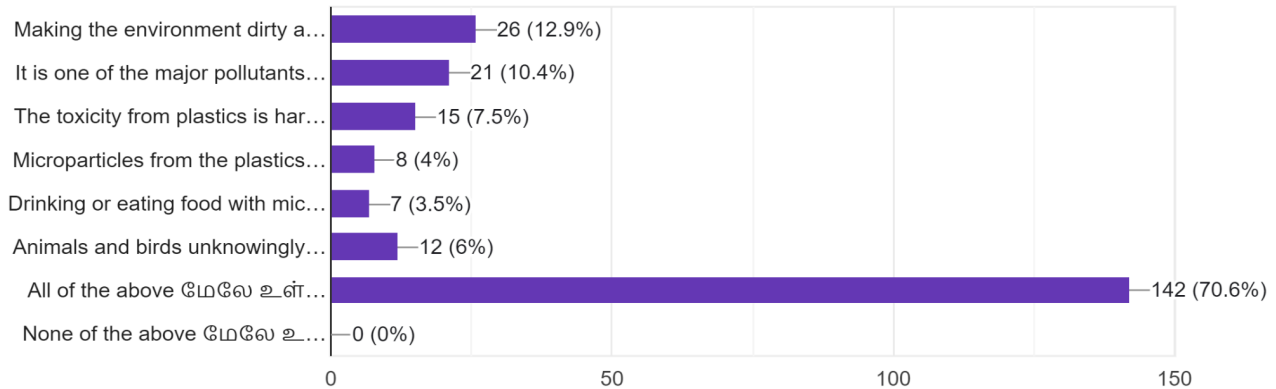


Figure 13 - Knowledge of SUP's effects on the environment

A significant proportion of respondents agreed that the consequences of using plastics was 'all the above' a. making the environment dirty and unclean, b. it is one of the major pollutants of the environment, c. the toxicity from plastics is harmful to living organisms, d. microplastics from the plastic are mixed in water and food, e. drinking or eating food with microplastics causes numerous diseases in human beings, f. animals and birds become unknowing victims of human used plastics.

2.2.11 Avoiding single-use plastics



Figure 14 Public perspective on what can dissuade SUP use

Nearly half the respondents felt that the survey itself had raised their awareness on the toxic nature of plastics, and that they would now make a more conscious effort to avoid SUPs. The next biggest category (30.3%) took up ownership of the problem themselves, and felt that they needed to make a more conscious effort to address the problem. This indicates that even while the survey creates the effect of raising awareness on the SUP crisis, more widespread awareness exercises can have desirable effects on people's choices. (This was actively requested by 25.9% of the respondents).

2.2.12 Awareness regarding plastics ban

Question: Do you know that Tamil Nadu has banned the use of certain plastic bags?

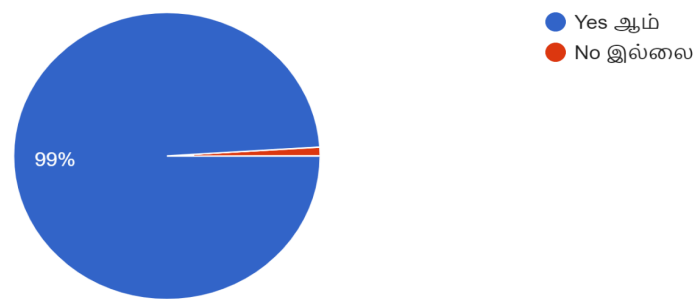


Figure 15: Public awareness on the TN's plastic bag ban

Nearly 99% of respondents were aware of the TN government's ban on plastic bags.

