

**INTENTION TO BUY OTOP FOOD PRODUCTS AMONG
CONSUMERS IN NONTHABURI PROVINCE**



**A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF PRIMARY HEALTH CARE MANAGEMENT
FACULTY OF GRADUATE STUDIES
MAHIDOL UNIVERSITY**

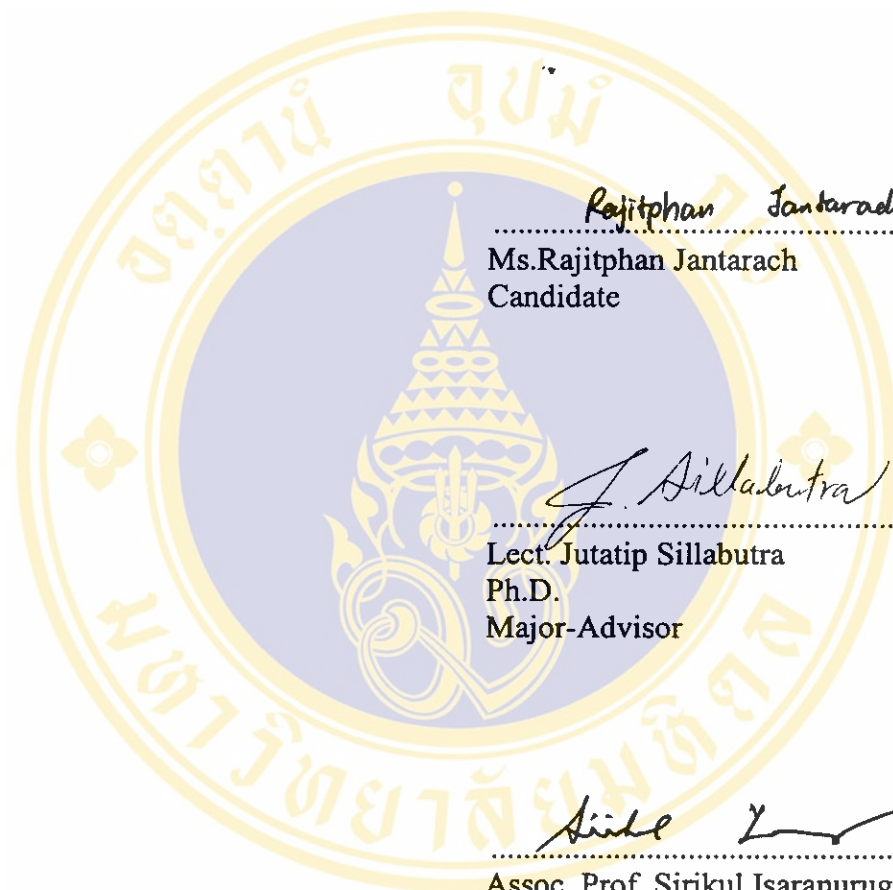
2007

COPYRIGHT OF MAHIDOL UNIVERSITY

Copyright by Mahidol University

Thesis
entitled

**INTENTION TO BUY OTOP FOOD PRODUCTS AMONG CONSUMERS
IN NONTHABURI PROVINCE**



Rajitphan Jantarach

Ms.Rajitphan Jantarach
Candidate

J. Sillabutra

Lect. Jutatip Sillabutra
Ph.D.
Major-Advisor

Sirikul Isaranurug

Assoc. Prof. Sirikul Isaranurug
M.D., Dip. Thai Board of Pediatrics
Co-Advisor

M.R. Jisnuson Svasti

Prof. M.R. Jisnuson Svasti
Ph.D.
Dean
Faculty of Graduate Studies

Sirikul Isaranurug

Assoc. Prof. Sirikul Isaranurug
M.D., Dip. Thai Board of Pediatrics
Chair
Master of Primary Health Care Management
ASEAN Institute for Health Development

Thesis
entitled

**INTENTION TO BUY OTOP FOOD PRODUCTS AMONG CONSUMERS
IN NONTHABURI PROVINCE**

was submitted to the Faculty of Graduate Studies, Mahidol University
for the degree of Master of Primary Health Care Management

on
March 14, 2007

Rajitphan Jantarach

Ms. Rajitphan Jantarach
Candidate

Yupin Lawanprasert

Lect. Yupin Lawanprasert
Dr. P.H.
Chair

Sirikul Isaranurug

Assoc. Prof. Sirikul Isaranurug
M.D., Dip. Thai Board of Pediatrics
Member

Jutatip Sillabutra

Lect. Jutatip Sillabutra
Ph.D.
Member

M.R. Jisnuson Svasti

Prof. M.R. Jisnuson Svasti
Ph.D.
Dean
Faculty of Graduate Studies
Mahidol University

Sirikul Isaranurug

Assoc. Prof. Sirikul Isaranurug
M.D., Dip. Thai Board of Pediatrics
Director
ASEAN Institute for Health Development
Mahidol University

ACKNOWLEDGEMENTS

I would like to acknowledge and extend my heartfelt gratitude to the following persons who have made the completion of this thesis possible.

I am deeply indebted to Lect. Jutatip Sillabutra, my major advisor, for her kind support, guidance and encouragement not only during completing this thesis but also during studying in this course.

I would like to express my thanks to Assoc. Prof. Sirikul Isaranurug, my co-major advisor for her comments and advice, without whose guidance it would be impossible for me to come up with this thesis.

I also would like to express my thanks to Lect. Yupin Lawanprasert, my external examiner, for her invaluable comments during defense my thesis.

I would like to express my special thanks to Ms. Sirilak, Mr. Lerpong, MPHM staff and other staff members of AIHD for their help during my study.

I am also very grateful to the manager of three hypermarkets in Nonthaburi Province and the respondents for their cooperation in this study for the data collection.

My family has been so supportive. My father, mother, sister and brother in law have encouraged and helped me in numerous ways. Particularly I am very much thankful to my sister for all of her kindness and support. I sincerely thank you all.

I deeply appreciate the support and continuous encouragement of my dearest friend, Dr. Amin and Dr. Trinh Anh. Their support and kindness will be in my memory for ever.

Rajitphan Jantarach

INTENTION TO BUY OTOP FOOD PRODUCTS AMONG CONSUMERS IN
NONTHABURI PROVINCE

RAJITPHAN JANTARACH 4937999 ADPM/M

M.P.H.M. (PRIMARY HEALTH CARE MANAGEMENT)

THESIS ADVISORS: JUTATIP SILLABUTRA, Ph.D., SIRIKUL ISARANURUG,
M.D., Dip. Thai Board of Pediatrics

ABSTRACT

A cross-sectional study was conducted in three hypermarkets in Nonthaburi Province to determine the intention of consumers to buy OTOP food products. Data was collected using self-administrated questionnaire from 264 respondents whose ages were between 18 and 60 years and who came to hypermarkets during 21st January to 31st January 2007. Chi-square and Fisher's Exact Test were used to analyze factors associated with the intention to buy OTOP food products.

The results indicated that 93.94% of the respondents had intended to buy OTOP food products for themselves and for others. The majority of the respondents was 21-30 years old, female, business employees/laborers and held bachelor's degree. Most of the respondents had a high level of knowledge about OTOP food products (70.83%), and a positive attitude towards OTOP food products (59.47%). OTOP food products were difficult to access (70.45%), and selling places for OTOP food products were not available (58.33%). Most of the respondents had a high social support towards OTOP food products (67.05%). More than 80% of the respondents had received information about OTOP food products, and had consumed OTOP food products. The significant factors associated with the intention to buy OTOP food products were knowledge of OTOP food products, attitude towards OTOP food products, availability of selling places for OTOP food products and social support towards OTOP food products at p-value < 0.05.

This study reveals that consumers who had access to selling places for OTOP food products had an intention to buy OTOP food products. Therefore, more selling places for OTOP food products should be constructed. Thai images of OTOP food products should also be created and provide more information about OTOP food products through various media especially by word of mouth.

KEY WORDS: INTENTION/ OTOP FOOD PRODUCTS/ CONSUMERS

83 P

CONTENTS

	Page
ACKNOWLEDGEMENTS	iii
ABSTRACT	iv
LIST OF TABLES	vii
LIST OF FIGURES	x
CHAPTER	
1 INTRODUCTION	
1.1 Rationale and justification	1
1.2 Research questions	3
1.3 Research objectives	3
1.4 Conceptual framework	4
1.5 Operational definition	5
1.6 Limitation of the study	8
2 LITERATURE REVIEW	
2.1 One Tambon One Product (OTOP)	9
2.2 The PRECEDE-PROCEED model	13
2.3 Literatures review	21
3 RESEARCH METHODOLOGY	
3.1 Research design	25
3.2 Study population	25
3.3 Sample size and sampling technique	25
3.4 Research instruments for data collection	26
3.5 Data collection procedure	30
3.6 Data analysis procedure and statistics used	30

CONTENTS (Cont.)

		Page
4	RESULTS	
	Results.....	31
5	DISCUSSION	
	Discussion.....	51
6	CONCLUSION AND RECOMMENDATION	
	6.1 Conclusion.....	59
	6.2 Recommendation.....	62
	REFERENCES.....	64
	APPENDIX.....	69
	BIOGRAPHY.....	83

LIST OF TABLES

TABLE	Page
1 The number of OTOP products that got OTOP product champion certification at nation level in 2003 and 2004.....	12
2 Number and percentage of the respondents classified by items related to intention to buy OTOP food products.....	32
3 Number and percentage of the respondents classified by intention to buy OTOP food products.....	33
4 Number and percentage of the respondents classified by socio-demographic characteristics.....	34
5 Number and percentage of the respondents classified by level of knowledge about OTOP food products.....	35
6 Number and percentage of the respondents classified by level of attitude toward OTOP food products.....	36
7 Number and percentage of the respondents classified by items related to accessibility of OTOP food products.....	37
8 Number and percentage of the respondents classified by level of accessibility.....	37
9 Number and percentage of the respondents classified by items related to availability of selling place of OTOP food products.....	38
10 Number and percentage of the respondents classified by level of availability of selling place of OTOP food products.....	39
11 Number and percentage of the respondents classified by items related to social support.....	40
12 Number and percentage of the respondents classified by level of social support....	41
13 Number and percentage of the respondents classified by items related to information about OTOP food products.....	42
14 Number and percentage of the respondents classified by level of information about OTOP food products.....	43

LIST OF TABLES (Cont.)

TABLE	Page
15 Number and percentage of the respondents classified by level of experience in consume OTOP food products.....	43
16 Relationship between socio-demographic characteristics and the intention to buy OTOP food products.....	45
17 Relationship between knowledge about OTOP food products and the intention to buy OTOP food products.....	46
18 Relationship between attitude toward OTOP food products and the intention to buy OTOP food products.....	46
19 Relationship between accessibility of OTOP food products and the intention to buy OTOP food products.....	47
20 Relationship between availability of selling place of OTOP food products and the intention to buy OTOP food products.....	48
21 Relationship between social support and the intention to buy OTOP food products.....	48
22 Relationship between information about OTOP food products and the intention to buy OTOP food products.....	49
23 Relationship between experience in consumes OTOP food products and the intention to buy OTOP food products.....	50
24 Number and percentage of the respondents classified by items related to knowledge about OTOP food products.....	70
25 Number and percentage of the respondents classified by items related to attitude toward OTOP food products.....	71
26 Number and percentage of non-intender and intender to buy OTOP food products classified by accessibility of OTOP food products.....	72
27 Number and percentage of non-intender and intender to buy OTOP food products classified by information about OTOP food products	72

LIST OF TABLES (Cont.)

TABLE	Page
28 Number and percentage of non-intender and intender to buy OTOP food products classified by types of information about OTOP food products that the respondents received.....	73
29 Number and percentage of cross tabulation between knowledge about OTOP food products and attitude towards OTOP food products.....	74
30 Number and percentage of cross tabulation between knowledge about OTOP food products and experience in consuming OTOP food products.....	75
31 Number and percentage of cross tabulation between attitude towards OTOP food products and experience in consuming OTOP food products.....	75
32 Relationship between independent variables and the intention to buy OTOP food products separate by male.....	76
33 Relationship between independent variables and the intention to buy OTOP food products separate by female.....	77

LIST OF FIGURES

FIGURE	Page
1 Conceptual Framework.....	4
2 Logo of One Tambon One Product.....	12
3 The PRECEDE-PROCEED model.....	14
4 The Behavioral Matrix.....	16
5 Causal relationship links among the components of Theory of Reasoned Action.....	19
6 Elaboration Likelihood Model of persuasion.....	20

CHAPTER 1

INTRODUCTION

1.1 Rational and justification

One objective of the 9th National Economic and Social Development Plan is to alleviate poverty as well as increase potential and opportunities of the Thai people to become self-reliant. Thai government has laid a firm foundation for sustained and balanced economic growth by focusing on the supply side of the economic stimulation equation in order to enhance the competitiveness of the real sectors and stimulate the demand side through poverty reduction, job creation and income creation at the grassroots level know as “One Tambon One Product Project” or “OTOP” project (1). The OTOP products are officially classified into five categories as foods, drinks, garments and clothing, utensils/ornaments/souvenirs, and herbal products (2).

Thai government has taken the OTOP policy seriously and generated a number of tangible plans, for instance, the establishment of special agencies for assistance in product development to meet quality standards and marketing requirements (3). The government committee to oversee this project is called “The National OTOP Administrative Committee” which consists of representatives from Office of the Prime Minister, Ministry of Interior, Ministry of Commerce, Ministry of Agriculture and Cooperatives, Ministry of Industry, and Ministry of Public Health. They setup five sub-committees. These sub-committees handle administration, production, marketing, standards and quality development, and provincial OTOP administration (4). The government also promoted OTOP products by doing “OTOP product champion contest” to find out the OTOP products that have high potential to compete in international markets. From the contest in 2003, 6,737 OTOP products got OTOP products champion. Among OTOP products champion, 2,955 OTOP products were health products and 1,901 OTOP products (28.23%) were food products (5).

The Ministry of Public Health and the private health sector participate in this project by encouraging the village people to produce health products such as preserved foods, herbal products, and Thai traditional medicine and massage (1). Food and Drug Administration (FDA), Ministry of Public Health has joined in the standard and quality development sub-committee to oversee health products surveillance, train OTOP producers in Good Hygiene Practice (GHP)/ Good Manufacturing Practice (GMP) and to setup community health product learning centers. FDA implemented GMP training, surveyed the safety of health OTOP products and lifted up twelve health OTOP producers to be the community health product learning centers in 2003 (6). At present, FDA has approved seventy-nine community health product learning centers in the whole of country.

Food is a critical contributor to physical well being and a major source of pleasure, worry and stress. Consumption of unsafe food will cause food borne illness. Most cases of food borne illness are preventable if food protection principles are followed from production to consumption. Consumers are faced with a wide range of competitively priced food products of consistently high quality. Each food item must be safe, aesthetically pleasing, good tasting, and consistent with the product image. Variations within the same batch or between batches of a product must be kept to a minimum since consumers interpret them an indication of production faults. As a result, quality control is essential in the food industry. Food Act of 1979 forced food producers or importers who produce or import processed food to obtain an FDA seal showing that these foods are safe before distribution to the consumers (7). FDA also encourages consumers to read the food label and look for an FDA mark before buying processed food. Most consumers know FDA mark and are confident in food products that are FDA approved (8). Instant or prepared OTOP food products are also under the Food Act of 1979, so FDA mark is compulsory for these products

Food products were the most used OTOP products (9). The intention of buying OTOP food products and factors related to OTOP consumer choices can be useful to formation when planning effective education programs for buying OTOP food products.

1.2 Research questions

1. What is the intention to buy OTOP food products among consumers in Nonthaburi province?
2. What are the factors related to intention to buy OTOP food products among consumers in Nonthaburi province?

1.3 Research objectives

1.3.1 General objective

To determine the intention to buy OTOP food products and factors related to intention to buy OTOP food products among consumers in Nonthaburi province.

1.3.2 Specific objectives

- 1.3.2.1 To describe the intention to buy OTOP food products of consumers.
- 1.3.2.2 To describe predisposing factors, enabling factors and reinforcing factors of consumers.
- 1.3.2.3 To determine relationship between the intention to buy OTOP food products and the following factors:
 - Predisposing factors of consumers.
 - Enabling factors of consumers.
 - Reinforcing factors of consumers.

