



**UNIVERSITI PUTRA MALAYSIA**

***KNOWLEDGE, ATTITUDE AND PRACTICE ON NO PLASTIC BAG  
DAY CAMPAIGN BETWEEN BOARDING SCHOOL AND ORDINARY  
SCHOOL STUDENTS IN PULAU PINANG***

**ADILAH BINTI ABDULLAH**

**Ip  
FPSK4 2017 32**

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## ABSTRACT

### KNOWLEDGE, ATTITUDE AND PRACTICE ON NO PLASTIC BAG DAY CAMPAIGN BETWEEN BOARDING SCHOOL AND ORDINARY SCHOOL STUDENTS IN PULAU PINANG

‘ADILAH BINTI ABDULLAH

**Introduction:** Plastics are made from fossil fuel sources, such as natural gas and petroleum and they will maintain in the environment, causing health effect to the human and animal. Worldwide including Malaysia, a plastic bag is a prominent method for conveying merchandise when buying goods. The retail business dependably utilize the plastic bags as they are inexpensive, weightless but sufficiently solid to convey purchased items and clean for the first time used. Therefore, No Plastic Bag Day (NPBD) campaign is an important measure to reduce the total number use of plastic among public. **Objective:** To study the knowledge, attitude and practice on ‘No Plastic Bag Day Campaign’ among secondary school students in Pulau Pinang. **Methodology:** A total of 239 respondents involved in this study from [Sekolah Menengah Kebangsaan Sains Tun Syed Syeh Shahabudin (SOKSEK)] and Sekolah Menengah Kebangsaan Bukit Mertajam (SMKBM)) both school in Bukit Mertajam. Students were from form 4 in both schools. Questionnaires were the main tool in this study to determine the knowledge, attitude and practice on No Plastic Bag Day campaign and their social demographic information. **Results and Discussion:** Both school students showed moderate level for independent variable. Level of knowledge for boarding school students where higher while for ordinary school students were moderate which was 65 (79.3%) and 105 (66.9%). Level of attitude for both school were moderate level which was 46 (56.1%) and 109 (69.4%) respectively. While for practice the level for both schools moderate as well which was 60 (73.2%) and 118 (75.2%). There are no mean difference for knowledge and practice for both school which was 126.30 for boarding school and 116.71 for ordinary school. Meanwhile for attitude there are difference in mean which was 61.76 for boarding school and 150.42 for ordinary school. Knowledge level and practice level showed an association between both school towards the campaign ( $p < 0.01$ ,  $p = 0.001$ ). There was an association between attitude and practice towards the campaign ( $p < 0.01$ ,  $p = 0.001$ ). Students that have moderate knowledge tend to have moderate practice and attitude. **Conclusion:** Secondary school students from both school had moderate knowledge, attitude and practice towards this campaign. Ministry of education (MOE) should provide the environmental education subject with more detail that necessarily to be considered as one of the syllabus in education system, regarding to increase the awareness on environment conservation such as the policy of “No Plastic Bag Day” campaign that been implement in Malaysia

**Keywords:** Knowledge, Attitude, Practice, No Plastic Bag Day, Secondary School Students



## **ABSTRAK**

### **MENGENAL TAHAP PENGETAHUAN, SIKAP DAN AMALAN TERHADAP KEMPEN HARI TANPA BEG PLASTIK DI ANTARA PELAJAR SEKOLAH BERASRAMA PENUH DAN SEKOLAH MENENGAH BIASA DI PULAU PINANG**

**ADILAH BINTI ABDULLAH**

**Pengenalan:** Plastik dihasilkan daripada sumber bahan api fosil, seperti gas semula jadi dan petroleum dan ianya akan, menyebabkan kesan kepada kesihatan manusia dan haiwan. Plastik adalah bahan yang digunakan untuk membawa barangan yang dibeli di Malaysia. Peniaga runcit banyak menggunakan plastik kerana ia murah, ringan dan kukuh untuk mengangkat barang serta bersih untuk sekali penggunaan. Maka, kempen ini adalah sangat penting untuk mengurangkan penggunaan beg plastik kalangan orang awam. **Objektif:** Untuk mengkaji tahap pengetahuan, sikap dan amalan terhadap kempen hari tanpa beg plastik kalangan pelajar sekolah menengah di Pulau Pinang. **Metodologi:** Seramai 239 responden terlibat dalam kajian ini dari dua buah sekolah [(Sekolah Menengah Kebangsaan Sains Tun Syed Syeh Shahabudin (SOKSEK) and Sekolah Menengah Kebangsaan Bukit Mertajam (SMKBM)]. Pelajar yang terlibat adalah pelajar tingkatan 4 dari dua buah sekolah tersebut. Borang soal selidik adalah alat utama untuk mengkaji tahap pengetahuan, sikap dan amalan mengenai kempen hari tanpa beg plastik dan mendapatkan maklumat sosio demografi. **Keputusan dan Perbincangan:** Tahap pengetahuan di sekolah berasrama penuh adalah tinggi manakala untuk sekolah menengah biasa pula sederhana iaitu 65 (79.3%) dan 105 (66.9%). Tahap sikap untuk dua buah sekolah adalah sederhana iaitu 46 (56.1%) dan 109 (69.4%). Manakala, untuk tahap amalan juga sederhana untuk dua buah sekolah iaitu 60 (73.2%) and 118 (75.2%). Kajian ini mendapati bahawa tiada perbezaan min untuk pengetahuan dan amalan untuk dua buah sekolah iaitu 126.30 untuk sekolah berasrama penuh dan 116.71 untuk sekolah menengah biasa. Manakala, tahap sikap untuk dua buah sekolah terdapat perbezaan min iaitu 61.76 untuk sekolah berasrama penuh dan 150.42 untuk sekolah menengah biasa. Tahap pengetahuan dan amalan menunjukkan terdapat perkaitan terhadap dua buah sekolah terhadap kempen ini ( $p < 0.01$ ,  $p = 0.001$ ). Terdapat perkaitan diantara sikap dan amalan terhadap kempen ini ( $p < 0.01$ ,  $p = 0.001$ ). Pelajar yang mempunyai pengetahuan yang sederhana cenderung untuk mempunyai sikap dan amalan yang sederhana. **Kesimpulan:** Pelajar sekolah menengah dari dua buah sekolah ini mempunyai tahap pengetahuan, sikap dan amalan yang sederhana terhadap kempen ini. Kementerian Pendidikan perlu menyediakan subjek mengenai pendidikan alam sekitar dengan lebih mendalam sebagai subjek penting dalam sistem pembelajaran, misalnya mengenai polisi kempen “Hari Tanpa Beg Plastik” yang telah dijalankan di Malaysia.

**Kata Kunci:** Pengetahuan, Sikap, Amalan, Hari Tanpa Beg Plastik, Pelajar Sekolah Menengah



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## **LIST OF ABBREVIATIONS**

|              |                                                                |
|--------------|----------------------------------------------------------------|
| <b>UNEP</b>  | <b>United Nations Environment Programme</b>                    |
| <b>MOE</b>   | <b>Ministry Of Education</b>                                   |
| <b>MDTCC</b> | <b>Ministry of Domestic Trade, Cooperative and Consumerism</b> |
| <b>NPBD</b>  | <b>No Plastic Bag Day</b>                                      |



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## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 Background**

A plastic bag is a prominent method for conveying merchandise when buying goods worldwide including Malaysia. The retail business dependably utilize the plastic bags as they are inexpensive, weightless but sufficiently solid to convey purchased items and clean for the first time used (Jalil et al., 2012). All over the world, governments and environment security gatherings are working very hard to create an understanding on the significance of preserving the earth. It is of nothing unexpected that natural issues, for example, air contamination, spills and ineffectual waste organization do bring about antagonistic results. The improper disposal of worn plastic bags, nevertheless, also known to bring long-term harm to the environment. Plastic waste takes quite a while to deteriorate in soil and contributes to air, water and soil contamination (Asmuni et al., 2015).

Nowadays plastic also can be found obviously floating in the ocean and waterways where it also can produce harm to aquatic animals. It is estimated that 100,000 marine creatures die from plastic entanglement a year and approximately 1 million birds that also die from plastics (Laura, 2015). This happens when these animals found the bags in the ocean and takes it as foods and ingest them where it can cause serious harm to digestive system and facing death if fatal (Ayalon, Goldrath, Rosenthal, & Grossman, 2009; Godman, 2013).

It is estimated that between 22 percent and 43 percent of the plastic usage worldwide is disposed of in landfilled (UNEP, 2013), where its resources are wasted, the waste takes up valuable space and it gives trouble to the communities. Meanwhile in Malaysia it is estimated that an average of 19,000 tonnes of solid waste produced annually and the plastic waste represents 24% total solid waste (Asmuni et al., 2015). Retrieved plastic from the waste stream for recycling or for combustion for production of energy has the possibility to reduce these problems (Figure 1.1). But, abundant of plastic collected for recycling is transferred to countries with lower environmental regulation. While burning plastic for energy generation need air emissions controls and produces hazardous ash, all while being generally unproductive (Gourmelon, 2015).

### Most Favoured Option

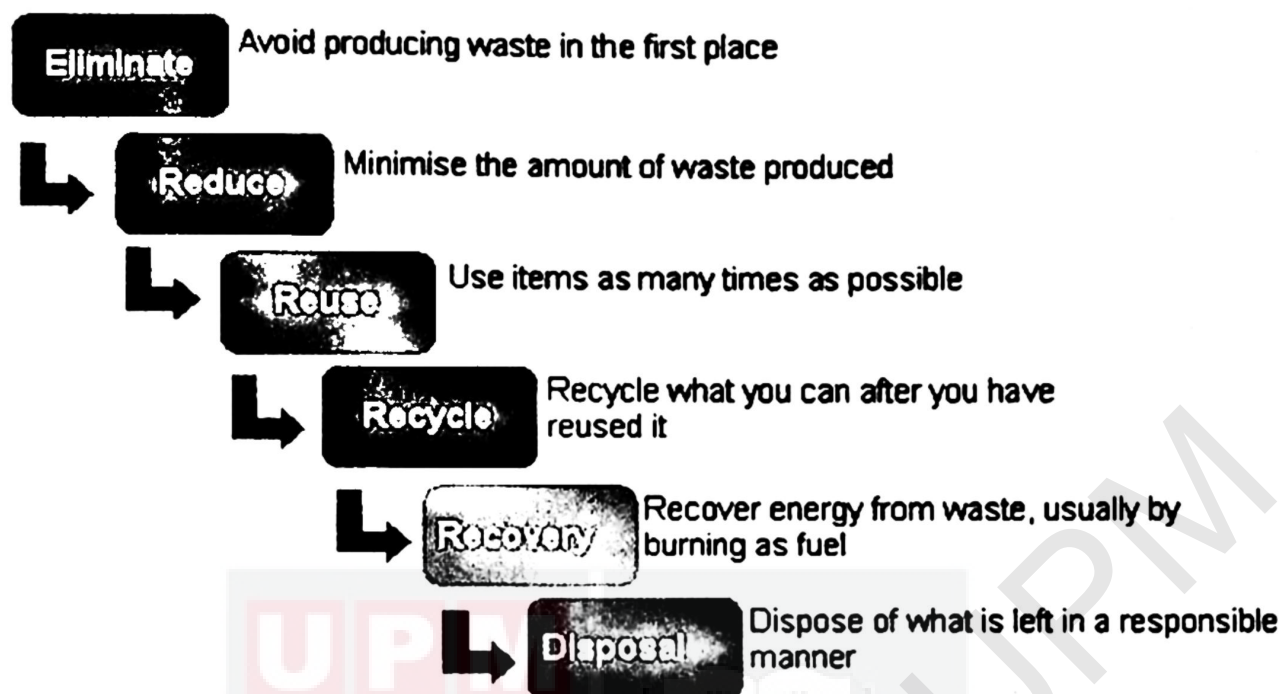


Figure 1.1: Plastic waste Hierarchy (Welsh Government, 2015)

The increasing number of plastic bags used year by year and improper plastic management can give earth not enough capacity or space to support all the plastic waste. Nevertheless, the plastic materials have a durable and slow to degrade process. The approach that has been used which is the restriction on plastic bag use applied in the program is one of the aims to educate the public especially the younger teenagers such as school students to increase their awareness on the environmental hazards of plastic bags usage. One of the methods used in order to reduce the usage of plastic bags is for the retailers to restrict the use of plastic bags for only those who are willing to pay for it before they can use it (Asmuni et al., 2015).



