

Consumer Purchasing Behavior for Herbal Medicine in Drugstore in Bangkok

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Abstract

Most drug consumers in Thailand still buy herbal medicines from drugstores. If their purchasing behaviors or their decision making process are not appropriate, they would have problems of getting the herbal drugs with no quality and their safety would be at risk. The objective of this research was to study the consumers' behavior in purchasing herbal medicines and their attitudes toward herbal medicines in modern drugstores in Bangkok. The samples were drawn from herbal medicine consumers from 12 districts in Bangkok, with 5 drugstores randomly drawn from each district. Five subjects were purposively selected from the clients at each store by using a simple random sampling technique. The subjects were interviewed using a structured interview questionnaire. The findings revealed that 66% of the subjects purchased herbal medicines by the drug's names. In terms of frequency of the purchase, 56.3% purchased the medicine once in a while and purchased the medicine in composite or mixed forms rather than in single item forms. For the purpose of purchasing, 56% bought the herbal medicines to cure their own illness while 24.7% bought the herbal medicines for health prevention or to enhance their health. Before making decision to purchase, 93.3% of the subjects thought it was necessary to find information about the herbal medicines, and the most popular sources of information were from physicians, pharmacists, and nurses, and 83.3% thought it was necessary to read the labels first before purchasing. It was also found that products with complete labels, products with legal licensing, and good indications were the factors which the subjects based their decision on the purchase of the herbal medicines. Furthermore, the subjects had positive attitudes toward herbal medicines, but were not certain in their effectiveness and quality.

Keywords: Herbal medicine; Consumers' purchasing behavior; Drugstore; Bangkok

INTRODUCTION

In 1978 the World Health Organization urged its member countries to use folk healing practices and herbal medicines as part of the basic public health projects (Laddawan, 2001). This has prompted Thailand to become interested in using herbal medicines and Thai traditional drugs. The Thai government began to support an attempt to develop herbal medicines and Thai herbal drugs systematically. Some items of herbal medicines were placed on the National List of Essential Medicines in 1999 (The National Drug Committee, 2000) as part of an effort to promote the use of herbal medicines and provide diversity of alternatives for health care.

Herbal medicines refers to medicines produced from herbal medicinal plants using a modern manufacturing process or produced with a modified modern drug production process, and a license was approved for the formula/prescription as a traditional drugs (Pricha, 1997). To facilitate the development and licensing, the National Drug Committee has classified the herbal medicinal products into 4 categories (Laddawan, 2001):

1. Traditional drugs are drugs derived from herbal medicinal plants with indications, dosage, and usage according to traditional practice passed on from generation to generation.

2. Modified traditional drugs are traditional

drugs developed into a dosage form which are completely different from the original through a modified modern drug manufacturing process in order to make them easy to use such as in tablets or in capsules.

3. Herbal drugs or phytopharmaceutics are herbal drugs derived from scientific research and development processes with the medicine derived from the herbal plants as raw materials, or as exudates, or crude extracts from the plants.

4. Modern medicines are herbal medicines derived from the scientific research and development process, and an important drug is in its pure form and its chemical structure is clearly known.

Two types of herbal medicines are placed on the National List of Essential Medicines, they are:

1. Herbal medicines which are made of a composite of herbal medicines, have been used traditionally and widely by the people from time immemorial and licensed as a prescription of herbal drug by the Office of the Food and Drug Administration.

2. Herbal medicines which have been developed from a single herbal plant with an evidence indicating its safety for use in humans and with a license granted by the Office of Thai Food and Drug Administration.

When the distribution process of herbal medicine from manufacturers to consumers

in Thailand was considered, it was found that these drugs were distributed through three channels (Public Health Systems Research Institute, 1994). The first channel is through drugstore, such as modern medicine drugstores, modern drugstores selling only ready-to-use drugs which are not harmful drugs or prescription drugs, and traditional medicine drugstores. The second is through traditional physicians who prescribe the herbal drugs to their patients. The other channels include sales directly from manufacturers or importers, sales from the forest or growing fields, or other illegal channels such as through vendors.