1.4 Conceptual framework

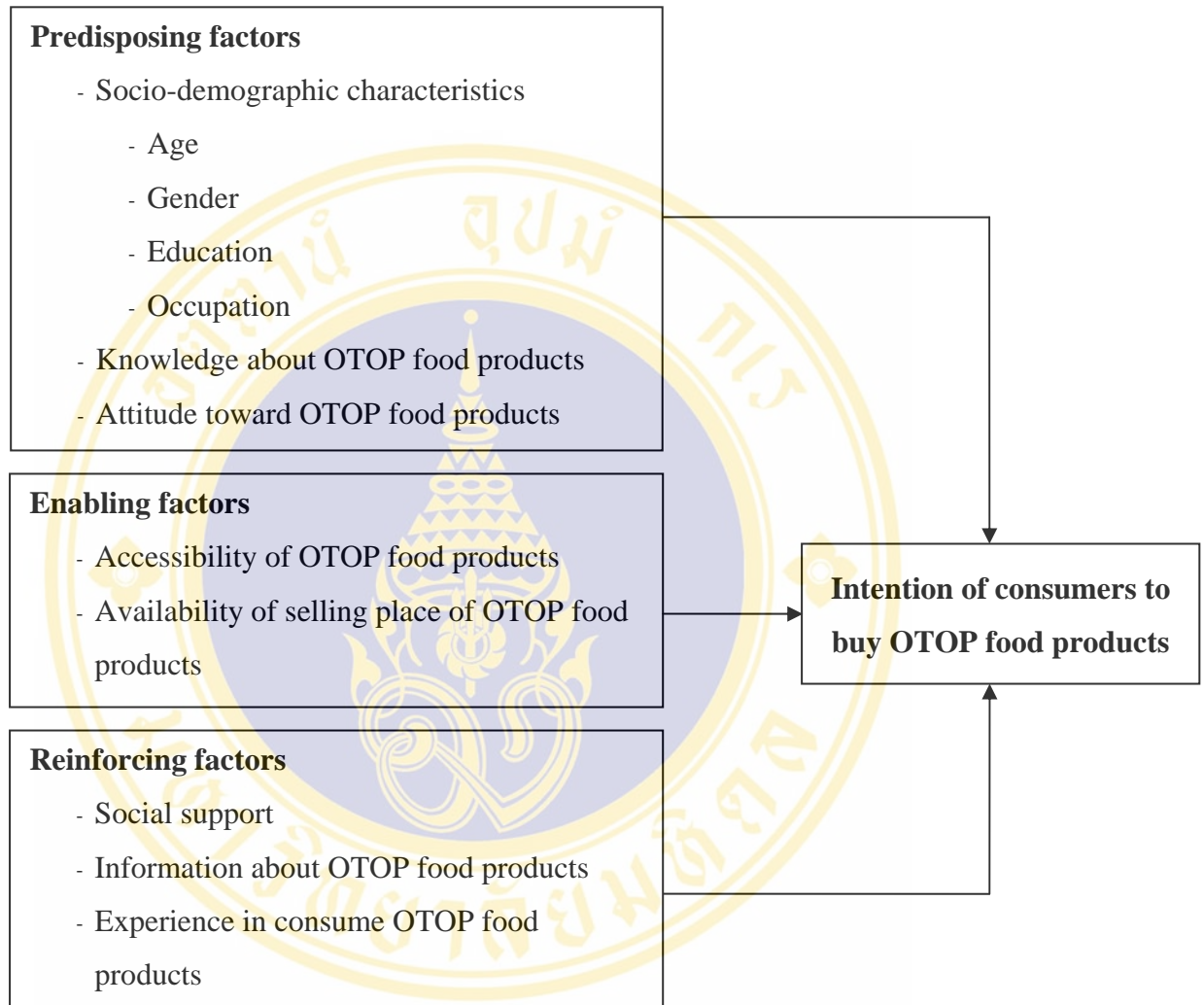


Figure 1 Conceptual framework of intention to buy OTOP food products among consumers in Nonthaburi province by adopted the PRECEDE-PROCEED model.

1.5 Operational definition

1.5.1 Intention to buy referred to the intention of consumers to buy OTOP processed food products. It was measured by 2 questions which one point given for YES answer and zero point for NO answer. It was categorized into two categories:

- **Intender** referred to total scores which were equal to two points.
- **Non-intender** refers to total scores which were less than two points.

1.5.2 Age referred to age of consumers in years at the time of interview. It was categorized to ≤ 20 years old, 21-30 years old, 31-40 years old, 41-50 years old, and 51-60 years old.

1.5.3 Gender referred to sex of consumers; male or female.

1.5.4 Education referred level of education that consumers have attained. It was categorized as primary school, secondary school, high school, diploma's degree, bachelor's degree and more than bachelor's degree.

1.5.5 Occupation referred to the current occupation of the consumer. It was categorized as jobless, government officer, business employee/labor, and business owner.

1.5.6 OTOP food products referred to processed foods; instant food or prepared food that had been registered as "OTOP" by the Department of Industrial Promotion, Ministry of Industry.

- **Instant food** referred to food that could be eaten immediately without being cooked and these kinds of food needed to have FDA mark such as crisp rice sheets, durian fried, dried banana, and chili paste.

- **Prepared food** referred to food that had to be cooked before eating and these kinds of food needed to have FDA mark such as preserved minced pork/chicken, and preserved fermented pork.

1.5.7 Knowledge about OTOP food products referred to consumer's general understanding of OTOP food products. It was measured by 10 questions with one point given for correct answer and zero point for wrong answer. The level of knowledge was categorized into three levels as follow:

- **High level** referred to total score which was more than or equal to mean.
- **Low level** referred to total score which was less than mean.

1.5.8 Attitude toward OTOP food products referred to the opinion, thinking and feeling of consumers toward OTOP food products in terms of quality, package and price. It was measured this by 10 questions which consist of positive and negative statements. For positive statements, a score of five indicated strongly agree, four for agree, three for undecided, two for disagree and one for strongly disagree. Negative statements were vice versa. It was categorized into two categories according to the mean of attitude:

- **Positive attitude** referred to total score which was more than or equal to mean.
- **Negative attitude** referred to total score which was less than mean.

1.5.9 Accessibility of OTOP food products referred to consumers' afford and accessibility to OTOP food products in terms of their price and distribution place. It was categorized into two categories: **Easy to access** referred to price of OTOP food products which were cheaper or the same as general food products, OTOP food products were ease to buy, and distribution place of OTOP food products were not far from their community or work place/education place, and the rest is **Difficult to access**.

1.5.10 Availability of selling place of OTOP food products referred to available of selling place of OTOP food products in their community and work place/education place. It was measured by 4 yes-no questions that one points was given for YES answer and zero point was given for NO answer. It was categorized into two categories:

- **Available** referred to total score which was more than or equal to mean.
- **Non-available** referred to total scores which was less than mean.

1.5.11 Social support referred to varieties of support regarding to buy OTOP food products which consumer got such as family support and peer support. It was measured by 6 yes-no questions that one points was given for YES answer and zero point was given for NO answer. This variable was categorized into two categories:

- **High social support** referred to total score which was more than or equal to mean.
- **Low social support** referred to total score which was less than mean.

1.5.12 Information about OTOP food products referred to sources of information that consumers received about OTOP food products such as television, radio, newspaper, magazines, billboards, leaflets, word of mouth, Internet, and others. It was measured by 2 questions and was categorized into three categories:

- **Exposed** referred to consumers who had received information about OTOP food products and will divide into 2 levels as:
 - **High-exposed** referred to consumer who had received information about OTOP food products through various media more than or equal to mean of total received media sources.
 - **Low-exposed** referred to consumers who had received information about OTOP food products through various media less than mean of total received media sources.

- **Non-exposed** referred to consumer who had never received information about OTOP food products.

1.5.13 Experience in consume OTOP food products referred to consumers who had consumed OTOP food products. It was categorized into two categories: Experienced referred to consumers who had consumed OTOP food products, and No-experience referred to consumers who had never consumed OTOP food products.

1.5.14 Hypermarket referred to a superstore which combined a supermarket and a department store. It was a gigantic retail facility which carried an enormous range of products under one roof, including full lines of groceries and general merchandise. It focused on high-volume and low-margin scale.

1.5 Limitation of the study

The sampling technique in this study was purposively sampling, so sampling error could not be estimated.

CHAPTER 2

LITERATURE REVIEW

2.1 One Tambon One Product (OTOP)

In 1997, Thailand faced the economic crisis in both agricultural and industrial sectors. In 2002, poverty dropped below the pre-crisis level. The latest survey for 2002 shows that Thailand's incidence of poverty fell to 9.8 percent of the population using the official poverty line (10). The government has laid a firm foundation for sustained and balanced economic growth, by first, focusing on the supply side of economic stimulation equation in order to enhance the competitiveness of the real sectors, and second, stimulating the demand side through poverty reduction, job creation and income creation at the grassroots level know as "One Tambon One Product" or "OTOP" project (1).

The One Tambon One Product was inspired from the One Village One Product (OVOP), originally started in Oita Prefecture in Japan. It improves upon/refines the locally available resources and produce goods that are acceptable internationally. The Thai government has been promoting local industry through the manufacturing of attractive specialty products based on the abundant native culture, tradition and nature. This campaign is called, One Tambon One Product (OTOP) in Thailand because the target area is the administrative unit called Tambon (11).

The One Tambon One Product is handling by "The National OTOP Administrative committee" which consists of governors from Office of the Prime Minister, Ministry of Interior, Ministry of Commerce, Ministry of Agriculture and Cooperatives, Ministry of Industry, Ministry of Public Health, and etc (4). This committee had set a core of the OTOP policy implementation as the following:

1. **Local yet Global** means to promote local products to global markets by producing goods and services from their own local wisdom and culture, in order to be accepted in the international level.
2. **Self-Reliance and Creativity** means the trial to help villagers to be on self-reliance by using their creative thinking and community potential to make their dream come true by OTOP process. To be self-reliance, it is necessary that the process also strive to enhance the quality of the products to meet the international standard in order to facilitate greater access to the global market.
3. **Human Resource Development** encourages employees to face the difficulty in a challenging way with a creative spirit.

Thai government has taken the OTOP policy seriously and generated a number of tangible plans, for instance, the establishment of special agencies for assistance in product development to meet quality standards and marketing requirements; arrangement of financial sources; business advisories; market promotion and promotional websites such as www.Thaitambon.com. OTOP, while implemented with Thai government help, was conceived by many at rural, non-governmental levels and carried to the Thai government which had the wisdom and foresight to recognize its values, applicability and cohesive capacity. OTOP has been well-received by virtually every citizen in every tambon. In fact, local products from communities under the OTOP policy do not only just mean the product itself but also include the thinking process, services, natural and environmental conservation, the way of living, tourism, folk-wisdom, culture and tradition and all things regarding the valuable resources of that community (3).

In 2002, the National OTOP Administrative committee set up 9 sub-committees to support their work. After one year they reduced it to 5 sub-committees for administration, production, marketing, standards and quality development and provincial OTOP administration. The tactics of standard and quality development rewards the OTOP product champion. They set up a framework for selecting OTOP product champions at the provincial level, regional level and national level that are

exportable, have brand equity, continuous production and quality consistence, standardization and satisfaction, and a story of product (4). OTOP product champion is classified by general criteria and specific criteria that are product and community strengthening criteria, marketing criteria and standard criteria. Then they could be categorized into five levels according to their scores that (2);

- | | |
|----------------------|--|
| 5 stars ☆☆☆☆☆ | (90 or above) product has high quality and is exportable. |
| 4 stars ☆☆☆☆ | (80-89) product can be acceptable at nation level and will be develop to be exportable. |
| 3 stars ☆☆☆ | (70-79) product can develop to be 4 stars. |
| 2 stars ☆☆ | (50-69) product can develop to be 3 stars and will evaluate consistency. |
| 1 star ☆ | (less than 50) product can not develop to be 2 stars since it has a lot of weak point and hard to develop. |

OTOP products could be categorized into five categories as following (2);

1. **Foods** are fresh products from agriculture and processed foods which are achieved FDA mark, GAP, GMP, HACCP, Q mark, community product standard or Halal, and are packed for distribution. They consist of
 - a. **Fresh products from agriculture** such as fresh vegetables, fresh fruits and etc.
 - b. **Raw material and processed from fresh products** such as rice, fresh meat and fresh fishery.
 - c. **Instant and prepared foods** such as durian fried and preserved meat.
2. **Drinks** are alcoholic beverages and non-alcoholic beverages such as fruit juices, herbal juices, ginger instant drink, tea from mulberry leaf, Chinese tea and etc.
3. **Garments and clothing** are woven and knit textiles made from natural fiber or synthetic fiber, clothes product and body ornament from various materials.
4. **Utensils/Ornaments/Souvenirs** are home decorations, utensils, furniture, decorations, gifts as well as invention through community knowledge,

community life style and local culture. They are divided into seven categories; wood, basketry and wicker ware, artificial flowers, metal, ceramic/pottery, home textile and others.

5. **Herbal products** are made from herbs or have herb as an ingredient such as herbal medicine, herbal cosmetic, herbal insecticide and herbal agriculture products.

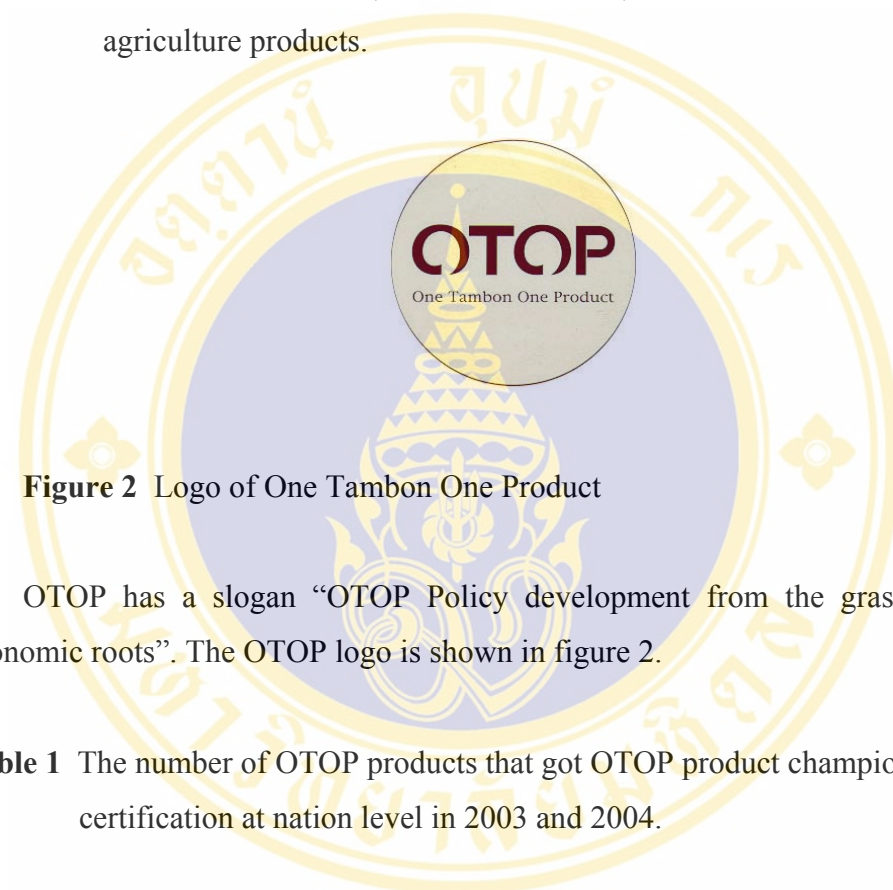


Figure 2 Logo of One Tambon One Product

OTOP has a slogan “OTOP Policy development from the grassroots to the economic roots”. The OTOP logo is shown in figure 2.

Table 1 The number of OTOP products that got OTOP product champion certification at nation level in 2003 and 2004.

