

Participation in No Plastic Bag Day (NPBD) Campaign among Young Consumers

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To Link this Article: <http://dx.doi.org/10.6007/IJARBSS/v13-i3/16652> DOI:10.6007/IJARBSS/v13-i3/16652

Published Date: 12 March 2023

Abstract

The usage of plastic-packaged food and plastic disposable utensils has led to the increase of plastic bags during the Covid-19 pandemic. This is encouraged with the use of more food delivery services and groceries by consumers. In 2011, Malaysia introduced the No Plastic Bag Day (NPBD) Campaign to create awareness on the environmental effects of using plastic bags. The campaign is still on going, but many studies show Malaysian consumers use plastic bags every day in their daily lives. The focus of this study is to determine the intention of young consumers to participate in the No Plastic Bag Day (NPBD) campaign. Three factors, namely consumer awareness, subjective norm, and consumer attitude was investigated determine young consumers intention to participate in the NPBD. A quantitative research approach is applied in the study and 207 online questionnaires was used for analysis. Descriptive and multiple regression analysis was used to determine the relationship between consumer awareness, subjective norm, and consumer attitude with intention to participate in NPBD

campaign. The results of this study revealed that consumer awareness and consumer attitude have a significant relationship towards intention to participate in NPBD campaign while subjective norm did not influence young consumers to participate in NPBD campaign.

Keywords: Rewards, No Plastic Bag Day, Young Consumers, Plastic Bags, Malaysia

Introduction

Plastic bags are convenient; they are inexpensive, light, portable, and long-lasting. The durability of plastic bag is one of the reasons for its appeal. However, the risk of slow biodegradability is a waste management issue. Plastic bags have severe environmental consequences (Jakovcevic, et al., 2014) because a plastic shopping bag can take up to 1000 years to break down and degrade (Braun & Traore, 2015). Also, each bag is only used for a few minutes (Spranz, 2018), but the microscopic-sized plastic, often known as microplastic, pollutes marine life. This microplastic is then passed down the food chain. Eventually, this microplastic is consumed by humans resulting in severe problems (Sharma & Chatterjee, 2017).

Since 2000, the plastic manufacturing business has experienced one of the fastest growth rates of any industry (GESB, 2011). Also, Malaysia is one of the world's major plastic manufacturing businesses, with over 1,300 plastic firms. According to World Bank Report (2021), the plastic industry in Malaysia is a dynamic and growing sector. This sector contributed USD 7.23 billion, which accounted for 4.7% GDP of Malaysia's economy. It was found that plastic resins worth 30 billion Malaysian Ringgit (MYR) was shipped to plastic companies worldwide in 2016 (MESTECC, 2018).

Today, the reduction of plastic bag usage has become highly popular in many countries. In addition, environmental movements have sparked studies on the uses and effects of plastic bags. These environmental efforts result in many plastics reduction campaigns and awareness education initiatives. The main aim of the programs is to change consumer behaviour, whether through education or creating incentives to limit the usage of plastic bags (Hohmann, et al., 2016)).

Malaysia has one of the highest per capita plastic consumptions in Southeast Asia (World Wildlife Fund-Malaysia, September 2020 report) with an annual plastic consumption of 16.78 kg per person which is higher than the other four countries in ASEAN. Thailand annual plastic consumption is at (15.52kg), Vietnam (12.93kg), Indonesia (12.5kg) and Philippines at 12.4kg. To minimise environmental plastic wastage, the Malaysian government introduced the No Plastic Bag Day (NPBD) Campaign in 2011 (Asmuni et al., 2015). The objective of the NPBD campaign was to minimize the usage of plastic bags in Malaysia and to save the environment. Customers are encouraged to carry or purchase eco-friendly bags at participating establishments. Some grocery stores or supermarkets provide reusable paper or synthetic fiber carry bags at a fee. The prohibition on plastic bags is strengthened by a fee of MYR0.20 (USD0.06) for each bag used. This campaign has gained a range of reactions from the public, including consumers, policymakers, environmentalists, and the plastic industry (Zen et al., 2013).

NPBD campaigns are mostly conducted on Saturdays and may vary from state to state in Malaysia. Customers are encouraged to bring or purchase eco-friendly bags at participating establishments. Despite the NPBD initiative, the use of plastics has been increasing year after year (The Star, 2021). Furthermore, the campaign is only being implemented in specific locations such as hypermarkets, retail outlets, and supermarkets. One study found that after 10 years the program's effectiveness shows a 52.3 percent reduction of plastic bags, and the

remaining 47.7 percent of consumers chose to pay for the levy (Asmuni et al., 2015). Therefore, the program's effectiveness does not show significant changes in consumer behaviour.

