

Management Model For Reducing Plastic Bag Usage In Dormitory Of Samut Songkhram Education Center: A Case Study Of College Of Allied Health Students Suan Sunandha Rajabhat University

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Abstract

Background - The cognition of the reducing of using plastic bag very important and benefit of the reduction, environment and health, the research focus for the knowhow of using plastic bag which concern the management model in order to create more value to use and recycle plastic bag. Then, to focus on the environment related problem and fixed it by give more knowledge and understanding.

Objective - This research aimed to 1) measure the level of cognition of the reducing of using plastic bag, 2) study the management model affecting the reducing of using plastic bag, 3) analyse the behavior of plastic bag reduction affect to the management model, and 4) analyse the ability to explain the variation of analyse the ability to explain the variation of the management model for reducing plastic bag.

Methods - The target group was 205 persons collected by simple random sampling. The research referred to a quantitative technique that analysed data using descriptive statistics, inferential statistics, and multiple regression analysis.

Results - The research proved that the level of cognition of the reducing of using plastic bag was in high level, the management model affecting the reducing of using plastic bag in fair level, the behavior of plastic bag reduction affect to the management model, and can explain the variation of analyse the ability to explain the variation of the management model for reducing plastic bag accounted for 53%. Work relationships can explain the variation of health problems estimated at 52% at the significance level of 0.05.

Conclusion - Findings in this research can effectively implement the management model for reducing plastic bag in the organisation. The authors are interested in behavior and the management model for reducing plastic bag. The authors expect that this study's findings will be an advantage for organisation management in all aspects.

Keywords: Plastic bags, Environment, Health, Plastic reduction

Background

In the daily life of College of Allied Health Sciences's students. Plastic bags are used a lot, approximately, 10 plastic bags are used per person per day, and for Thai people use plastic

bags up to 5,300 tons per day (Pichham Rakrod, 2019), resulting in garbage and pollution in the dormitory. The reason for using plastic bags is because they are convenient, easy to find, and in order to be used to put things than the other bags,

people began to use plastic bags to carry goods by hands or otherwise in the 1970s, (Clapp & Swanton, 2009) and these bags became popularized rapidly, from these behavior did causing overflow of waste and causing air pollution thus causing physical and mental harm. (Pollution Control Department, 2005). From the data of using plastic bages can persist up to 1000 years (Stevens E, 2001 and United Nations Environment Programme (UNEP), 2005a). One of the problems is deterioration of natural beauty of an environment. So, accumulation of plastic bag wastes causes environmental pollution that can be disclose in number of ways to find the way reducing use plastic bages (Kanitha Rattanasin, 2019). plastic bags are still causing severe environmental pollutions and also human and animal health damages in urban and rural areas of the country. For this reason, the researcher has to find a method and a model to create cognition about the use of plastic bags and how to use them to be to be more value.

Methodology

This research employed the quantitative technique to measure the level of cognition to reduce of using plastic bag, the management model affecting the reducing of using plastic bag, analyse the behavior of plastic bag reduction affect to the management model and analyse the ability to explain the variation of analyse the ability to explain the variation of the

management model for reducing plastic bag. The target group was 205 official employees collected by simple random sampling. A questionnaire used in this research was delivered to the respondents from December 2020 to May 2021.

Data analysis

The research analysed demographic characteristics by the descriptive statistics such as percentage, mean, standard deviation, then studied the level of degree of the level of cognition, the management model for reducing plastic bag, behaviour by multiple regression analysis.

Results

The results showed that most of the research respondents were female (75%) aged between 26 – 35 years old (63%). Most of them had an educational background in bachelor's degree (84%) with 3 – 5 years work experience (69%). They earned income from 15,001 – 20,000 Baht a month (53%). The majority often agreed that conflicts often arose in the organisation because of conflict factors in work detail, behaviour, and work relationship. By list, the respondents also thought that conflicts often arose in the organisation because of work relationship ($\bar{x} = 4.11$), followed by work detail ($\bar{x} = 4.10$), and behaviour ($\bar{x} = 4.08$), respectively. See Table 1.

