
Research on the Behavior of Use of Nylon Bag of the People of Thai Nguyen City

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Abstract

This study was conducted to assess the behavior of using plastic bags of Thai Nguyen city people. Data of the study were collected from a direct survey of 221 consumers using plastic bags in Thai Nguyen city. Through descriptive statistical method, the study has shown important contents related to people's awareness of Thai Nguyen city about the harmful effects of plastic bags on the environment, on human health, and on usage behavior of plastic bags and the demand for replacement products for plastic bags of people in Thai Nguyen city. From the research results, the authors have proposed some recommendations to improve the behavior of using plastic bags of Thai Nguyen city people.

Keywords: Consumer behavior, awareness, nylon bags

1. Introduction

1.1 Introduce the problem

Nowadays, the production and consumption of plastic bags and nylon bags have become common in people's daily lives, and the suppliers and manufacturers of goods focus on how to make people happy. Shopping is convenient for consumers. That's why nylon bags are so popular today. We can easily see nylon bags of all colors and sizes everywhere. Nylon bags can be used to store all possible items such as clothes, food, drinks, furniture, etc. On average, one person per day goes to the market to shop for food. at least a few nylon bags were brought home.

The use of plastic bags has now become a problem in environmental management in most developing countries, including Vietnam. The nylon packaging currently used in our country and many countries around the world is difficult and long to decompose. It takes 500-1000 years for nylon bags to decompose on their own, which affects the living environment, leading to Climate Change. With the advantages of compactness, durability and low cost, nylon bags have gradually replaced most of the traditional baskets and wrappers. The outstanding advantages in production and consumption have overshadowed the harmful effects of plastic bags on the environment. That is also the main reason why plastic bags are used very popularly in many countries around the world despite warnings about great harm to the environment and public health.

Currently, Vietnam is very interested in reducing the use of plastic bags to protect the environment. On April 13, 2022, the Prime Minister issued Decision No. 450/QĐ-TTg, approving the national strategy of environmental protection to 2030 with a vision to 2050, in which the campaign strengthens pollution control. environment such as reduce, reuse, recycle, collect and treat plastic waste. From after 2025, do not circulate and use single-use plastic products, non-biodegradable plastic packaging in commercial centers, supermarkets, hotels and tourist areas; after 2030, stop the production and import of single-use plastic products, non-biodegradable plastic packaging and products and goods containing microplastics; promote the development of environmentally friendly products and materials to replace.

Each year, Vietnam uses more than 30 billion plastic bags, an average of 6 bags per family per day. Notably, only 17% of it was reused.

- Nylon bags account for of the amount of plastic waste in Vietnam.
- Vietnam is one of the four countries that emit the most plastic bags in Asia.
- Statistics from the Vietnam Plastics Association show that in 1990, each Vietnamese person consumed only 3.8kg of plastic per year, but after 31 years, this figure reached 41kg.

According to scientists from the Research Institute for Sea and Islands Management under the Vietnam Administration of Seas and Islands, Vietnam annually discharges 0.28-0.73 million tons of plastic bags and plastic waste into the ocean, accounting for 6% of the total world volume.

- In recent years, despite the development of life, the situation of using plastic bags has not decreased. Particularly, the two big cities are TP. Hanoi and TP. In Ho Chi Minh City, on average, about 80 tons of plastic and nylon are discharged every day.

1.2 Explore important of the problem

As a central city of the Northern Midlands and Mountains, the goal of sustainable development is considered an indispensable requirement of Thai Nguyen city. To achieve sustainable growth, all development must necessarily be associated with environmental protection. In Thai Nguyen city, every day up to 1,030 tons of solid waste is collected, mainly plastic bags and consumer plastic. Domestic solid waste is buried mainly in landfills, accounting for 90% of the volume.

We know that the harmful effects of nylon bags are extremely large that many people often do not pay attention to because of the utility that nylon bags bring in daily life. Therefore, how to make city people, especially Thai Nguyen city people, be aware of the harmful effects of plastic bags and the importance of giving up using plastic bags is a difficult and costly issue. much time and effort. Therefore, it is necessary to have premise studies to collect information on plastic bag consumption behavior so that we have a scientific basis to propose practical solutions from which to change the perception of behavior people use nylon bags.