This campaign also is one of the approaches to change the behavior of the peoples in just depending on the use of plastic bags to carry their purchased items and also to reduce the amounts of plastic waste generation in the country. In order to keep this program a success it also needs full cooperation from the shopping stores to carry out the implement program. The involvements of the people especially the youngsters in carrying the No Plastic Bag Day (NPBD) program is important to make sure this program is success (Asmuni et al., 2015).

The NPBD program has been implemented by the several state governments and federal governments such as Pulau Pinang, Selangor and Melaka. For other countries they have the same initiatives on the reduce of the usage of plastic bags with banning the use of it and the use of plastic bag tax. The use of these tax can play an important role to change the people's behavior and also can increase the level of their acceptance to this program implementation (Convery, McDonnell, & Ferreira, 2007). With so many attempts have been made in order to reduce the use of plastic bags, less of them have been assessed in terms of the effectiveness of their attempts (Poortinga, Whitmarsh, & Suffolk, 2013).



### **1.1.1 No plastic bag day campaign in Malaysia**

Penang state in 2009 has banned the use of plastic bags from shopping retailers on Monday. Meanwhile in 2010, Selangor starts by following to banned the use of plastic bags on Saturdays. Then, Penang state government have strict that the use of plastic bags is banned every day. This is one of the efforts in order to reduce the usage of plastic bags in Malaysia (Asmuni, et al., 2015). Followed by Selangor where starting early January 2017 the usage of plastic will be ban every day instead only Saturday and in Malacca where there has been ban on petroleum-based plastic bags and polystyrene containers since the start of 2016 (The Star Online, 2016).

In 2011 the NPBD campaign has been launched by the Federal Government through the Ministry of Domestic Trade, Cooperative and Consumerism (MDTCC) in Malaysia on every Saturday. Their objective is to reduce the usage of plastic bags which can give great impacts to the environment. This includes the participation from the retail outlets, supermarkets and hypermarkets to ban the plastic bag use. But there is an exception for wet markets, restaurants and night markets for hygiene purposes when the consumers carrying wet groceries and food (Zen, Ahamad, & Omar, 2013). There are some stores that do not provide plastic bags but they encourage the consumers to bring their own carrier bags or they can either buy the eco-friendly bags provided by the store.

## **1.2 Problem statement**

Plastics are made from fossil fuel sources, such as natural gas and petroleum. Plus, plastic is not biodegradable that makes it always exist, crowding our landfills and polluting the oceans. Besides that, plastic bags are so lightweight and aerodynamic that they are easily picked up and carried by the wind even when disposed properly. They will maintain in the environment, causing harm for a very long time.

There are several methods that have been proposed in order to fight this problem. The most popular of these is the simplest building of the new landfills on the county outskirts. This situation makes Malaysia a country that is difficult to obtain new land because of land scarcity and the increase of land prices and also the high demands because of the increase in population (Manaf et al., 2009).

There are a number of negative environmental impacts from the solid waste landfill sites, more if the landfills are not managed properly. Besides, inappropriate solid waste management can cause air, soil and water pollution. Furthermore, plastic is non-biodegradable which it will still remain in the landfill for a very long time.

Thus, to reduce the amount of plastic usage and plastic waste is with the public starts to reduce the use of it by abide to this NPBD campaign or just bring their own carrier bags or the biodegradable bag that can be purchased at the supermarket. This



will more likely help to increase the awareness of the public to reduce the usage of plastic bags in their daily lives.

A study has been done by a Monash University Malaysia, 2014 and they have concluded that plastic bag bans and taxes do not reduce the impact of plastic on the biosphere. The public is aware about the program but they still insist on using the plastic bags (Monash University, 2014). Environmentalist Matthias Gelber also said that there was no change at all in the behavior of Malaysians on the usage of plastic bags. He also said that to make a difference is to educate the people, especially the younger generation on the negatives of plastic and the harm it causes to the environment (The Star Online, 2016).

Generally, Malaysian school students have the knowledge and the awareness on the harm of plastic bag to the environment but they still don't practice on to reduce the usage of it (Hassan & Mohd. Nor, 2013). This may be the reason of the low involvement of the school students on the environmental awareness practice. Thus, it is also mainly from the practice at home where the surroundings don't practice on to reduce the usage of the plastic bags (Atiqah, 2015).

In order to address the issue, the study of knowledge, attitude and practices on NPBD Campaign among boarding school and ordinary school students need to be done since there is still lacking of research to study the behavior of school students in this particular issue.

### **1.3 Study Justification**

Mainly there were researchers conducted on the significant different between resident population and cooperation with various organizations towards NPBD campaign but not many of them specifically conducted among school students in Malaysia. However, it is one of the way to know whether the school students these days have the knowledge and awareness on the negatives impact of the plastic to the environment. The outcome of this study will gives valuable information that related to the level of knowledge, attitude and practice of school students towards No Plastic Bag Day campaign.

In conjunction to bring this program to success, the practice need to be start at the earlier stage which is the young generation as the best example to be starts with. They are the best stage where the understanding on the environmental issues begins in this phase, secondary school students is an appropriate target group for these program (Atiqah, 2015).

Thus, the purpose of this study is to determine the behavior among the students on the NPBD campaign in earlier education and will give them awareness on the bad effects of the large amount of plastic usage.



Furthermore, the outcome of this study could be as the baseline information for the government on how to encourage the student to understand more about the NPBD campaign. This is important because the knowledge about this can be taught from school so that the students can have better understanding on how to protect the environments as one of the responsible residents towards the usage of plastic bags



1.4 Conceptual Framework

Figure 1.2 shows the summary of conceptual framework of this study. The conceptual framework summaries on institution especially secondary school students that located in Pulau Pinang on ‘NPBD Campaign’ which influence by the independent variable.

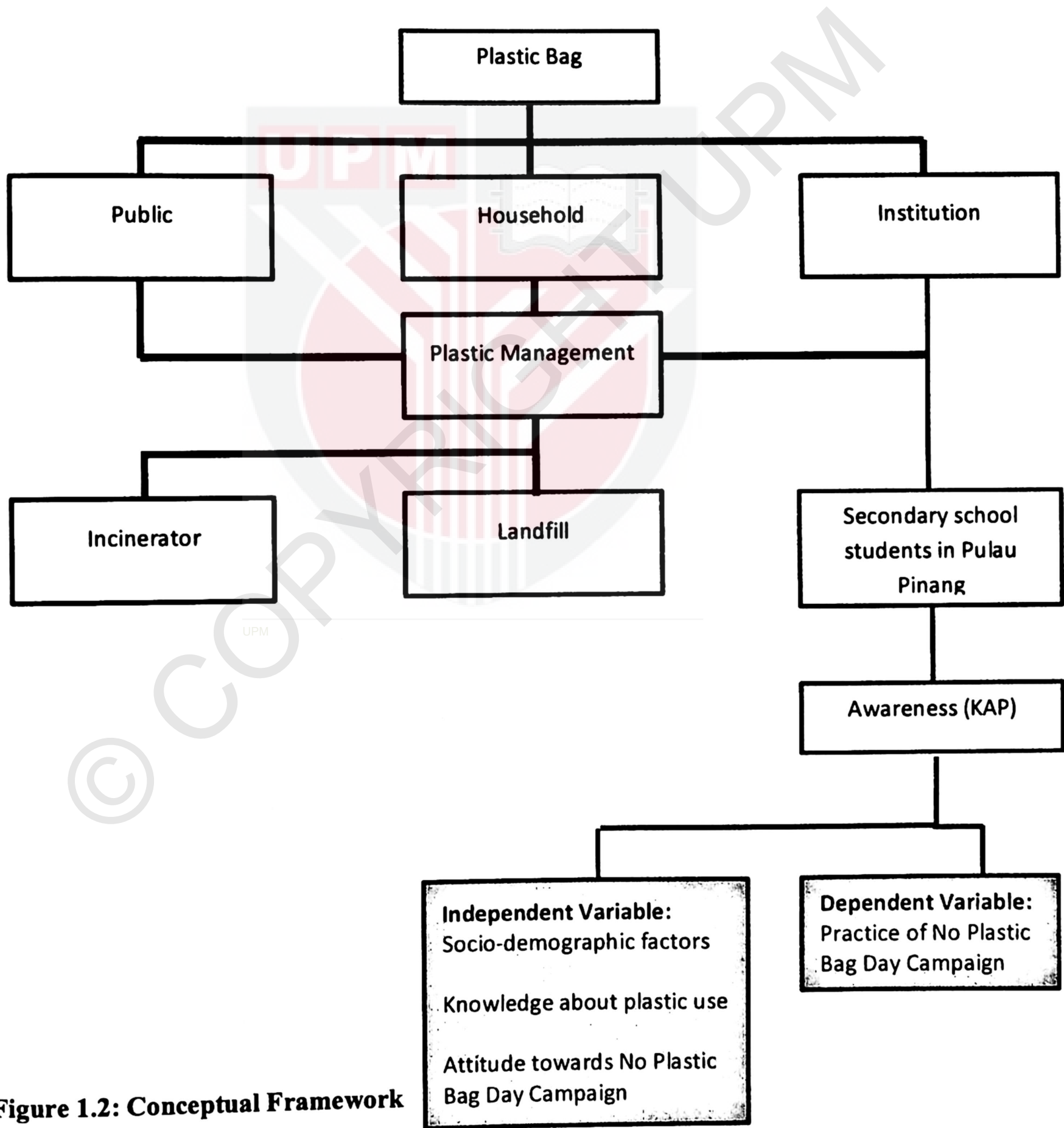


Figure 1.2: Conceptual Framework

## **1.5 Definition**

### **1.5.1 Conceptual Definition**

- **Plastic bags**

Plastic bags are made of non-renewable resources (i.e., petroleum), it takes hundreds of years to degrade plastic bags, and plastic bags usually contain additives that pollute the ground and water when released by action of humidity and ultraviolet radiation (Irina et al., 2013).

- **No Plastic Bag Day campaign**

NPBD program is a campaign that have been launched by the federal government through the Ministry of Domestic Trade, Cooperative and Consumerism (MDTCC) in Malaysia every Saturday (Asmuni et al., 2015).

- **Socio-demographic**

Socio-demographic is characterized by a combination of sociological and demographic characteristic. For example, age, gender, race, education level, etc.



- **Knowledge**

Knowledge is a condition to trigger the environmental awareness in individuals.

It is the students ability to understand and evaluate the impact of a society on the ecosystem (Rosta et al., 2011).