A number of studies have been conducted on consumer behavior in the use of herbal drugs or medicinal herb-based drugs in several areas. However, no studies have been performed on herbal drug use behaviors of consumers who make their purchase in modern drugstores. In Bangkok, modern drugstores are available in great numbers and are visited by the majority of consumers. If these consumers have inappropriate drug purchasing behaviors or have improper decision making process of purchasing drug, they will obtain low quality herbal drugs which are unsafe, and the user's health may be at risk. Because of this, the researcher was interested in studying the herbal drug-purchasing behaviors of consumers in Bangkok. It is expected that the findings will be used as guidelines in promoting appropriate herbal drug uses and in purchasing safe and high quality herbal drugs. The objectives of the study were to study herbal drug purchasing behaviors of consumers and to examine the attitudes toward herbal drugs or herb-based medicine of consumers who make their purchase at modern drugstores in Bangkok.

It was hypothesized that consumers who made their herbal drug purchase at the drug stores had different drug purchasing behaviors, they were different in their decision-making process in purchasing drugs, and they also had positive attitudes towards herbal drugs.

MATERIALS AND METHODS

The present study was a descriptive and cross-sectional research conducted between January 1 - March 1, 2003.

Sample

The samples consisted of consumers 15 years of age or older who purchased their herbal drugs at modern drugstores in Bangkok. The subjects were drawn by using a multi-stratified random sampling techniques.

With a stratified random sampling techniques, the fifty districts in Bangkok were divided into three groups based on the number of population. Four districts were then randomly drawn from each group. All together, there were 12 districts, these districts were Huai Khwang, Wattana, Phra Nakhon, Phyathai, Klong Toey, Phasi Charoen, Thonburi, Bang Krap, Rajathevi, Bang Na, Phra Khanong, and Minburi.

Five drugstores were drawn from each district using a simple random sampling technique. Finally, 5 subjects were drawn from each drugstore using a purposive sampling technique, having 25 subjects in each district. All together, there was a total number of 300 subjects.

Instrument

The instrument used was a three-part questionnaire consisting of information about the herbal drug-purchasing behaviors, attitudes toward herbal drugs, and demographic information of each subject. This questionnaire was tried out with 30 subjects who made a herbal drug purchase at modern drugstores in Nontaburi. The data were analyzed and the quality of the part on the attitudes towards herbal drugs was determined using the coefficient alpha, which resulted in the correlation of 0.8635. The questionnaire was then adjusted and revised for use in data collection.

Data collection

The data were collected at the designated drugstores in the sample districts by the researcher and three well-trained interviewers. Five subjects were interviewed using the structured questionnaire at each drugstore in each district, with 25 subjects in each district, and with a total number of 300 subjects from 12 districts in Bangkok.

Analysis of data

The SPSS 9.0 for windows was employed. The statistics used were frequency, percentage, and Chi-square.

RESULTS

Subject demographics

The demographic information indicated that 63% of the subjects who made a purchase of herbal drugs at the drugstores in Bangkok were female. They were in the ages ranging from 30 - 49 years. The majority of them had a Bachelor's degree and worked as government officials and

state enterprises, with the income ranging from 5,001 - 20,000 baht per month.

Herbal drug purchasing behaviors

For method of drug purchasing, 66% of the subjects told the name of the herbal drugs they wanted to purchase, 20% described the symptoms to the clerks and the clerks recommended the drugs, and 14% showed the sample of the drugs to the clerks, as shown in Table 1 below. In terms of frequency of purchase, it was found that 56.3% of the subjects made a purchase once in a while, 25.7% made a purchase regularly, especially when they felt ill, and 18% were first-time purchasers (Table 2). Most of the herbal drugs the subjects purchased were composite herbal drugs (54.3%) rather than single item herbal drugs (45.7%), as shown in Table 3. Most of the dosage forms of drugs purchased were in capsules (29.0%) and tablets (28.0%), followed by liquid drugs (18.0%), powder (14.7%), and ointment or cream (10.3%), as shown in Table 4.

