

RESEARCH ARTICLE

THE AWARENESS OF SOLID WASTE SEGREGATION AMONG HOUSEHOLD OF BANTING COMMUNITY

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ARTICLE DETAILS

ABSTRACT

Article History:

Received 01 September 2019
Accepted 08 October 2019
Available online 09 October 2019

There is still a lack of study on the awareness of solid waste segregation among household especially in sub-urban area. This study identifies the level of awareness on solid waste segregation among the community in banting, Selangor, Malaysia. A total of 20 respondents were recruited and participated in the survey in September 2018 to February 2019. Descriptive data were presented by using Microsoft Excel. Generally, most of the respondents had moderate level of awareness on solid waste segregation at home. Promotional of solid waste segregation has to conduct continuously by the all stakeholders especially at the sub-urban communities in Banting, Selangor, Malaysia.

KEYWORDS

Solid waste, segregation, household, community.

1. INTRODUCTION

Segregation of waste are one of the steps in solid waste management and it is becoming a great challenge to do it in a develop country such as Malaysia. Malaysia is one of the most successful countries in transition but also increasing in waste generated as Malaysia is experiencing a rapid industrialization and urbanization. Also increase in the number of populations. But the biggest challenge is when having a lot of people, a lot of waste will be produced on daily basis. A lot of people think that in managing the waste are not their responsibilities, it is someone else job. This type of ignorance soon will lead to a big pollution to the environment [1].

The purpose of solid waste management is to reduce the amount of waste that are being produced, reducing the cost of waste disposal, negative impacts toward the environment and public health. But people tend to think something that is easier by practicing the burning of waste and open dumping. It is easy to do, but the effect on the environment are very hard to overcome. Such a simple act can pollute the world [2]. As for the schedule of waste collecting, there is a problem such as low collection coverage and irregular collection services where it is definitely needs to be prioritize the most. In order to helps the waste management in Malaysia, there is simpler way where it can be done at household level which is segregation of waste. This step comes before recycling. We separate the waste from the source and sort it [3].

Household waste should be separated daily into different bags for the different categories of waste such as wet and dry waste, which should be disposed of separately [4]. One should also keep a bin for toxic wastes such as medicines, batteries, dried paint, old bulbs, and dried shoe polish. Wet waste, which consists of leftover foodstuff, vegetable peels, etc., should be put in a compost pit and the compost could be used as manure in the garden. Dry waste consisting of cans, aluminum foils, plastics, metal, glass, and paper could be recycled. If we do not dispose of the waste in a more systematic manner, all landfills required to have bigger land to store all the waste which can cause a lot of problems to the community and towards the environment [5].

In Malaysia, the Government has made it mandatory to separate the waste from sources starts from 1st September of 2015. This implementation is following the regulations set under Act 672, Solid Waste and Public Cleansing Management Act. It only enforced on certain states and federal territories in Malaysia such as Kuala Lumpur, Putrajaya, Johor, Melaka,

Negeri Sembilan, Pahang, Kedah and Perlis. Act 672 is an Act to provide and regulate the management of solid waste management of controlled solid waste and public cleansing for the purpose of maintaining the sanitation [6].

In Kuala Langat District, a total of 50971 tons of waste was generated and go straight to the disposal site. While in 2018, the total number of tons increased to 73601 tons of waste. This data is taken from Majlis Daerah Kuala Langat and it shows that the increasement of waste can force the landfill to occupy a lot more spaces while there is no longer space that can be used.

Malaysia is one of the developing countries where the industrialization is developed and improving and the increasing of population number but also increase in the number of wastes that are being produced. It will lead to a serious issue because improper waste management will create pollution and more waste are produce, the more it will be sent to the landfills. It will consume a lot more spaces than it should. The waste is mixed between the wet and dry waste, biodegradable and non-biodegradable. There are also waste that need to takes a long time compost at landfills. This will show that our landfills will have to expand their area because it will not give an adequate facility to handle the number of waste can be handle compare to waste that is continuously produce right now.

We must spread the information about waste segregation to the communities because they might not know about the importance of waste segregation that could help in preserving the environment for the next generation. This could change a mindset that everyone have about their responsibility towards solid waste management [7]. The problems has occurred in many countries, for certain countries this is one of the biggest problem for them to overcome. That is why education about solid waste segregation needs to spread to all Malaysians so that they know what they have to do and what effects in could give. This study is aim to identify the awareness of solid waste segregation among household in Banting [8].

2. METHOD

A simple survey will be administrated to the households of Majlis Daerah Kuala Langat Quarters in Banting. This is to identify their awareness about solid waste segregation. Will be carry out this survey based on cross-sectional design that starts from September of 2018 until February of 2019.

Questionnaire sample will be used to help this survey, a total of 20 copies of questionnaire will be given to the household of Majlis Daerah Kuala Langat Quarters in Banting. It will be given to the respondent randomly. The questionnaire are provide in Bahasa Melayu.

The questionnaire was adapted and combined from Nurul Fadila bt Fadhiludin research about community readiness towards solid waste separation at source survey and Sahaas Survey on Waste Segregation. The question is asking about the knowledge of solid waste separation. The answers will be given is yes/no.

This questionnaire contain four parts. Part A is demographic, it is general. It is a basic information about the respondent that need to be filled. Part B, C and D are more into the respondent knowledge, attitude and practices of solid waste segregation direct from the sources. 8 questions in part B, 7 questions in part C and 8 questions in part D. Part A is about demographic, part B is about the knowledge, part C is about their practices, and part D is about their attitude [9].

Microsoft Excel will be used to create pie and bar charts. The data will be analyse based on yes/no The grade shows the awareness of the community and household in Banting towards segregation of waste. It will be assess after the questionnaire survey is done.