Stars	Number of OTOP products	
	2003	2004
5 stars	576	572
4 stars	2,496	2,267
3 stars	3,665	5,106
Total	6,737	7,945

The standards and quality development sub-committee held an “OTOP product champion contest” in 2003 and 2004 to find out OTOP products that have high potential to compete in international market. The figure of OTOP products is received OTOP product champion certification at nation level that shows in table 1 (1, 12).

In November 2006, the military-installed government has renamed One Tambon One Product or OTOP because some villages have the potential to produce more than one product. It will be replaced with “Local and Community Products”, even though the OTOP brand will be maintained. The reconfigured OTOP will divide local products into two categories. One deals with products that are not made in simply one tambon but in many different communities. The other will be called “local products” which describes products made by a single producer in a locality. The OTOP product rating system which split goods into five star levels was also under review. The new OTOP policy as stated by this government did not differ from the existing programme which also focused on production and marketing to promote the village goods (13).

2.2 The PRECEDE-PROCEED model

The PRECEDE-PROCEED model provides a comprehensive structure for assessing health and quality of life needs and for designing, implementing, and evaluating health promotion and other public health programs to meet those needs. **PRECEDE** (Predisposing, Reinforcing, and Enabling Constructs in Educational Diagnosis and Evaluation) outlines a diagnostic planning process to assist in the development of targeted and focused public health programs. **PROCEED** (Policy, Regulatory, and Organizational Constructs in Educational and Environmental Development) guides the implementation and evaluation of the programs designed using PRECEDE.

In actual practice, PRECEDE and PROCEED function in a continuous cycle. Information gathered in PRECEDE guides the development of program goals and objectives in the implementation Stage of PROCEED. This same information also provides the criteria against which the success of the program is measured in the evaluation Stage of PROCEED. In turn, the data gathered in the implementation and evaluation Stages of PROCEED clarify the relationships examined in PRECEDE between the health or quality-of-life outcomes, the behaviors and environments that influence them, and the factors that lead to the desired behavioral and environmental changes (14).

PRECEDE consists of five stages illustrated in figure 3 below (15).

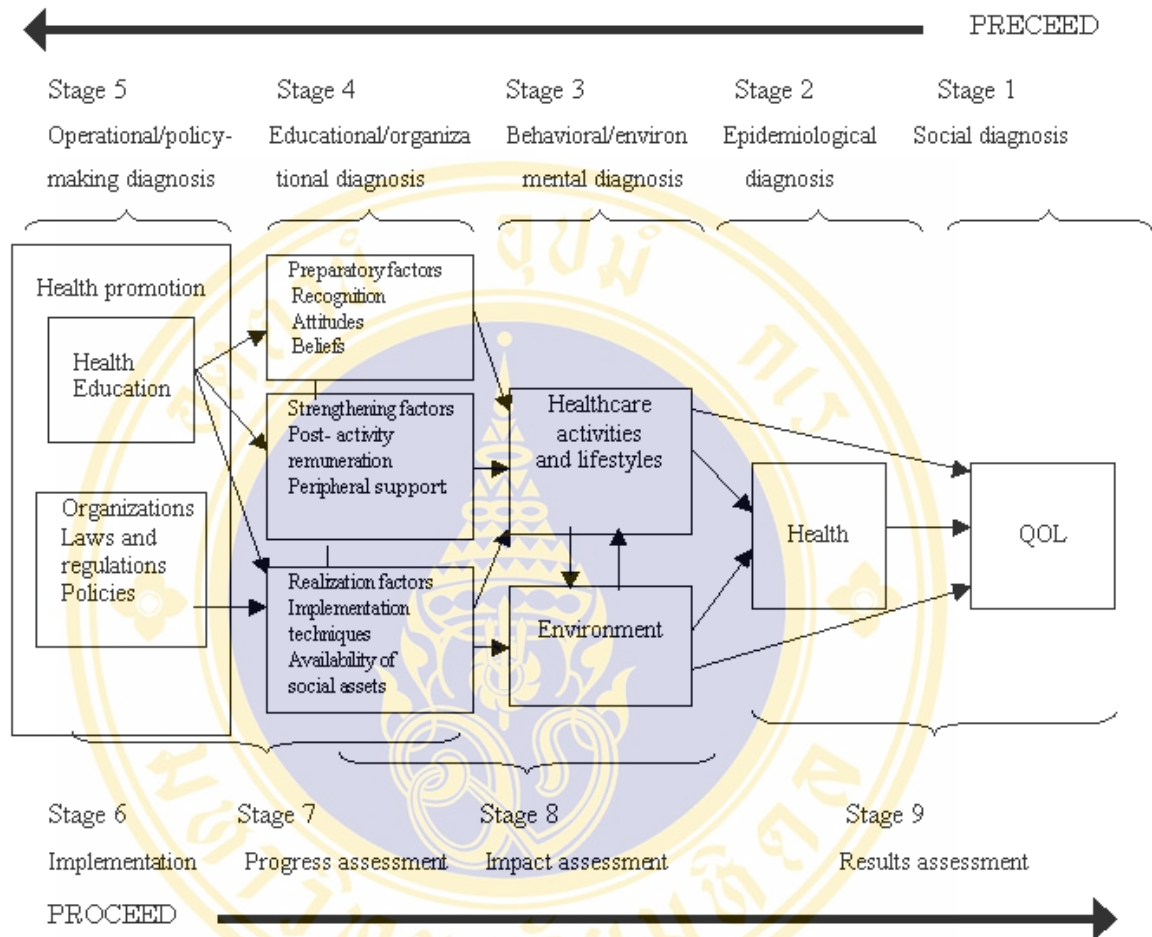


Figure 3 The PRECEDE-PROCEED model.

Stage 1-Social Diagnosis.

The focus of this stage is to identify and evaluate the social problems which impact the quality of life of a target population. This requires program planners to gain an understanding of the social problems which affects the quality of life of the patient, consumer, student, or community, as those populations see those problems. This followed by the establishment of a link between these problems and specific health problems which may become the focus of health education. The link is essential in life and, in turn, how the quality of life affects social problems. Methods used for social diagnosis may be one or more of the following: community

forums, nominal groups, focus groups, surveys, interviews and central location intercept.

Stage 2-Epidemiological Diagnosis.

The focus of this stage is to identify specific health problem and non health factors which are associated with a poor quality of life. Those data might be vital statistics, years of potential life loss, disability, prevalence, morbidity, incidences and mortality. Describing these health problems can: 1) help establish relationships between health problems, other health conditions, and the quality of life; 2) lead to the setting of priorities which will guide the focus of program development and resources utilization; and 3) make possible the delineation of responsibilities between involved professionals and organizations and agencies.

Stage 3-Behavioral and Environmental Diagnosis.

This stage focuses on the systematic identification of health practices and other factors which seem to be linked to health problems defined in Stage 2. This includes non-behavioral causes (personal and environmental factors) that can contribute to health problems, but are not controlled by behavior. These could include genetic predisposition, age, gender, existing disease, climate, and workplace, the adequacy of health care facilities, etc. Another important component of this Stage is the determination of the importance and relative changeability of each behavioral cause. It is critical that a behavioral diagnosis is completed for each health problem identified on Stage 2. This will allow all the planners to choose target behaviors which will become the focus of specific educational interventions by using the behavioral matrix that shown in figure 4. Behavioral objectives are created from Quadrant I and II. Quadrant III is used more for political reasons.

	More Important	Less Important
More Changeable	High Priority Quadrant I	Low Priority Except for Political Reasons Quadrant III
Less Changeable	Priority for Innovations Assessment Crucial Quadrant II	No Program Quadrant IV

Figure 4 The Behavioral Matrix.

Stage 4-Educational diagnosis.

This stage assesses the causes of health behaviors which were identified in Stage 3. Three kinds of causes are identified predisposing factors, enabling factors, and reinforcing factors.

- **Predisposing factors** are defined in these models as factors that exert their effects prior to a behavior occurring, by increasing or decreasing a person or population's motivation to undertake that particular behavior. They include people's knowledge, attitudes, beliefs, values, self-efficacy and existing skills (16).
 - *Knowledge* is usually a necessary but not always a sufficient cause of individual or collective behavior change. Usually, however, the behavior will not occur without a strong enough cues to trigger motivation to act on that knowledge and possibly also without enabling factors such as new skills or resources.
 - *Beliefs* are convictions that something is real or true. Statements of belief about health include such comments as "I don't believe that exercising daily will make me feel any better."
 - *Values* are the moral and ethical propositions people use to justify their actions. They determine whether people consider various health related behaviors to be right or wrong. Similar values tend to be held by people who share generation, geography, history, or ethnicity. Values

are considered to be more entrenched and thus less open to change than beliefs or attitudes.

- *Attitudes* are relatively constant feelings directed toward something or someone that always contain an evaluative dimension. Attitudes can always be categorized as positive or negative. Attitudes are distinct from values in that they are directed toward specific persons, objects, or actions and are based on one or more values. They differ from beliefs in that they always include some evaluation of the person, object or action.
- *Self-efficacy* is the person's perception of how successful he or she can be in performing a particular behavior. Self-efficacy plays a particularly important role with addictive or compulsive behaviors that are associated with a high degree of relapse, such as weight loss and smoking cessation.
- *Existing skills* are skills that people already possess insofar as they motivate the behavior. In contrast, any skills that still need to be developed are considered to be enabling factors.

The PRECEDE-PROCEED model views other factors such as genetic, socio-demographic, and personality characteristics as also playing a role in predisposing to health-related behavior. However, because most of these are not amenable to change through health education, they are treated as a special subcategory of predisposing factors (17).

- **Enabling factors** are defined as factors that make it possible (or easier) for individuals or populations to change their behavior or their environment. They include accessibility, availability, skills and laws (local, state and federal) (17).
- **Reinforcing factors** comprise the different type of feedback and rewards that those in the target population receive after behavior change, the result of which may be either to encourage or to discourage the continuation of the behavior. Family, friends, teachers, self and others who control rewards can deliver reinforcing behaviors.

Stage 5-Administrative and Policy Diagnosis.

This stage focuses on the administrative and organizational concerns which must be addresses prior to program implementation. This includes the assessment of resources, budget development and allocation, development of an implementation timetable, organization or personnel within programs, and coordination of the program with all other departments, and institutional organizations and the community.

Stage 6-Implementation of the Program.

This is the development of an intervention able to practically deliver the required services or messages. It involves the principles of office and program administration.

Stage 7-Process Evaluation.

This is used to evaluate the process by which the program is being implemented.

Stage 8-Impact Evaluation.

This measures the program effectiveness in terms of intermediate objectives and changes in predisposing, enabling and reinforcing factors.

Stage 9-Outcome Evaluation.

This measures change in terms of overall objectives and changes in health and social benefits or the quality of life. It takes a very long time to get results and it may take years before an actual change in the quality of life is seen.

Another theory to understand and predict human behavior is Theory of Reasoned Action (TRA) developed by Martin Fishbein and Icek Ajzen shown in figure 5. This theory mentioned that behavior results in part from intentions and from complex outcome of attitudes. The intent to perform a behavior is the best predictor which a desired behavior will actually occur.

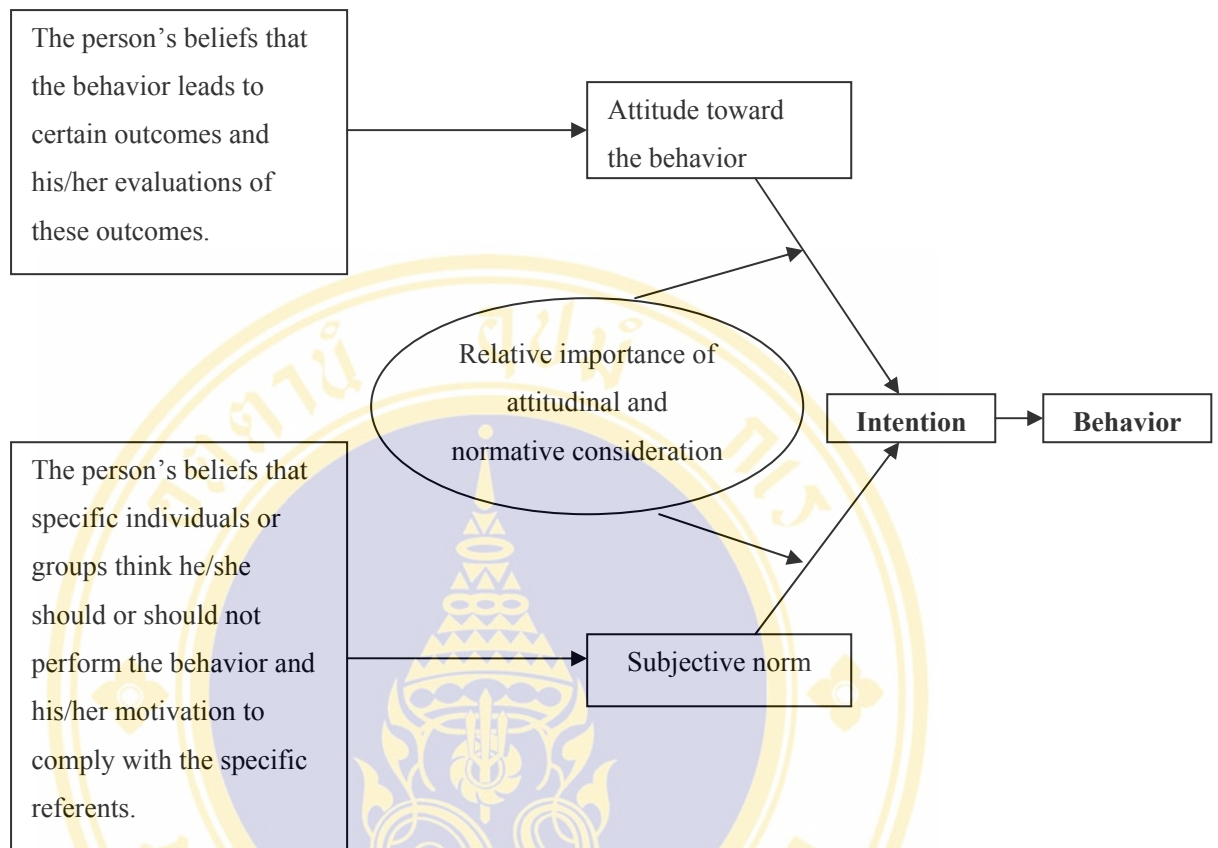


Figure 5 Causal relationship links among the components of Theory of Reasoned Action.

Based on the premise that humans are rational and that the behaviors being explored are under volitional control, the theory provides a construct that links individual beliefs, attitudes, intentions, and behavior. Essentially, the behavioral and normative beliefs -- referred to as cognitive structures -- influence individual attitudes and subjective norms, respectively. In turn, attitudes and norms shape a person's intention to perform a behavior. A person's intention remains the best indicator that the desired behavior will occur. Overall, the TRA model supports a linear process in which changes in an individual's behavioral and normative beliefs will ultimately affect the individual's actual behavior (18). This theory has a same concept in understanding and predication human behavior as PRECEDE-PROCEED model by which predisposing, enabling, and reinforcing factors have the potential to influence

a given health-related behavior-either by encouraging the behavior to occur or by inhibiting it from occurring (16).

Belief, attitude and behavior change as taking any one of three different paths-the decision-making path, the experiential path and the behavioral influence path. The study of belief, attitude and behavior change is closely related to the study of persuasion, which is the explicit attempt to influence beliefs and attitudes. The Elaboration Likelihood Model (ELM) was developed by Richard Petty and John Cacioppo which explains the persuasion process from within the decision-making perspective. The ELM suggests that the mode through which persuasion occurs changes depending upon whether the consumer is in a high- or low-involvement state. In high-involvement conditions the consumer is said to move through the central route to persuasion, focusing on the nature of the arguments presented in a message. Based upon this message, they evaluate it and form feeling and attitudes. If attitudes are positive, they may then purchase the product. In low-involvement conditions, on the other hand, the consumer is said to move through the peripheral route to persuasion, focusing on a different set of cues-such as the attractiveness of the source of information or the context within which the information is presented. Therefore, attitudes tend to occur only after the product or service is bought and the consumer reflects on how he or she feels about it as shown in figure 6 (19).