There were significant differences between the subjects who made a purchase of single-item herbal drugs and those who purchased composite herbal drugs ($p < 0.05$), between those who were differences in their levels of education ($p = 0.00$), and between those who had differences in their incomes ($p = 0.016$). However, there were no significant differences between those who had differences in ages and sexes ($p > 0.05$).

Drug purchasing decision process

In terms of awareness of the problems, most of the subjects made the drug purchase to cure their own illness (56.0%), followed by the purchase of herbal drugs for preventive measures or for enhancing their own health (24.7%), and the purchase for others (19.3%), as shown in Table 5. About 93.3% of the subjects thought it necessary to understand the detail of the herbal drugs before making a purchase. The most popular sources for the information were physicians, pharmacists, and nurses. 83.3% of the subject thought it necessary to read the drug labels before making the purchase. 77.7% of the subjects

read the labels before making the purchase (Table 6). The majority of them read the drug indications first, followed by the manufacturing date and expiration date, method of use, price, and the names of the a manufacturers, respectively (Table 7).

There were no significant differences in the drug label reading behaviors of the subjects according to sex, age, occupation and income. However, there were significant differences ($p = 0.048$) when the subjects were classified according to their levels of education.

The main factor affecting their decision in making the purchase was the products themselves, followed by the recommendations of others, advertising, the need to support herbal medicine products, and ease of purchase (Table 8).

The subjects who made the decision to purchase herbal drugs because of the products themselves provided the reasons for purchasing, in decreasing order, that the products had complete labels, were legal, had good indications, and were effective in healing the illness because they had used them before.

Use of herbal drugs

Experience from the use of herbal drugs, the subjects had the experience of using herbal drugs. The first five drugs the subjects used the most were (in decreasing order): Fah Ta-lai Jon or Andrographis paniculata capsules to treat cough, sore throat, fever, and diarrhea; turmeric capsules to treat indigestion and gassy stomach; Ya Satree Pen Park (Pen Park Brand Tonic) to treat irregular menstrual periods, and as blood enrichment; Ya Kom Tra Bai Hoh (Bai Hor Brand Bitter Tablet) to treat aphthous ulcers (oral ulcers) and thirst; and Ya Hom Hah Chedies (Ya Hom Powder Five Pagodas Brand) to treat vertigo and dizziness.

In terms of promotion of the use of herbal drugs, the subjects believed that the manufacturers, drugstores, and the Office of the Food and Drug Administration should work collaboratively to manufacture herbal drugs that were of high quality, with high standards, safety, and reasonable prices.

Table 1. Method of drug purchasing

Method of drug purchasing	n	%
Telling the name of the drugs	198	66.0
Showing samples	42	14.0
Describing the symptoms	60	20.0
Total	300	100.0

Table 2. Frequency of drug purchase

Frequency of drug purchase	n	%
First time	54	18.0
Once in a while	169	56.3
Regularly when ill	77	25.7
Total	300	100.0

Table 3. Types of herbal drug purchased

Types of herbal drugs	n	%
Single-item herbal drugs	137	45.7
Composite herbal drugs	163	54.3
Total	300	100.0

Table 4. Dosage forms of herbal drug purchased

Dosage forms of herbal drugs	n	%
Powder	44	14.7
Tablets	84	28.0
Capsules	87	29.0
Liquid	54	18.0
Ointment or cream	31	10.3
Total	300	100.0

Table 5. Herbal drug purchasing purpose

Herbal drug purchasing purpose	n	%
Healing one's own illness	168	56.0
Preventive measures	74	24.7
Purchase for others	58	19.3
Total	300	100.0

Table 6. Label reading behavior before making a purchase

Label reading behavior	n	%
Not reading the label	67	22.3
Reading the label	233	77.7
Total	300	100.0

Table 7. Information read from the drug labels (except the name of the herbal drugs)

Information read from the drug labels	n	%
Drug indications	142	60.9
Method of use	19	8.2
Price	15	6.4
Manufacturing date/expiration date	45	19.3
Name of manufacturers	12	5.2
Total	233	100

Table 8. Factors affecting their decision on the purchase of herbal drugs

Factors	n	%
Products	201	67.0
Advertising	21	7.0
Recommendations by others	45	15.0
Ease of purchase	13	4.3
Desire to support herbal medicine products	20	6.7
Total	300	100.0

Attitudes toward herbal medicines

The majority of the subjects (43.62%) had positive attitudes towards herbal drugs while 22.46% had either negative attitude or were uncertain about the effectiveness and quality of herbal medicines.

