

Household Waste Management According to A New Normal of Public Service: A Case Study of Bangkok

Ravipa Thummachote, Associate Professor, Faculty of Political Science, Ramkhamhaeng University, Thailand, Email: Ravipa_t123@hotmail.com

The subject is “Household waste management according to a new normal of public service: A case study of Bangkok” this study has three objectives 1) to study the behavior of the people in household waste management according to the new way of public service in Bangkok 2) to study the factors affecting the behavior of the people in the waste management of the households according to the new public service approach in the area Bangkok 3) to study the problems and obstacles in household waste management according to the new public service guidelines in Bangkok area. It is a quantitative research model and documentary research. The population in this research was households in Bangkok. which has announced a new approach to waste management according to public services total number of 50 districts, 3,041,115 households. The researcher used simple random sampling and used a questionnaire for households in the three districts with the highest number of households in the top three by randomly selecting households. accounted for 1: 1000 of 337 households, consisting of 121 households in Chatuchak, 112 households in Bang Khen and 104 households in Bang Kapi The finding are:1) The behavior of the people in household waste management are according to the new approach found that separate each type of waste such as organic solid waste, general solid waste, and recycled solid waste. 2) Factors affecting ,people’s behavior in household waste management are according to the new approach to public service in Bangkok. It was found that the knowledge and understanding of households and household waste campaign measures according to the new government guidelines It affects the behavior of people in household waste management according to the new public service guidelines.3) Problems and obstacles in household waste management are according to the new public service guidelines

in Bangkok area. because of ordering food delivery, It is a problem of the state's public service that is not yet thorough.

Keyword: *household waste management, the new way of public service*

Introduction

Currently, due to the epidemic situation of the COVID-19 virus People have to adapt to the new normal or New Normal, not even in the matter of waste management. especially in Bangkok At present, people turn to ordering food online. causing a lot of plastic waste including used masks that are toxic waste which must be managed properly By implementing a new lifestyle or New Normal, which is waste management in the situation of the Covid-19 virus, "Bangkok" campaigns for solid waste separation. Once used, the hygienic mask must be disposed of properly. In addition, from an interview with Ms. Silpasuay Rawesangsun, Permanent Secretary for Bangkok Reveal the situation of the Covid-19 virus and a new way of life (New Normal) that causes a lot of waste, including food waste, plastic waste and infectious waste. which may become a threat to the community that Bangkok Asking for public cooperation as follows: 1) General solid waste 2) Recycled solid waste 3) hazardous waste Let the people separate the waste of more hygienic masks. to prevent the spread of the COVID-19 virus and asking people for cooperation not to leave them mixed with general household waste by folding the mask into a sealed bag Tie the bag tightly. Write or stick to the front of the bag saying “Hygienic masks” are left separately for garbage collection trucks at the district office or disposed of in specialized hygienic mask tanks (orange) at a designated location in Bangkok. This approach is considered necessary for campaigning and public relations in order to create a concrete practice guideline today. This article is considered part of the research that needs to study the social way of managing household waste. according to the guidelines in the new way in the Bangkok area and surveyed the knowledge and understanding of the people in household waste management according to the new approach in Bangkok area and surveyed the knowledge and understanding of the people on household waste management in accordance with the new approach in the Bangkok area. including in the part of problems and obstacles in household waste management according to the new approach in Bangkok area To bring the research results to be presented to the executives of the Bangkok Metropolitan Administration to formulate policies and measures for household waste management in accordance with the new public service guidelines in the Bangkok area, respectively.