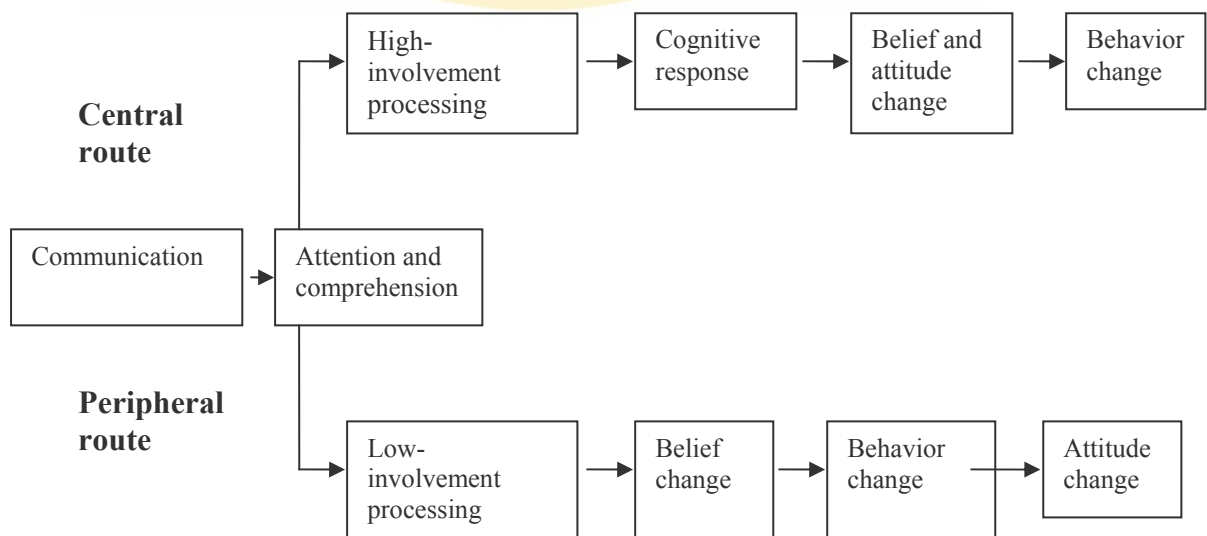


Figure 6 Elaboration Likelihood Model of persuasion.

2.5 Literatures review

2.5.1 Intention to buy

According to the study of Chanjaruporn (20), 71.51% of the respondents indicated that they would purchase herbal cosmetic OTOP products in the future. The survey of the National Statistic Office (21) showed 78% of the respondents indicated that they had intention to use OTOP products in the future.

The study of purchasing decisions regarding herbal cosmetic OTOP products reported that there was significant difference between intenders and non-intenders to buy herbal cosmetic OTOP products in terms of benefit of herbal products, shopping place and sources of information about herbal cosmetic OTOP products (20).

2.5.2 Socio-demographic characteristics

Pongcharusatit (23) studied purchasing behavior in food product of consumers in Bangkok. Data was collected from 360 respondents who buy food products from supermarkets, convenience stores and grocery stores in Bangkok. The study showed 64.7% of the respondents were female and most respondents were 15 to 44 years old. With regard to educational level, 67.5% were studying in or graduated from university level and most respondents (30.8%) were students. The Evaluation of One Tambon One Product (24) data was collected from 2,500 consumers who are 25 – 54 years old in 4 regions by using self-administered questionnaires. Respondents were mainly female (63.3%), 25 – 30 years old (41.67%), hold a bachelor degree (45.7%), and have income of 5,001 – 8,000 baht per month.

The pervious study (20) found that there was a significant difference between age and gender, and purchasing decision of herbal cosmetic OTOP products. Similar as Lertsuchatavanich's study (25) found significantly related factors to food supplement consumption behavior were age and gender. However, another studies (27, 28) reported that there was no significant association between age, marital status, occupation and education level, and food products purchasing behavior.

2.5.3 Predisposing factors

Knowledge

The study of food supplement consumption behavior for weight control (25) found that there was a statistically significant association between knowledge regarding food supplements and food supplement consumption behavior. Ratanasuksa's study (26) also reported that there was significant association between knowledge and FDA-registered food products purchasing behavior. Whereas the situation of purchasing cooked food among consumer in Phrae province (27) showed that there was significant association between knowledge regarding ready to eat food and purchasing ready to eat food.

Attitude

Chanjaruporn (20) studies the purchasing decision and opinions regarding herbal cosmetic OTOP products among undergraduate students in Bangkok. The study found that buyers had a significantly more positive opinion regarding the product than non-buyers. The study of Wannasai in Bangkok people's decision on buying processed food (28) also reported that the attitude towards the product had significantly influencing the decision of Bangkoknians on buying the processed food: CPIF sausages. Intention to buy online grocery has studied in the work of T. Hansen, J.M. Jensen, and H.S. Solgaard (30), it found that consumer's attitude toward behavior was the most important predictor of behavior intention, and a study of attitudes and food choice behavior (31) also found a strong correlation between attitude evaluation and behavioral intention. The study of ethical values and motives driving organic food choice (32) in 1,283 Norwegian adults revealed that the more positive attitude they have towards organic food, then the more likely it is that they will consume organic food. The study of A.E. Lobb, M. Mazzocchi and W.B. Traill (33) emerged that attitudes were the most important determination of intention to purchase.

2.5.4 Enabling factors

Accessibility

The study of Chanjaruporn (20) found that consumers would consider the price before buying any products, and most of them (59.54%) agreed that the price of herbal cosmetic OTOP products were lower than general cosmetics. The work of Pornprasertsuk (22) and Food and Drug Administration (9) also indicated that the respondents bought OTOP products because of cheap price. For food products (23), most of the respondents indicated that they purchased it because of taste (36.1%), quality (35.3%) and price (14.2%). Research survey of Department of Health (29) also found that the first priority which consumers decided to buy cooked food were cleanliness followed by taste, nutritional value, availability and price. Price of products had influenced in making a decision to buy food products in Haitian consumers (34) and health food products in Hong Kong people (35). Therefore, the study of factors influencing purchases of customers in a worksite cafeteria (36) reported that price was the most important factors in the purchase decision as well as having the most influence on their decision to purchase a hot entree.

Availability

According to Chanjaruporn's study (20), about 43% of respondents thought that distribution channels and selling places of herbal cosmetic OTOP products were not sufficient. Nongyao's study (37) also found that the distribution channels of OTOP processed fruit were limit and suggested to have more distribution channels that reach the targeted consumers. Furthermore, the survey of the National Statistic Office (21) and the evaluation of confidential, popularity and expectancy to health OTOP products (9) found that the majority of respondents indicated that OTOP products were ease of purchase.

2.5.5 Reinforcing factors

Social support

For buying OTOP products (22), buyers were influenced by their families, their friends and themselves. Another study also indicated that friends/colleagues (67.42%)

and family/relatives (60.10%) were two main groups of people who played the important role on respondents purchasing decision, respectively (20) and had significantly influencing the respondents' decision on buying the processed food (28). The study of cross-cultural evaluation of factors driving intention to purchase new food products-Beijing, China and south-east England (38) reported the Chinese and English rated the influence of family and friends as important in choice of new food products while the opinions of others were not the greatest influence on the choices of the Chinese. The Hong Kong Health Food Market (35) also indicated that the reason for Hong Kong people to consume health food product were fulfilling personal nutrient requirements, referral from peers and curiosity.

Information

Approximately 53% of the respondents thought product information that they received had high degree of influence on their purchasing decision. Since, television was their important source of information for herbal cosmetic OTOP products, and sources of information for herbal cosmetic OTOP products have significant difference between intender and non-intender (20). For OTOP information, the consumers were received from radio (59%), television (56%) and leaflet/brochure (48.5%) (22). Wannasai's study also found that received the information about the processed food: CPIF sausages had significantly influencing the respondent's decision on buying these products (28).

Experience

The survey of the National Statistic Office (21) indicated that 56.9% of the respondents had previously consumed OTOP products. The evaluation of confidential, popularity and expectancy to health OTOP products (9) found that 80.61% of the respondents had used health OTOP products, and OTOP food products were the most (33.60%). Chanjaruporn's study (20) also found that more than 60% of the respondents thought past experience of using the product had a high degree of influence on their purchasing decision.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Research design

The research design for this study was a cross-sectional design to determine the intention to buy OTOP food products among consumers in Nonthaburi province.

3.2 Study population

The target population was consumer who aged between 18-60 years and came to hypermarket in Nonthaburi province and were willingness to answers the questionnaire.

3.3 Sample size and sampling technique

The sample size was calculated according to the statistical formula of determination of sample size for estimating population proportion (39) as follows:

$$n = \frac{Z^2 * P * (1-P)}{E^2}$$

in which Z = Level of statistical significance.

P = Proportion of intention to buy OTOP food products.

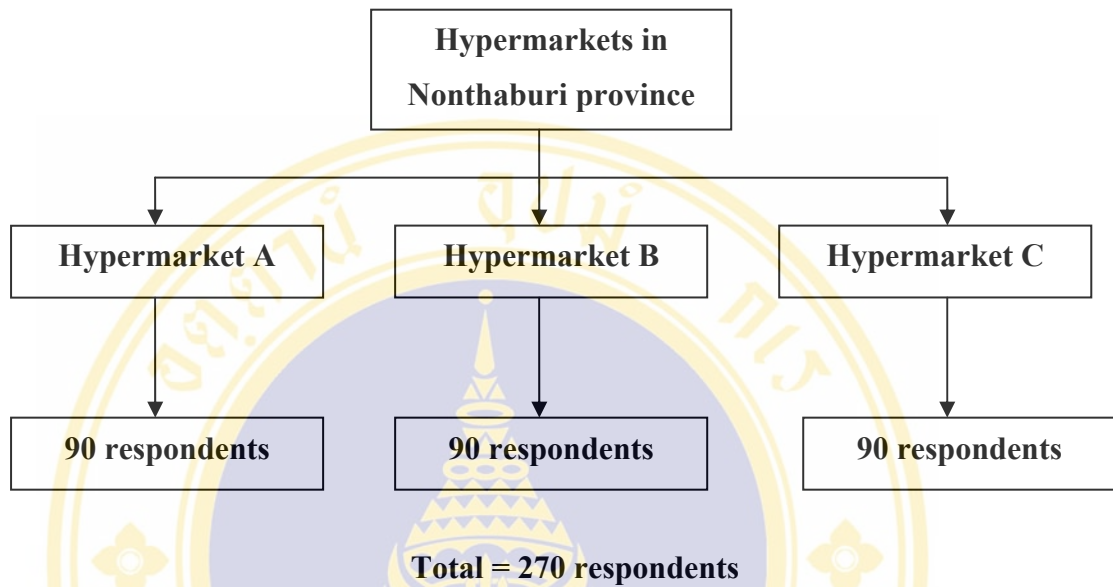
In this study, P equals to 0.78 (23).

E = The margin of error in the estimate of the characteristic.

In this study, E equals to 0.05.

$$\begin{aligned} n &= \frac{(1.96)^2 * (0.78) * (0.22)}{(0.05)^2} \\ &= 264 \end{aligned}$$

The minimum sample size required in this study was equal to 264. So, 90 respondents were proportionally selected at 3 hypermarkets in Nonthaburi province.



3.4 Research instruments for data collection

In this study, self-administrated questionnaire was used as a tool to collect the primary data from the respondents. The questionnaire consistde of 5 parts as follow:

Part 1: Knowledge about OTOP food products

This part composed of 10 yes-no questions from question number 1 to 10, regarding to OTOP food products. For the corrected answer, one point was given and zero point was given for wrong answers. The total score of knowledge part varied from 0 to 10 points and were categorized into three levels.

- **High level:** total score was more than or equal to mean (8 to 10)
- **Low level:** total score was less than mean (0 to 7)

Part 2: Attitude toward OTOP food products

This part composed of 10 questions which consisted of positive and negative statements about consumers' attitude toward OTOP food products from question number 11 to 20. The answer had five rating scales: strongly agree, agree, undecided,

disagree and strongly disagree. The score was given according to the level of attitude as follow:

Scores for positive statement			Scores for negative statement		
Strongly agree	=	5	Strongly agree	=	1
Agree	=	4	Agree	=	2
Undecided	=	3	Undecided	=	3
Disagree	=	2	Disagree	=	4
Strongly disagree	=	1	Strongly disagree	=	5

Questions number 12 and 17 of attitude part were negative statements and the rest were positive statements. The total score of attitude part varied from 10 to 50 points and was classified into two levels according to the mean of attitude.

- **Positive attitude:** total score was more than or equal to mean (39 to 50)
- **Negative attitude:** total score was less than mean (10 to 38)

Part 3: Enabling and reinforcing parts

This part had 17 questions which consisted of enabling factors; accessibility of OTOP food products and availability of selling place of OTOP food products, and reinforcing factors; social support, information about OTOP food products and experience in consume OTOP food products.

Accessibility towards OTOP food products

There were 4 questions regarding to consumers' afford and accessibility to OTOP food products in terms of their price and selling place from question number 21 to 24. It was categorized into two categories as: **easy to access** was the respondents stated that price of OTOP food products were cheaper than or the same as general food products, OTOP food products were ease to buy, and selling place of OTOP food products were not far from their community or work place/education place, and the rest was **difficult to access**.

Availability of selling place of OTOP food products

There were 3 questions regarding available of selling place of OTOP food products in their community and work place/education place from question number 25 to 27. The answer had two rating scales yes and no. One point was given to the yes answer and zero point was for the no answer. The total score of this part varied from 0 to 3 points and was classified into two levels according to the mean of available of selling place of OTOP food products.

- **Available:** total scores was more than or equal to mean (2 to 3)
- **Non-available:** total scores was less than mean (0 to 1)

Social support

There were 6 questions regarding supportive of buying OTOP food products that the respondents got from their family and friends from question number 28 to 33. The answer had two rating scales were yes and no. One point was given to the yes answered and zero point was for the no answer. The total score of this part varied from 0 to 6 points and was classified into two levels according to the mean of social support.

- **High social support:** total score was more than or equal to mean (5 to 6)
- **Low social support:** total scores was less than mean (0 to 4)

Information about OTOP food products

There were 2 questions from question number 36 to 37, regarding sources of information that the respondents had received about OTOP food products. It was categorized into three categories as follow:

- **Exposed** referred to consumer who had received information about OTOP food products and it was divided into 2 levels as:
 - **High exposed:** the respondents who answered that they had received information about OTOP food products through various media more than or equal to mean of total received media sources (≥ 4 sources).
 - **Low exposed:** the respondents who answered that they had received information about OTOP food products less than mean of total received media sources (1 to 3 sources).

- **Non-exposed:** the respondents who answered that they had never received information about OTOP food products.

Experience in consume OTOP food products

There were 2 questions from question number 34 to 35. It was categorized into two categories: **experienced** were the respondents who answered that they had consumed OTOP food products, and the rest were **no-experience**.

Part 4: Intention to buy OTOP food products

There were 2 yes-no questions regarding to the intent of consumers to buy OTOP food products. For the yes answered, one point was given and zero point was for the no answer. The total score of this part varied from 0 to 2 points and was classified into two levels.

- **Intender:** total score was equal to two points.
- **Non-intender:** total score was less than two points (0 to 1).

Part 5: Socio-demographic characteristics of the respondents

There were 5 questions which consisted of age, gender, education level, and occupation of the respondents from question number 41 to 45.

Age: Only respondents having age between 18 to 60 years old were selected. It was calculated in year and divided into five groups as less than 20 years old, 21-30 years old, 31-40 years old, 41-50 years old and 51-60 years old.

Gender: sex of the respondents as male or female.

Education level: this variable was categorized into groups as primary school, secondary school, high school, diploma's degree, bachelor's degree and more than bachelor's degree

Occupation: this variable was categorized into three groups as jobless (student and housewife), government officer, business employee/labor, and business owner.

3.5 Data collection procedure

At first, the researcher asked for permission from hypermarket manager by official letter from AIHD, Mahidol University. After obtaining the permission from hypermarket manager, researcher and two coordinators collected the data at that hypermarket.