- **Attitude**

Attitude defined as position or posture of the body appropriate to or expressive of an action, emotion, etc. It can be in the form of likes and dislikes, biases, views, feelings concerning a situation or issue (Sammur, 2013)

- **Practice**

Practice is the observable actions of an individual in response to a stimulus. This is something that deals with the concrete, with actions.

- **Secondary school students**

Consist of students with age 13-17 years old

### **1.5.2 Operational Definition**

- **Socio-demographic**

Socio-demographic factor will measured by using self-administered questionnaire that consist of question such as age, race and gender.

- **Knowledge**

Knowledge will be evaluated by using self-administered questionnaire that consist of question regarding the general information about the impact of plastic to the environment and how to reduce the use of plastic bag.

- **Attitude**

Attitude will be evaluated by using self-administered questionnaire that consist of question on the attitude that they should have regarding the No Plastic Bag Day Program.

- **Practice**

Practice will be evaluated by using self-administered questionnaire that consist of question on practices that they should do to the waste that they produce.

- **Secondary school student**

The selection of the students is based on their age which was 16 years old because of their knowledge on the NPBD Program.

## **1.6 Research Objectives**

### **1.6.1 General Objectives**

To study the knowledge, attitude and practice on 'NPBD Campaign' between boarding school and ordinary school students in Pulau Pinang.

### **1.6.2 Specific Objectives**

- a) To determine the socio-demographic data of the respondents
- b) To compare the level of knowledge on "NPBD Campaign" between two groups of respondents for each school [students from Sekolah Menengah Kebangsaan Sains Tun Syed Syeh Shahabudin (SOKSEK) and Sekolah Menengah Kebangsaan Bukit Mertajam (SMKBM)].
- c) To compare the level of attitude on "NPBD Campaign" between two groups of respondents for each school students from (SOKSEK) and (SMKBM).
- d) To compare the level of practice on "NPBD Campaign" between two groups of respondents for each school students from (SOKSEK) and (SMKBM).



- e) To determine the association between knowledge, attitude on practice of 'No Plastic Bag Day Campaign' among respondents.



### **1.7 Study Hypothesis**

- a) **There is a significant difference of knowledge's score on 'NPBD Campaign' between respondents students from (SOKSEK) and (SMKBM)**
- b) **There is a significant difference of attitude's score on 'NPBD Campaign' between respondents students from (SOKSEK) and (SMKBM)**
- c) **There is a significant difference of practice's score on 'NPBD Campaign' between respondents students from (SOKSEK) and (SMKBM)**
- d) **There is an association between knowledge, attitude and practice on 'NPBD Campaign' among respondents.**

## **CHAPTER 2**

### **LITERATURE REVIEW**

This chapter discussed on the study of previous researcher regarding “NPBD” campaign among school students. It also explain on the definition of plastic and “NPBD”, school students behavior on “NPBD” campaign, knowledge attitude and practice, impacts of plastic waste to the environment and human, benefit of “NPBD” campaign.

#### **2.1 Background of “No Plastic Bag Day”**

Since March 2002, Ireland has applied tax for about € 0.15 per plastic bag. The purpose of this tax is to reduce the presence of plastic bag and to increase the public awareness to littering. Other countries besides Ireland who discourage the use of plastic bags but the actions also taken by Bangladesh and Rwanda who ban the usage of plastic bag and Denmark who put on taxes to producers and retailer (Convery, McDonnell, & Ferreira, 2007).

Between African countries, South Africa was the primary state to act by forbid thin plastic bags and introduce taxes on thicker ones in 2003, meanwhile in 2007 Uganda and Kenya followed. Somalia, Eritrea and Rwanda prohibit all plastic bags in 2005, followed

by Tanzania the next year (BBC News, 2008). The government strategy about the environment will not take effect without full participation from the public (Eden, 1996).

In Malaysia, the local government in Penang has launched the ‘No Plastic Bag Day’ on every Monday in 2009 to keep the environmental friendly among the public (Yunus, 2011). The campaign then extended to three days a week which is Monday, Tuesday and Wednesday effective on Jan 1, 2010 and on Jan 1, 2011 Penang had effectively achieved the ultimate of “No Plastic Bag Day Any Day”. After that, the Selangor state government also implemented this program and set that Saturday as the ‘No Plastic Bag Day’ in 2010 (Bernama, 2011).

## **2.2 Overview of school student’s behavior on “No Plastic Bag Day” campaign**

The chosen of secondary school students as the target age group for this study is due to the potential impact from their actions that could give effects to the community, however they seems to be affected by some factors such as their academic activities and surrounding issues. Besides that, the students can also act as a teacher while they are in high school and with the message they bring to home will give big influence to their parents and siblings.



Secondary school students are way more important subject that should be focus on because they are persuadable and they can accept the concepts like sense of pride and civic duty with right education exposed to them during school. One specific theory, self-efficacy is the reliance that one's activity have an effect on the surroundings. The greatest motivations to generate huge "cognitive strategies" is by self-efficacy (Greene et al., 2004).

There is research done on the design of broad socio-psychological model for environmentalism. In this study it shows that social and institutional structure exercises premature and strong influence on the shape of individual psychological features. The specific beliefs and attitudes will lead to the formation of behavioral intentions and also will eventually formed behavior (Stern, Dietz & Guagnano, 1995).

### **2.3 Knowledge, Attitude and Practice**

Adjacent to the expansion of natural concern, the natural crisis drastically keeps on highlighting powerful variables on ecological assurance, for example, environmental behavior, awareness, knowledge and attitude (Ayush, 2008). The researchers trusted that the knowledge and attitude are connected to each other where attitude is additionally associated with the behavior (Flamm, 2006).

Ecological instruction can expand the attitude and knowledge about the environment that is important to handle and to take care of issues (Department Of The Environment and Heritage, 2005). The speculation on “when the people have more knowledge about the environment and its consequences if it is damage then they become well informed on the problems related with the environment and, thus, be more inspired to treat the environment with care (Fahlquist, 2008).

There are research that been proved over a decades ago that knowledge, attitudes and practice can be acquire through environmental education. It is for the most part concurred that environmental education is a procedure that makes awareness and comprehension of the connection amongst people and their numerous surroundings (Hafezi et al., 2013).

They are theory that put forward the attitude factor and external context that moves together to affect the behavior. The outside situation will give effects to the attitude-behavior force, where when there is negative external conditions the attitudes will not induce the behavior. The particular behavior will increase from the attitudes with the present of strong positive external condition (Guagnano et al., 1995).

There are some factors mentioned which is gender, age, political issues, parent's income and their educational level that can give effect to their awareness, knowledge and attitude on environmental education (De Le Vega, 2006).

The environmental behavior also been reported with the awareness, locus of control, culture and beliefs, attitudes, environmental knowledge, education, behavior control and more (Ooi et al., 2012; Cheah & Phau, 2011). The usage of non-biodegradable plastic bags is one of the big reason that will contribute to environment degradation (Mudiarasan& Behrooz, 2015).

#### **2.4 Impacts of plastic waste to the environment and human**

The preferred method practiced in Malaysia for disposal of waste is through landfill because it is the most common method and cheapest to treat the solid waste (Manaf et al., 2009). Most of the landfill is an open dumping area. The main problems about this open dumping landfill is that it gives an impact to the environment and also to human health (Ngoc and Schnitzer, 2009). The exposure to the soil contaminant through direct waste contact and air pollution through the burning of waste can give effect to human and the worse scenario is the spreading of disease by different vectors like insects, birds and rodents (Samsudin and Don, 2013).

Due to the over production of certain unrecyclable solid waste including plastic bags has made degradation of the environment (Mudiarasan& Behrooz, 2015). Improper disposal of used plastic bags is known to be the source of long-term damage to the environment. It takes more time to degrade in soil and will also cause pollution to

air, water and soil. Plastic bags that left in landfills will give exceptional problems to the environment (Musa et al., 2013).

Plastic waste takes about 400 to 1000 years to deteriorate on landfills (Musa et al., 2013 ; Bashir, 2013). Used plastic bags create trouble besides their simple use (Asmuni et al., 2015).

## **2.5 Environmental Concern**

Defined as natural issue as a conviction, position and the level of concern an individual holds towards the earth (Mat Said et al., 2003). Environmental concern also defined as the enlivening and consciousness of purchasers in the way that the ecological in peril and that normal asset are restricted. The expanding number of buyers with ecological concern may be reflected by the expanding number of aim to buy green products. It may be more persuasive for some of the behavior and it can be indicated in their everyday lives (Kalafatis et al., 1999).

Environmental concern is measure as a uni-measurement as they embraced from past review by Maloney et al., 1975. It also refers on how a person is adhering to the environmental concern (Chan & Lau, 2000). From Diamantopoulos et al., (2003) said that environmental concern as a big contributor in consumer judgement. There are three environmental concern element used to describe green consumer among consumer in



British which are their knowledge about green problems, their attitudes towards the element of environment and their emotional behavior on the environment (Diamantopoulos et al., 2003).

The highlighted motivational factors such as environmental concerns, perceived responsibility and perceived effectiveness of environment-related behavior. The study also reveals that knowledge on environmental problem is insufficient to motivate youngsters to act and have better attitudes towards the environment (Lee, 2008). With sufficient knowledge, the individual's awareness and attitude could be increase and eventually will produce individual with positive behavior to the environment (Kollmus and Agyeman, 2002).

## **2.6 Benefit of “No Plastic Bag Day” campaign**

There are 66% consumers that aware about the benefit of this program that it will reduce the volume of waste and will give positive impacts to the environment (Irina et al., 2013). The implementation of the plastic bag policy gives a direct impact to the change of consumer behavior (Baker, 2010).

The utilization of controls, for example, the necessity for retailers to confine the utilization of plastic bags for as it were the individuals who will pay a require amount is a strategy executed to dishearten the utilization of plastic bags. The regulation plays an important role in instigating moral responsibility for producers (Zaman, 2012).

The adequacy of the charge correspondingly, which is through the propensity change of customers towards intentionally bringing their own carrier bags. The thought of the utilization of the outcome on not bringing own bags and it is taking an utilitarian approach, which can be compelling in advancing a change of propensity (Chan, Wong, & Leung, 2007).

## **CHAPTER 3**

### **METHODOLOGY**

This chapter explains the method and tools used in this research. The various sections will explain the design, duration, population and methods used for selection of research participants.

#### **3.1 Study Location**

This cross sectional study was conducted at Bukit Mertajam, Pulau Pinang (Figure 3.1). Bukit Mertajam is located at the central Seberang Perai district in the state of Penang, Malaysia and it also is the capital of this district. Other localities that are situated in Central Seberang Perai include Perai, Seberang Jaya, Permatang Pauh, Penanti, Bukit Tengah, Bukit Minyak, Juru, Alma, Machang Bubok and Permatang Tinggi.