Objective

- 1 To study the behavior of people in household waste management according to the new public service approach in the area Bangkok
- 2 To study the factors affecting people's behavior in household waste management according to the new public service approach in the area Bangkok
- 3 To study the problems and obstacles in household waste management according to the new public service guidelines in the area Bangkok

Research Hypothesis

1. Knowledge and understanding of households affecting household behavior in household waste management according to A new approach to public administration
2. Government campaign measures affect household behavior in household waste management according to A new approach to public administration
3. Household cooperation affects household behavior in household waste management according to A new approach to public administration

Research Scope

1. Content

Focusing on the study of household behavior in household waste management according to the new approach to public administration in the area Bangkok by studying the behavior of waste separation garbage collection behavior garbage disposal behavior

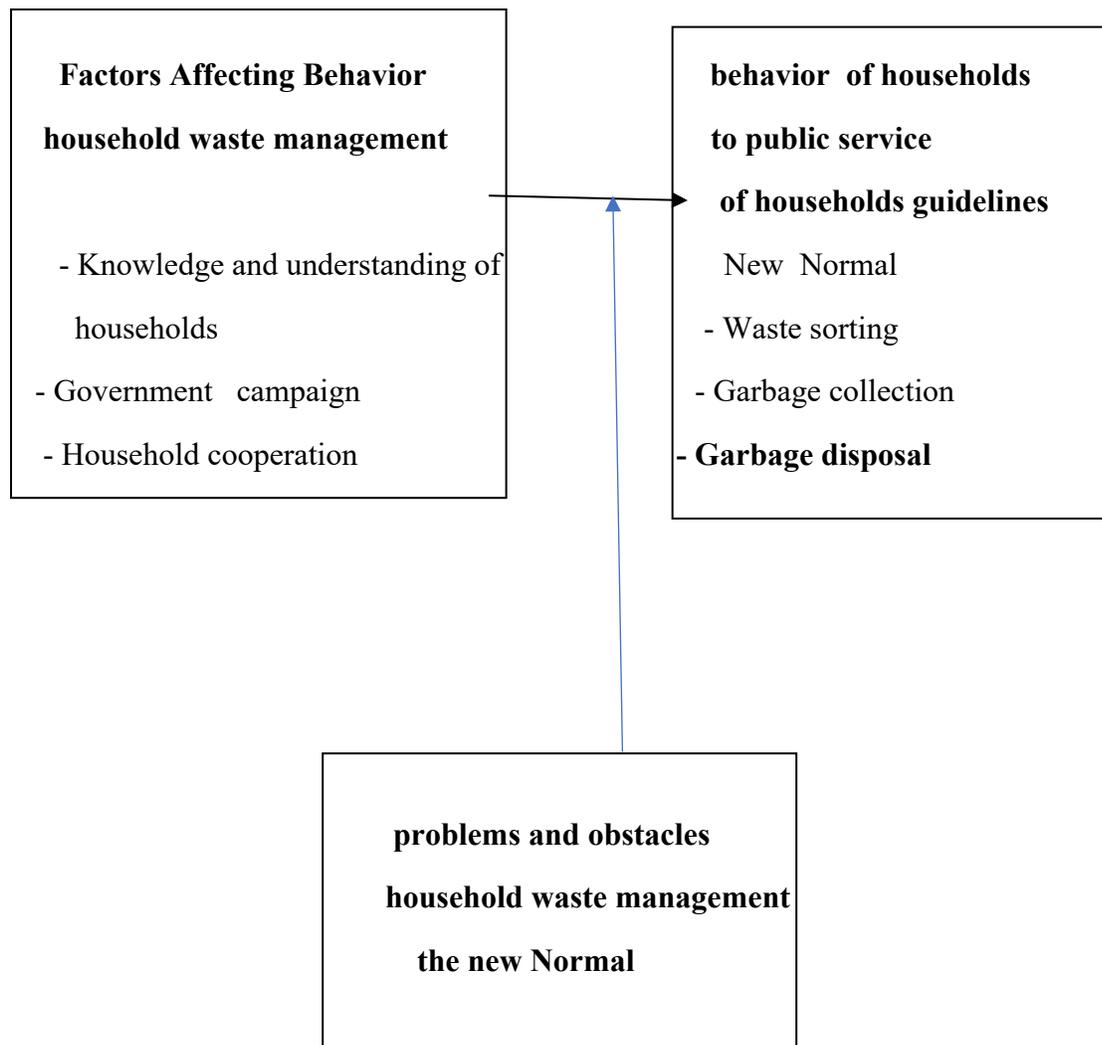
2. The sample group

This study was to collect data by using a questionnaire on household waste management behavior according to the new public service approach. with people in every area in Bangkok in 3 districts comprising Chatuchak District, Bang Khen District and Bang Kapi District, which has announced a policy for household waste management according to a new approach, totaling 544 households.