After the questionnaire was developed, a pre-test was done on 30 respondents for test validity and reliability. For pretest, the researcher selected one hypermarket in Nakhorn Pathom province with the consumers having almost the same characteristics as they were in the three hypermarkets where the data were collected. Kuder-Richardson 20 and Cronbach's alpha were calculated to measure the reliability of the questionnaire in knowledge and attitude part, respectively. The reliability was 0.561 for the knowledge part and 0.686 for the attitude part.

3.6 Data analysis procedure and statistics used

The analyzing of data was done by using the MINITAB program. Descriptive statistics and Chi-square test and Fisher's exact test were used for this study. The presentations of the results were divided into the following parts:

1. To describe the distribution of independent variables and dependent variable using descriptive statistics; frequency, mean, standard variation, minimum, maximum and percentage.
2. To determine the significant relationship between intention to buy OTOP food products among consumers and the following factors:
 - Predisposing factors (socio-demographic characteristics, knowledge about OTOP food products, and attitude towards OTOP food products)
 - Enabling factors (accessibility of OTOP food products and availability of selling place of OTOP food products)
 - Reinforcing factors (social support, information about OTOP food products, and experience in consume OTOP food products)

The critical significance level of statistical test was set at 0.05.

CHAPTER 4

RESULTS

This study was conducted by using structured questionnaire on 264 consumers whose ages were between 18 to 60 years old to investigate their intention to buy OTOP food products, and to find the relationship between predisposing factors, enabling factors, reinforcing factors and intention to buy OTOP food products. Respondents were the consumers, who came to three hypermarkets in Nonthaburi province from the 21st to 31st of January, 2007.

The study results were presented in five parts as follow:

Part 1 Characteristic of intender to buy OTOP food products such as:

- Intender
- Non-intender

Part 2 Characteristic of predisposing factors such as:

- Socio-demographic characteristics of respondents
- Knowledge about OTOP food products
- Attitude toward OTOP food products

Part 3 Characteristic of enabling factors such as:

- Accessibility of OTOP food products
- Availability of selling place of OTOP food products

Part 4 Characteristic of reinforcing factors such as:

- Social support
- Information about OTOP food products
- Experience in consuming OTOP food products

Part 5 Relationship between various factors and intention to buy OTOP food products

4.1 Intention to buy OTOP food products

Table 2 presents the intention to buy OTOP food products in number and percentage. A majority of the respondents stated that they intended to buy OTOP food products for themselves (95.45%) and for other (96.59%). Only 4.55% and 3.41% of the respondents mentioned that they not intended to buy OTOP food products for themselves and for other, respectively. The respondents who intend to buy OTOP food products to other stated that they would like to buy for their relatives (69.02%), their parent (67.06%), their friends (65.88%), their brothers/sisters (41.18%), their neighbors (38.82%), and their spouse or children (32.16%). Some of the respondents would like to buy for other (4.31%) such as their boss and their customers.

Table 2 Number and percentage of the respondents classified by items related to intention to buy OTOP food products

Intention to buy food OTOP products	Number N = 264	Percent (%)
Buy for themselves		
- Yes	252	95.45
- No	12	4.55
Buy for other		
- Yes	255	96.59
- No	9	3.41
Buy for whom (multiple answers)		
	N = 255	
- Parents	171	67.06
- Brothers/sisters	105	41.18
- Spouse or children	82	32.16
- Relatives	176	69.02
- Friends	168	65.88
- Neighbors	99	38.82
- Other	11	4.31

Table 3 shows the intention to buy OTOP food products in number and percentage among all 264 respondents who came to supermarkets in Nonthaburi province. The respondents who intended to buy OTOP food products for themselves and for others were classified into two groups as intender and non-intender. It was found that most of the respondents were intenders (93.94%) and the proportion of respondents who were non-intenders (6.06%) was nearly one out of every fifteen respondents.

Table 3 Number and percentage of the respondents classified by intention to buy OTOP food products

Intention to buy food OTOP products	Number N = 264	Percent (%)
Intender	248	93.94
Non-intender	16	6.06

4.2 Predisposing factors

4.2.1 Socio-demographic characteristics

Table 4 shows the average age among all respondents was 33.20 years old with standard deviation of 10.88. More than one-third of the respondents were in the age group of 21-30 years old (36.74%) while nearly one-third of them were in the age group of 31-40 years old (27.65%). For gender, the proportion of the respondents indicated that more than half of the respondents (59.85%) were female.

For the educational level, most of the respondents (32.58%) had bachelor's degree, followed by diploma's degree (19.69%), high school (18.18%), and secondary school (14.77%). Concerning occupation, the results indicated that half of the respondents (56.44%) were business employee or labor. The proportion of the respondents whose occupation was jobless (22.73%) were nearly equal to those whose occupation was government officers (20.83%).

Table 4 Number and percentage of the respondents classified by socio-demographic characteristics

Socio-demographic characteristics	Number N = 264	Percent (%)
Age groups (years)		
- ≤ 20	29	10.98
- 21 – 30	97	36.74
- 31 – 40	73	27.65
- 41 – 50	45	17.05
- 51 – 60	20	7.58
Mean = 33.20 SD = 10.88	Min. = 18	Max. = 60
Gender		
- Male	106	40.15
- Female	158	59.85
Education level		
- Primary school	13	4.93
- Secondary school	39	14.77
- High school	48	18.18
- Diploma's degree	52	19.69
- Bachelor's degree	86	32.58
- More than bachelor's degree	26	9.85
Occupation		
- Jobless	60	22.73
- Government officer	55	20.83
- Business employee/ labor	102	56.44
- Business owner	47	17.80

4.2.2 Knowledge about OTOP food products

More than 70 % of the respondents chose correct answers in all questions of knowledge part except one question about community product standard. Only one-tenth of the respondents (10.23%) knew that OTOP food products were not compulsory to had community product standard (Table 24, Appendix A).

Table 5 shows the level of knowledge of OTOP food products that were classified into three levels. The mean score of knowledge was 7.96 with the standard deviation of 1.10. The majority of respondents (70.83%) had a high level of knowledge and nearly one-third of them (29.17%) had a low level of knowledge.

Table 5 Number and percentage of the respondents classified by level of knowledge about OTOP food products

Level of knowledge	Number N = 264	Percent (%)
- High level (\geq MEAN)	187	70.83
- Low level ($<$ MEAN)	77	29.17
Mean = 7.96 SD = 1.10 Median = 8.00	Min. = 2	Max. = 10

4.2.3 Attitude toward OTOP food products

Around 40% of the respondents were undecided about nutrition (45.83%) and safety (40.15%) of OTOP food products. More than half of the respondents were strongly agreed about supporting and promotion OTOP food products by government and private organization (60.98%), buying OTOP food products was supporting Thai goods (69.32%), and community producers could earn more money from selling OTOP food products (55.68%) (Table 25, Appendix A).

Table 6 shows the level of attitude toward OTOP food products, which was classified into two levels by mean of attitude. It reported that the mean scores of attitude were 38.83 with the standard variation of 3.83, and had scores range from 20

to 49. From this result indicated that more than half of the respondents (59.47%) had positive attitude and two-fifth of them (40.53%) had negative attitude.

Table 6 Number and percentage of the respondents classified by level of attitude toward OTOP food products

Level of attitude	Number N = 264	Percent (%)
- Positive (\geq MEAN)	157	59.47
- Negative ($<$ MEAN)	107	40.53
Mean = 38.83 SD = 3.83 Median = 39.00	Min. = 20	Max. = 49

4.3 Enabling factors

4.3.1 Accessibility of OTOP food products

Table 7 shows the accessibility of OTOP food products as price and place of distribution. More than half of the respondents (52.65%) mentioned that OTOP food products had the same price as general food products. Nearly one-third of them (29.17%) stated that they were cheap, and the rest (18.18%) mentioned that they were expensive.

Concerning the selling place of OTOP food products, the majority of respondents (51.52%) stated that it was difficult to find, and nearly half of them (48.48%) mentioned that it was easy to find. About two-third of them stated that the selling place was far from their community (64.77%) and their place of work/education (65.71%).

Table 7 Number and percentage of the respondents classified by items related to accessibility of OTOP food products

Accessibility factors of OTOP food products	Number N = 264	Percent (%)
Price		
- Cheap	77	29.17
- The same	139	52.65
- Expensive	48	18.18
Accessibility of selling place		
- Easy to find	128	48.48
- Difficult to find	136	51.52
Selling place in your community		
- Near	93	35.23
- Far	171	64.77
Selling place in your work/education		
- Near	90	34.09
- Far	174	65.91

Table 8 reports the accessibility of OTOP food products in number and percentage. The respondents who mentioned that prices of OTOP food products were cheap or similar to general food products and selling place of OTOP food products is easy to find, and close to their community or their work/education were classified as easy to access and the rest were difficult to access. It was expressed that OTOP food products were difficult to access (70.45%) and the rest were easy to access (29.55%).

Table 8 Number and percentage of the respondents classified by level of accessibility

Level of accessibility	Number N = 264	Percent (%)
- Easy to access	78	29.55
- Difficult to access	186	70.45

4.3.2 Availability of selling place for OTOP food products

Table 9 demonstrates the availability of selling places for OTOP food products in their community and work/education place. A majority of the respondents mentioned that there were not enough selling places for OTOP food products (73.86%) and the remainder stated that there were enough (26.14%). The proportion of those who expressed that selling places were available for OTOP food products in their community (48.11%) was nearly equal to those who expressed that this selling place is not available (51.89%). Half of them mentioned that they had selling place of OTOP food products available in their work/education place (49.62%), but half of them did not have (50.38%).

Table 9 Number and percentage of the respondents classified by items related to availability of selling place of OTOP food products

Availability factors	Number N = 264	Percent (%)
Availability of selling place		
- Enough	69	26.14
- Not enough	195	73.86
Availability of selling place in your community		
- Available	127	48.11
- Not available	137	51.89
Availability of selling place in your work/education place		
- Available	131	49.62
- Not available	133	50.38

Table 10 reports the level of availability of selling place of OTOP food products in number and percentage classified by mean of availability. The mean scores of availability were 1.24 with standard deviation of 0.07. It was found that selling places of OTOP food products were not available (58.33%), but nearly the same said that they are available (41.67%).

Table 10 Number and percentage of the respondents classified by level of availability of selling place of OTOP food products.

Level of availability	Number N = 264	Percent (%)
- Available (\geq MEAN)	110	41.67
- Not available ($<$ MEAN)	154	58.33
Mean = 1.24 SD = 0.07	Min. = 0	Max. = 3

4.4 Reinforcing factors

4.4.1 Social support

Table 11 illustrates the number and percentage out of 264 respondents about social support which consisted of family and peer support. It was found that the majority of their family (92.05%) had bought OTOP food products. More than two-thirds of them received the suggestion (76.89%) and were influenced (73.48%) from their family to buy OTOP food products. Less than one-third of them never got the suggestion (23.11%) nor was they influenced (26.52%) to buy OTOP food products from their family.

Concerning peer support, the majority of respondents' friends (90.91%) had bought OTOP food products. More than two-thirds of them (79.92%) got the suggestion to buy OTOP food products from their friend. Nearly two-thirds of them (65.91%) stated that their friend had influenced them to buy these products.

Table 11 Number and percentage of the respondents classified by items related to social support.

Social support	Number N = 264	Percent (%)
Family support		
- Buying OTOP food products		
Buy	243	92.05
Never buy	21	7.95
- Suggestion		
Suggest	203	76.89
Not suggest	61	23.11
- Influence		
Influence	194	73.48
Not influence	70	26.52
Peer support		
- Buying OTOP food products		
Buy	240	90.91
Never buy	24	9.09
- Suggestion		
Suggest	211	79.92
Not suggest	53	20.08
- Influence		
Influence	174	65.91
Not influence	90	34.09

Table 12 demonstrates the level of social support that was classified into two levels by mean of social support. It showed that the mean scores of social support were 4.79 with standard variation of 0.09 and had scores range from 0 to 6. Two-third of the respondents (67.05%) had a high level of social support, and one-third of them (32.95%) had low level of social support.

Table 12 Number and percentage of the respondents classified by level of social support

Level of social support	Number N = 264	Percent (%)
- High social support (\geq MEAN)	177	67.05
- Low social support ($<$ MEAN)	87	32.95
Mean \pm SD = 4.79 \pm 0.09	Min. = 0	Max. = 6

4.4.2 Information about OTOP food products

Table 13 reports the number and percentage of the respondents related to information about OTOP food products. Majority of them (86.75%) had received information about these products. The most popular source to receive information about these products was television (80.35%), followed by word of mouth (61.57%), and newspaper (58.08%). Some of them (6.55%) received information from trade fair.

Table 13 Number and percentage of the respondents classified by items related to information about OTOP food products.

Information about OTOP food products	Number N = 264	Percent (%)
Never receive information	35	13.26
Receive information	229	86.75
Sources to receive information*		
- Television	184	80.35
- Radio	85	37.12
- Newspaper	133	58.08
- Magazines	82	35.81
- Billboards	105	45.85
- Leaflets	64	27.95
- Word of mouth	141	61.57
- Internet	43	18.78
- Trade fair	15	6.55

*Multiple answers

Table 14 reports the level of information in number and percentage. The respondents who mentioned that they had received information about OTOP food products were categorized as exposed and the rest were non-exposed. The exposed category was classified into two levels as high-exposed and low-exposed. The respondents who received information about OTOP food products more than or equal to four sources were classified as high-exposed and the rest had low-exposed. It was found that less than one-fifth of them (13.26%) were non-exposed. The proportion of high-exposed respondents (42.05%) was nearly equal to those who had low-exposed (44.70%).

Table 14 Number and percentage of the respondents classified by level of information about OTOP food products.

Level of information	Number N = 264	Percent (%)
- Non-exposed	35	13.26
- Exposed		
High-exposed (\geq MEAN)	111	42.05
Low-exposed ($<$ MEAN)	118	44.70
Mean \pm SD. = 3.72 \pm 1.94	Min. = 1	Max. = 9

4.4.3 Experience in consuming OTOP food products

Table 15 demonstrates the experience in consuming OTOP food products in number and percentage among 264 respondents. Majority of them (89.77%) had consumed OTOP food products, and less than one-fifth (10.23%) never consumed OTOP food products. The respondents who never consumed OTOP food products mentioned the reasons that these products were difficult to buy (44.40%), expensive (37.00%), did not have good quality (22.20%), and other (7.40%).

Table 15 Number and percentage of the respondents classified by level of experience in consuming OTOP food products

Experience in consuming OTOP food products	Number N = 264	Percent (%)
- Experienced	237	89.77
- No-experienced (multiple answers)	27	10.23
Expensive	10	37.00
Difficult to buy	12	44.40
Do not have good quality	6	22.20
Other	2	7.40

4.5 Relationship between various factors and intention to buy OTOP food products.

4.5.1 Relationship between predisposing factors and the intention to buy OTOP food products

Predisposing factors consisted of socio-demographic characteristics, knowledge and attitude toward OTOP food products. Results from the statistical analysis were shown in Table 16. For the age of respondents, chi-square was done and found that it had expected frequency less than 5 more than 20%, then the data was grouped into 3 groups as: 18-30 years old, 31-50 years old, and 51-60 years old. The analysis indicated that the proportion of intenders and non-intenders in each age group was nearly the same. There was no significant association between age of the respondents and the intention to buy OTOP food products ($p\text{-value} > 0.05$).

Regarding the gender of the respondents, the proportion of intenders and non-intenders among males and females was equal, the analysis showed that there was no significant association between gender of the respondents and the intention to buy OTOP food products ($p\text{-value} > 0.05$). As for the education level of the respondents, chi-square was done and found that it had 1 cell with expected frequency less than 1 so fisher's exact was applied. The proportion of intenders and non-intenders in two groups that less than diploma's degree and equal or higher than diploma's degree were nearly the same. There was no significant association between education level of the respondents and the intention to buy OTOP food products ($p\text{-value} > 0.05$).

According to the occupation of the respondents, the proportion of intenders and non-intenders in each occupational group were nearly the same, showing no significant association between occupation of the respondents and the intention to buy OTOP food products ($p\text{-value} > 0.05$).