2. Methods

2.1 Methods of data collection

Primary data in the study were collected by interviewing 221 people directly involved in the use of plastic bags in 5 wards of Thai Nguyen city, namely Quang Trung, Hoang Van Thu, and Tan Thinh, Dong Quang and Phan Dinh Phung. The survey was conducted in January 2022 with convenience sampling method.

In the sample size of the study, the proportion of women accounted for 70% and men accounted for 30%. This can be explained by female subjects who are usually responsible for purchasing goods, services, and food in the family, so they often have the opportunity to come into direct contact with plastic bags through choosing, choose to buy, sell and use goods on the market. Occupations are also quite diverse, mainly employees (23.6%), civil servants (19.1%), housewives (17.3%) and self-employed (11.8%), and the remaining (28.2%) includes other occupations.

2.2 Analytical methods

Descriptive statistical method through criteria such as frequency, average value, minimum maximum value, standard deviation to analyze people's behavior of using plastic bags, people's perception of convenience. Benefits and harms of using nylon bags. In addition, the criteria for assessing the perception of the use of plastic bags are measured by a 5-point Likert scale to assess the level of awareness about the impact of plastic bags on the environment and the health of the city's residents.

3. Results

3.1 The behavior of using plastic bags of people in Thai Nguyen city

For a typical product such as a nylon bag, the use behavior of the product is very important to the life and environment of the community. The survey results show that the percentage of people using plastic bags the most is at the market 88%, the remaining 12% is in the supermarket. People use nylon bags for many different purposes such as storing fresh food, cooked food, storing household items and storing garbage. According to the survey results on the purpose of using plastic bags, up to 83% of people use it to store fresh food, 8% to store cooked food and household items, and only 1% of people use it. nylon bags for household waste. This shows that the benefits of nylon bags are always optimally used by people in daily life.

Nowadays, people often do not have the habit of carrying a tracker when shopping for goods because most sellers are given a nylon bag to store their goods. This has been proven in the study when up to 71.8% of people said that they do not have the habit of carrying baskets to locate goods when shopping. Besides, the reason that people do not bring shopping carts when they go shopping is due to the inconvenience of work, the lack of aesthetics and they only buy goods in small quantities. Thus, nylon bags have really brought convenience and savings to people because their very cheap prices are often included with purchases. Most people appreciate the benefits of using plastic bags in life. Besides, when surveying about plastic bag consumption

habits, the number of plastic bags used by people every day is at least one, at most 15, and on average 6. The amount of plastic bags used by people every day depends on the amount of goods they buy as well as the number of family members.

The survey results on the use and treatment of plastic bags by people in Table showed that up to 80.9% of people did not buy plastic bags from grocery stores to use for their families. Therefore, collaborators' use of nylon bags is largely not due to demand, but rather to the availability of nylon bags on the market, which are distributed free of charge by sellers when shopping. Regarding the habit of reusing nylon bags, 54.5% of people have the habit of reusing plastic bags because they want to save money, use old bags to store household objects or collect garbage. On the contrary, those who do not have the habit of reuse think that when buying new goods, nylon bags are already provided, so they do not need to use plastic bags.

The survey results also show that the majority of people treat plastic bag waste through the garbage collection system, accounting for 94.5%. This proves that the waste collection system has a positive effect in the centralized collection of plastic bag waste. In fact, Thai Nguyen city is the center, so the garbage collection system is arranged properly, the garbage to be put into plastic bags is put in the right place and then the garbage collectors take it to the garbage truck to download it to the right place. The remaining 5.5% of people dispose by burying their waste because they have a relatively large land area.