Table 1 The cognition of the reducing of using plastic bag in higer level. (N=205)

List	Compliance (n)	%	Level of Cognition
Cognition of using plastic bag			
About 500 billion bags need 9 billion liters of oil to produce?	166	81.0	Excellent
The bags that we use in 1 year, like 7 rounds trip to the moon	137	66.81	Fair
A lot of plastic bags can affect dorms	133	64.9	Fair
Plastic bags were developed and expanded as a result of celluloid	142	69.3	Fair
Plastic bags are the source of pollution in the world?	161	78.5	Good
Summary	72.7		Good
Cogition of reducing the use of plastic bags			
Plastic bag in the right format will help reduce contaminants	135	65.9	Fair
About hundreds of billions of plastic bags are use, less than 1% of plastic bags are recycled.	162	79.0	Good

List	Compliance (n)	%	Level of Cognition
The problem of global warming The focus is on reducing the use of plastic bags.	154	75.1	Good
The energy used to produce about 9 plastic bags can be converted to oil for the car to travel up to 1 kilometer?	144	70.2	Good
Plastic bag waste is a serious burden for storage, transportation and disposal due to the lightness of plastic bags?	126	61.5	Moderate
Summary	70.34		Good
Cognition of the benefits of reducing the use of plastic bags			
Reducing the number of plastic bags used in daily life, plastic waste in the soil has also decreased.	143	70.0	Good
The number of plastic bags is reduced, will result in the deterioration of water quality as well.	125	61.0	Fair
To reduce the amount of plastic bags, will help reduce the danger to living things both in water and on land.	124	60.5	Fair
Attention to using plastic bags less and less as a habit, will reduce greenhouse gas emissions and reduce global warming.	123	60	Fair
To reduce the amount of plastic, in order to keep clean food and strong health	138	67.3	Fair
Summary	63.72		Fair
Cognition of the problem of plastic bags			
The environmental problems are caused by plastic bags	141	68.8	Fair
Plastic bags which is the source of pollution and negatively affects the global environment	142	69.3	Fair
Plastic bags are used with a short lifespan, will transform from ordinary plastic bags into garbage immediately after use or damage.	127	47.4	Poor
Plastic bags with handles Even the kind that can be recycled But nowadays very few are recycled.	126	47.4	Poor
Every year many sea turtles and aquatic animals die from eating plastic?	105	51.2	Fair
Summary	59.74		Fair
Cognition of safe use of plastic bags			
Plastics need to be careful to use them safely in order to reduce the risk of health problems and environment	108	52.7	Fair
Should not bring cold plastic bags to put hot food that can be dangerous.	108	52.7	Fair
Plastic bags should not be used to pack food directly?	108	52.7	Fair
Should not use food wrap film to direct contact with food	109	53.2	Fair
Containers made of melamine should not be used in the microwave oven	133	53.2	Fair
Summary	55.24		Fair
Total	64.35		Fair

Table 1 showed that the cognition of the reducing of using plastic bag in fair level, because of the cognition of using plastic bag was a point of cognition of reduction which the overall was in

good level, followed by how to reduce of using it in good level, but benefit of the reduction, environment and health problem were in fair level.

Table 2 The satisfaction with management model of using plastic bag in higher level.