Table 16 Relationship between socio-demographic characteristics and the intention to buy OTOP food products

Socio-demographic characteristics	Intention to buy OTOP food products		χ^2	P-value
	Non-intender	Intender		
	N = 16 (%)	N = 248 (%)		
Age groups (years)			0.496	0.780
- 18 – 30	9 (7.14)	117 (92.86)		
- 31 – 50	6 (5.08)	112 (94.92)		
- 51 – 60	1 (5.00)	19 (95.00)		
Gender			0.687	0.407
- Male	8 (7.55)	98 (92.45)		
- Female	8 (5.06)	150 (94.94)		
Education level			0.318	0.573
- Less than diploma's degree	5 (5)	95 (95)		
- Equal or more than diploma's degree	11 (6.71)	153 (93.29)		
Occupation				0.059**
- Jobless	7 (11.67)	53 (88.33)		
- Have job	9 (4.41)	195 (95.59)		

**Fisher's exact test

Regarding the knowledge of OTOP food products, the proportion of the non-intender respondents who had a low level of knowledge (11.69%) was three times more than those who had a high level of knowledge (3.74%). Fisher's exact was applied to analyze and found that there was a statistically significant association between knowledge level and the intention to buy OTOP food products (p-value < 0.05) as showed in Table 17.

Table 17 Relationship between knowledge of OTOP food products and the intention to buy OTOP food products

Knowledge of OTOP food products	Intention to buy OTOP food products		χ^2	P-value
	Non-intender	Intender		
	N = 16 (%)	N = 248 (%)		
Knowledge level				0.0214**
- High	7 (3.74)	180 (96.26)		
- Low	9 (11.69%)	68 (88.31%)		

**Fisher's exact test

Concerning attitude towards OTOP food products, the intender proportion was higher among the respondents who had positive attitude (96.82%) than among who had negative attitude (89.72%) while the non-intender proportion was higher among the respondents who had negative attitude (10.28%) than among who had positive attitude (3.18%). There was significant association between attitude level and intention to buy OTOP food products (p-value = 0.018) as showed in Table 18.

Table 18 Relationship between attitude toward OTOP food products and intention to buy OTOP food products

Attitude towards OTOP food products	Intention to buy OTOP food products		χ^2	P-value
	Non-intender	Intender		
	N = 16 (%)	N = 248 (%)		
Attitude level			5.627	0.018*
- Positive	5 (3.18)	152 (96.82)		
- Negative	11 (10.28)	96 (89.72)		

*Statistical significant at p-value < 0.05

4.5.2 Relationship between enabling factors and the intention to buy OTOP food products

Enabling factors consisted of accessibility and availability of OTOP food products. Table 19 indicates that the proportion of the intenders and non-intenders who found it easy to access OTOP food products (93.59%) was less than those who found it difficult to access these products (94.09%). Fisher’s exact was applied to analyze and found that there was no statistically significant association between accessibility of OTOP food products and intention to buy OTOP food products (p-value > 0.05).

Table 19 Relationship between accessibility of OTOP food products and the intention to buy OTOP food products

Accessibility of OTOP food products	Intention to buy OTOP food products		χ^2	P-value
	Non-intender N = 16 (%)	Intender N = 248 (%)		
Accessibility				1.000**
- Easy to access	5 (6.41)	73 (93.59)		
- Difficult to access	11 (5.91)	175 (94.09)		

**Fisher’s exact test

The statistical analysis in Table 20 reveals that the intender proportion was higher among the respondents who had availability of selling OTOP food products (96.26%) than among those who did not have availability of these products (88.31%) and the non-intender proportion was vice versa. There was significant association between availability of OTOP products and the intention to buy OTOP food products (p-value < 0.05).

Table 20 Relationship between availability of OTOP food products and intention to buy OTOP food products

Availability of OTOP food products	Intention to buy OTOP food products		χ^2	P-value
	Non-intender	Intender		
	N = 16 (%)	N = 248 (%)		
Availability			6.047	0.014*
- Available	7 (3.74)	180 (96.26)		
- Non-available	9 (11.69)	68 (88.31)		

*Statistical significant at p-value < 0.05

4.5.3 Relationship between reinforcing factors and intention to buy OTOP food products

Reinforcing factors consisted of social support, information about OTOP food products and experience in consuming OTOP food products. Results from statistical analysis in Table 21 shows that the proportion of non-intenders who had high social support (3.95%) was less than who had low social support (10.34%) and the proportion of intenders were vice versa. There was significant association between social support and intention to buy OTOP food products (p-value < 0.05).

Table 21 Relationship between social support and intention to buy OTOP food products

Social support	Intention to buy OTOP food products		χ^2	P-value
	Non-intender	Intender		
	N = 16 (%)	N = 248 (%)		
Social support			4.183	0.041*
- High social support	7 (3.95)	170 (96.05)		
- Low social support	9 (10.34)	78 (89.66)		

*Statistical significant at p-value < 0.05

Concerning the information about OTOP food products, the proportion of intenders who are non-exposed (91.43%), have low-exposed (93.22%) and high-exposed (95.50%) was nearly the same. The statistical analysis indicated that there was not significant association between level of information exposed and the intention to buy OTOP food products (p-value > 0.05) as displayed in Table 22.

Table 22 Relationship between information about OTOP food products and intention to buy OTOP food products

Information about OTOP food products	Intention to buy OTOP food products		χ^2	P-value
	Non-intender N = 16 (%)	Intender N = 248 (%)		
Information			0.967	0.617
Non-exposed	3 (8.57)	32 (91.43)		
Exposed				
- Low exposed	8 (6.78)	110 (93.22)		
- High exposed	5 (4.50)	106 (95.50)		

Regarding the experience in consumption of OTOP food products, the result in Table 23 shows that the intender proportion who had consumed OTOP food products (94.51%) was higher than those who never did (88.89%). Fisher’s exact was applied to analyze. It was found that there was no statistically significant association between experience in consumption of OTOP food products and the intention to buy OTOP food products (p-value > 0.05).

Table 23 Relationship between experience in consuming OTOP food products and the intention to buy OTOP food products

Experience in consumption of food OTOP products	Intention to buy OTOP food products		χ^2	P-value
	Non-intender	Intender		
	N = 16 (%)	N = 248 (%)		
Experience				0.385**
- Experience	13 (5.49)	224 (94.51)		
- No-experience	3 (11.11)	24 (88.89)		

**Fisher's exact test

From Chi-square and fisher's exact test, there was a significant association between intention to buy OTOP food products and the following factors:

- Knowledge about OTOP food products with p-value = 0.0214
- Attitude towards OTOP food products with p-value = 0.018
- Availability of selling place of OTOP food products with p-value = 0.014
- Social support with p-value = 0.041

CHAPTER 5

DISCUSSION

This descriptive study was conducted on OTOP food products to investigate the intention of consumers to buy OTOP food products and study the relationship between intention of consumers and independent factor; the predisposing factors, the enabling factors and the reinforcing factors. The data was collected from the 21st to 31st of January 2007. The data of 264 respondents was collected from three hypermarkets in Nonthaburi province. The Kuder-Richardson 20 of knowledge part was quite low (0.561). This might be because that the number of questions was not enough and the standard variation of data was fairly low. The purposively sampling was used in this study as it was more convenient and possible to collect the data from the respondents who came to hypermarkets within the limited time and money. Therefore, the sampling errors in this study could not be estimated.

5.1 Intention to buy OTOP food products

The results indicated that almost all of the respondents were intenders (93.94%), while the non-intenders were just 6.06%. Some of the respondents stated that they would like to buy OTOP food products to support community producers, support Thai goods that are cheap price, delicious and good quality. So, it meant that the majority of the consumers who had the intention of buying OTOP food products might be due to their positive attitude towards OTOP food products (59.47%). Most of the respondents mentioned that they wanted to support Thai goods and thought that OTOP food products were safe to consume and had a good quality. The findings were the same as Ratanasuksa's study (26), which stated that most consumers considered nutritional value or quality of food products as the first criteria in purchasing decision to buy food products and followed by price of products and brand. According to Chanjaruporn's study (20), the priorities that consumers decided to buy OTOP products were cheap price, follow by supporting Thai goods, good quality, available

in their communities and good taste, and the first thing that most of consumers would consider before buying any products was the quality and price of products. Her study also reported that the majority of the respondents (71.51%) would like to purchase herbal cosmetic OTOP products again in the future. However, the proportion of intenders to buy OTOP herbal cosmetic products (71.51%) was slightly lower compared to this study (93.94%). It might be due to the different types of OTOP products that cosmetic products were attached to the brand and consumers preferred famous brand products more than general brand products.

5.2 Relationship between various factors and intention to buy the OTOP food products

5.2.1 Predisposing factors

Predisposing factors consisted of socio-demographic characteristics of respondents, knowledge of OTOP food products and attitude toward OTOP food products. Focusing on socio-demographic characteristics of the respondents, the study showed that respondents were mainly female (59.85%), their ages were from 18 to 50 years old (89.43%), employees or business owners (56.44%), and hold bachelor's degree (32.58%). Some of these figures are similar to Pongcharusatit's study (23), whereas majority of the respondents were female, 15 to 44 years old, and graduated from university. Likewise, the study on the Evaluation of One Tambon One product (24) reported that the respondents were mainly female, 25 to 30 years old, and held a bachelor's degree.

In this study, it was found that there was no significant association between socio-demographic characteristics (age, gender, education level, and occupation) and the intention of the consumers to buy OTOP food products. It might be because OTOP project was very well-known. In 2005, the national OTOP administrative committee emphasized on marketing of OTOP products that they called "The Year of Marketing OTOP" (4). From these activities and support from government and community, the OTOP project and OTOP products brand are well-known among consumers in every age, education level and occupation. Therefore, the OTOP

products were very well-known among consumers in Thailand at the present. The previous study (28) also reported that there was no significant association between socio-demographic characteristics (age, gender, education level and occupation) and purchasing ready to eat food. Although, Ratanasuksa's study (26) found that there was significant association between age, marital status, occupation and education level of housewives and purchasing behavior of FDA-registered food products.

According to Table 5 regards to knowledge about OTOP food products, the results indicated that more than two-thirds of the respondents (70.83%) had a high level of knowledge about OTOP food products. Nearly all of the questions in this part had over 70% correct answer (Table 24, Appendix A) and mean scores of knowledge were 7.96 from a total score of 10. It indicated that the consumers had very good knowledge on the OTOP food products. It might be because the royal Thai government policy supported the OTOP product at all levels from policy to community, and the media also played a very important role in promoting the OTOP food products. It was also indicated that the food safety policy which adopted by Thai government since 2004 had been applied by the communities to all of the food products. Although in the question about community product standard, only 10.23% of the respondents had correctly answer that OTOP food products were not compulsory to have community product standard. It might be that this standard was used for community products and OTOP products (40) but anywhere it is not compulsory for OTOP food products. In 2005, Thai Industrial Standards Institute, Ministry of Industry also launched information about community product standard through various media to promote this standard (41) then the consumers may interpret that the community product standard was a compulsory standard for OTOP food products. Another reason might be because the respondents already knew that OTOP products came from the community but the phrase in "community product standard" had the word community which made the respondents misunderstand, so they chose the wrong answer. However, the previous study about FDA-registered food products (26) reported that more than half of the respondents had a low level of knowledge about FDA- registered food products.

The analysis of this study reported that there was a statistically significant association between knowledge and the intention to buy OTOP food products. Knowledge is an influencing component of individual in understanding, behaviors and accumulating the capacity to conduct various activities then consumers who have a high level of knowledge about OTOP food products will intend to buy OTOP food products more than those who have a low level of knowledge. Lertsuchatavanichi's study (25) also reported that there was significant association between knowledge regarding food supplements and consumption behavior ($p = 0.001$). However, Ratanasuksa's study (26) found that there was not significant association between knowledge about FDA-registered food products and purchasing behavior.

As the results in Table 24, Appendix A with concerns the attitude towards OTOP food products, around 40% of the respondents were undecided about OTOP food products were more nutritious than general food products and 100% safe. It might be that the consumers were not sure about the ingredients in OTOP food products and the outbreak of food borne botulism that was caused by eating home-canned bamboo shoots in Northern Thailand on March 2006 (42). These home-canned bamboo shoots were produced by community producers and the respondents already understood that the OTOP food products came from community producers, so the respondents might be also felt not sure about safety of OTOP food products. More than half of the respondents disagreed that OTOP food products did not use good ingredients and more than half of them also agreed that OTOP food products were good taste, clean and delicious. It might be that consumers thought OTOP products had compulsory community product standard, thus relying on OTOP food products. Around 60% of the respondents strongly agreed that government and private organizations should support and promote OTOP food products, buying OTOP food products support Thai goods, and community producers could earn more money from selling OTOP food products. It might be the consumers had knowledge about OTOP food products and thought that OTOP products were Thai products which produced from Thai community producers (Table 29, Appendix A). Therefore, they have strong willing to support the Thai products.

According to the result, it showed that 59.47 % of the respondents have positive attitude towards the OTOP food products while 40.53% of the respondents have negative attitude towards OTOP food products. The study found that there was a significant association between attitude level and the intention to buy OTOP food products. It could be explained that attitudes were relatively constant feelings directed toward something or someone which always contain an evaluation dimension and always be categorized as positive or negative, then any individual who was pleased or showed a positive attitude towards an object, would inclined to react one's behavior in the same direction, and vice versa. Therefore, the consumers who had a positive attitude intend to buy OTOP food products more than those who had a negative attitude. Similarly, Ratanasuksa's study (26) indicated that more than half of the respondents had a high level of attitude towards FDA-registered food products and there was a statistically significant association with purchasing behavior of FDA-registered food products.

5.2.2 Enabling factors

Enabling factors in this study consisted of accessibility and availability of OTOP food products. Regarding the accessibility of OTOP food products, a majority of the respondents mentioned that the price of OTOP food products was cheap or the same as general food products (81.82%) and the rest (18.18%) mentioned that they were expensive. Similarly, the previous study found that most of the respondents thought that the price of herbal cosmetic OTOP products was lower than general cosmetics (21) and OTOP products were cheaper (9, 22). Most of the respondents expressed that places where OTOP food products are sold are difficult to find. This shows findings similar to Chanjaruporn's study in which most of the respondents thought herbal cosmetic OTOP products were not easily available (21). In the current, most of the respondents stated that selling places of OTOP food products was far from their community (64.77%) and their work/education (65.71%). Focusing on the level of accessibility of OTOP food products, it showed that OTOP food products were difficult to access (70.45%).

The analysis reported that there was no statistically significant association between accessibility of OTOP food products and the intention to buy OTOP food products. Even though, the study of food consumption behavior for weight control of public health personnel in Ratchaburi province (25) found that the price of food supplement were cheap, selling place of these products were difficult to access and these products were quite difficult to access. There was significant association between accessibility to the food supplements and food consumption behavior for weight control ($p = 0.001$). It might be explained that Nonthaburi province has good transportation making accessibility to be no obstacle to buy OTOP food products, since the government had projects and campaigns to support OTOP food products. The respondents knew that OTOP food products were good and they wanted to purchase them, so they looked for places where they could buy OTOP food products.

Concerning the availability of selling place of OTOP food products, only 26.14% of the respondents mentioned that there was enough selling place. A majority of the respondents stated that they did not have selling place of OTOP food products available in their community (51.89%) and their work/education (50.38%). It showed the same result as Chanjaruporn's study (20) that only 19.09% of the respondents though the distribution channels and selling place are sufficient. Similarly, a study of marketing mix of One Tambon One product for processed fruit (36) found that the distribution channels still were limited and Pornprasertsuk's study (22) also suggested that there should be more distribution channels. However, some studies (9, 21) indicated that OTOP products were easily acquired.

The analysis found that there was a significant association between availability of OTOP food products and the intention to buy OTOP food products. The proportion of intenders who had available of selling place of OTOP food products (96.26%) were higher than who did not have available of selling place of these products (88.31%). It might be explained that OTOP food products can be substituted with general food products. If the consumers would like to buy OTOP food products, but these products were not available for them, they might switch to buy general food products.

Therefore, the available of selling place of OTOP food products might be made the consumers had intended to buy more OTOP food products.