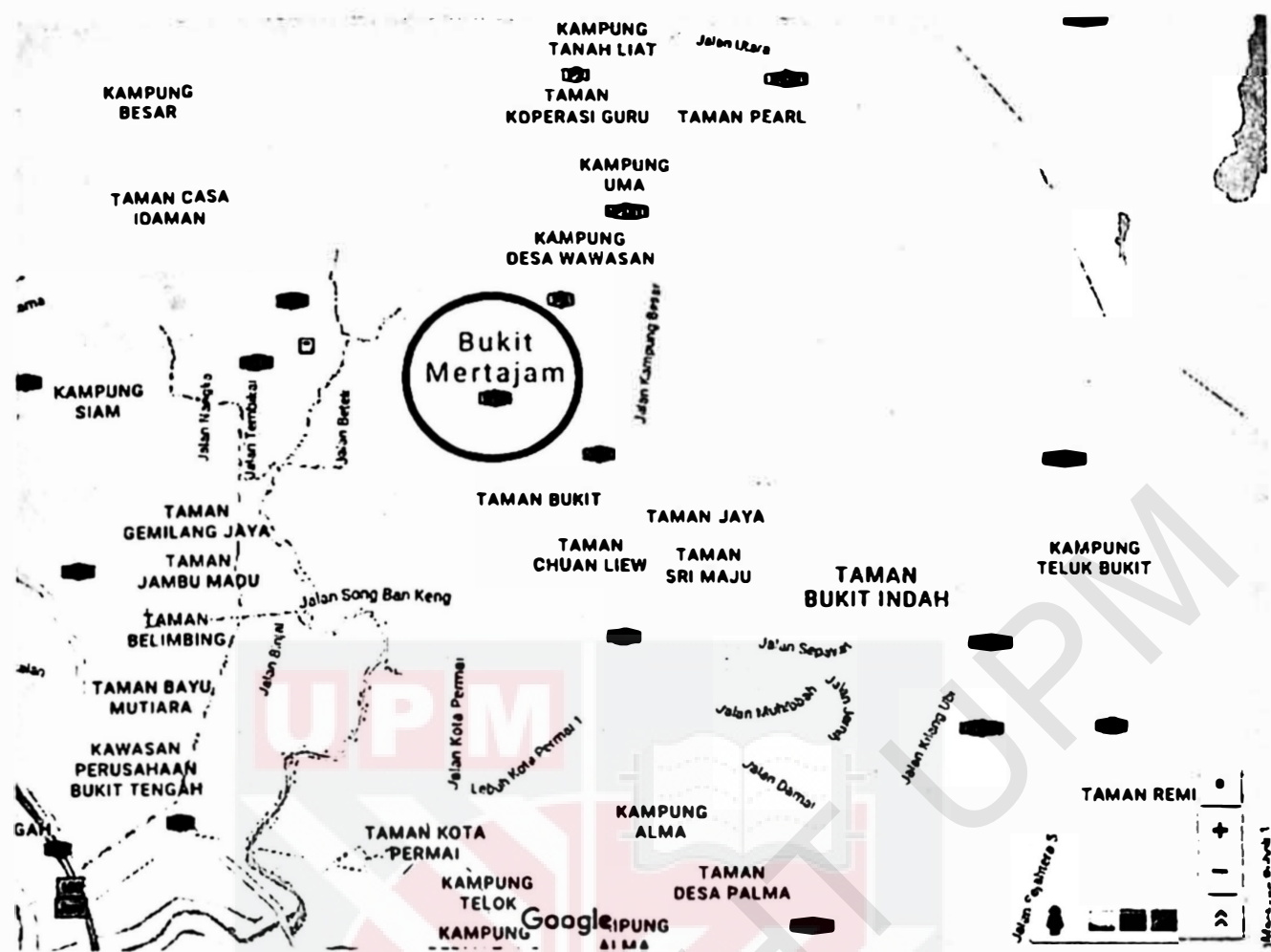


Figure 3.1 : Location of research at Bukit Mertajam

Sources : <https://www.google.com/maps/place/Bukit+Mertajam,+Penang,+Malaysia>.

In Pulau Pinang, there are only two boarding schools. One of the schools is located at Bukit Mertajam which is SOKSEK and the other one is in Kepala Batas which is Sekolah Menengah Sains Kepala Batas. There are 16 secondary schools located in Bukit Mertajam, SMKBM is chosen because it is closest to SOKSEK. These two schools were chosen to study the difference among their knowledge, attitude and practice towards the study.



### **3.2 Study Design**

The research carried out a cross sectional comparative study which was to study the knowledge, attitude and practice on NPBD Campaign among secondary school students. This study involves school students which were compared between boarding school students (Sekolah Menengah Sains Tun Syed Syeh Shahabudin) and secondary school students (Sekolah Menengah Kebangsaan Bukit Mertajam) at Bukit Mertajam, Pulau Pinang. Then comparison between these two groups were analysed.

### **3.3 Sampling**

#### **3.3.1 Sampling Population**

Form four students from both secondary school students will be chosen as the respondent and the comparison between the knowledge, attitude and practice between these two schools will be analyzed.

**Inclusion criteria:** All form four students who were present during period of study.

### **3.3.2 Sampling Frame**

The updated school name list was obtained from the official website of Kementerian Pendidikan Malaysia. Meanwhile, the students list was obtained from the school principals of both schools in Pulau Pinang.

### **3.3.3 Sample**

The sample for this study was students of form four in two different secondary schools located in Bukit Mertajam.

### **3.3.4 Sampling Unit**

Students involved were aged 16 years for both of the secondary school.

### **3.3.5 Sampling Method**

Form four students in Sekolah Menengah Sains Tun Syed Sheh Shahabudin and Sekolah Menengah Kebangsaan Bukit Mertajam was selected as the respondents.

### **3.3.6 Sample Size**

The sample sizes involved are form four students in both selected secondary schools in Bukit Mertajam, Pulau Pinang by using Universal Sampling. Hence, the sample size in this study was 239 students which were 82 students from boarding school and 157 more from the secondary school students.

## **3.4 Study Instrumentation**

### **3.4.1 Questionnaire**

The respondents were assessed by using self-administered questionnaire which consist of 3 sections. Section A was describing their socio-demographic status, for example age, gender and race. Section B was asked about the general knowledge. Section C consist of 3 subsections which asked questions about their knowledge on No Plastic Bag Day campaign, their attitude towards the program and practices that they do related to the NPBD campaign.

Questionnaire was modified from another research (Atiqah, 2015) according to the suitability of this research. A set of questionnaire was developed based on information gathered from previous study which is more convince and reliable.

### **3.5 Variables**

#### **3.5.1 Dependent Variable**

The dependent variable is the practice on “NPBD” campaign

#### **3.5.2 Independent Variable**

The independent variable is Knowledge about plastic use and Attitude towards “NPBDCampaign”

### **3.6 Data Collection**

After all application process accepted, all the selected students were gathered at the provided room. Before distribute the questionnaire, the students were brief on the purposed of the research and fill in the form of agreement to participate in this study. The students have 20-25 minutes to answer the entire question given. A token of appreciation were given to them when they completed the questionnaire.



### **3.7 Quality Control**

#### **3.7.1 Pilot Study**

A pilot study was done to test the validity and time taken for respondents to complete the questionnaire. A sample of the questionnaire was distributed to 20 students as the representative of respondents from the study population to observe their ability and understanding to answer the questionnaire in order to produce a good research result. A reliability test was then done by using SPSS to get the Cronbach alpha value. According to Bryman and Cramer (2005), value of Cronbach alpha of 0.7 or more is acceptable for reliability test. For this study, the Cronbach alpha for knowledge part is 0.75 while for attitude was 0.72 and practice was 0.79.

### **3.8 Data Analysis**

Data analysis was done by using “Statistical Package for Social Sciences (SPSS)” Version 21.0. The test for knowledge had 14 questions. The right answer score 1 point and wrong answer score 2 point.

For the scoring part, it was planned as follow:

**1. Knowledge: the scoring method**

**Right answer: 1 point**

**Wrong answer: 2 point**

The obtained score was converted in term of score level and were classified into 3 levels (low, moderate and high knowledge). Possible scores range between 14-18 points. A mean score and standard deviation of the group were used to classify subject into 3 groups as follow (Ajit, 2010):

**Good level : score > 17**

**Moderate level : score = 15-17**

**Low level : score < 15**

**2. The questions on attitude towards NPBD Campaign comprised of 12 questions and following scoring criterion was followed:**

**Strongly agree answer :5 points**

**Agree answer :4 points**

**Not certain answer :3 points**

**Disagree answer :2 points**

**Strongly disagree :1 points**

The obtained score was converted in term of score level and were classified into 3 levels (low, moderate and high attitude). Possible scores range between 44-49 points. A mean score and standard deviation of the group were used to classify subject into 3 groups as follow (Ajit, 2010):

**Good level :score > 48**

**Moderate level :score = 45-48**

**Low level:                      :score < 45**

### **3.       Practice: the scoring method**

**Right answer: 0 points**

**Wrong answer: 1 points**

The obtained score was converted in term of score level and were classified into 3 levels (low, moderate and high practice). Possible scores range between 2-7 points. A mean score and standard deviation of the group were used to classify subject into 3 groups as follow (Ajit, 2010):

**Good level                      :score > 6**

**Moderate level                :score = 3-6**

**Low level:                      :score < 3**

### **3.9 Ethical Consideration**

The approval from Ethic Committee of the University Putra Malaysia was obtained before the study started. A formal letter from Department of Environmental and Occupational Health, Faculty of Medicine and Health Science UPM was obtained for the application process to the Ministry of Education through official portal of Ministry of

Education. Ministry of Education approved the application and the approval letter was forwarded to the Education District Office in Pulau Pinang.

This research was conducted on a voluntary basis where all respondents were given a brief in how the study was conducted and all respondents were asked to give their written permission using agreement consent form. In order to respect the right of the respondents, the identity of the respondents including their personnel information remained confidential.

### **3.10 Study Limitation**

Some of the students may not be able to participate in the survey due to absent from school and there were some students that may copy the answers among themselves. They have the tendency to fill the questionnaire without even bother to read and understand it.



## **CHAPTER 4**

### **RESULTS**

This chapter includes descriptive and analytical findings on demographic, knowledge, attitude and practice. The descriptive finding on general information followed by descriptive characteristic on general knowledge, knowledge on 'No Plastic Bag Day' campaign, attitude towards its management and present practices on the campaign. Analytical findings on the comparison between group and the association of all independent variables and dependent variable were present later in this section.

In order to complete the study, 239 copies of questionnaire were distributed. The questionnaires were distributed to both boarding and secondary school students. Out of 239 copy, 239 (100% response rate) were completed and were returned to the researcher. All participants were 16 years old.

#### **4.1 General Socio-Demographic Characteristic**

This part shows the frequency distribution of selected variables describing background characteristics of the respondents. Table 4.1 reveals general information such as gender, races, number of family and family income in school that located at Bukit Mertajam, Pulau Pinang. Diagram 4.1, 4.2, 4.3, 4.4 and 4.5 summarized on the social demographic.

Regarding gender, the study population comprises of 32 (39.9%) males and 50 (61.0%) females for boarding school students. Meanwhile, the respondents for secondary school comprises of 73 (46.5%) males and 84 (53.5%) females.

Regarding race, in boarding school all form 4 students were Malay. Meanwhile in secondary school Malay students were 115 (73.2%), followed by Indian that comprise of 30 (19.1%) students and lastly Chinese students which is 12 (7.6%).

For number of family, the highest numbers of family members were 78 (49.7%) that comprises of 3-6 members and the lowest were 6-9 members about 20 (24.4%). Lastly is the family income where the highest were 70 (44.6%) from range of RM 3000-RM 4000 and the lowest range is >RM 5000 about 3 (1.9%).