There are many reasons for changes in consumer behaviour. Many consumers are willing to reduce their use of plastic bags, and many are aware of the negative effects of using them. Nevertheless, their good actions do not reflect their true behaviour, so they continue to use plastic bags. Consumers usually act according to the actions that work best for them. NPBD requires consumers to carry extra bags for their groceries, which is inconvenient for some consumers.

According to Youth Policy Org (2014) youth or young consumers in Malays are those from the age of between 15 – 40 years old. The selection of young consumers in this study is vital as they represent the future of the nation and future consumers (Naderi & Steenburg, 2018; Annunziata et al., 2019). Meanwhile, young consumers are reportedly more concerned about the environment. The increase in environmental deterioration made them motivated to be more ecologically conscious consumers. The motivation saw young consumers indulging in green buying (Tan et al., 2019). However, there is little research on Malaysian young consumers' intentions to take part in environmental activities. As a result, this study looks at young customers' willingness to take part in the NPBD campaign.

Literature Review

The study is based on Ajzen and Fishbein (1975 & 1980) theory of reasoned action (TRA). This theory is a validated intention model that has been established successfully in predicting and elucidating behavior (Lin & Liu, 2009). The theory of reasoned action (TRA) is a model for predicting people's behaviour. People's intention to perform the behaviour is the best predictor of people's behavior. Thus, borrowing from the theory of reasoned action, this study examines young consumer intention to participate in the NPBD campaign.

Intention to Participate NPBD Campaign

Participating in green initiatives informs people about various options for being green consumers. By participating in green initiatives consumers are given helpful information. Information disseminated by green campaigns help and encourage people to become more interested in green behavior. The involvement by these consumers may help modify consumer behaviours (Hosseinpour et al., 2016). In another study, (White et al., 2019), consumers' opinions toward socially responsible products are positive when they embrace green behavior. However, results show their actual intentions and activities are not always congruent with their beliefs. As observed by White et al (2019), sustainability interventions require widespread support from a large group of people. This is because changing one's behaviour alone is difficult. Individual resistance to behavioural changes may arise because of habit. Likewise, habit is a difficult behaviour to change (Verplanken & Roy, 2016). Also, sustainability interventions elicit opposition when consumers reject "what is perceived as a power, a pressure, an influence, or any attempt to act upon one's conduct" (Roux & Izberk-Bilgin, 2018).

Consumer Awareness

Consumer awareness of environmentally conscious behaviour is said to be the cultivation of good attitudes and enthusiasm for environmentally sound behaviour (Law et al., 2019). A study conducted in Selangor, Malaysia by Masud et al (2015) found an essential link between

people's awareness and pro-environmental behaviour. The study found that people with a high awareness about climate change are more likely to engage in pro-environmental behaviour. Also, Hohmann et al (2020), study showed awareness of the overuse of plastic bags is the most critical factor in lowering the use of plastic bags. The findings of Nabila and Nurcahyo's (2020) found individuals from Indonesia are aware of the environmental damage produced by plastic garbage. Therefore, these individuals participate in behaviour that reduces the usage of plastic bags that pollute their environment.

A poll by Ipsos Malaysia performed from October 2018 to June 2019, found 56 percent of Malaysians are concerned about single-use plastics. Meanwhile, 70 percent believe it is the government's responsibility to discover solutions to limit plastic usage. The Malaysian government is taking steps to phase out single-use plastics. However, according to an Ipsos Malaysia poll, only 44% of Malaysians are aware of the country's "Roadmap Towards Zero Single-Use Plastic" (Ipsos, 2019).

Kamaruddin et al (2016) found that the 'No Plastic Bag Day' campaign raised environmental awareness among consumers in Selangor, Malaysia. The NPBD campaign did educate the Selangor consumers on proper trash disposal and reducing the consumption of single-use plastics. Asmuni et al (2015), discovered that 72.9 percent of store cashiers ask customers if they want a plastic bag during selling and buying transactions. This study also stated that 53.9 percent of cashiers advise clients that they will not be given a plastic bag or must pay a levy to receive one plastic bag during the No Plastic Bag Day. This indicates that the awareness towards NPBD is relatively high because cashiers remind customers that they would have to pay to receive plastic bags every Saturday. A qualitative study by Zen et al (2013) had shown that self-claim awareness of the plastic bag campaign among Malaysian households was substantial, at 94 percent, with supermarkets and hypermarkets ranking first at 65 percent as campaign sources.