5.2.3 Reinforcing factors

Reinforcing factors in this study consisted of social support, information about OTOP food products and experience in consuming OTOP food products. Concerning social support, it was found that the majority of the respondents got influence to buy OTOP food products from their family (73.48%) and their friends (65.91%). Chanjaruporn's study (20) also showed that friends/colleagues (67.42%) and family/relatives (60.10%) were two main groups of people who played important roles on respondents' purchasing decision. Similarly, Ratanasuka's study (26) indicated that the respondents got influence to buy FDA-registered food products from their husband, their children, health personnel, their parents and their relatives.

From the analysis, it was found that there was a significant association between social support and the intention to buy OTOP food products. It might be because their family and their friends found the OTOP food products were so good with cheap price and good taste, so they told the respondents-their friends to buy them. The study of food supplement consumption behavior (25) found that food supplement consumption behavior was highest among the respondents who have received information from their peers and their family members compared with the proportion of those who have not received information. Therefore there was a significant association between peer and family influence and food supplement behavior for weight control. Another study (26) also reported that there was a significant association between social support and purchasing behavior of FDA-registered food products.

Regarding the information about OTOP food products, it was found that majority of the respondents (86.75%) had received information about OTOP food products. Information about these products in order of importance, were television, followed by word of mouth. A previous study (22) found that the respondents were received OTOP information from radio (59%), television (56%) and leaflets/brochures (48.5%). Therefore, others studies indicated that the respondents received information about

FDA-registered food products (26) and food supplement (25) from various media such as television, radio, newspapers/magazines and internet.

The analysis of this study indicated that there was no significant association between level of information exposed and intention to buy OTOP food products. It might be that most of the respondents had a high level of knowledge about OTOP food products and such a positive attitude toward OTOP food products that they might make the decision to buy OTOP food products according to their knowledge and attitude more than the advertisement from mass media. Otherwise, the sources of information for herbal cosmetic OTOP products have significant difference between intender and non-intender (20). Lertsuchatavanich's study (25) showed that there was significant relationship between media influence and food supplement consumption behavior ($p = 0.001$). The study of FDA-registered food products purchasing behavior (26) reported that there was significant association between information and purchasing behavior.

Focusing on the experience in consumption of OTOP food products, the study indicated that majority of the respondents (89.77%) had previously consumed OTOP food products. Similarly, the previous study found that 80.61% of the respondents had used OTOP health products and OTOP food products were the most (33.60%) (9). A Survey of the National Statistic Office (21) indicated that half of the respondents had consumed OTOP products. The proportion of intenders who had consumed OTOP food products was higher than those who had never consumed them and the proportion of non-intenders was similar. The result from this study showed no statistically significant association between experience in consumption of OTOP food products and the intention to buy OTOP food products. It might be explained that they knew about OTOP food products through advertisement or from government projects, so when they bought OTOP products, they had no influence from their experience but they were influenced by other factors.

CHAPTER 6

CONCLUSION AND RECOMMENDATION

6.1 Conclusion

“One Tambon One Product Project” or “OTOP” project was set up to alleviate poverty as well as increase potential and opportunities of the Thai people to become self-reliant. The OTOP products were already famous among consumers in Thailand and food products were the most used OTOP products. The intention of buying OTOP food products and factors related to OTOP consumer choices can be useful to formation when planning effective education programs for buying OTOP food products and plans to support the community producers. The general objective of the study was to determine the intention to buy OTOP food products among consumers in Nonthaburi province with the specific objectives were to describe the predisposing factors, the enabling factors and the reinforcing factors of consumers, and to determine relationships between the intention to buy OTOP food products and various factors; predisposing factors, enabling factors and reinforcing factors.

In this study, a structured questionnaire was used for data collection of 264 consumers whose ages were between 18 to 60 years and came to three hypermarkets in Nonthaburi province between the 21st and 31st of January, 2007. The accidental sampling was used in this study that is a type of non-probability sampling and involves the sample being drawn from people that were readily available and convenient. The accidental sampling was used as it was more convenient and possible to collect the data from the respondents who came to hypermarkets with in the limited time and money. Therefore, the sampling errors in this study could not be estimated.

For the data collection, there was a questionnaire consisting of 45 questions related to socio-demographic characteristics of respondents, knowledge and attitude of respondents towards OTOP food products, accessibility of respondents to OTOP

food products, availability of OTOP food products, characteristics of reinforcing factors such as social support, information about OTOP food products, experience in consuming OTOP food products and characteristics of intender to buy OTOP food products. Chi-square analysis was applied to measure the relationship between factors such as predisposing factors, enabling factors, reinforcing factors and intention to buy OTOP food products with the significance level of statistical test at 0.05. Based on the results of this study, the conclusion and recommendation are presented as follows:

Regarding the predisposing factors, the respondents in this study were from 18 to 60 years old, and the majority of them (36.74%) were in the younger age group (21 to 30 years old). Most of them were female (59.85%), business employees/ labors, and had minimally a bachelor's degree (32.58%). Most of them had a high level of knowledge about OTOP food products (70.83%) and positive attitude towards OTOP food products (59.47%).

Concerning the enabling factors, more than half of the respondents (81.82%) stated that price of OTOP food products was the same as general food products. They mentioned that the selling place of OTOP food products was difficult to find (51.52%), and far from their community (64.77%) and their work/education place (65.91%). Half of them stated that the quantity of selling places of OTOP food products was not enough (73.86%) and not available in their community (51.89%) and work/education (50.38%).

Regarding to reinforcing factors, most of the respondents got the suggestion and were influenced to buy OTOP food products from their family (76.89%, 73.48%) and friends (79.92%, 65.91%). Most of their family (92.05%) and friend (90.91%) had bought OTOP food products. The majority of the respondents (86.75%) had received information about OTOP food products and the most popular sources were television (80.35%), followed by word of mouth (61.57%), newspaper (58.08%), billboards (45.85%), radio (37.12%), magazines (35.81%), leaflets (27.95%) and internet (18.78%). Most of them (89.77%) also have consumed OTOP food products.

Regarding the intention to buy OTOP food products (Table 16), most of the respondents were intenders (93.98%) and only 6.06% were non-intender. Most intender and non-intender respondents were 18-30 years old, and had an education equal to or more than vocational school. The majority of intender respondents were female, but the proportion of non-intender respondents was equally divided into both genders. The majority of intender respondents were government officers, but most non-intender respondents were unemployed. Concerning the knowledge about OTOP food products, more than half of intender respondents had a high level of knowledge but the majority of non-intender respondents had a low level of knowledge. Most of intender respondents had positive attitude toward OTOP food products but most of non-intender respondents had negative attitude.

Concerning the enabling factors among intender and non-intender respondents, the results showed that the majority of intender and non-intender respondents stated that OTOP food products were difficult to access. Most intender respondents mentioned that OTOP food products were available in their communities and their work/education place while most of non-intender respondents stated that these products were not available.

With regards to reinforcing factors among intender and non-intender respondents, this study found that more than half of the intender respondents had high social support whereas more than half of the non-intender respondents had low social support. Nearly 80% of intender and non-intender respondents had received the information about OTOP food products. Concerning the experience in consuming OTOP food products, the result was showed that a majority of intender and non-intender respondents had consumed OTOP food products.

Chi-square test was used to determine the association between factors: predisposing factors, enabling factors, reinforcing factors and intention to buy OTOP food products. The analysis illustrates a significant association between intention to buy OTOP food products and knowledge of OTOP food products, attitude towards OTOP food products, availability of selling places of OTOP food products and social

support with p-value of 0.014, 0.018, 0.014 and 0.041 respectively. The remaining factors of age, gender, education level, occupation, accessibility of OTOP food products, information about OTOP food products and experience in consuming OTOP food products did not have statistically significant association with the intention to buy OTOP food products.

6.2 Recommendation

6.2.1 Recommendations for implementation

From the findings in the study, the following of recommendations might be implemented with respect to the intent of consumers to buy OTOP food products.

1. The organization responsible for OTOP project and food products should provide continuous information about the OTOP project, food products and especially community product standard and compulsory standard for OTOP food products through television, word of mouth, newspapers and billboards in order to provide consumers with up to date of knowledge about the OTOP project, food and OTOP food products.
2. The government and related organizations should launch campaigns to create the Thai image of OTOP food products and in order to shape the consumers' positive attitude towards OTOP food products.
3. The organizations responsible for food and OTOP products should support OTOP producers to produce a good quality of OTOP food products and inspect OTOP food products in the market to assure that these products have a good or the same quality as general one.
4. The government or related organizations should establish more distribution places or channels for OTOP food products in order to make them available for the consumers.

6.2.2 Recommendation for the further research

1. Multiple choices and more questions about OTOP products should be used to modify the reliability of the knowledge part.
2. More questions in the intention part should be used to avoid homogeneity of the respondents.
3. The qualitative study as in-depth interview regarding intention to buy OTOP food products should be done to investigate the opinions of the consumers towards OTOP food products and the barriers to access the OTOP food products in greater detail.
4. It would be interesting to conduct nation-wide to determine the real situation of intention to buy OTOP food products and the barriers to access to the OTOP food products.

REFERENCES

1. Siasiriwattana S. Health Policy in Thailand 2005. Bangkok: Express Transportation Organization Printing; 2005. p. 9, p.11
2. กรมการพัฒนาชุมชน กระทรวงมหาดไทย. แนวทางและหลักเกณฑ์การคัดสรรสุดยอดหนึ่งตำบลหนึ่งผลิตภัณฑ์ไทย ปี พ.ศ. 2549 (OTOP PRODUCT CHAMPION). กรุงเทพฯ: หจก.บางกอกบลิ๊อค; 2549.
3. The Office of Small and Medium Enterprises Promotion (OSMEP) [Online]. Available from: <http://www.sme.go.th/DesktopPage.aspx?tabid=238003> [Accessed 2006 Oct 14]
4. คณะอนุกรรมการหนึ่งตำบลหนึ่งผลิตภัณฑ์ระดับภูมิภาค. จากรากสู่ใบ วิถีไทยสู่โลก. กรุงเทพฯ: กรมพัฒนาชุมชน กระทรวงมหาดไทย; 2548.
5. Anonymous. New Page [Online]. Available from: <http://www.thaitambon.com/OPC/RegionalOPC46.htm> [Accessed 2006 Oct 21]
6. กรมส่งเสริมอุตสาหกรรม กระทรวงอุตสาหกรรม. สรุปผลการดำเนินงาน 2546. กรุงเทพฯ: Jiraya Communication.; 2546.
7. กลุ่มงานพัฒนาบุคลากรและวิเทศสัมพันธ์ กองวิชาการ. คู่มือการจัดซื้อและจำหน่ายผลิตภัณฑ์สุขภาพ. พิมพ์ครั้งที่ 3. กรุงเทพฯ: โรงพิมพ์องค์การสงเคราะห์ทหารผ่านศึก; 2545.
8. กองแผนงานและวิชาการ สำนักงานคณะกรรมการอาหารและยา. รายงานประจำปี 2547 สำนักงานคณะกรรมการอาหารและยา. กรุงเทพฯ: สำนักงานกิจการโรงพิมพ์องค์การสงเคราะห์ทหารผ่านศึก; 2547.
9. ศูนย์ประสานงานพัฒนาคุณภาพผลิตภัณฑ์สุขภาพชุมชน (ศพช.) สำนักงานคณะกรรมการอาหารและยา ร่วมกับ สวนดุสิตโพล มหาวิทยาลัยราชภัฏสวนดุสิต. รายงานสรุปผลเบื้องต้น การประเมินผลความเชื่อมั่น ความนิยม และความคาดหวังต่อ ผลิตภัณฑ์สุขภาพชุมชน (OTOP). นนทบุรี: สำนักงาน; 2549.
10. Isarangkun C, Pootrakool K. Sustainable economic development through the sufficiency economy philosophy. Available from: <http://www.sufficiencyeconomy.org/en/files/3.pdf> [Accessed 2006 Dec 25].
11. Background about OTOP [Online]. Available from: <http://www.thai-otop-city.com/about-thai-otop.asp> [Accessed 2006 Sep 20].

12. Anonymous. OTOP-SME-BOI [Online]. Available from:
<http://www.thaitambon.com/OPC2547/Stat1.htm> [Accessed 2006 Oct 22]
13. OTOP Thai village handicrafts. Thailand Fashion Portal & Bangkok Shopping Guide [Online]. Available from:
<http://www.thailandfashion.net/index.php?id=99> [Accessed 2007 Jan 15]
14. Encyclopedia of Public Health Precede-Proceed Model [Online]. Available from: <http://health.enotes.com/public-health-encyclopedia/precede-proceed-model/print> [Accessed 2006 Oct 30]
15. The PRECEDE/PROCEED MODEL [Online]. Available from:
http://hsc.usf.edu/~kmbrown/PRECEDE_PROCEED_Overview.htm
 [Accessed 2006 Nov 8]
16. Encyclopedia of Public Health Predisposing factors [Online]. Available from:
<http://health.enotes.com/public-health-encyclopedia/predisposing-factors/print> [Accessed 2006 Oct 30]
17. Encyclopedia of Public Health Enabling factors [Online]. Available from:
<http://health.enotes.com/public-health-encyclopedia/enabling-factors/print>
 [Accessed 2006 Nov 8]
18. Behavior change-A Summary of Four Major Theories [Online]. Available from:
<http://ww2.fhi.org/fhi.html> [Accessed 2006 Oct 25]
19. Mowen J C. Consumer Behavior. 3rd ed. United States of America: Macmillan; 1993. p.6, p.267-275, p.296-299.
20. Chanjaruporn F. Survey of the Purchasing Decision and Opinions Regarding Herbal Cosmetic One Tambon One Product (OTOP) Products among Undergraduate Students in Bangkok. [M.M. Thesis in Health Business Management] Nakorn Pathom: Faculty of Graduated Studies, Mahidol University; 2005.
21. The National Statistic Office. Survey of the Opinions of people about OTOP project 2004. Bangkok: The National Statistic Office, Ministry of Technology and Communication; 2004.
22. Pornprasertsuk P. Factor Affecting Decision Making on Purchasing One Tambon One Product in Singburi Province. [Independent Study Master of

- Sciences Business Economics]. Bangkok: Faculty of Graduated Studies, Kasetsart University; 2004.
23. Pongcharusatit R. Food product purchasing behavior of consumers in Bangkok. [M.Sc. in Pharm] Nakorn Pathom: Faculty of Graduated Studies, Mahidol University; 1998.
24. Suo Cengo Company (Thailand). The Evaluation on “One Tambon One Product”. Bangkok: Office of National Research Council of Thailand; 2003.
25. Lertsuchatavanich S. Food supplement consumption behavior for weight control of public health personnel in Rachaburi province. [M.Sc. in Public Health] Nakorn Pathom: Faculty of Graduated Studies, Mahidol University; 2006.
26. Ratanasuksa O. Determinants of FDA-registered food products purchasing behavior among housewives in Nonthaburi province. [M.P.H. in Public Health Research] Nakorn Pathom: Faculty of Graduated Studies, Mahidol University; 2000.
27. จุฬาลักษณ์ จงวิริยานุรักษ์, กรรณิกา อินทร์ปรา, ชีรารัตน์ สุวรรณาลัย, ภัทธิยา ลำเนียง, จีรพันธ์ จันจร. สถานการณ์การเลือกซื้ออาหารพร้อมบริโภคทันทีของผู้บริโภคจังหวัดแพร่. กรุงเทพฯ: สำนักงานคณะกรรมการอาหารและยา; 2544.
28. Wannasai T. Factors Affecting Bangkok People’s Decision on Buying Processed Food: A Case Study of CPIF sausages. [M.A. in Social development] Bangkok: National Institute of Development Administration; 2005
29. สละ ชูจงกล, ลีลานุช สุเทพารักษ์, ชัยเลิศ กิ่งแก้วเจริญชัย, นัยนา ไข่มุกมวงส์, ศิริวิไลมา ตอวิวัฒน์. การศึกษาทัศนคติของบุคลากรในกระทรวงสาธารณสุขต่อการเลือกซื้ออาหารปรุงสำเร็จ. กรุงเทพฯ: กองสุขภาพิบาลอาหาร กรมอนามัย; 2539
30. Hansen T, Jensen JM, Solgaard HS. Consumer Online Grocery Buying Intention: A TRA VERSUS A TPB APPROACH [Online]. Available from: <http://ep.lib.cbs.dk/download/ISBN/x656314507.pdf> [Accessed 2007 Feb 14]