A review of the literature

The researcher studied the concepts, theories and related research results in order to formulate the conceptual framework used in the study in 4 areas as follows: 1) concepts and theories on solid waste 2) household waste disposal behavior 3) management concepts. Garbage in the new normal era 4) A comparative study of foreign countries on waste management in the New Normal style

Conceptual Framework



Research Method

Quantitative research model (Quantitative and Documentary Research. The population in this research was households in the Bangkok area. which has announced a new approach to waste management according to public services A total of 50 districts, totaling 3,041,115 households, were used by simple random sampling and household questionnaires in 3 districts. There were 337 households with the largest number of households by randomly selecting the proportion 1: 1000, consisting of 121 households in Chatuchak, 112 households in Bang Khen, and 104 in Bang Kapi. Statistics used in quantitative analysis. using SPSS program Contains percentage and mean values to analyze knowledge level. understanding and The waste management behavior according to the new household method was analyzed and the T-test and F-test values were analyzed to find the relationship between the factors, the level of knowledge, the compatibility with the waste management behavior according to the new normal.

Research Results

Most of the respondents lived in Chatuchak area, followed by Bang Kapi and Bang Khen districts. Most of the respondents were male. Most were under 20 years old, followed by 20-30 years old and 41-50 years old respectively. Most of them were family members, followed by family heads and 76 residents, respectively.

1. To study the behavior of people in household waste management according to the new public service approach in the area Bangkok

The results showed that Most of the respondents used a waste management method by using a public garbage truck the most, followed by incineration and others respectively. Most of the respondents were unaware of the information. While some people Stay informed However, if considering the behavior of people in waste management, it can be summarized as follows.

Waste Sorting Behavior

Most of the sample groups have sorted each type of waste such as organic solid waste, general solid waste, recycled solid waste, and hazardous waste for each type before being disposed of occasionally.

Most of the samples who have separated general waste and used masks To prevent the spread of the COVID-19 virus for some time, while one in four people have never sorted out their general waste from used masks.

Most of the sample groups never had any sort of hygienic waste sorting. Fold and put in a bag to bring. Dispose of them in bins that only accommodate Bangkok's face masks, while less than a quarter of the population has ever sorted out their hygienic masks. Fold and put in a bag to be disposed of in a bin that supports only Bangkok's masks.

Most of the sample groups never wrote or put on the front of the garbage bag saying that the masks were left separately for the garbage collection truck of the district office or disposed of in the specific hygienic bins (orange) in the designated areas in Bangkok and there were a small proportion of people. More than 1 in 4 people who write or stick to garbage bags say that the masks are left separately for garbage collection trucks at the district office or disposed of in specific hygienic bins (orange) at the points specified in Bangkok.

Most of the samples had to separate plastic bags and foam boxes from food delivery orders and sell them or sell them to reduce the amount of waste in the Bangkok area from time to time. It is equal to 1 in 4 never separating plastic bags and foam boxes from food delivery orders and selling them or selling them to reduce the amount of waste in the Bangkok area.

1.6. Most of the sample groups have sorted waste products such as gels. and spray alcohol from other types of waste sometimes before throwing the garbage, while 1 in 4 people do not have to sort the waste products such as gels and alcohol spray from other types of waste before disposing of rubbish

Most of the samples that have been sorted waste products such as gels. and alcohol spray and sometimes disposed of in the designated storage bin, which is similar in proportion to the people who have never had a waste sorting of gel products. and alcohol spray and discarded in the storage tank set up And there is a minority of people who have sorted waste products such as gels. and alcohol spray and discarded in the storage tank set up

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Garbage Collection Behavior

1.8. Most of the samples were collected and delivered to the public service agencies of Bangkok. will continue to collect and dispose of it in a hygienic manner from time to time, which has a proportion similar to People who have never been collected and delivered to the public service agencies of Bangkok. It will continue to collect and dispose of it in a hygienic manner.