List	Most	More	Moderate	Low	Very Low	Level of Satisfaction
Create a value for using plastic bags	53.38	11.88	4.06	4.74	3	Fair
If there is support for a policy to reduce the use of plastic How good do you think it will be for the environment?	48.9	16.5	4.1	4.9	2.6	Fair
If you are involved in the activities of the World Conservation Organization how much knowledge will you be able to use?	51.5	12.0	3.8	6.4	3.4	Fair
If people are encouraged to refrain from using plastic bags with handles how good do you think it affects the world?	54.5	11.3	4.9	3.8	2.6	Fair
Reducing waste from plastic packaging to enable the world to switch to reusable packaging. How useful do you think it is?	56.4	9.8	3.4	4.1	3.4	Fair
If there is a reduction or refusal to use plastic bags with handles and single-use plastics how good do you think it will be?	55.6	9.8	4.1	4.5	3.0	Fair
Create knowledge and understanding of using plastic bags	25.1	20	17.2	6.9	3.4	Low
The management of reducing the amount of plastic bags	27.8	25.6	16.2	7.1	3.4	Low
If using plastic bags such as hot bags, handle bags, and used to landfill How much impact do you think it will have on the ecosystem?	23.3	24.4	17.7	7.9	3.8	Poor
Burning of plastic waste to what extent do you think it affects the greenhouse effect	26.3	25.2	16.9	6.0	2.6	Low
Carbon Dioxide from the burning of plastic waste, how badly do you think it will affect the ecosystem	24.8	25.6	16.2	7.1	3.4	Low
To use of plastic waste to produce RDF (combustible waste) can be reused as fuel, it was good to manage waste	23.3	24.8	18.8	6.4	3.8	Low
Knowledge of the effects of plastic bags	25.4	24.7	17.06	6.6	3.26	Low
Plastic bags contain information on your health effects	32	22.2	16.2	4.5	2.3	Low
Plastic bags are causing natural decomposition to occur very slowly?	24.4	25.2	18	6.4	3.0	Low
A lot of problem of water pollution from plastic bags	23.7	25.2	17.3	7.1	3.8	Low
Fermentation of biodegradable plastic bags leave a residue affecting you	21.4	25.9	18.0	7.9	3.8	Low
The reducing fuel consumption and releasing carbon dioxide, effect the environment	25.6	25.2	15.8	7.1	3.4	Low
Total	34.62	18.86	12.77	6.08	3.22	Low

Table 2 showed that the cognition of the reducing of using plastic bag in fair level, because of the

cognition of using plastic bag was a point of cognition of reduction which the overall was in

good level, followed by how to reduce of using it in good level, but benefit of the reduction,

environment and health problem were in fair level.

Table 3. The behavior to use plastic bag in high level.

List	Most	More	Moderate	Low	Very Low	Level of Satisfaction
Use of plastic bags	42.22	31.34	16.3	8	2.16	Fair
To use plastic bags each day	46.3	28.3	15.6	7.3	2.4	Fair
To refuse plastic bags from convenience stores	33.2	33.7	21.0	10.2	2.0	Low
To use plastic bags easy it is to use	46.8	33.2	14.1	4.9	1.0	Fair
To use plastic bag in the wrong way, will affect to health	42.4	27.8	17.6	8.8	3.4	Fair
To reuse plastic bags for food packaging for the best solution	42.4	33.7	13.2	8.8	2.0	Fair
Using plastic substitutes	43.8	31.92	18.52	6.82	2.14	Fair
To use other packaging instead of plastic bags? will help to reduce the amount of waste	40.5	28.3	18.5	9.8	2.9	Fair
To reduce the amount of unnecessary shopping will help reduce the amount of waste	51.2	35.1	10.2	2.9	0.5	Fair
To recycle plastic bags will reduce the amount of waste	43.9	31.9	15.1	6.3	2.9	Fair
To avoid used products will help to reduce the amount of waste	41.5	34.1	16.1	6.3	2.0	Fair
To buy second-hand goods will reduce the amount of waste	42	30.2	16.6	8.8	2.4	Fair
Total	43.01	31.92	17.41	7.41	2.15	Fair

Table 3 showed that the behavior to use plastic bag in fair level, because of the replacement of the plastic bag was the key to use

it and to reduce of spending for consumer products, followed by to use plastic bag which easy finding to use plastic bag in the daily life.