3.2 People's reasons for using plastic bags

Nylon bags have long been considered an indispensable item in people's daily life. In general, people know that the use of plastic bags causes environmental pollution. Although aware of the dangers of plastic bags to the environment, many people still use them because so far there have not been many environmentally friendly bags produced and if they have a higher cost than nylon bags. The harmful effects of plastic bags begin at the production stage because the production of nylon bags must use input materials such as petroleum, gas fields, additives used mainly as plasticizers, metals. heavy, dyes... These are extremely dangerous substances for health and the environment. Therefore, during the production of plastic bags, CO2 will be generated, increasing the greenhouse effect, contributing to global climate change.

Table 1: People's reasons for using plastic bags

<i>People's reasons for using nylon bags</i>	<i>Rate %</i>
Compact, lightweight, convenient nylon bag	55.8
Overly popular nylon bag	37.8
Less popular replacement bag	4.5
Selling price of cheap nylon bags	1.9
Total	100

Source: Author's survey data, 2022

The habit of using nylon bags has existed for a long time and is increasingly popular among the population. People use nylon bags for many reasons, of which the reason that nylon bags are

light, compact and convenient accounts for the highest percentage (55.8%), 37.8% of people think that they use nylon bags because too popular. Most retailers provide a free nylon bag to store goods for customers. A small percentage of people also think that replacement bags are not popular and the price of nylon bags is too cheap, so nylon bags are still the first choice of people.

3.3 People's awareness of materials and the ability to decompose plastic bags

According to the survey results on people's awareness about the materials to make plastic bags, up to 78.2% of people really don't know that plastic bags have petroleum as the main ingredient. It shows that most people do not care about the origin of raw materials to make plastic bags. In fact, plastic bags have become an indispensable item in people's daily life, but they are not aware of where the plastic bags they use are made from. This has led to a limited bias in the correct perception of the harmful effects of plastic bags on the environment and human health. However, when considering people's comments about the degradability of plastic bags, up to 88.2% of people agree with the view that this is a difficult-to-decompose product. Thus, people who use nylon bags are also somewhat aware of its harmful effects but still accept it.

3.4 People's awareness about the harmful effects of plastic bags on the environment

The study continued to explore people's perception of harm to the environment by giving the 7 most basic harms of plastic bags for people to evaluate. The evaluation results of Thai Nguyen people are presented in detail in Table 2.

Table 2: People's perception of the harmful effects of plastic bags on the environment

<i>Environmental Impacts</i>	<i>Average Score</i>	<i>Meaning</i>
Hazardous to the environment	1.79	Very influential
Soil Erosion	2.67	Indifference
Flood	2.66	Indifference
Climate change	2.13	Influence
Loss of urban beauty	1.76	Very influential
Reduced biodiversity	2.85	Indifference

Source: Author's survey data, 2022

Notes: 1. Very influential; 2. Influence; 3. Indifference; 4. Little influence; 5. No effect

According to Table 2, the majority of people think that the most obvious harm of plastic bags is to lose the beauty of the living environment, with an average value of 1.76 reaching the significance level. In fact, everywhere we can see the image of plastic bags being thrown indiscriminately on the road, which makes the city landscape a lot worse.

In addition, the majority of people also agree that plastic bags are harmful to the environment, causing soil erosion as well as climate change with an average score of 1.79, 2.67 and 2.13 respectively. The significance level is influence. Plastic bags are products that are difficult to decompose when in the soil, a nylon bag accidentally interferes with metabolism, water in the soil, soil makes the soil inert and degraded. Plastic bags are also a contributor to climate change,

mainly by increasing the amount of CO₂ in the atmosphere through the burning of plastic bags. However, for plastic bags causing floods, reducing biodiversity.... Most people don't realize it. These three criteria have an average score of 2.66, respectively; 2.79; 2.85 means indifference.

Currently, the problem of flooding in Thai Nguyen city is common, but people do not think that plastic bags are one of the causes of this situation. In addition, due to living in urban areas, people have little interest in and access to biodiversity, so most people do not show interest in the harmful effects of plastic bags on biodiversity.