1.9 Most of the samples cooperated with government agencies in collecting waste. and sometimes delivered to government agencies or in sorting bins, and less than 20 percent of them have never cooperated with government agencies in collecting waste. garbage disposal behavior

1.10 Most of the respondents had never used household waste disposal methods by incinerating waste in their homes or nearby areas. while the samples who used to burn garbage in the house or nearby areas less than 20 percent

1.11 Most of the samples collected styrofoam and plastic waste from food orders. delivery way to sell In order to reduce the amount of waste from time to time and never collecting styrofoam and plastic boxes received from food orders. delivery way to sell to reduce the amount of waste less than 30 percent

1.12 Most of the sample group used the household waste disposal method by having a public service car to pick it up on a regular basis, while the sample group never used the household waste disposal method by having a public service car to pick it up. less than 10 percent

1.13 The majority of the sample group used the method of disposal of container waste from food delivery orders by selling or donating from time to time, while the sample group never used the container waste disposal method from ordering food delivery. Ari by selling or donating accounted for 36.21 percent

1.14 Most of the samples tend to dispose of the garbage in the wrong place or not at the specified point. They are often smuggled in public places, along roadsides, into canals and sewers. While the sample never smuggled garbage in public. Abandoned by the side of the road and sewer less than 11 percent

1.15 Most of the sample group sometimes throw masks mixed with organic waste, while less than 20% of the sample group who never throws masks mixed with organic waste.

2. To study the factors affecting people's behavior in household waste management according to the new public service approach in the area Bangkok

The results showed that Factors affecting people's behavior in household waste management according to the new public service approach in the area Bangkok In summary, the details are as follows.

Knowledge Factor Household Understanding

2.1 The large sample group agreed on the waste separation that there are 4 types, consisting of 1) organic solid waste 2) general solid waste 3) recycled solid waste and 4) hazardous solid waste. while only 2% of the sample disagreed.

2.2 Most of the samples agreed with The cause of life in a new way (New Normal) creates a lot of waste, including food waste, plastic waste and infectious waste. which may become a threat to communities in Bangkok while the sample group disagreed less than 5 percent

2.3 Most of the sample groups disagreed with 50.55 percent of the discarded masks mixed with general solid waste.

2.4 Most of the respondents thought that “Hygienic masks” should be disposed of separately at the district office's garbage collection truck or disposed of in a specific hygienic bin (orange) at a designated location in Bangkok. accounted for 74.82 percent

2.15. Most of the respondents thought that government agencies The private sector and most establishments cooperate in setting up tanks to support specific masks to ensure the safety and health of workers collecting solid waste and preventing the spread of the COVID-19 virus. accounted for 63.97%

In addition, from the results of the study, it was found that factors affecting people's behavior in household waste management according to the new public administration approach in the area. Bangkok by statistical analysis Multiple Linear Regression Analysis to describe the research hypothesis as follows:

Hypothesis 1. Knowledge and understanding of households affect households' waste management behavior.

Households According to The New Way of Public Administration

The results of the data analysis revealed that the knowledge factor Household understanding affects household behavior in managing household waste in a new way. Taking into account the correlation coefficient, the Sig value is less than 0.001, therefore H0 is rejected and H1 is accepted. H1 and show that Knowledge Factor Variables Household understanding affects household behavior in waste management in a new way. From the research results, it can be seen that The level of household knowledge affects the behavior of households in household waste management according to the new approach.

Hypothesis 2. Government campaign measures affecting households' waste management behavior.