Table 4 The management model affect the reducing of using plastic bag. (N=205)

Measure	Unstandardized Coefficients		Standardized Coefficients	t	p-value
	B	Std. Error	Beta		
(Constant)	2.138	.107		20.048	.000
Behavior of using plastic bag	.024	.042	.041	.565	.573
Behavior of using the other bag instead	-.096	.046	-.148	-2.063	.040*

Note: p-value <0.122, R=.144, R²=.021, F=2.129

Table 4 showed multiple correlations equated .144, that variable of behavior of plastic bag

the management model was not related to use the other bag instead, accounted for 02% statistically.

Discussion

The research aimed to measure the level of cognition of the reducing of using plastic bag. The research showed that the cognition of the reducing of using plastic bag in fair level. The overview of the cognition of using plastic bag was a point of cognition of reduction which the overall was in good level, followed by how to reduce of using it in good level, but benefit of the reduction, environment and health problem were in fair level. because of the replacement of the plastic bag was the key to use it and to reduce of spending for consumer products, followed by to use plastic bag which easy finding to use plastic bag in the daily life.

On the other hand, the increasing public awareness on environmental impacts on consumption of plastic bags. (Abdul Jalil, Md. Nannu Mian, Muhammad Khalilur Rahman1, 2013).

Management Model for Reducing Plastic Bag Usage in Dormitory of Samut Songkhram Education Center: A Case Study of College of Allied Health Students Suan Sunandha Rajabhat University. The cognition of the reducing of using plastic bag, the management should point and focus of cognition of reduction (Nilobol Trisanejit (2010), should promote environment friendly sustainable alternatives to plastic bags (Oriental Overseas Exports, 2010) and motivate the benefit of using the other alternative way (Nilobol Trisanejit, 2010). which the overall result was in good level, followed by how to reduce of using it in good level, but benefit of the reduction, environment and health problem were in fair level, it mean that the management model should more focus for the knowhow of using plastic bag which concern the environment and try to advise new perception of the

The management should provide policy and find model to reduce plastic bag and try to advise, give knowledge and provide more training to use alternative ways to minimize use plastic bags in Dormitory of Samut Songkhram Education Center. Findings in this research can effectively implement the management model for reducing

The satisfaction with management model of using plastic bag in higher level. showed that satisfaction with management model of using plastic bag in poor level, because of the cognition of using plastic bag was a point of cognition of reduction and use the other ways to recycle (Though, 2007; PBWG, 2002) (Thanawadee Lechakphai, 2017) which the overall was in good level, followed by how to reduce and recycle of using it in good level, (Chompoonut Phromphak, 2020). but benefit of the reduction, environment and health problem were in fair level.

The management model affect the reducing of using plastic bag showed multiple correlations equated .144, that variable of behavior of plastic bag the management model was not related to use the other bag instead, accounted for 02% statistically, due to Plastic bags are being extensively used in every place and behavior of using plastic bag (Plastic bag reduction around the world, 2009; Porter, 2000)

alternative products (Palida Sampradit (2016) Pawarisa Nakpanich (2015). And for satisfaction with management model of using plastic bag in poor level which need more advise and motivate to understand the model to creative value to use and recycle (Paiboon Archarungrote and Supada Sirikutta, 2018), especially, to advise the behavior (Ratchaphittha Pandee, Ratchaneekorn Chotichaisathit, Jintana Thanaviboonchai, 2020)

and must more provide knowledge and training about the effect of using more plastic bag. (Paisan Nakpipat, 2012). Then, to focus on the environment related problem and fixed it by give more knowledge. Finally, give more information and find the way of the plastic replacement were the main focus and recommendations.

Conclusion

plastic bag in the organisation. The authors are interested in behavior and the management model for reducing plastic bag. The authors expect that this study's findings will be an advantage for organisation management in all aspects.

Limitation

This research only studied of plastic bags in one dormitory of Samut Songkhram Education Center should have studied more at the other place and compare results in order to promote the

Declaration of Conflicting Interest

The authors declare no conflict of Interest.

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good environment and reduce waste of plastic bags. Furthermore, to save the earth from the problem of pollution, should clean and green environment in the future.

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