# Gender at Boarding School

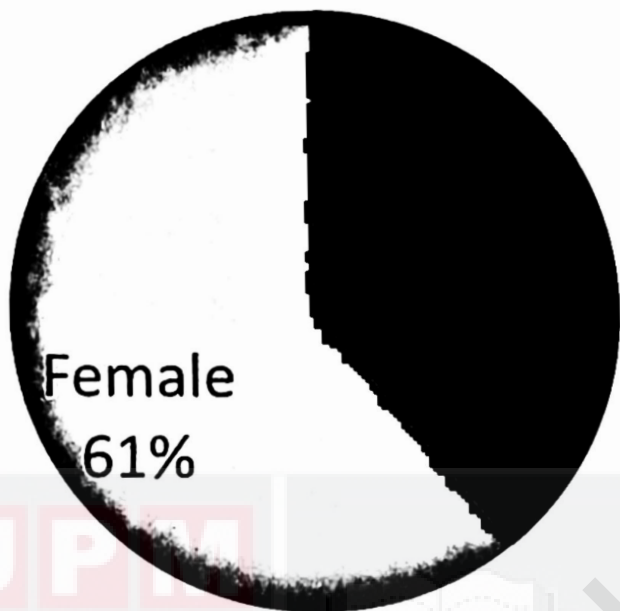


Diagram 4.1: Gender of students in Boarding school

# Gender at Ordinary Secondary School

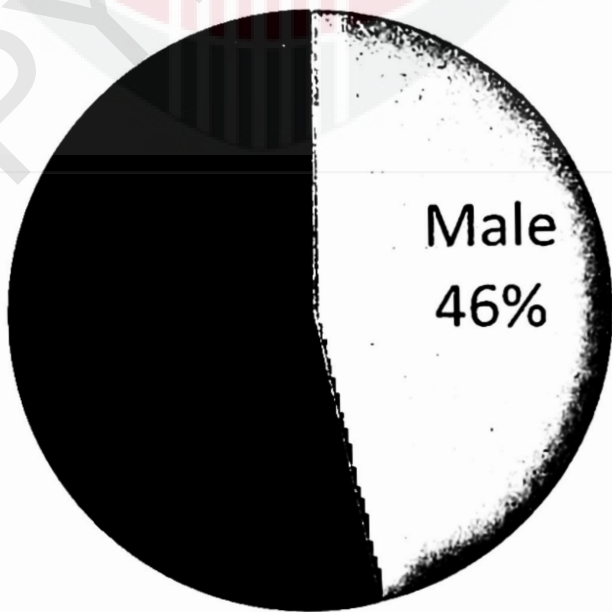
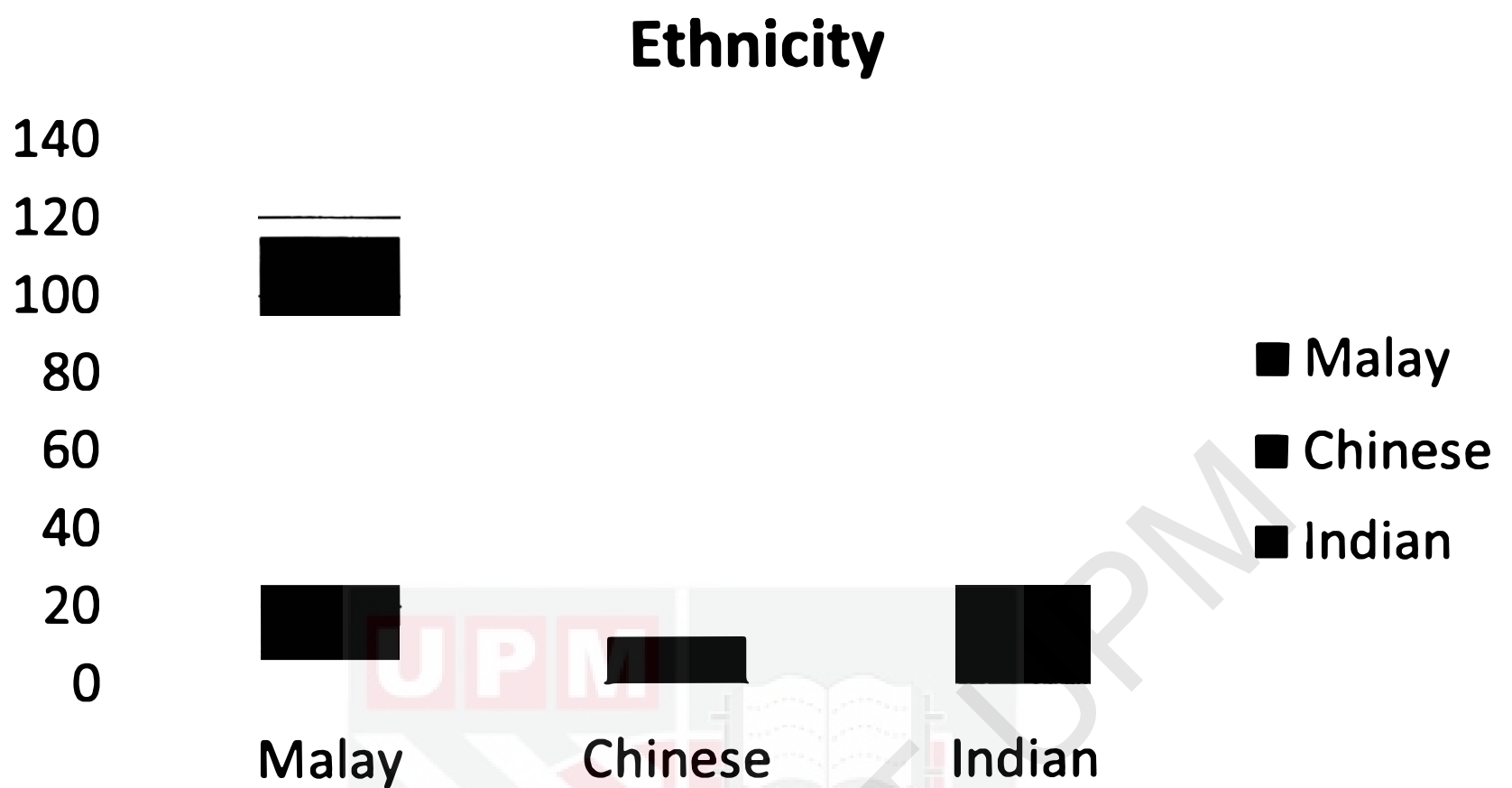
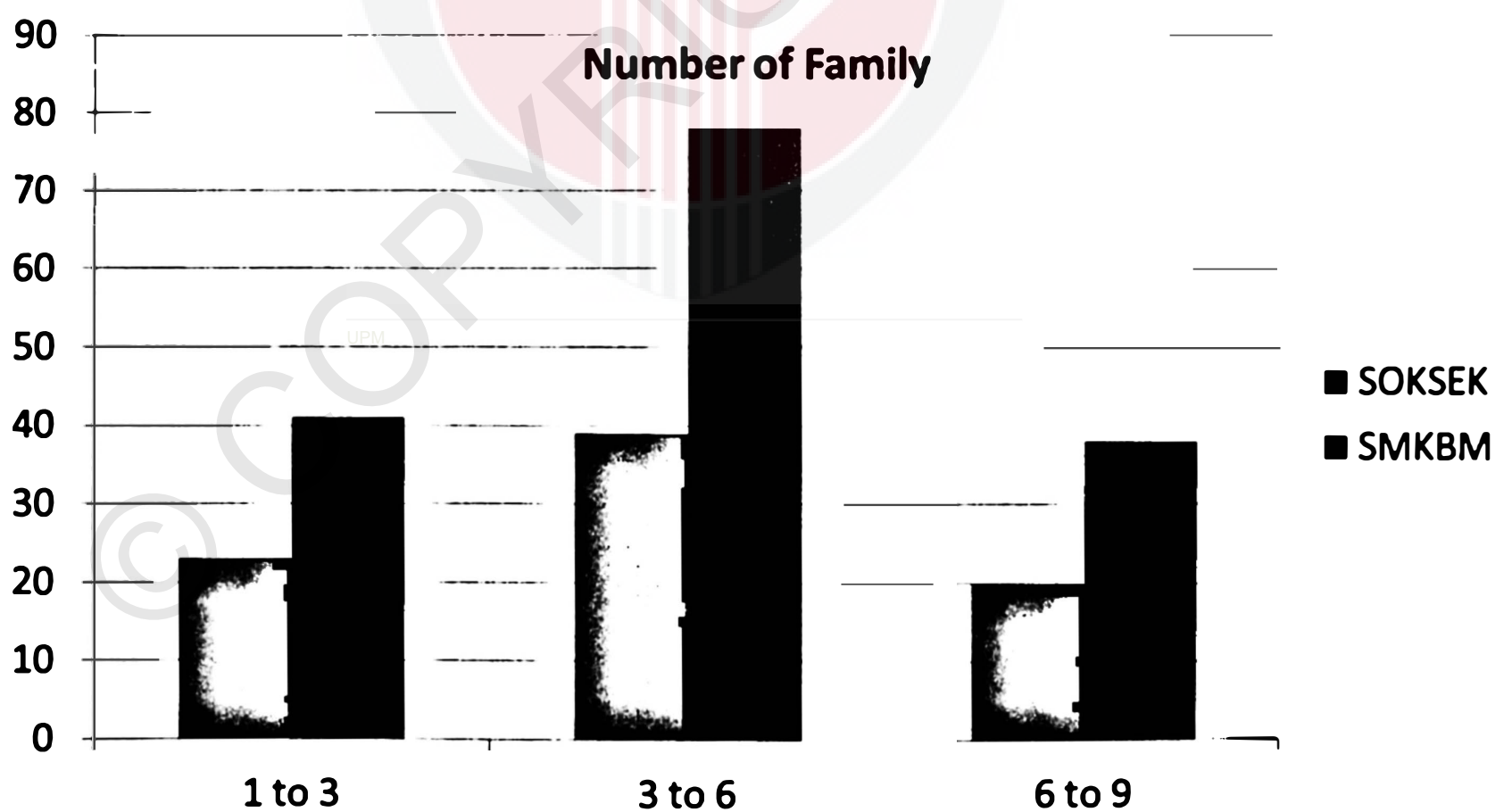


Diagram 4.2: Gender of students in Ordinary secondary school



**Diagram 4.3: Races of students in secondary school**



**Diagram 4.4: Number of family members in both school in Bukit Mertajam, Pulau Pinang**

**Table 4.1: Social demographic characteristics (n=239)**

| Variable         | SOKSEK     |                | SMKBM      |                |
|------------------|------------|----------------|------------|----------------|
|                  | Number (n) | Percentage (%) | Number (n) | Percentage (%) |
| Age              |            |                |            |                |
| 16               | 82         | 100.0          | 157        | 100.0          |
| Gender           |            |                |            |                |
| (n=239)          |            |                |            |                |
| Male             | 32         | 39.0           | 73         | 46.5           |
| Female           | 50         | 61.0           | 84         | 53.5           |
| Races (n=239)    |            |                |            |                |
| Malay            | 82         | 100.0          | 115        | 73.2           |
| Chinese          |            |                | 12         | 7.6            |
| Indian           |            |                | 30         | 19.1           |
| Number of Family |            |                |            |                |
| 1-3              | 23         | 28.0           | 41         | 26.1           |
| Members          |            |                |            |                |
| 3-6              | 39         | 47.6           | 78         | 49.7           |
| Members          |            |                |            |                |
| 6-9              | 20         | 24.4           | 38         | 24.2           |
| Members          |            |                |            |                |
| Family Income    |            |                |            |                |
| 2000-3000        | 8          | 9.8            | 23         | 14.6           |
| 3000-4000        | 28         | 34.1           | 70         | 44.6           |
| 4000-5000        | 35         | 42.7           | 61         | 38.9           |
| >5000            | 11         | 13.4           | 3          | 1.9            |



**4.2 General Knowledge on NPBD Campaign**

This part shows frequency of general knowledge on No Plastic Bag Day Campaign for supporting information about this campaign among respondents. Table 4.2 shows information on whether they knowing about NPBD Campaign realize on NPBD Campaign, knowing other countries that implement NPBD, source of information on NPBD Campaign and practice of NPBD at home.