The results of the data analysis revealed that the factors of government campaign measures affect the behavior of households in household waste management according to the new approach. Taking into account the correlation coefficient, the Sig value is less than 0.001, therefore H0 is rejected and H1 is accepted. and show that Factor variables of government campaign measures affecting household behavior in waste management according to the new approach was statistically significant The results of the research reflect that government campaign measures Affects the behavior of households in household waste management according to the new approach Therefore, if the government pays attention to the measures of education campaigns understanding and

building consciousness and awareness Household waste management in a new way It will help drive more households' behavior in waste management according to new ways for households.

Hypothesis 3. Household cooperation affects household behavior in household waste management.

The results of the data analysis revealed that the cooperation factor of the households did not affect the behavior of the households in the household waste management according to the new approach. Taking into account the correlation c and show that Household cooperative factor variables did not affect household behavior in waste management according to the new approach. statistically significant The results of the research reflect that Household cooperation in general waste management The behavior of households in household waste management in accordance with the new public service guidelines has not yet been established.oefficient, the Sig value is greater than 0.001, therefore H1 is rejected and H0 is accepted. nd show that Household cooperative factor variables did not affect household behavior in waste management according to the new approach. statistically significant The results of the research reflect that Household cooperation in general waste management The behavior of households in household waste management in accordance with the new public service guidelines has not yet been established.

However, from the results of the study in Table Show multiple regression analysis. Factors affecting household waste management behavior according to the new public service approach found that knowledge factor Understanding of households and government campaign measures that together predicted the households' behavior in household waste management according to the new way was statistically significant (p -value < 0.001).

These two variables can explain the variation of household behavior in household waste management according to the new approach by 20.51 percent, and the forecast equation can be written in the form of a raw score as follows:

Equation to promote people's behavior in household waste management according to a new approach

$$\text{behavior of people in management} = 0.564 \text{ Household cognition} + 0.281 \text{ campaign measures}$$

Household waste according to the government's new approach

3 To study the problems and obstacles in household waste management according to the new public service guidelines in the area Bangkok

The Study Concluded

3.1 Most of the sample groups have opinions on problems and obstacles in household waste management according to the new public service approach in the area. Bangkok due to the continuously increasing amount of waste Because ordering food delivery is a problem of the state's public service that is not yet thorough. accounted for 61.21%

3.2 Most of the sample groups have the opinion that problems and obstacles in household waste management according to the new public service approach in the area Bangkok Due to the fact that most people do not have knowledge and understanding of new waste management methods, 61.95%