DISCUSSION

According to the study, most of the subjects were female rather than male. This might be because females had certain features that males do not have such as pregnancy, menstrual period, etc., and these factors might compel them to use herbal medicines such as medicines for females, medicines for relieving pain caused by strained sinews or related problems. In addition, females are more concerned with their appearance and health than males. They want to have good appearance, shape, and body weight in vogue at the time. As a result, females tend to use herbal medicines to help lose their weight, particularly laxatives. This findings were similar to those of Arunsee (1991) and of Lakkhana (2001) which revealed that females tended to used herbal drugs more than males.

Herbal drug purchasing behaviors

Most of the subjects made the purchase of the drugs by specifying the name of the medicine, by describing the symptoms to the clerks, and by showing the samples of the herbal medicines to the clerks. Word of mouth was the chief means of inducing the subjects to use herbal medicines. When one person had used the drugs and they were effective, the users would record the names of the drugs. When they felt ill again, they would go to the drugstore to make a purchase of the drug to cure their own illness. This finding was in line with those found by Rapeepan (1997) and Saowanee (1999).

Most of the subjects made the purchase of the herbal medicine once in a while; some made the purchase regularly, and others were first time purchasers. This finding was supported by the study conducted by Rungrawee (1999), which found that most of the consumers used ready-to-consume herbal medicine once in a while depending on the occasion, followed by those who consume regularly.

The types of herbal medicines the subjects purchased were composite herbal medicines rather than single-item herbal medicines. This was because the composite herbal medicines are more readily available in the drugstores, and these

medicines were passed on to one another by word of mouth than single - item herbal medicines. Furthermore, these herbal medicines are advertised in various mass communication media such as on radio, television, and magazines. This leads to the use of more composite or mixed herbal medicine than single-item herbal medicines. However, the trend on the use of single-item herbal medicine is increasing because of the promotion of government agencies and more reliable scientific evidence to support their effectiveness.

In terms of the forms of herbal medicines the subjects purchased, most of them were in capsules and tablets, followed by tonic, powder, balms or creams, respectively. This is because the medicines in the form of capsules and tablets are easy to consume and carry. Furthermore, no smell and undesirable taste would bother the consumers. This findings were in line with those of Rungrawee (1999), which found that ready-to- consume herbal medicines in the form of capsule were the most popular form among consumers in Lampang Province.

The subjects who purchased single-item herbal medicines and those who purchased composite herbal medicines were significantly different ($p < 0.05$) according to their levels of education and income, but there were no significant differences ($p > 0.05$) among them according to their sex and age. In terms of the level of education, the subjects with higher levels of education tended to purchase single-item herbal medicines rather than composite herbal medicines. The possible explanation was that they had more knowledge about and more scientific information of single-item herbal medicines. The subjects with lower levels of education tended to believe more in composite herbal medicines because of word of mouth. In terms of income, the subjects with high income would make a purchase of single-item herbal medicines which are more expensive while the subjects with low income would make a purchase of composite herbal medicines which are less expensive.

Decision making process in purchasing herbal medicine

In terms of awareness of the problem, the main reason for purchasing herbal medicines was to cure their own illness. The other reasons for the purchase were to prevent or enhance their own health and to give to other people to use. That is, when the subjects were sick, they would try to cure their own illness by resorting to herbal medicine, a drug-using behavior commonly found

among the Thai people. Besides preventing an/or enhancing their health, the subjects chose to purchase herbal medicines because they were less harmful and had fewer side effects. However, a study by Rungrawee (1999) revealed that the main reason for purchasing ready-to-consume herbal medicines was to nourish and enhance their health rather than to cure their illness.