Subjective Norms

Subjective norms are defined as "consumers' favourable and unfavourable behaviour in doing a particular job because of societal pressure and influence" (Ajzen, 1991). Social pressure can come from various sources, such as family members, friends, and peer groups (Khan et al., 2019). Subjective norms have a strong, substantial association with environmental behaviour development, according to Kuppusamy & Gharlegghi (2015). It was also believed that increased social pressure would lead to better behavioural intentions among Malaysians to reduce their use of plastics.

Godfrey (2019) stated that people who reduce single-use plastic consumption were affected by social pressure. This social pressure might be attributed to persuasion or encouragement from family members, friends, neighbours, and co-workers. Another study by Nabila and Nurcahyo's (2020), found subjective norms have a substantial impact on Malaysians for minimizing the use of plastic bags. It was discovered that individuals are more likely to minimize the usage of plastic bags if most of the people who are important to them do not use plastic bags. Also, supportive friends or family urge them to reduce the use of plastic bags. Similarly, subjective norms or social pressure influenced consumers from Turkey to minimize plastic bag use (Ari & Yilmaz, 2017).

Consumer attitudes towards NPBD campaign

The relevance of public perception, knowledge, awareness, attitude, and conduct regarding environmental issues has been highlighted by numerous studies published in recent years

(Afroz, Rahman, Masud, & Akhtar, 2017). Attitudes are vital indicators of how people observe and respect their local surroundings and environmental issues. The impact of the "no plastic bag" campaign has elicited a variety of responses, attitudes, and behaviours from the public. The campaigns also include response from the plastics industry, customers, markets, and shop owners (Omar et al., 2019). In addition, older, more educated, and those who have a higher income are more likely to participate in a no-plastic-bag campaign in Malaysia than their younger generation.

Afroz et. al (2017) found 35% of the Malaysian household respondents, are willing to join in the anti-plastic bag campaign. The number of customers who will purchase reusable bags and limit their plastic bags will grow. Therefore, shops can provide reusable bags and make them more available to customers. One study found most pro-environmental consumers are Malay and Chinese females, and this group showed a positive attitude towards NPBD campaign (Asmuni et al., 2015). Likewise, the execution of environmental policies must be implemented in Malaysia to encourage households to join the no-plastic-bag movement and lean toward a positive sustainable attitude (Afroz et al., 2017). Thus, the proposed model in Figure 1 explains the relationship between attitude, subjective norms, and awareness towards intention to participate in the NPBD campaign.

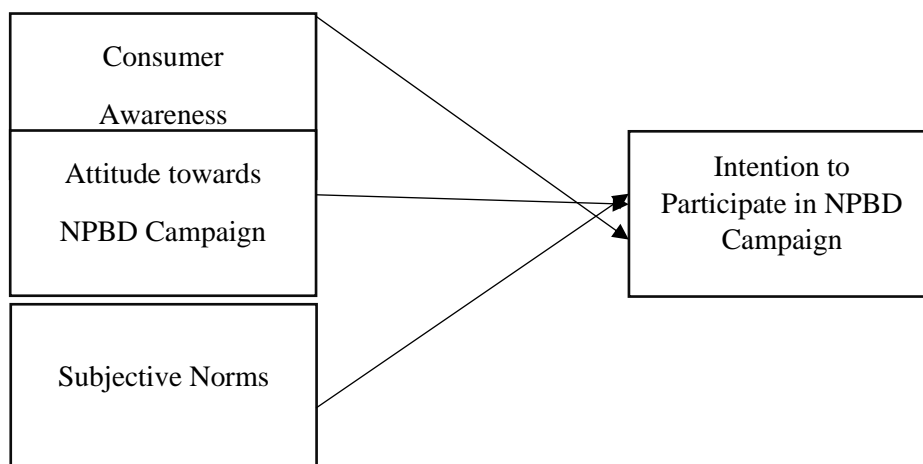


Figure 1: Proposed Model

Research Methodology

The sample size of respondents is young consumers living in a community in Malaysia. Respondents ranged from 18 to 40 years old. Respondents had to be 18 years old because this group had sufficient knowledge to make decisions (Norzalita et al., 2009). Furthermore, respondents aged 18 and over are expected to be well-informed about environmental campaigns (Quoquab et al., 2017). At the same time, data were examined using the Social Science Statistics Package (SPSS 25.0). The study explores the relationship between consumer awareness, consumer attitudes, and subjective norms regarding a young consumer's willingness to participate in the NPBD campaign.