**Knowing about NPBD Campaign**

From the question, there were 239 (100.0%) of students that know about what is NPBD Campaign and there is no answer that indicate the student did not know about this campaign.

**Realize on No Plastic Bag Day Campaign**

There about 239 (100.0%) students that realize about this campaign and there is no students that did not realize about this campaign.

### **Knowing other country that implement NPBD Campaign**

There are about 150 (62.2%) students that know about the implementation of this program and there about 89 (37.8%) students that did not know about this campaign on other country.

### **Sources of information on NPBD Campaign**

Majority of students in the study chose television and friends as their source to get the information about this campaign which were 239 (100.0%) followed by teachers 103 (42.7%) and lastly from magazine as their sources which is 25 (10.4%).

### **Practice of NPBD Campaign at home**

There about 239 (100.0%) students that practice about this campaign while there are no answer that indicates they did not practice about this campaign.

**Table 4.2: General knowledge on NPBD Campaign**

| General knowledge                                          | Number (n) | Percentage (%) |
|------------------------------------------------------------|------------|----------------|
| Knowing about NPBD Campaign (n 239)                        |            |                |
| Yes                                                        | 239        | 100.0          |
| No                                                         |            |                |
| Realize on NPBD Campaign (n=239)                           |            |                |
| Yes                                                        | 239        | 100.0          |
| No                                                         |            |                |
| Knowing other country that implement NPBD Campaign (n 239) |            |                |
| Yes                                                        | 150        | 62.2           |
| No                                                         | 89         | 37.8           |
| Source of information on NPBD Campaign (n=239)             |            |                |
| Television                                                 | 239        | 100.0          |
| Radio                                                      | 0          | 0              |
| Magazine                                                   | 25         | 10.4           |
| Friends                                                    | 239        | 100.0          |
| Teacher                                                    | 103        | 42.7           |
| Others                                                     | 0          | 0              |
| Practice NPBD Campaign at home (n=239)                     |            |                |
| Yes                                                        | 239        | 100.0          |
| No                                                         | 0          | 0              |

4.3 Knowledge towards NPBD Campaign

Questions were asked to explore the respondent’s knowledge about NPBD Campaign including 14 questions. The respondents got 1 score for correct answer and 2 score for wrong answer. The obtained score was converted in term of score level and was classified into 3 levels (low, moderate and high knowledge). Possible range score is between 14-18 points.

Table 4.3: Level of knowledge of respondents towards NPBD Campaign

| Level Knowledge    | SOKSEK    |                | SMKBM     |                |
|--------------------|-----------|----------------|-----------|----------------|
|                    | Frequency | Percentage (%) | Frequency | Percentage (%) |
| High Knowledge     | 65        | 79.3           | 8         | 5.1            |
| Moderate Knowledge | 12        | 14.6           | 105       | 66.9           |
| Low Knowledge      | 5         | 6.1            | 44        | 28.0           |

In order to summarize the knowledge level of the respondents, the distribution of knowledge towards NPBD Campaign was shown in table 4.3. Boarding school students had shown that they have a high knowledge than ordinary secondary school which is 65 (79.3%) score level for boarding school and 8 (5.1%) for ordinary secondary school.

For moderate knowledge, boarding school students had 12 (14.6%) and 105 (66.9%) for ordinary secondary school. There were 5 (6.1%) for boarding school students and 44 (28.0%) for ordinary school students for low knowledge. Majority of respondents had knowledge level below 80% which was considered as moderate level.

#### **4.4 Attitude towards the NPBD Campaign**

In order to know the attitude towards the NPBD Campaign, all the respondents were asked about their opinion whether they agree or disagree about this campaign. The attitude had 12 questions. The score was given 5 for strongly disagree answer, 4 for disagree answer, 3 for uncertain answer, 2 for agree answer and 1 for strongly agree answer.



**Table 4.4: Level of attitude towards NPBD Campaign**

| Level of attitude          | SOKSEK    |                | SMKBM     |                |
|----------------------------|-----------|----------------|-----------|----------------|
|                            | Frequency | Percentage (%) | Frequency | Percentage (%) |
| High level of attitude     | 19        | 23.2           | 18        | 11.5           |
| Moderate level of attitude | 46        | 56.1           | 109       | 69.4           |
| Low level of attitude      | 17        | 20.7           | 30        | 19.1           |

Level of attitude towards NPBD Campaign of respondents and its distribution was shown in table 4.4. Majority the respondents from both school had moderate attitude level which were 46 (56.1%) and 109 (69.4%) respectively while 30 (19.1%) from ordinary secondary school score and 17 (20.7%) from boarding school score for low attitude level. There about 19 (23.2%) from boarding school score and 18 (11.5%) from ordinary secondary school score for their level attitude towards this campaign.

4.5 Practices towards NPBD Campaign

For practice towards NPBD Campaign, all the respondents were asked 11 questions regarding their practice towards this campaign. The respondents get 0 for correct answer and 1 for wrong answer. The practice score were converted in term of attitude score level and was classified into 3 levels (low, moderate and good practices).

Table 4.5: level of practice on NPBD Campaign

| Level of practice | SOKSEK    |                | SMKBM     |                |
|-------------------|-----------|----------------|-----------|----------------|
|                   | Frequency | Percentage (%) | Frequency | Percentage (%) |
| Good practice     | 2         | 2.4            | 36        | 22.9           |
| Moderate practice | 60        | 73.2           | 118       | 75.2           |
| Low practice      | 20        | 24.4           | 3         | 1.9            |

The distribution of level of practice towards NPBD campaign was shown in table 4.5. Majority of the respondents for both school had moderate practice which is 118 (75.2%) and 60 (73.2%). The good practice score shown in ordinary school students which is 36 (22.9%) while for boarding school only 2 (2.4%). And for low practice for boarding school score is 20 (24.4%) and 3(1.9%) for ordinary school students.

#### **4.6 Compare Knowledge, Attitude and Practice on NPBD Campaign between both schools.**

Table 4.6, 4.7 and 4.8 shows the difference in knowledge, attitude and practice level score between boarding school students and ordinary secondary school students.

The p-value of Kolmogorov-Smirnov (KS) for knowledge level score was 0.001. It was not normally distributed, hence Mann-Whitney test was used. For the knowledge score, the mean rank of boarding students was 126.30, while the mean rank for ordinary secondary school students was 116.71. Based on Mann-Whitney test, the Z statistics is -10.236 and p-value is 0.000 which is  $<0.05$ . Therefore, null hypothesis was rejected and the result was significant.

The p-value of Kolmogorov-Smirnov (KS) for attitude level score was 0.001. It was not normally distributed, hence Mann-Whitney test was used. For the attitude score, the mean rank for boarding students was 61.76, while the mean rank for ordinary secondary school students was 150.42. Based on Mann-Whitney test, the Z statistics is -10.236 and p-value is 0.001 which is  $<0.05$ . Therefore, null hypothesis was rejected and the result was significant.

The p-value of Kolmogorov-Smirnov (KS) for practice level score was 0.001. It was not normally distributed, hence Mann-Whitney test was used. For the attitude score, the mean rank for boarding students was 90.62, while the mean rank for ordinary secondary school students was 135.34. Based on Mann-Whitney test, the Z statistics is -10.236 and p-value is 0.001 which is  $<0.05$ . Therefore, null hypothesis was rejected and the result was significant.

**Table 4.6: Comparison of the knowledge level of NPBD campaign between both school (n=239)**

| Group              |        | N   | Median<br>(IQR) | Mean<br>rank | Z-<br>Statistics | p-value |
|--------------------|--------|-----|-----------------|--------------|------------------|---------|
| Level<br>knowledge | SOKSEK | 82  | 14.00(5)        | 126.30       | -10.236          | 0.001   |
|                    | SMKBM  | 157 | 17.00(6)        | 116.71       |                  |         |

**\*significance at  $p<0.05$**

**Table 4.7: Comparison of the attitude level of NPBD campaign between both school (n=239)**

|                   | Group  | N   | Median    | Mean   | Z-         | p-value |
|-------------------|--------|-----|-----------|--------|------------|---------|
|                   |        |     | (IQR)     | rank   | Statistics |         |
| Level<br>attitude | SOKSEK | 82  | 47.00(11) | 61.76  | -10.236    | 0.001   |
|                   | SMKBM  | 157 | 46.00(10) | 150.42 |            |         |

**\*significance at  $p<0.05$**

**Table 4.8: Comparison of the practice level of NPBD campaign between both school (n=239)**

|                   | Group  | N   | Median   | Mean   | Z-         | p-value |
|-------------------|--------|-----|----------|--------|------------|---------|
|                   |        |     | (IQR)    | rank   | Statistics |         |
| Level<br>practice | SOKSEK | 82  | 4.00(7)  | 126.30 | -10.236    | 0.001   |
|                   | SMKBM  | 157 | 5.00(12) | 116.71 |            |         |

**\*significance at  $p<0.05$**



4.7 Association between Knowledge, Attitude on Practice of NPBD Campaign

Chi-Square test was used to analyse the association between knowledge and attitude on practice of NPBD campaign and was presented in table 4.9 and 4.10 below.

The results show that the students have a moderate knowledge and practice which is 88. The Pearson’s Chi-square statistics was 33.827 and the degree of freedom is 4. The p-value of the test was 0.000 which is less than 0.001. The minimum expected count was 4.72 which was less than 5. Table 4.9 shows an association between knowledge and practice of NPBD campaign. Students with poor knowledge tend to have poor practice about the campaign

Table 4.9: Association between knowledge and practice

| Knowledge | Practice level |     |          |      | p-value |
|-----------|----------------|-----|----------|------|---------|
|           | Count          | Low | Moderate | High |         |
| Low       |                | 17  | 54       | 2    | 0.000   |
| Moderate  |                | 6   | 88       | 23   |         |
| high      |                | 0   | 36       | 13   |         |

\*significance at p<0.001

The attitude score also shows that the students have moderate level of attitude about NPBD campaign which is 114. The Pearson’s Chi-square statistic was 1.251 and the degree of freedom was 4. The p-value test was 0.000 which is less than 0.001. The minimum expected count was 3.56 which was less than 5. There was an association between attitude and practice of NPBD campaign that presented on table 4.10.

**Table 4.10: Association between attitude and practice**

|          |       | Practice level |          |      | p-value |
|----------|-------|----------------|----------|------|---------|
| Attitude | Count | Low            | Moderate | High |         |
| Low      |       | 5              | 34       | 8    | 0.000   |
| Moderate |       | 16             | 114      | 25   |         |
| high     |       | 2              | 30       | 5    |         |

\*significance at p<0.001

## **CHAPTER 5**

### **DISCUSSION, CONCLUSION AND RECOMMENDATION**

#### **5.1 Discussion**

This study was a cross sectional study to explore the knowledge, attitude and practice of ‘NPBD’ campaign among secondary school students that located in Pulau Pinang using self-administered questionnaire.

##### **5.1.1 Respondent background**

A total of 239 respondents were chosen from two different school in Pulau Pinang. Survey was conducted in one of the boarding schools and one of the secondary school that located in Bukit Mertajam, Pulau Pinang. The respondents consist of 134 females and 105 males. More females were involved in this study because of the higher number of female students in both schools.