The majority of the subjects were of the opinion that it was necessary to know the details of the herbal medicine before making the purchase. The sources most popularly used were pharmacists, physicians, and nurses because the subjects believed that the pharmacists, physicians, and nurses were the people who were knowledgeable about medicines. Pharmacists were perceived as experts on modern medicines and herbal medicines, particularly single-item herbal medicine, and who possessed reliable scientific data about the herbal drugs. Pharmacists, physicians, and nurses were willing to answer their inquiries.

Most of the subjects were of the opinion that it was necessary to read the labels first before making a purchase because they thought the herbal medicine they purchased might not have the indications they needed, rather than that the herbal medicines might be harmful and that they may use the wrong herbal medicines since the labels were the sources of important information about the drugs such as the name of the drugs, the ingredients, method of use, or indication, manufacturing date/expiration date, names of the manufacturers, and so on. If they read the labels first before making the purchase, they would also know whether the drugs were legal and reliable or not, etc.

The majority of the subjects read the labels before making the purchase because the labels contained necessary information for making a decision to purchase. Furthermore, it might be that the subjects were influenced by the Read the Label Campaign sponsored by the Office of Thai Food and Drug Administration.

In reading the labels, most of the subjects read the indications first to make sure that the medicines had the indications they needed, followed by reading the manufacturing date/expiration date, method of use, prices, and names of the manufacturers.

There were significant differences ($p = 0.048$) in the label-reading behaviors of the subjects based on their levels of education. However, there were no significant differences in the label-reading behaviors of the subjects based on their sexes, ages occupations, and incomes ($p = 0.05$). This means that people with different levels of education had different label-reading behaviors. The subjects with high levels of education read

labels more than those with lower levels of education because they needed complete and accurate information for use in their making decision to purchase the herbal medicines that were of high quality and were safe in the use of the medicines.

The reasons most of the subjects used in making a decision to purchase herbal medicine were the products themselves, followed by recommendations by others, advertising, the need to support herbal products, and ease of purchase. These findings were similar to those found by Rungrawee (1999), who revealed that the factors affecting the decision of the consumers to make a purchase were mainly the products themselves, followed by prices, marketing campaigns (advertising), and locations (ease of purchase).

The subjects who purchased the products themselves gave the following as the main reasons for the purchase: the products had complete labels and that they were legal. The other reasons were that the products had good indications, that they used to consume the products and they proved effective, that they were safe, that they were less harmful or had fewer side effects, that the prices were reasonable, that the forms and containers were convenient to consume and carry. They believed that the products with complete labels indicated that the herbal medicines had been given permission to manufacture and distribute legally, and that they would be safe to use.

The use of herbal medicines

From the list of the first five herbal medicines the subjects used the most, it is clearly seen that they included both composite herbal medicines and single-item herbal medicines. The subjects used the herbal medicines to cure minor illnesses such as sore throats, fevers, coughs, indigestion, gassy stomachs, blood enrichment, aphthous ulcer, fainting, vertigo, etc. These findings corresponded to those found by Rapeepan (1997), which revealed that the herbal drugs sold in drugstores included both single-item and composite or mixed herbal medicines. This means that herbal medicines that were used in the past are still popularly used today while the trends of using single-item herbal medicines or medicines derived and further developed from medicinal plants are gaining popularity among the consumers because they have reliable scientific data, and because they have been promoted by the government agencies to encourage the people to mostly use single-item herbal medicines.

In terms of promotion of herbal drugs

consumption, the subjects were of the opinion that the manufacturers, drugstores, and the Office of Thai Food and Drug Administration should take actions to promote consumption of herbal medicines.

The manufacturer should take the following actions: have good quality and standard herbal drugs with reason prices, advertise the drugs which have effectiveness in curative treatment, improve and develop the quality of the drugs, the product design and packaging. Furthermore, they should identify the indications, harms and, clear directions of use.

The drugstores should take the following actions: recommend the indications of the drugs derived from medicinal plants, sell only high quality products, do not concentrate too much on making profits and make available a variety of products for consumers to choose.

The Office of Thai Food and Drug Administration should guarantee the quality of and inspect the herbal drug products and monitor the production of herbal drugs in order to ensure that the drugs meet the quality and standards, as well as control the prices. Moreover, it should launch publicity campaigns of herbal medicines that are effective and safe, promote and support more consumption of herbal drugs and adopt a more lenient approach for herbal drug registration.