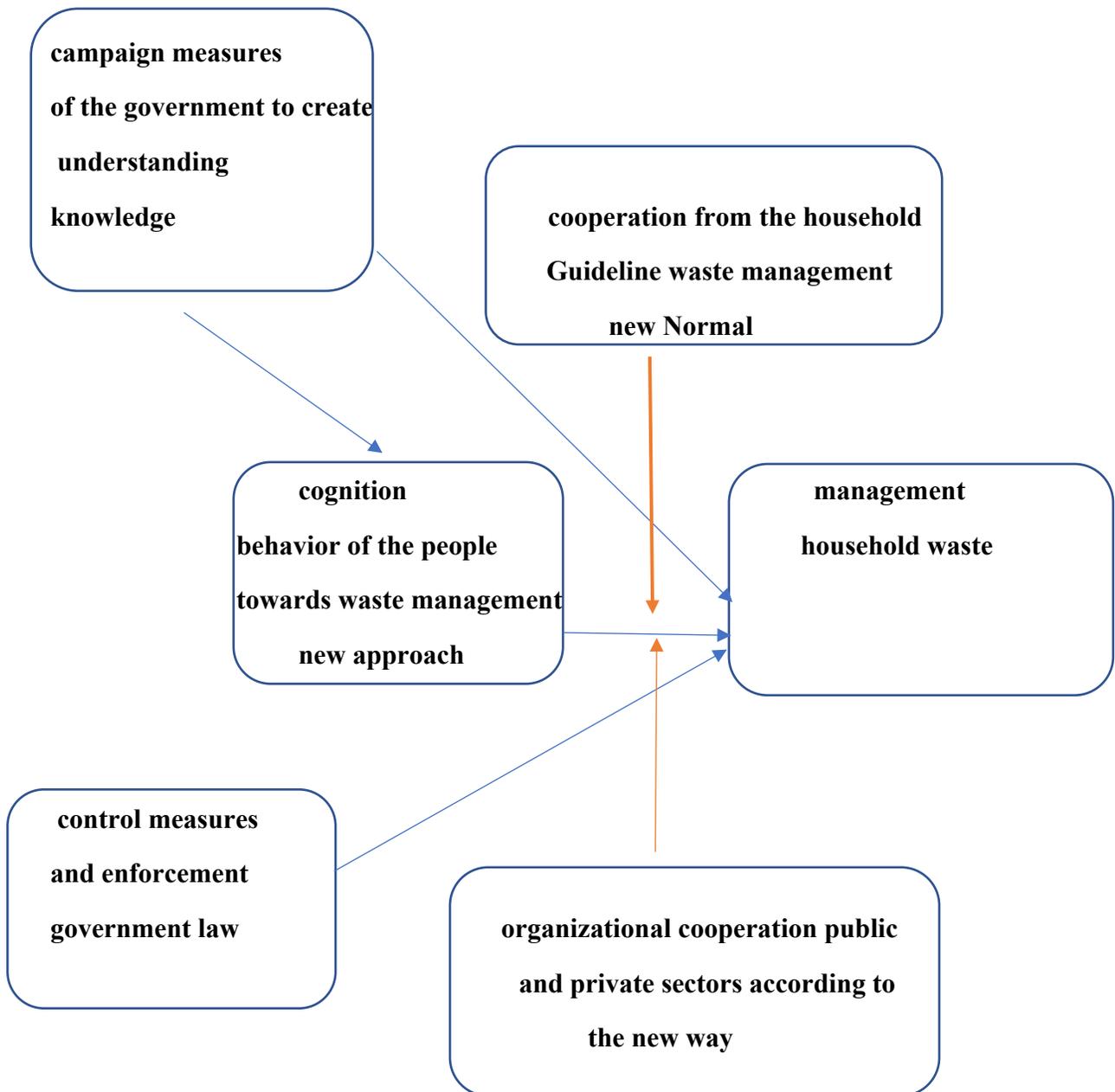
3.3 Most of the sample groups were of the opinion that Problems and obstacles in household waste management according to the new public service approach in the area Bangkok Due to the campaign of government agencies is not enough to change the behavior of household waste management. accounted for 65.63%

3.4 Most of the samples were of the opinion that Problems and obstacles in household waste management according to the new public service approach in the area Bangkok due to problems arising from the behavior of throwing garbage in the wrong place or not throwing it in the specified point smuggling in public places, beside roads, dumping into canals and sewers that still have a lot accounted for 67.46 percent

3.5. Most of the sample groups were of the opinion that Problems and obstacles in household waste management according to the new public service approach in the area Bangkok Due to the measures and laws of government agencies have not yet been rigorous and strict to adjust household waste management behavior according to the new approach. accounted for 65.81%

3.6. Most of the sample groups have the opinion that Problems and obstacles in household waste management according to the new public service approach in the area Bangkok due to government agencies lacking knowledge and innovation in technology for waste management according to new ways accounted for 62.68%

A Model for Promoting Household Waste Management Behavior According to The New Public Service Approach in The Area Bangkok



From the model reflects that Guidelines for promoting household waste management behavior according to the new public service approach in the area Bangkok The government should have campaign measures to create knowledge. Understanding of waste management according to the new approach to public service

In addition, the government should have policies, laws and measures to control and enforce household waste management behavior in accordance with the new public service guidelines in the area. Bangkok In order to encourage and alert the public sector and households in Bangkok have knowledge A correct understanding of waste management in accordance with the new approach to public service. To encourage people to have household waste management behavior according to the new way However, such approach will be successful. Requires the cooperation of households in waste management in a new way. and cooperation of public and private organizations in accordance with the new approach

Discuss the results of the research.