Data Analysis

Respondents' Profile

350 surveys in total were distributed, and 207 valid replies were gathered for data analysis. The survey was distributed via a Google form and was disseminated on social media sites like WhatsApp.

Table 1.0

Demographic profile of respondents

Demographic		Frequency	Percentage
Gender	Male	75	36.2 %
	Female	132	63.8 %
Age	18 – 25 Years Old	154	74.4 %
	26 – 30 Years Old	23	11.1 %
	31- 35 Years Old	9	4.3 %
	36 – 40 Years Old	21	10.1 %
Race	Malay	161	77.8 %
	Chinese	28	13.5 %
	Indian	5	2.4 %
	Other	13	6.3 %
Education	SPM	5	2.4 %
	Diploma/ Matriculation	Foundation/ 16	7.7 %
	Degree	111	53.6 %
	Masters	66	31.9 %
	Doctoral Degree	9	4.3 %
Income	< RM 2 000	145	70.0 %
	RM 2 001 – RM 3 000	23	11.1 %
	RM 3 001 – RM 4 000	10	4.8 %
	RM 4 001 – RM 5 000	10	4.8 %
	> RM 5 000	19	9.2 %

As display in Table 1.0, demographic factors include gender, race, education, and income. 36.2 % are male, while 63.8 % are female. The age component showed a variation in percentage, with 18-25 years old (74.4 %), 26-30 years old (11.1 %), 31-35 years old (4.3 %), and 36-40 years old (10.1 %). All races exhibited a modest variation in proportion by Malay (77.8 %), Chinese (13.5 %), Indian (2.4 %), and others (6.3 %) based on race criteria. From Table 2, 2.4 % had a higher secondary education, 7.7 % had a diploma and equivalent, 53.6 % had a degree qualification, 31.9 % had postgraduate education, and 4.3 % obtained a PhD qualification. Most respondents (70.0 %) had earnings of RM 2,000 or less. Meanwhile, 11.1 % of respondents reported having income between RM 2,001 and RM 3,000, and 9.2 % had income greater than RM 5,000. Income between RM 3,001 and RM 4,000 and those earning between RM 4,000 and RM 5,000 was at 4.8%

Measurement of Items

All constructs were measured using multi-item scales derived from prior studies and based on five-point Likert-type scales (1- strongly disagree to 5 - strongly agree). The items for this study are being derived from studies from (Asmuni et al., 2015; Afroz et al., 2017; Nabila and Nurcahyo, 2020; Van et al., 2021).

Table 2.0

Measurement of Items

Description	Source	Measurement Scale
Intention to Participate NPBD Campaign		
I am willing to participate in the No Plastic Bag Day (NPBD) campaign.	Afroz et al (2017).	5 points Likert Scale
I will pay for plastic bag during NPBD.	Asmuni et al (2015).	5 points Likert Scale
I am willing to buy ecofriendly bag from the store.	Asmuni et al (2015).	5 points Likert Scale
I am willing to bring my own bag to put items bought from store.	Asmuni et al (2015).	5 points Likert Scale
I will try to leave the store without plastic bag during NPBD.	Asmuni et al (2015).	5 points Likert Scale
Consumer Awareness		
I am aware that plastic waste is a serious problem.	Afroz et al (2017).	5 points Likert Scale
I am aware that plastic waste affects the natural environment in Malaysia.	Afroz et al (2017).	5 points Likert Scale
I am aware of the 20 cents charge for the use of plastic bag.	Asmuni et al (2015).	5 points Likert Scale
I am aware by reducing the use of plastic bag can help in reducing environmental pollution.	Afroz et al (2017).	5 points Likert Scale
Subjective Norms		
My family, my friends and my relatives influence me to reduce the use of plastic bags.	Nabila & Nurcahyo (2020)	5 points Likert Scale