3.5 People's awareness about the harmful effects of plastic bags on human health

In addition to the harmful effects on the environment, nylon bags also seriously affect human health. In daily life, people are exposed to plastic bags every day, so their health is affected in different ways with different degrees. After the study, 7 criteria were proposed for people to evaluate the harmful effects of plastic bags on human health. The results of the survey are presented in detail in Table 3.

Table 3: People's perception of the harmful effects of plastic bags on human health

<i>Harm to human health</i>	<i>Average Score</i>	<i>Meaning</i>
Food poisoning	2.61	Indifference
Effect on endocrine glands	2.77	Indifference
Lung cancer	2.26	Influence
Reduced immunity	2.33	Influence
Birth defects in children	2.74	Indifference
Harm to the brain	2.80	Indifference
Producing many pathogenic bacteria	1.96	Influence

Source: Author's survey data, 2022

Notes: 1. Very influential; 2. Influence; 3. Indifference; 4. Little influence; 5. No effect

Statistical results in Table 3 show that there are 3 harms given for people to evaluate, but there are 4 harms that people evaluate at an indifferent level, which are harms such as: food poisoning, endocrine gland damage, birth defects in children and brain damage. There are only two harmful effects of plastic bags causing lung cancer and creating an environment that produces many disease-causing bacteria, which were assessed by most of the respondents at the level of influence with an average score of 2.26 and 1.96. These are common and prominent realities in society, so the authors are aware.

3.6 People's demand for products to replace nylon bags

Aware of some of the harms that nylon bags bring, so the need to use replacement products for nylon bags to protect the environment and the health of themselves and their families is being concerned by people. The survey results in Table 4 show that 84% of people have a need to use products to replace plastic bags in the future. This shows that people are aware of the harmful effects of plastic bags, so the need to protect the environment, protect their own health, and eat

their families and communities with products to replace plastic bags is being raised. they aim for. Up to 16% of people have no need, the reason is that these subjects have not been aware of the harmful effects of plastic bags, so the need to use alternative products for them is not necessary.

Table 4: People's demand for replacement plastic bags

<i>Harms to human health</i>	<i>People's needs</i>	<i>Rate</i>
Demand for replacement bags for nylon bags	Yes	84.0
	No	16.0
Perceive nylon replacement bags as biodegradable products	Yes	90.0
	No	10.0
Understanding the nylon replacement bags on the market	Yes	71.0
	No	29.0

Source: Author's survey data, 2022

The survey results in Table 4 also show that most people already know that alternatives to plastic bags are products that are biodegradable in the environment (90%). The majority of people also have a certain understanding of alternatives to plastic bags in the current market (71%). The plastic bag substitutes that they know about are products such as paper bags, cloth bags, compostable nylon bags, etc., remaining 29% of people don't know about plastic bag substitutes on the market. now.

4. Discussion and recommendations

Through a study to assess the perception of people's behavior of using plastic bags in Thai Nguyen city, the results show that people's awareness of the harmful effects of plastic bags on the environment and human health has not yet been studied. are high, such as some problems about the harmful effects of plastic bags in causing floods and birth defects in children. Most people still prefer to use nylon bags because of its low cost, convenience and availability. Replacement bags are well known to consumers, but their higher cost is not common, so few people use them.

From the above research results, the author proposes some recommendations to raise awareness about the behavior of using plastic bags of Thai Nguyen city people as follows:

- Regularly organize communication activities in combination with advising people to use packaging with safe and environmentally friendly materials;
- Distributing leaflets to each household about the harmful effects of plastic bags, as well as encouraging people to use environmentally friendly bags;
- There should be mandatory sanctions to use packaging with environmentally safe materials for supermarkets and large stores - where there is a high demand for nylon bags;

- Create investment incentive mechanisms and policies for establishments producing eco-products that are easily degradable in the environment such as paper bags and bags made from agricultural products;
- Besides, it is necessary to focus on improving and renewing friendly bag products, in order to bring user-friendly bags closer to users by meeting the needs of replacing nylon bags, creating a unique style for people. use.
- Stricter management of the production process of nylon bags because at present this process is still floating, product quality and safety standards of nylon bags are still left open.

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