### **5.1.2 Respondents level on knowledge, attitude and practice**

The knowledge about NPBD campaign should be taken as a serious matter by the youth to adopt the practice of the campaign. Without sufficient knowledge, they cannot perform the recommendation task to practice NPBD through their daily routine.

In this survey, we found that 30.5% of secondary school students had high knowledge on NPBD campaign and 20.5% of them had low knowledge about NPBD campaign. Survey showed a mean score of 1.90 with standard deviation of 0.709, showing that majority of respondents had knowledge level below 80% which was considered as moderate level.

Most of people may have the information about this campaign but they have less exposure on specific detail about the campaign. Therefore their level of knowledge is considered as moderate. This shows that knowledge is consider as an important component on environmental awareness among the students to understand more and evaluate the impact of the society to the ecosystem (Gambro et al., 1996). Certain knowledge about the environment can further their strength on the attitudes and their practice to environment-friendly routine (Awang et al., 2013).

The attitude on NPBD campaign is an important indicator to practice the management of waste. Regarding attitude on this campaign, this study shows that 64.3% of subject with moderate level of attitude. Without further knowledge about this matter, attitude alone will not bring any good behavior and practice towards waste management. Although attitude is essential for good action, someone's action cannot be push only with attitude (Oweini and Hour, 2006).

To determine the effectiveness or failure of this campaign is through the practice among the public. The higher level of practice, the greater rate to achieved success. Through this study, the practice among secondary school students was 73.9 % shows a moderate practice for this NPBD campaign. This is maybe due to the lack of further knowledge about the benefit of this campaign.

The level of knowledge and attitude of this campaign is moderate among secondary school students in Bukit Mertajam and the mean between the knowledge and attitude is different between both schools. Students were identify to get the information through many sources. Students self-learning, situation awareness, managing behavior and decision making were the impact from their knowledge (Lorenz et al., 2005).



### **5.1.3 The difference of Knowledge, Attitude and Practice level between both secondary schools**

Both of these secondary schools are located in urban area. However the boarding school students have a good infrastructure and facilities. This gives their more opportunities and advantage to be exposed more to this campaign.

Between both of this school there are no significant difference between knowledge and attitude but there are different in term in practice, where it shows that the boarding school students have less practice on this campaign compared to ordinary secondary school students.

This may be due to the difference of their lifestyle and the influenced from their family (Zarritaj et al., 2013). This also might because the boarding school student's activity that does not allow them to go outside and practice this campaign while the other secondary school students that most of them does not stays in hostel have the chance to practice this campaign. Though with high awareness about the environment they still find it difficult to practice the attitudes in order to keep their surrounding better (Arba'at et al., 2010).

#### **5.1.4 The Association between knowledge,-Attitude levels with Practice level**

There was a significant association found between knowledge-attitude with practice level. Where the students with moderate knowledge and attitude tend to have moderate practice on NPBD campaign.

According to Zarrintaj et al., (2013), the increase of knowledge will increase the attitude. Knowledge and attitude can be increase from the environmental education (Chen et al., 2011). In order to improve this NPBD campaign practice among secondary school students, their specific knowledge on this campaign should be further improved. At the same time, their attitudes towards this campaign must enhance as well to ensure that the campaign will become permanent practice at workplace and home. More information on this NPBD campaign should be introduced to school children so that early exposure to this campaign will be known and the practice will be maintain by Malaysian.

## **5.2 Conclusion**

This study has indicated that the level of knowledge, attitude and practice among secondary school students were moderate. However, they still realize about the NPBD campaign that has been implementing in the country and they also realize about this campaign on other countries. Necessary steps are required to have a better outcome.

The study has conclude that attitude and practice between both school showed significant different on knowledge and practice. The mean of knowledge of boarding school students was higher compared to ordinary secondary school students. For attitude and practice there are significant different shows for both secondary school students.

NPBD campaign is an important matter that they should be practice in daily life routine. There should be no more excuses no not practice it because the information about this campaign is easy to find and access. Public should realize now that the improper disposal of plastic is one of the main problem of our solid waste management.

### **5.3 Recommendation**

Ministry of education (MOE) should provide the environmental education subject with more detail that necessarily to be considered as one of the syllabus in education system increase awareness among young generation, for example regarding the policy of “No Plastic Bag Day” campaign that been implement in Malaysia. This kind of approach will give the students a brief knowledge about this campaign and in the meantime the teachers that teach also will gain the information about the environmental topics like global warming, waste management, recycling, ozone depletion greenhouse gases effect and acid rain due to the environmental problems. Schools can produce the students and the teachers with knowledge about the importance to preserving the environment and will help maintaining the health of the environment for future generations.

The media also should take a big part in raising public interest about this campaign, especially among secondary schools students. They can gain interesting advertisements about the “NPBD” campaign by using cartoons or showing the image of future world effect from the plastic bag waste.

Last but not least, the family also plays an important role to educate their children or teenager at home. Parenting is the good examples or role model to encourage a good behavior regarding the environmental conservation and preservation (Atiqah, 2015).

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# APPENDICES



**JAWATANKUASA ETIKA UNIVERSITI UNTUK  
PENYELIDIKAN MELIBATKAN MANUSIA (JKEUPM)  
UNIVERSITI PUTRA MALAYSIA, 43400 UPM SERDANG,  
SELANGOR, MALAYSIA**

**BORANG B2: PENERANGAN DAN PERSETUJUAN IBUBAPA/PENJAGA**

Sila baca maklumat berikut dengan teliti. Sekiranya anda mempunyai sebarang pertanyaan, sila kemukakan kepada penyelidik.

**1.TAJUK KAJIAN**

**2. PENGENALAN**

**3. APAKAH YANG PERLU ANDA LAKUKAN?**

**4. SIAPA YANG TIDAK BOLEH MENYERTAI KAJIAN INI?**

**5. APAKAH FAEDAH MENYERTAI KAJIAN INI?**

**a) KEPADA ANAK/JAGAAN SAYA SEBAGAI PESERTA?**

**b) KEPADA PENYELIDIK?**

**6. ADAKAH IA BERISIKO?**

**7. ADAKAH MAKLUMAT DAN IDENTITI ANAK/JAGAAN SAYA KEKAL RAHSIA?**

**8. SIAPA YANG SAYA PERLU HUBUNGI SEKIRANYA SAYA MEMPUNYAI SOALAN TAMBAHAN  
SEPANJANG PENYELIDIKAN INI?**

*Sila tandatangan di sini sekiranya anda telah membaca dan memahami kandungan halaman ini*

9. PERSETUJUAN

Saya..... No Kad Pengenalan. ....  
beralamat.....  
.....dengan ini secara sukarela bersetuju membenarkan \*anak / jagaan saya  
..... menyertai penyelidikan tersebut di atas \*(klinikal/percubaan ubat-  
ubatan/rakaman video/kumpulan sasaran/temuduga/ soal selidik).

Saya telah diberi penjelasan secara menyeluruh mengenai penyelidikan ini dari segi metodologi, risiko dan komplikasi (seperti yang tercatat dalam Helaian Penerangan). Saya memahami bahawa \*anak / jagaan saya berhak menarik diri dari penyelidikan ini pada bila-bila masa tanpa memberi sebarang alasan.Saya juga memahami bahawa sebarang maklumat yang berkaitan identiti \*anak / jagaan saya akan dirahsiakan.

Saya\* berminat / tidak berminat untuk mengetahui keputusan kajian yang melibatkan \*anak / jagaan saya.

I setuju/tidak bersetuju untuk imej/gambar/rakaman video/ rakaman suara berkaitan dengan anak/ jagaan saya digunakan dalam apa jua bentuk penerbitan atau pembentangan. (sekiranya berkaitan).

\*potong yang tidak berkenaan

Tandatangan ..... Tandatangan .....  
(Ibubapa/ Penjaga) (Saksi)

Tarikh :..... Nama :.....  
No. K/P: .....

Saya mengesahkan bahawa saya telah menerangkan kepada ibubapa/penjaga responden mengenai sifat dan tujuan penyelidikan tersebut di atas.

Tarikh ..... Tandatangan .....  
(Penyelidik)



**JAWATANKUASA ETIKA UNIVERSITI UNTUK  
PENYELIDIKAN MELIBATKAN MANUSIA (JKEUPM)  
UNIVERSITI PUTRA MALAYSIA, 43400 UPM SERDANG,  
SELANGOR, MALAYSIA**

## **BORANG B1: PENERANGAN DAN PERSETUJUAN RESPONDEN**

Sila baca maklumat berikut dengan teliti. Sekiranya anda mempunyai sebarang pertanyaan, sila kemukakan kepada penyelidik.

### **1.TAJUK KAJIAN**

Tahap pengetahuan, sikap dan amalan terhadap Kempen "Hari Tanpa Beg Plastik" terhadap pelajar Sekolah Berasrama Penuh di Pulau Pinang.

### **2. PENGENALAN**

Beg plastik adalah kaedah utama untuk mengangkut barangan apabila membeli barang-barang di Malaysia. Perniagaan runcit kebanyakannya menggunakan beg plastik kerana mereka adalah murah, ringan tetapi cukup kukuh untuk menyampaikan barangan yang dibeli dan bersih untuk masa yang pertama kali digunakan. Di seluruh dunia, kerajaan dan majlis keselamatan persekitaran bekerja keras untuk mewujudkan pemahaman mengenai kepentingan memelihara bumi. Ia adalah apa-apa yang tidak dijangka bahawa isu-isu asli, sebagai contoh, pencemaran udara, tumpahan dan organisasi sisa tidak berkesan yang membawa hasil yang bermusuhan. Pelupusan yang tidak betul beg plastik dipakai, bagaimanapun, juga dikenali untuk membawa mudarat jangka panjang kepada alam sekitar. Sisa plastik mengambil masa yang agak lama untuk merosot dalam tanah dan menyumbang kepada udara, air dan pencemaran tanah.

### **3. APAKAH YANG PERLU ANDA LAKUKAN?**

Anda akan diberi dan diminta untuk menjawab satu set borang soal selidik. Anda dikehendaki untuk menandatangani borang persetujuan (responden) untuk menunjukkan minat anda dalam kajian ini. Selain itu, anda perlu mengembalikan semula borang keizinan kepada penyelidik sewaktu selesai menjawab soal selidik.

### **4. SIAPA YANG TIDAK BOLEH MENYERTAI KAJIAN INI?**

Pelajar yang tidak boleh membaca atau menulis dan pelajar tingkatan 1,2,3 dan 5.

### **5. APAKAH FAEDAH MENYERTAI KAJIAN INI?**

#### **a) KEPADA ANDA SEBAGAI PESERTA?**

Anda akan lebih menyedari kepentingan pengetahuan, sikap dan amalan mengenai kempen "Hari Tanpa Beg Plastik" ini. Selain itu, anda akan mendapat maklumat tambahan mengenai kebaikan mengamalkan "Hari Tanpa Beg Plastik" ini.

#### **b) KEPADA PENYELIDIK?**

Penyelidik kajian ini boleh memperolehi data primer dan akan digunakan sebagai rujukan untuk kajian pada masa depan.

### **6. ADAKAH IA BERISIKO?**

Tidak akan ada risiko yang mungkin berkaitan dengan responden yang mempunyai mengambil bahagian dalam kajian ini.



## 7. ADAKAH MAKLUMAT DAN IDENTITI SAYA KEKAL RAHSIA?

Semua maklumat dan identiti yang diperolehi semasa kajian ini akan kekal sulit.