The duration of time for this research are only 6 months. Starting from September of 2018 until February of 2019.

3. RESULT AND DISCUSSION

After a period of 6 months in collecting the data from the 20 random respondent, the data needs to be prepared in graph chart. The graph shows the number of questions and the answers of *yes/no* from the respondents (Figures 1 to 3). Demographically, there were 6 males and 14 females aged between 25 to 45 years old participated in this survey.

Based on Figure 2, only 5 from 20 respondent knows what is waste segregation, but when it comes to practicing it, all 20 respondent did not do the waste segregation from their own house. More than a half agreed that segregation of waste is wasting their time and a bit sloppy. Most of the respondents were not practice waste removal process (Figure 2). However, on the other side, most of the respondent are willing to change based on their answers in Figure 3. This issues can be solved with a little bit of educational promotion by the local authority and make a program or campaign about waste segregation. This will sure can give a good and additional information to the public.

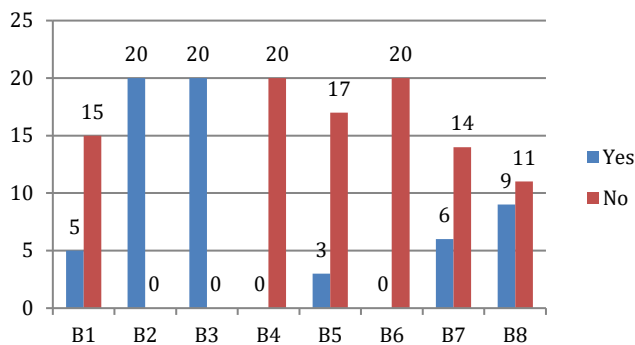


Figure 1: Feedback on "Knowledge" of the respondents

Questions

- B1. Do you know about the separation of dry and wet waste?
- B2. The residue should be separated into dry and wet residues
- B3. Separation of waste at source helps in recycling of waste
- B4. Are there any waste removal related programs in your area?
- B5. Do you know about the existence of a new Act on solid waste in Malaysia?
- B6. Did you know that under the new Malaysian Solid Waste Act, the government may require the people to dispose of their waste?
- B7. Do you pass on any information regarding government / organization waste removal efforts to others?

B8. Do you know who to contact regarding waste disposal? (Recycling company, local government, recycling center)

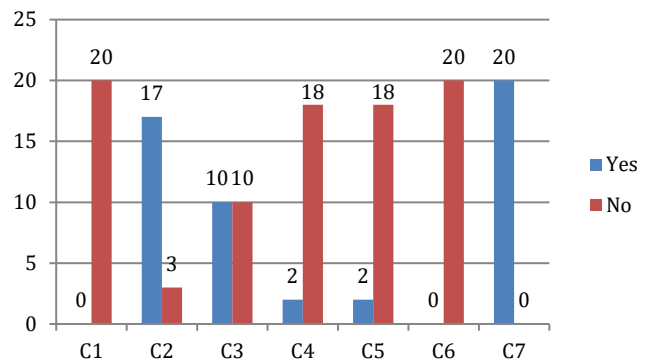


Figure 2: Feedback on "Attitude" of the respondents

Questions

- C1. Do you practice the waste removal process?
- C2. Do you plan to separate waste in the future?
- C3. Do you advise others to dispose of their trash?
- C4. I sort out the waste at the root to make the waste management process more efficient and effective
- C5. Every time I throw out the garbage, I separate them into the wet and dry waste
- C6. Do you have a trash can to separate between dry and wet waste?
- C7. Do you need a lot of time to separate waste?

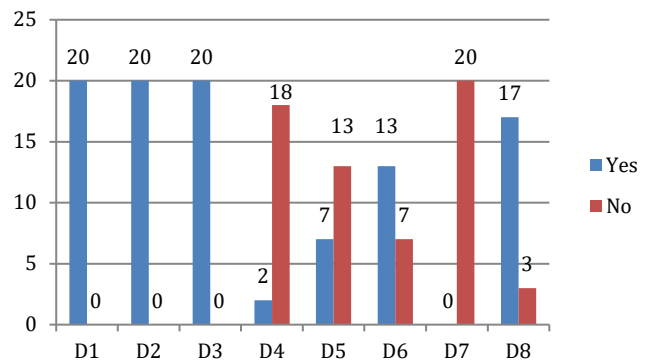


Figure 3: Feedback on "Practices" of the respondents

Questions

- D1. If you have a waste management activity / campaign in your area, do you want to get involved?
- D2. Do you agree that the Recycling Program is widely implemented?
- D3. Do you intend to continue the practice of waste removal in the future?
- D4. I care that the effects of not isolating waste can have a detrimental effect on human health and the environment.
- D5. Is cleaning a wet waste bin a waste and time-consuming?
- D6. I don't want to keep more than one basket in my house.
- D7. I don't want to take away the problem of isolating waste.
- D8. Is waste removal efforts a waste and a waste of time?

4. CONCLUSION

With the results, we can conclude that the level of awareness among household in MDKL Quarters, Banting are something that need changes. By testing their knowledge, practices, and attitude using a set of

questionnaire, toward waste segregation issues. Their knowledge and practices about waste segregation are things that need to be worried as more than a half respondent knows about this issue, but when it comes to practices, all 20 respondent did not practice the waste segregation at their own house. Other else, their attitude can change it as their eagerness and willing to join or gain an information if there is any program about waste segregation. Segregating will also help the amount of waste that goes direct to the landfill decrease, as only domestic waste such as food leftover or wet waste. As for dry waste, such as garden waste, paper or else can be put on other trash bin. Although it will not show major difference, but if it done continuously, for the next 10 years, we can ensure that there will be a decrease number of tons of waste in the landfills.

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