My family, my friends and my relatives support me to reduce the use of plastic bags.	Nabila & Nurcahyo (2020)	5 points Likert Scale
If my family, my friends and my relatives are active in reducing the use of plastic bags, it will influence me in reducing the use of plastic bags.	Nabila & Nurcahyo (2020)	5 points Likert Scale
Social media information influences me to reduce the use of plastic bags.	Nabila & Nurcahyo (2020)	5 points Likert Scale
I am affected by others while they point out unfriendly environmental behaviours	Van et al (2021).	5 points Likert Scale
Consumer attitudes		
I react to the No Plastic Bag Day by bringing my own recyclable bags	Afroz et al (2017).	5 points Likert Scale
I support the No Plastic bag campaign.	Afroz et al (2017).	5 points Likert Scale
I use reusable bag to help reduce the number of plastic bags that end up in the landfill.	Afroz et al (2017).	5 points Likert Scale
I reduce the use of plastic bags in my daily life.	Nabila & Nurcahyo (2020).	5 points Likert Scale
I find it convenient to bring my own recycle bag.	Afroz et al (2017).	5 points Likert Scale

Reliability Analysis

Each variable underwent a reliability test to determine the accuracy of the items used to measure it.

Table 3.0
Reliability Analysis

Variables	Number of Items	Cronbach's Alpha
Intention to participate to NPBD Campaign	5	.600
Consumer Awareness	4	.782
Subjective Norms	5	.805
Consumer Attitudes	5	.839

Table 3.0 exhibits the overall outcome of the reliability test and the strength of factors that influence consumers intention to participate in the NPBD campaign. The Cronbach Alpha

score for young consumers intention to participate in NPBD campaign was 0.6, consumer awareness at 0.782, subjective norm at 0.805 and consumers attitudes at 0.839. Overall, the reliability for all variables is good and acceptable.

Descriptive analysis

Consumer Intention to Participate in NPBD Campaign

Table 4.0

Consumer Intention to Participate in NPBD Campaign

	Mean	Std Deviation	Rank
I am willing to participate in NPBD campaign	4.55	0.658	2
I will pay for plastic bag during NPBD	3.49	1.361	5
I am willing to buy eco-friendly bag from the store	4.27	1.016	4
I am willing to bring my own bag to put items bought from store	4.56	0.721	1
I will try to leave the store without plastic bag during NPBD	4.38	0.899	3

Table 4.0 shows the items to assess respondents' views on consumer intention to participate in the NPBD campaign. The item **'I am willing to bring my own bag to put items bought from store.'** scored the highest mean value with 4.56. This show that young consumers are willing to bring their own bag to put items bought from store. Next, item **'I am willing to participate in NPBD campaign.'** has a high mean as well, although it is slightly lower than the highest mean in Table 4.4, which is 4.55. This indicates that young customers are eager to engage in the NPBD campaign. Item **'I am willing to pay for plastic bag during NPBD campaign.'** has the lowest mean in this table, which is 3.49. During NPBD, young shoppers appear to be hesitant to pay for plastic bags.

Consumers Awareness to Participate in NPBD Campaign

Table 5.0

Consumer Awareness to Participate in NPBD Campaign

	Mean	Std Deviation	Rank
I am aware that plastic waste is a serious problem	4.78	0.511	2
I am aware that plastic waste affects the natural environment in Malaysia	4.83	0.428	1
I am aware of the 20 cents charge for the use of plastic bag	4.72	0.556	3
I am aware by reducing the use of plastic bag can help in reducing environmental pollution	4.78	0.530	2

Table 5.0 exhibits the descriptive analysis of items under variable consumer awareness. The statement **'I am aware that plastic waste affects the natural environment in Malaysia'** has the highest mean score which is 4.83. Followed by other 2 items which is **'I am aware that plastic waste is a serious problem'** and **'I am aware by reducing the use of plastic bag can help in reducing environmental pollution'** that have same mean score of 4.78. This suggests that the young consumers are aware that plastic is one of the contributors to environmental pollution and aware that their contribution and participation in reducing plastic will help to minimise environmental pollution. This is consistent with a study of awareness among Selangor residents on NPBD has increased and the consumers were taught on proper garbage disposal and single-use plastic usage was reduced (Van, et al., 2021).

Subjective Norms to Participate in NPBD Campaign

Table 6.0

Subjective Norms to Participate in NPBD Campaign

	Mean	Std Deviation	Rank
My friends and my relatives influence me to reduce the use of plastic	3.80	1.138	5
My family, my friends and my relatives support me to reduce the use of plastic bags.	4.02	1.019	4
If my family, my friends and my relatives are active in reducing the use of plastic bags, it will influence me in reducing the use of plastic bags.	4.24	0.964	1
Social media information influences me to reduce the use of plastic bags.	4.21	0.966	2
I am affected by others while they point out unfriendly environmental behaviours	4.03	1.031	3

The item, **'If my family, my friends and my relatives are active in reducing the use of plastic bags, it will influence me in reducing the use of plastic bags.'** has the greatest mean of 4.24. This suggests that family and friends of young consumers persuade young consumers to minimise their use of plastic bags. Item **'Social media information influences me to reduce the use of plastic bags.'** has the second highest mean of 4.21. This means that social media information able to influence young customers to use fewer plastic bags. Item **'My friends and my relatives influence me to reduce the use of plastic'** has the lowest mean in this table, which is 3.80. Despite having the lowest mean in this table, the value reveals that young customers are still being motivated to use less plastic by their friends and family.