From the study and review of the literature on waste management in the new normal era, it was found that Most of the respondents used a waste management method using a public garbage truck, followed by incineration and others, respectively. Most of the respondents sorted the waste before disposing, the most and did not sort the waste before disposing, respectively. Most of the respondents did not know about the new normal waste management while some people. Stay informed When considering the behavior of the people in waste management, it was found that the waste sorting behavior Most of the samples were sorted for each type of waste, i.e. organic solid waste, general solid waste, recyclable solid waste, and each type of hazardous waste, before being disposed of from time to time. used To prevent the spread of the COVID-19 virus for some time, while one in four people have never sorted out their general waste from used masks. It was also found that most of the samples had never sorted out the hygienic masks. Fold and put in bags to be disposed of in bins that only accommodate face masks in Bangkok, while less than a quarter of the population has ever sorted out their hygienic masks. Fold and put in bags to be disposed of in bins that accommodate Bangkok's specialized masks, in line with Primada Chalongchaisit.

Factors affecting people's behavior in household waste management according to the guidelines A new way of public service in the area Bangkok consists of knowledge factors. Understanding of households and factors of government campaign measures which corresponds to Chidchai Boonphithak

where knowledge factor household understanding Most of the samples agreed with The cause of life in a new way (New Normal) creates a lot of waste, including food waste, plastic waste and infectious waste. which may become a threat to communities in Bangkok while the sample group disagreed less than 5 percent

In addition, most of the sample group believe that people should separate plastic waste for sale or donation, which will help reduce the amount of waste from food delivery orders. And most of the samples think that entrepreneurs should use environmentally friendly packaging. To help reduce the amount of plastic waste accounted for 80.51 percent, which is consistent with Siriporn Kwanil Narongsak Nusorn.

However, if considering the household cooperation found that most of the samples has cooperated in the separation of plastic waste for sale or donation This will help reduce the amount of waste that Bangkok has to collect while most of the sample groups think that people are not cooperating and leave masks and hand sanitizer mixed with other household waste.

Including most of the sample group still think that government agencies The private sector and most establishments cooperate in setting up tanks to support specific masks to ensure the safety and health of workers collecting solid waste and preventing the spread of the COVID-19 virus. which corr Problems and obstacles in household waste management according to the new public service approach in the area Bangkok Most of the sample group had opinions on problems and obstacles in household waste management according to the new public service guidelines in Bangkok area. esponds to Wichai Kiatsamipak and Atthaphon Thammasarsophon.

This was because government campaigns were not sufficient to change household waste management practices, in line with Siriporn Kawanil Narongsak Nusorn. Measures and laws of government agencies have not yet been rigorous and strict to adjust household waste management behavior according to the new approach. And government agencies still lack knowledge of innovative technology in waste management according to new ways as well.

However, in this research also found new knowledge. This represents a model of the relationship between household waste management behavior according to the new approach. which is related to Knowledge and understanding of the people on waste management according to the new approach

Recommendations From Research Results

1. Government campaign measures to build knowledge and understanding among households

1.1 Bangkok should have public relations continuously. Provide knowledge on waste separation that there are 4 types which are 1) organic solid waste 2) general solid waste 3) recycled solid waste and 4) hazardous solid waste.

1.2 Bangkok should have public relations continuously. knowledge of separation Face mask Have a car to collect waste from the district office or dispose of it in a specific hygienic mask tank (orange) at the point specified in Bangkok.

1.3 Bangkok should have public relations continuously. Knowledge of separating plastic waste for sale or donation, thereby reducing the amount of waste from food delivery orders.

1.4 Bangkok should have public relations continuously. Educating entrepreneurs to use environmentally friendly packaging To help reduce the amount of plastic waste

1.5 Bangkok should have public relations continuously. To create awareness and understanding of the proper disposal of hygienic mask waste

1.6 The Bangkok Metropolitan Administration should publicize and ask for cooperation from the public not to leave the masks in the household waste. by folding the mask into a sealed bag Tie the bag tightly. Write or stick to the front of the bag saying "Hygienic masks" are separated from the garbage trucks of the district office.