2.2.13 Identification of banned plastic products

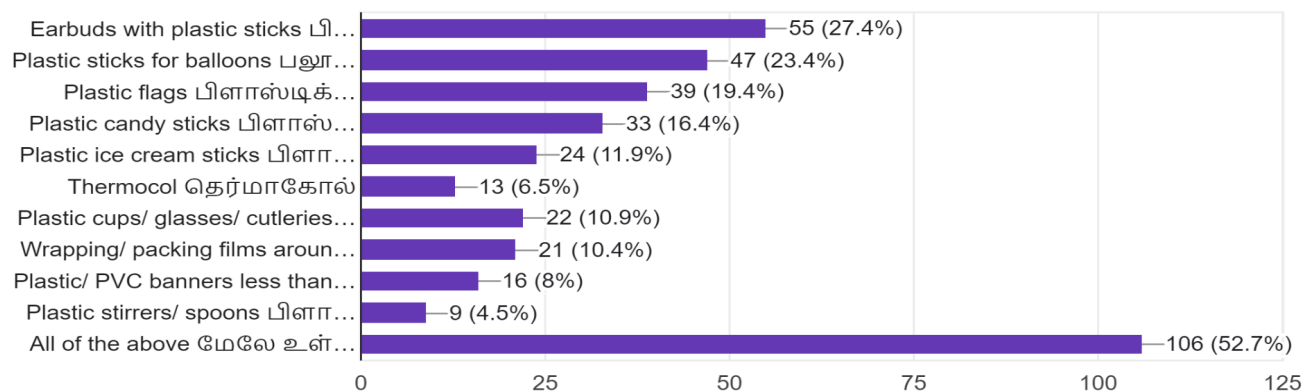


Figure 16: Public knowledge of SUPs banned in the country

52.7% of the respondents correctly identified all the listed material as banned plastic products. Unlike with plastic bags, which 99% of respondents identified as a banned product, SUP items such as plastic banners, plastic spoons were recognised as banned items by fewer respondents.

2.2.14 Frequency of plastic usage from the above list

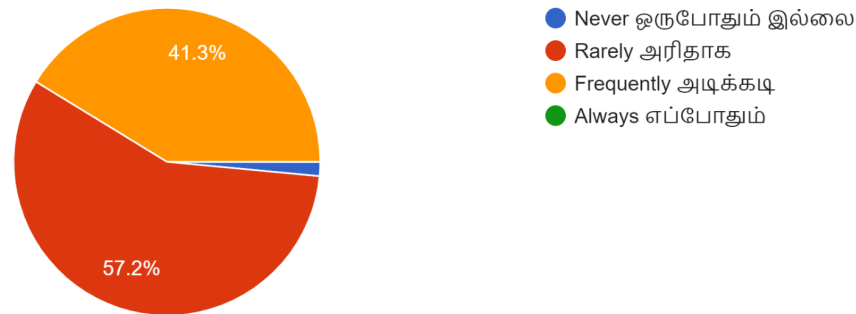


Figure 17: Public use (and therefore, availability) of banned plastics

57% of the respondents claimed rare usage of banned plastic products while 41% claimed frequent usage of plastic products.

2.2.15 Considering the harmful effects of plastics, would you consider avoiding it and opting for reusable/ alternative bags/ items?



Figure 18: Willingness to switch to reusables

100% of respondents demonstrated a willingness to opt for reusable materials. However, for this willingness to become everyday behaviour, better reuse mechanisms have to be set in place.

2.2.16 Would you encourage your family and friends to do the same?



Figure 19: Willingness to motivate others to switch to reusables

100% said yes to encouraging family and friends to opt for reusable materials. While this will not translate to immediate changes in behaviour, given time and regular reminders, these findings suggest that the public can be counted on to effect changes within their spheres of influence.

2.2.17 We will be conducting a few activities in your community on the same topic, over the next month. Would you be interested in actively participating in it?



Figure 20: Willingness to spend time learning about plastic

100% of respondents appear willing to spend their time learning more about SUPs and their deleterious effects on the environment and their own health.

Conclusion

From our survey, it is clear that a good portion of the people remain reliant on plastics, despite the plastic ban. Even though 99% of the population is aware of the plastic ban, with a significant proportion being aware of the toxic nature of plastics, the easy availability of plastics and the laxity in enforcing the ban ensures that plastic continues to be a part of people's everyday life. There is also evidence that there is a personal preference for plastic use, given its lightweight nature and other convenience features. However, on a positive note, respondents do appear willing to know more and learn more about the deleterious nature of plastics on their health and the environment. Addressing the plastic reliance will therefore need to be done on two fronts at least - enforcing the plastic ban and creating awareness so the public is frequently reminded of the detrimental effects of single use plastic.

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