Consumer Attitude to Participate in NPBD Campaign

Table 7.0

Consumer Attitude to Participate in NPBD Campaign

	Mean	Std Deviation	Rank
I react to the No Plastic Bag Day by bringing my own recyclable	4.48	0.787	3
I support the No Plastic bag campaign	4.71	0.577	1
I use reusable bag to help reduce the number of plastic bags that end up in the landfill.	4.54	0.736	2
I reduce the use of plastic bags in my daily life	4.38	0.844	5
I find it convenient to bring my own recycle bag	4.42	0.801	4

Table 7.0 displays the full descriptive analysis for the consumer attitude variable. In this table, the item **'I support the No Plastic Bag movement.'** received the highest mean, 4.71. We can infer that youth consumers favour the NPBD initiative. Item **'I use reusable bag to help reduce the number of plastic bags that end up in the landfill.'** has the second highest mean, with a value of 4.54. This demonstrates that they are willing to utilise reusable bags to reduce the quantity of plastic bags that end up in landfills. The item with the lowest mean score, **'I reduce the use of plastic bags in my daily life,'** earned a 4.38 score. But the high mean value suggests that young consumers are willing to reduce their daily use of plastic bags.

Regression analysis

Table 8.0 Regression Analysis for consumer awareness, subjective norms, and consumer attitude

Item	Standard Beta	(t)	Significance (p)
consumer awareness	0.227	3.528	0.001*
subjective norms	0.098	1.565	0.119
consumer attitude	0.385	5.728	0.000*
R-square	0.325		
Adjusted R square	0.315		
p-value	0.000		

Significance level $p < 0.05$

According to Table 8.0, R square is 0.325 which conveys that 32.5% of the intention to participate in the NPBD campaign is explained by the three independent variables, which are customer awareness, subjective norm, and attitude. The highest beta value is attitude with 0.385, while awareness is 0.227 and the subjective norm is 0.098. Therefore, attitude has the highest strength among the independent variables influencing intention to participate in the NPBD campaign.

Conclusion and Recommendations

In this study, three variables—consumer awareness, consumer attitudes, and subjective norm—are examined to see how they affect young customers' intentions to take part in the NPBD campaign. According to the findings, young consumers' participation in the NPBD campaign was influenced by their level of consumer awareness. This is because the majority of the young customers in this study have a degree or higher in education. As a result, the young consumers have learned about the NPBD initiatives at work, school, or on social media sites. Additionally, it was shown that consumer attitudes affected the NPBD campaign. This indicates that young consumers who support the campaign have a favourable outlook. Instead of using plastic bags, they carry their own recycling bags, demonstrating their attitude of support.

This study, however, did not back up the subjective norm. It reveals that young consumers, specifically the respondents to the study, make their own decisions about whether to participate in the NPBD campaign. Their friends and family did not persuade them to participate in the campaign. Their decision to participate in NPBD may have been impacted by how well the campaign reinforced positive societal norms on the ethical use of plastic bags. It is advised to use targeted NPBD campaigns that are based on psychographic as well as demographic factors and to target young consumers with messages that are specific to their stage of life.

Studying the NPBD in Malaysia has proven to help better understand the effectiveness of campaigns to reduce plastic waste. Through the study, it also helps identify challenges and obstacles faced by campaign such as lack of awareness or resources that can be addressed to improve campaign impact. Furthermore, this research may contribute to a broader debate on sustainable development in Malaysia and the need for greener policies and practices. It should be noted that the research conducted provides insight into the attitudes and behavior of individuals, especially young consumers, and businesses towards plastic use. Conclusively, the study of the NPBD campaign in Malaysia would help the goal of creating a more sustainable and healthier environment for current and future generations.

Finally, social media platforms must be utilized in future NPBD campaigns. This is because social media is presently the medium used by young customers. Twitter and Instagram would be effective channels for informing young consumers about the NPBD campaign and plastic usage in Malaysia.

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