1.7 Bangkok Metropolitan Administration has set a policy and has asked for cooperation from government agencies, the private sector, business establishments and various buildings to set up tanks to support specific masks. For the safety and health of workers collecting solid waste and preventing the spread of the COVID-19 virus.

2. Measures to control and implement laws of the government sector

2.1 It should be defined as a law for joint coordination between the Ministry of Interior. and the Ministry of Public Health to collect waste Ministry of Natural Resources and Environment to control and manage waste types Masks and hand sanitizer

2.2 Ministry of Natural Resources and Environment should establish guidelines for waste management

Including the designation of garbage bags in which the masks are collected separately from other types of garbage bags.

2.3 Bangkok Metropolitan Administration and the Ministry of Interior shall comply with the laws relating to waste disposal.

Infected fuzz and waste

3. Household cooperation in waste management in a new way

3.1 Collection of waste bags containing used masks separately from other garbage bags

3.2 Specify the message on the garbage bags collecting the masks as “used masks” clearly visible.

3.3 Bring the garbage bags collected from the masks to the agencies such as Bangkok and local administrative organizations for proper disposal.

4. Cooperation between the public and private sectors in waste management according to a new approach

Cooperation of Entrepreneurs, The Private Sector

4.1 Provide waste bins specifically for disposing of used masks. by attaching symbols, pictures, and messages that convey the used masks

4.2 Public relations to educate on disposing of used masks in the department continuously A picture or diagram should be presented to explain how to properly dispose of masks and hand sanitizer in the trash bin.

4.3 Collecting garbage in the category of masks and hand sanitizer from other types of waste to send to Bangkok and local government organizations To send to private organizations to get rid of the next method

Government Cooperation

Ministry of Interior and Bangkok

4.4 Comply with the laws related to the collection and disposal of solid waste. and infectious waste

4.5 Provide enough bins for disposing of used masks in the general community by collecting them in sealed garbage bags.

4.6 Local administrative organizations and operators should be entrusted to cooperate in the management of waste disposal in order to reduce the risk of spreading and spreading disease.

Ministry of Industry and Ministry of Health

4.7 Ask for cooperation from private sector operators who accept infectious waste disposal, reduce or refrain from collecting service fees for infectious waste disposal during the epidemic.

Ministry of Natural Resources and Environment

4.8 Collaborate and create a network between the Ministry of Interior Bangkok and the Ministry of Commerce to collect information in anticipation of Volume of production, use, disposal and waste disposal

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References

- Pollution Control Department. (2021). Environmental quality situation of Thailand, year 2020. Retrieved 4 June. 2021, from https://www.pcd.go.th/pcd_news/11873/
- Bangkok. (2561). Volume of waste collection in Bangkok, 2007-2019. Retrieved on 1 June 2021, from http://www.bangkok.go.th/upload/user/00000130/BMA_STATSITICS%202562/5.BMA_Env_62/Stat_Env_11_62.xlsx
- Strategic Management Division Bangkok. (2019). Statistics of Bangkok 2019. Retrieved on 7 June 2021, from <http://www.bangkok.go.th/pipd/page/sub/16647>
- Thai Environment Institute. (2020). Lockdown has reduced city waste by 13-55%, but plastic waste from Delivery doubled increase Retrieved 7 June 2021, from http://www.tei.or.th/th/highlight_detail.php?event_id=647
- Office of Natural Resources and Environmental Policy and Planning. (2005). Plan study project. Strategies for the management of community solid waste and hazardous community solid waste at the national level.
- Economic All Days. (2020). Waste disposal in the new normal era. Retrieved June 4, 2021, from <https://www.economicalldays.com/video-page/new-normal-2>
- The Momentum. (2020). Create a "normal" way to manage plastic waste the right way. Prolong the service life Benefit. Retrieved 7 June 2020, from <https://themomentum.co/live-for-energy-by-ptt-new-normal-for-using-plastic-advertorial/>