It is clearly seen that promotion of herbal medicines consumption needs strong cooperation from both government sector (The Office of Thai Food and Drug Administration- FDA) and the private sectors (drugstores and drug manufacturers). In terms of manufacturing of the products, the drugs must be of high quality, standardized, effective and safe in consumption. In marketing promotion, there should be public campaigns and advertising for the general public to learn about the medicines. The prices must be reasonable, and the establishments for manufacturing the drugs must be approved by the Office of the Thai Food and Drug Administration, Ministry of Public Health. The drug products must be distributed and sold in legally approved establishments.

Attitudes towards the herbal drugs consumption

In terms of economic aspect, about 57.82% of the subjects had positive attitude towards herbal medicine. They thought that herbal medicines were less expensive than modern medicines because herbal medicines used domestic raw materials in production, and they helped save the money for the country. Moreover, consumption of herbal medicines also promotes the economy of the country. However, a minority of subjects thought that consumption of herbal medicines

was a waste of money since some single-item herbal medicines were highly costly.

In terms of social aspect, 42.21% of the subjects had positive attitudes toward herbal medicine consumption. They contended that herbal medicines were accepted by the family members, and the experiences of consuming the medicines had been passed down from generation to generation. They also suggested that government agencies should promote herbal medicine either for curative purposes or for health care promotion. This corresponded to the purpose of purchasing herbal medicines of the majority of the subjects.

In terms of the quality of the drugs, 44.92% of the subjects had positive attitudes toward herbal medicines. They believed that when the herbal medicines have been approved by the Office of the Thai Food and Drug Administration and registered as herbal drugs, they had high quality and standards. When the herbal medicines were used and they proved effective, the subjects were satisfied with the drugs. However, about 44.25% of the subjects were not certain about the quality of the herbal medicines manufactured in each batch, though the manufacturers have been certified and awarded with Good Manufacturing Practice (GMP) standards.

In terms of the effectiveness of the drugs, 47.72% of the subjects were not certain about the effectiveness of the herbal medicines since most of the subjects had high levels of education and they believed in scientific data more than information from experience. In fact, herbal medicines are appropriate in curing minor illnesses such as colds and sore throats. This fact corresponded to the list of herbal medicines the subjects consumed widely such as Fah Ta-lai Jone (*Andrographis paniculata*) capsules, Ya Satree Pen Park and Ya Kom Tra Bai Hoh.

On the whole, the majority of the subjects (43.62%) had positive attitudes toward herbal medicines while 22.46% had negative attitudes toward herbal medicines. From this study, it can be seen that most of the subjects had positive attitudes more than negative attitudes towards herbal medicines, and the attitudes might have had an effect on their purchasing behaviors as well.

CONCLUSIONS

From the study, the findings revealed that most of the herbal medicine consumers in Bangkok were females aged between 30-49 years old. They were bachelor's degree holders, working as government officials and state enterprise employees, and having an average income of 5,001-20,000 baht per month. The majority of the subjects made the purchase of herbal medicines

by specifying the name of the drugs, made the purchase once in a while, and preferred to purchase composite or mixed herbal drugs rather than single-item herbal drugs. In terms of the purpose of the purchase, the subjects purchased the herbal medicines mostly to cure their own illness. Before making the purchase, the subjects tended to search for necessary information about the herbal medicines. The most popular information sources were from physicians, pharmacists and nurses. The subjects also thought it was necessary to read the drug labels before making the purchase. The information on the labels which considered most important by the subjects were the indications, manufacturing date and expiration date. The factors affecting the decision to make a purchase of the herbal medicines were the products with complete labels, legally registered, and have good indications. The subjects had positive attitudes towards herbal medicines, but were uncertain about their effectiveness and quality. They also thought that the drug manufacturers, drugstores, and the Office of the Thai Food and Drug Administration should work collaboratively to improve and obtain herbal medicines that are safe, of high quality, and with reasonable prices for the consumers.

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