## 8. SIAPA YANG SAYA PERLU HUBUNGI SEKIRANYA SAYA MEMPUNYAI SOALAN TAMBAHAN SEMASA MENGIKUTI PENYELIDIKAN INI?

Untuk sebarang soalan dan pertanyaan anda boleh menghubungi,

### Maklumat penyelidik

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*Sila tandatangan di sini sekiranya anda telah membaca dan memahami kandungan halaman ini \_\_\_\_\_*

9. PERSETUJUAN

Saya..... No Kad Pengenalan. ....  
beralamat.....  
.....dengan ini bersetuju untuk mengambil bahagian secara sukarela dalam penyelidikan yang tersebut di atas \*(kajian klinikal/percubaan ubat-ubatan/rakaman video/kumpulan sasaran/temuduga/ soal selidik).

Saya telah diberi penjelasan secara menyeluruh mengenai penyelidikan ini dari segi metodologi, risiko dan komplikasi (seperti tertulis pada Helaian Penerangan Responden). Saya memahami bahawa saya berhak menarik diri dari penyelidikan ini pada bila-bila masa tanpa memberi sebarang alasan.Saya juga memahami bahawa sebarang maklumat yang berkaitan identiti saya akan dirahsiakan.

Saya\* berminat / tidak berminat untuk mengetahui keputusan kajian yang melibatkan saya.

I setuju/tidak bersetuju untuk imei/gambar/rakaman video/ rakaman suara digunakan dalam apa jua bentuk penerbitan atau pembentangan. (sekiranya berkaitan).

\*potong yang tidak berkenaan

|                   |                   |
|-------------------|-------------------|
| Tandatangan ..... | Tandatangan ..... |
| (Responden)       | (Saksi)           |
| Tarikh :.....     | Nama :.....       |
|                   | No. K/P: .....    |

Saya mengesahkan bahawa saya telah menerangkan kepada responden ini sifat dan tujuan penyelidikan yang tersebut di atas.

|              |                   |
|--------------|-------------------|
| Tarikh ..... | Tandatangan ..... |
|              | (Penyelidik)      |



TAHAP PENGETAHUAN, SIKAP DAN AMALAN MENGENAI “HARI TANPA BEG PLASTIK” DI  
KALANGAN PELAJAR SEKOLAH MENENGAH DI PULAU PINANG

Tujuan borang soal selidik ini adalah untuk mendapatkan pendapat maklumat daripada anda berkaitan tahap pengetahuan, sikap dan amalan mengenai “Hari Tanpa Beg Plastik” di kalangan pelajar sekolah menengah. Jawapan anda akan diproses menggunakan komputer dan dikendalikan secara rahsia. Tiada hasil jawapan individu akan dibentangkan dalam apa-apa jua jenis pembentangan. Walaupun kami ingin anda untuk menjawab setiap soalan, anda mempunyai hak untuk tidak menjawab salah satu soalan, sekumpulan soalan, atau pun seluruh borang soal selidik ini. Oleh yang demikian, saya memohon jasa baik pihak tuan untuk menjawab soalan-soalan yang terdapat dalam borang soal selidik ini secara tepat dan jujur. Segala maklumat kajian yang diterima akan dirahsiakan. Kerjasama dari pihak tuan amatlah dihargai.

|                                                                                                                             |            |
|-----------------------------------------------------------------------------------------------------------------------------|------------|
| Saya telah membaca pengenalan borang soal selidik dan bersetuju untuk menjawab mengikut syarat-syarat yang telah ditetapkan | Ya / Tidak |
|-----------------------------------------------------------------------------------------------------------------------------|------------|

Tarikh :

Tandatangan :

.....

SULIT

Semua maklumat adalah untuk kegunaan kajian sahaja dan maklumat ini akan dianggap sulit.

Arahan: Sila jawab semua soalan pada bahagian yang disediakan dan tandakan (✓) pada soalan yang berkenaan.

A. MAKLUMAT RESPONDEN

1. Jantina:  
Lelaki ☐ Perempuan ☐
2. Bangsa:  
Melayu ☐ Cina ☐ India ☐  
Bumiputra Sabah  
& Sarawak ☐ Lain-lain ☐
3. Pendapatan keluarga: \_\_\_\_\_
4. Jumlah ahli keluarga: \_\_\_\_\_

B. SOALAN UMUM

1. Adakah anda pernah dengar mengenai program “Hari Tanpa Beg Plastik”?  
Ya ☐ Tidak ☐
2. Adakah anda menyedari tentang program “Hari Tanpa Beg Plastik” yang sedang dilaksanakan ?  
Ya ☐ Tidak ☐
3. Adakah anda tahu Negeri mana yang mengamalkan “Hari Tanpa Beg Plastik”  
Ya ☐ Tidak ☐  
Jika Ya, nyatakan (lebih dari satu)  
\_\_\_\_\_
4. Daripada manakah maklumat mengenai program “Hari Tanpa Beg Plastik” yang anda perolehi?
- |                           |                          |
|---------------------------|--------------------------|
| Televisyen                | <input type="checkbox"/> |
| Radio                     | <input type="checkbox"/> |
| Majalah                   | <input type="checkbox"/> |
| Rakan                     | <input type="checkbox"/> |
| Guru                      | <input type="checkbox"/> |
| Lain-lain: Nyatakan ..... |                          |

5. Adakah anda mempraktikkan “Hari Tanpa Beg Plastik”

Ya

☐

Tidak

☐

UPM



C. TAHAP PENGETAHUAN, SIKAP DAN AMALAN

a) Tahap pengetahuan terhadap program “Hari Tanpa Beg Plastik”

|    | Kenyataan                                                                                                                  | Ya | Tidak |
|----|----------------------------------------------------------------------------------------------------------------------------|----|-------|
| 1  | Adakah anda mengetahui mengenai “Hari Tanpa Beg Plastik” pada setiap hari di Pulau Pinang ?                                |    |       |
| 2  | Adakah anda menyokong program “Hari Tanpa Beg Plastik” ini ?                                                               |    |       |
| 3  | Adakah sahabat dan keluarga mengamalkan “Hari Tanpa Beg Plastik” ini ?                                                     |    |       |
| 4  | Adakah anda percaya program “Hari Tanpa Beg Plastik” dapat memberi manfaat kepada alam sekitar ?                           |    |       |
| 5  | Adakah program “Hari Tanpa Beg Plastik” ini dapat mengurangkan jumlah sisa berasaskan plastik di tempat pelupusan sampah ? |    |       |
| 6  | Adakah anda tahu bahawa plastik boleh dikitar semula?                                                                      |    |       |
| 7  | Adakah anda mengetahui bahawa plastik adalah bahan yang tidak mesra alam ?                                                 |    |       |
| 8  | Adakah anda mengetahui bahawa plastik dihasilkan daripada petroleum ?                                                      |    |       |
| 9  | Beg plastik mengambil masa 100-500 tahun untuk dilupuskan sepenuhnya ?                                                     |    |       |
| 10 | Beg plastik yang dibakar atau ditanam akan membebaskan gas karbon dioksida ?                                               |    |       |
| 11 | Adakah terdapat teknologi sedia ada yang boleh melupuskan plastik ?                                                        |    |       |
| 12 | Adakah peningkatan penggunaan plastik beg dapat mengundang kepada kepada pencemaran?                                       |    |       |
| 13 | Adakah anda mengetahui bahawa sisa plastik antara yang terbanyak dihasilkan dalam sisa pepejal di Malaysia?                |    |       |
| 14 | Pada pendapat anda, adakah program “Hari Tanpa Beg Plastik” ini akan kekal sehingga tahun-tahun akan datang?               |    |       |

b) Sikap terhadap program “Hari Tanpa Beg Plastik”

| Kenyataan |                                                                                                                                  | Pilihan Jawapan |   |   |   |   |
|-----------|----------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---|---|---|
| 1         | Saya tidak pernah menggunakan plastig beg yang disediakan di pasaraya semasa membuat pembelian                                   | 1               | 2 | 3 | 4 | 5 |
| 2         | Saya tidak akan menggunakan plastik beg yang disediakan oleh pasaraya jika barang belian saya hanya sedikit                      |                 |   |   |   |   |
| 3         | Saya sering membawa “reusable bag” ketika membeli barang                                                                         |                 |   |   |   |   |
| 4         | Saya tidak kisah membelanjakan RM0.20 terhadap beg plastik yang disediakan di pasaraya untuk kemudahan menyimpan barangan belian |                 |   |   |   |   |
| 5         | Saya percaya “Hari Tanpa Beg Plastik” dapat membantu alam sekitar daripada tercemar                                              |                 |   |   |   |   |
| 6         | Saya merasakan program “Hari Tanpa Beg Plastik” ini sangat penting kepada masyarakat                                             |                 |   |   |   |   |
| 7         | Saya akan berasa kecewa jika saya tidak mengamalkan “Hari Tanpa Beg Plastik” ini                                                 |                 |   |   |   |   |
| 8         | Saya merasakan program “Hari Tanpa Beg Plastik” akan membebankan saya semasa membuat belian di pasaraya                          |                 |   |   |   |   |
| 9         | Ahli keluarga saya menggalakkan saya mengamalkan program “Hari Tanpa Beg Plastik” ini                                            |                 |   |   |   |   |
| 10        | Saya sering menasihati individu yang tidak mengamalkan “Hari Tanpa Beg Plastik” ketika membeli barang                            |                 |   |   |   |   |
| 11        | Saya percaya promosi “Hari Tanpa Beg Plastik” melalui iklan TV dapat membantu saya memperolehi lebih maklumat                    |                 |   |   |   |   |
| 12        | Saya merasakan program “Hari Tanpa Beg Plastik” sepatutnya diajar dari peringkat sekolah lagi                                    |                 |   |   |   |   |

Skala 1=sangat tidak setuju, 2=tidak bersetuju, 3=tidak pasti, 4=setuju, 5=sangat setuju

**D. CADANGAN**

1. Pada pendapat anda apakah media yang paling sesuai bagi menyebarkan maklumat mengenai kempen ini. Pilih SATU sahaja dan sertakan alasan bagi pilihan anda.

|                                           |                          |
|-------------------------------------------|--------------------------|
| Media massa (cth: televisyen / radio)     | <input type="checkbox"/> |
| Media cetak (cth: majalah / surat khabar) | <input type="checkbox"/> |
| Media sosial (cth: <i>Facebook</i> )      | <input type="checkbox"/> |
| Laman web                                 | <input type="checkbox"/> |

Lain-lain. Nyatakan: \_\_\_\_\_

Alasan: \_\_\_\_\_

\_\_\_\_\_

2. Pada pendapat anda, apakah cadangan untuk menjayakan lagi kempen “Hari Tanpa Beg Plastik” ini. Pilih SATU sahaja.

|                                                                                                           |                          |
|-----------------------------------------------------------------------------------------------------------|--------------------------|
| a. Mengetatkan perundangan dan meningkatkan penguatkuasaan                                                | <input type="checkbox"/> |
| b. Meningkatkan kesedaran tentang kebaikan “Hari Tanpa Beg Plastik” di kalangan pemilik premis perniagaan | <input type="checkbox"/> |
| c. Menerapkan pendidikan berkaitan 3R (Reuse, recycle, reduce) di kalangan orang awam                     | <input type="checkbox"/> |
| d. Meningkatkan kempen “Hari Tanpa Beg Plastik” di media massa dan media cetak                            | <input type="checkbox"/> |
| e. Kerajaan Negeri, Kpdnkk dan Ngo perlu mengambil peranan penting dalam menjayakan kempen ini            | <input type="checkbox"/> |

**Sekian**

**Terima Kasih kerana sudi menjawab borang soal selidik**