31. Thompson KE, Haziris N, Alekos PJ. Attitudes and food choice Behavior. *British Food Journal*. 1994; 96 (11): 9-17.
32. Honkanen P, Verplanken B, Olsen SO. Ethical values and motives driving organic food choice. [Online] Available form: <http://uit.no/getfile.php?PageId=1935&FileId=385> [Accessed 2007 Feb 22]
33. Lobb AE, Mazzocchi M, Traill WB. Modelling risk perception and trust in food safety information within the theory of planned behaviour [Online] Available from: <http://www.sciencedirect.com> [Accessed 2007 Feb 19]
34. Nelson RG, Jolly CM, Hinds MJ, Donis Y, Prophete E. Conjoint analysis of consumer preferences for roasted peanut products in Haiti [Online] Available from: <http://www.blackwell-synergy.com/doi/pdf> [Accessed 2007 Feb 23]
35. Hong Kong Health Food Market [Online] Available from: http://www.agr.gc.ca/misb/fb-ba/nutra/hk/pdf/hk_e.pdf [Accessed 2007 Feb 21]
36. Perlmutter CA, Gregoire MB. Factors Influencing Purchase of Customers in a Worksite Cafeteria. *Journal of the American Dietetic Association* Available from: <http://www.blackwell-synergy.com/doi/pdf/10.1111/j.1745-4506.1998.tb00149.x> [Accessed 2007 Feb 21]
37. นางเยาว์ สุวรรณภักดิ์. ส่วนผสมทางการตลาดของสินค้าหนึ่งตำบลหนึ่งผลิตภัณฑ์ ประเภทอาหารแปรรูปจากผลไม้ Available from: <http://www.thailis.or.th/> [Accessed 2007 Feb 20]
38. Eves A, Cheng L. Cross-cultural evaluation of factors driving intention to purchase new food products – Beijing, China and south-east England. *International Journal of Consumer Studies*. 2007 [Online] Available from: <http://www.blackwell-synergy.com/doi/abs/10.1111/j.1470-6431.2007.00587.x> [Accessed 2007 Feb 19]
39. Daniel WW. *Biostatistics a foundation for analysis in the health sciences*. 8th ed. United States of America: New York; p.189.
40. สำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม. *หลักเกณฑ์และเงื่อนไขการรับรองคุณภาพผลิตภัณฑ์ชุมชน*. กรุงเทพฯ; 2546.

41. สมอ.วางเป้าหมายปี 50 ผลักดันผู้ประกอบการที่ได้รับ มผช. แล้ว ให้ธุรกิจอยู่รอดได้.. [Online].

Available from <http://www.tisi.go.th/otop/news/news32.html>

[Accessed 2007 Feb 28]

42. Botulism from Home-Canned Bamboo Shoots --- Nan Province, Thailand, March 2006 [Online]. Available from:

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5514a1.htm>

[Accessed 20067 Jan 5]





APPENDIX A

SUPPORTING DATA

Table 24 Number and percentage of the respondents classified by items related to knowledge about OTOP food products


Knowledge about OTOP food products	Corrected answer	
	Number N = 264	Percent (%)
1. OTOP food products have to show manufacturing date and expiry date.	260	98.48
2. The expired OTOP food products are safe to eat.	248	93.94
3. The colorful OTOP food products are safe food.	218	82.58
4. OTOP food products must have quality verification same as general food products.	248	93.94
5. OTOP food products such as preserved pork, dried durian and crispy rice should not have FDA mark.	218	82.58
6. Canned OTOP food products produced from the production place that has GMP approval.	206	78.03
7. OTOP food products are not compulsory to have community product standard.	27	10.23
8. OTOP food products are food products that adopt local wisdom of community in production process.	257	97.35
9. Food products that pass the OTOP Product Champion contest are OTOP food products.	199	75.38
10. Food products that have  sign are OTOP food products.	221	83.71

Table 25 Number and percentage of the respondents classified by items related to attitude toward OTOP food products

Statement	Level of attitude				
	Number (%), N = 264				
	SA	A	U	DA	SDA
11. OTOP food products such as preserved pork, dried durian are more nutritious than general food products.	9 (3.41)	66 (25.00)	121 (45.83)	65 (24.62)	3 (1.14)
12. OTOP food products do not use good ingredients.	1 (0.38)	25 (9.46)	50 (18.94)	143 (54.17)	45 (17.05)
13. OTOP food products are 100% safe.	26 (9.85)	78 (29.55)	106 (40.15)	46 (17.42)	8 (3.03)
14. OTOP food products taste good and are clean.	37 (14.02)	150 (56.82)	68 (25.76)	8 (3.02)	1 (0.38)
15. Packaging of OTOP food products is beautiful and attractive to buy.	36 (13.64)	148 (56.06)	51 (19.32)	27 (10.23)	2 (0.77)
16. OTOP food products are well-known.	37 (14.02)	158 (59.85)	55 (20.83)	13 (4.92)	1 (0.38)
17. OTOP food products can not be export goods.	16 (6.06)	23 (8.71)	39 (14.77)	115 (43.56)	71 (26.90)
18. Government and private organization should support and promote OTOP food products.	161 (60.98)	87 (32.96)	9 (3.41)	1 (0.38)	6 (2.27)
19. Buying OTOP food products is supporting Thai goods.	183 (69.32)	75 (28.41)	4 (1.52)	0 (0.00)	2 (0.77)
20. Community producer can earn more money from selling OTOP food products.	147 (55.68)	103 (39.02)	9 (3.41)	2 (0.77)	3 (1.14)

SA = Strongly agree A = Agree U = Undecided,
DA = Disagree SDA = Strongly disagree

Table 26 Number and percentage of non-intender and intender to buy OTOP food products classified by accessibility of OTOP food products

Accessibility of OTOP food products	Intention to buy OTOP food products	
	Non-intender N = 16 (%)*	Intender N = 248 (%)*
Price		
- Cheap	4 (25.00)	73 (29.44)
- The same	10 (62.50)	129 (52.02)
- Expensive	2 (12.50)	46 (18.55)
Accessibility of selling place		
- Easy to find	9 (56.25)	119 (47.98)
- Difficult to find	7 (43.75)	129 (52.02)
Selling place in your community		
- Near	6 (37.50)	87 (35.08)
- Far	10 (62.50)	161 (64.92)
Selling place in your work/education		
- Near	3 (18.75)	87 (35.08)
- Far	13 (81.25)	161 (64.92)

* Percent column

Table 27 Number and percentage of non-intender and intender to buy OTOP food products classified by information about OTOP food products

Information about OTOP food products	Intention to buy OTOP food products	
	Non-intender N = 16 (%)*	Intender N = 248 (%)*
Never receive information	3 (18.75)	32 (12.90)
Receive information	13 (81.25)	216 (87.10)

* Percent column

Table 28 Number and percentage of non-intender and intender to buy OTOP food products classified by types of information about OTOP food products that the respondents received

Types of information about OTOP food products	Intention to buy OTOP food products	
	Non-intender N = 13 (%)*	Intender N = 216 (%)*
Television		
- Received	9 (69.23)	175 (81.02)
- Not received	4 (30.77)	41 (18.98)
Radio		
- Received	5 (38.46)	80 (37.04)
- Not received	8 (61.54)	136 (62.96)
Newspaper		
- Received	7 (53.85)	126 (58.33)
- Not received	6 (46.15)	90 (41.67)
Magazines		
- Received	2 (15.38)	80 (37.04)
- Not received	11 (84.62)	136 (62.96)
Billboards		
- Received	6 (46.15)	99 (45.83)
- Not received	7 (53.85)	117 (54.17)
Leaflets		
- Received	4 (30.77)	60 (27.78)
- Not received	9 (69.23)	156 (72.22)
Word of mouth		
- Received	7 (53.85)	134 (62.04)
- Not received	6 (46.15)	82 (37.96)
Internet		
- Received	4 (30.77)	39 (18.06)
- Not received	9 (69.23)	177 (81.94)

Table 28 Number and percentage of non-intender and intender to buy OTOP food products classified by types of information about OTOP food products that the respondents received (cont.)

Types of information about OTOP food products	Intention to buy OTOP food products	
	Non-intender N = 13 (%)*	Intender N = 216 (%)*
Other information		
- Received	0 (0.00)	15 (6.94)
- Not received	13 (100.00)	201 (93.06)

* Percent column

Table 29 Number and percentage of cross tabulation between knowledge about OTOP food products and attitude towards OTOP food products

Level of attitude	Level of knowledge	
	Low N = 77 (%)*	High N = 187 (%)*
Attitude towards OTOP food products		
- Negative	42 (54.55%)	65 (34.76%)
- Positive	35 (45.45%)	122 (65.29%)

* Percent column

Table 30 Number and percentage of cross tabulation between knowledge about OTOP food products and experience in consuming OTOP food products

Level of experience	Level of knowledge	
	Low N = 77 (%)	High N = 187 (%)
Experience in consuming OTOP food products		
- No-experience	7 (25.93%)	20 (74.04%)
- Experience	70 (29.54%)	167 (70.46%)

Table 31 Number and percentage of cross tabulation between attitude towards OTOP food products and experience in consuming OTOP food products

Level of experience	Level of attitude	
	Negative N = 107 (%)	Positive N = 157 (%)
Experience in consuming OTOP food products		
- No-experience	16 (59.26%)	11 (40.74%)
- Experience	91 (38.40%)	146 (61.60%)

Table 32 Relationship between independent variables and the intention to buy OTOP food products separate by male

Variables	Male		p-value
	Non-intender N = 8	Intender N = 98	
Age groups (years)			0.1066
- 18 – 30	8 (10.26%)	70 (89.74%)	
- 31 – 50	0 (0.00%)	28 (100.00%)	
Education level			1.0000
- < Diploma's degree	2 (6.45%)	29 (93.55%)	
- ≥ Diploma's degree	6 (8.00%)	69 (92.00%)	
Occupation			0.0835
- Jobless	3 (20.00%)	12 (80.00%)	
- Have job	5 (5.49%)	86 (94.51%)	
Knowledge level			0.0206*
- Low	6 (16.22%)	31 (83.78%)	
- High	2 (2.90%)	67 (97.10%)	
Attitude level			0.2799
- Negative	5 (11.11%)	40 (88.89%)	
- Positive	3 (4.92%)	58 (95.08%)	
Accessibility level			0.4359
- Difficult to access	7 (9.21%)	69 (90.79%)	
- Easy to access	1 (3.33%)	29 (96.67%)	
Availability level			0.7098
- Non-available	4 (6.25%)	60 (93.75%)	
- Available	4 (9.52%)	38 (90.48%)	
Social support			1.0000
- Low	3 (8.82%)	31 (91.18%)	
- High	5 (6.94%)	67 (93.06%)	
Information			0.2539
- Non-exposed	2 (15.38%)	11 (84.62%)	
- Exposed	6 (6.45%)	87 (93.55%)	
Experience			1.0000
- No-experience	1 (9.09%)	10 (90.91%)	
- Experience	7 (7.37%)	88 (92.63%)	

*Statistical significant at p-value < 0.05

Note Use fisher's exact test

Table 33 Relationship between independent variables and the intention to buy OTOP food products separate by female

Variables	Female		p-value
	Non-intender N = 8	Intender N = 150	
Age groups (years)			0.6818
- 18 – 30	7 (5.79%)	114 (94.21%)	
- 31 – 50	1 (2.70%)	36 (97.30%)	
Education level			1.0000
- < Diploma’s degree	3 (4.35%)	66 (95.65%)	
- ≥ Diploma’s degree	5 (5.62%)	84 (94.38%)	
Occupation			0.2254
- Jobless	4 (8.89%)	41 (91.11%)	
- Have job	4 (3.54%)	109 (96.46%)	
Knowledge level			0.6805
- Low	3 (7.50%)	37 (92.50%)	
- High	5 (4.24%)	113 (95.76%)	
Attitude level			0.2258
- Negative	6 (9.68%)	56 (90.32%)	
- Positive	2 (2.08%)	94 (97.92%)	
Accessibility level			0.2466
- Difficult to access	4 (3.64%)	106 (96.36%)	
- Easy to access	4 (8.33%)	44 (91.67%)	
Availability level			0.7262
- Non-available	4 (4.44%)	86 (95.56%)	
- Available	4 (8.33%)	44 (91.67%)	
Social support			0.0177*
- Low	6 (11.32%)	47 (88.68%)	
- High	2 (1.90%)	103 (98.10%)	
Information			1.0000
- Non-exposed	1 (4.55%)	21 (95.45%)	
- Exposed	7 (5.15%)	129 (94.85%)	
Experience			0.1877
- No-experience	2 (12.50%)	14 (87.50%)	
- Experience	6 (4.23%)	136 (95.77%)	

*Statistical significant at p-value < 0.05

Note Use fisher’s exact test


APPENDIX B

QUESTIONNAIRES

INTENTION TO BUY OTOP FOOD PRODUCTS AMONG CONSUMERS IN NONTHABURI PROVINCE

Part 1: Knowledge of OTOP food products.

Instruction: Please tick (✓) in the blanket that appropriate with your answer.

Knowledge of OTOP food products	YES	NO
21. OTOP food products must show manufacturing date and expiry date.	()	()
22. The expired OTOP food products are safe to eat.	()	()
23. The colorful OTOP food products are safe food.	()	()
24. OTOP food products must have quality verification same as general food products.	()	()
25. OTOP food products such as preserved pork, dried durian, crispy rice do not have FDA mark.	()	()
26. Canned OTOP food products produced from the place that has GMP approval.	()	()
27. OTOP food products must have community product standard.	()	()
28. OTOP food products are food products that adopt local wisdom of community in production process.	()	()
29. Food products that pass the OTOP Product Champion contest are OTOP food products.	()	()
30. Food products that have  sign are OTOP food products.	()	()

Part 2: Attitude toward OTOP food products.

Instruction: Please tick (✓) in the blanket that appropriate with your opinion to the statement given below.

Statement	Level of your opinion				
	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
31. OTOP food products such as preserved pork, dried durian, crispy rice are more nutritious than general food products.	()	()	()	()	()
32. OTOP food products do not use good ingredients.	()	()	()	()	()
33. OTOP food products are 100% safe.	()	()	()	()	()
34. OTOP food products taste good and are clean.	()	()	()	()	()
35. Packaging of OTOP food products is beautiful and attractive to buy.	()	()	()	()	()
36. OTOP food products are well-known.	()	()	()	()	()
37. OTOP food products can not be export goods.	()	()	()	()	()
38. Government and private organization should support and promote OTOP food products.	()	()	()	()	()
39. Buying OTOP food products is supporting Thai goods.	()	()	()	()	()
40. Community producer can earn money from selling of OTOP food products.	()	()	()	()	()

Part 3: Enabling and reinforcing factors of consumers toward OTOP food products

Instruction: Please tick (✓) in the blanket that appropriate with your answer.

41. What is the price of OTOP food products as compared with general food products?

() Cheaper () Same () Expensive

- | | YES | NO |
|---|------------|-----------|
| 42. OTOP food products are easy to buy. | () | () |
| 43. Selling place of OTOP food products is at long distance from your living place. | () | () |
| 44. Selling place of OTOP food products is at long distance from your work/education place. | () | () |
| 45. There is enough selling place for OTOP food products. | () | () |
| 46. There have OTOP food products sell in your living place or nearby with in 5 kilometer. | () | () |
| 47. There have OTOP food products sell in your work/education place or nearby with in 5 kilometer. | () | () |
| 48. Your parent, spouse, children or relatives have bought OTOP food products. | () | () |
| 49. Your parent, spouse, children or relatives have suggested you to buy OTOP food products. | () | () |
| 50. Your parent, spouse, children or relatives have influenced your decision to buy OTOP food products. | () | () |
| 51. Your friends, neighbors and colleagues have bought OTOP food products. | () | () |
| 52. Your friends, neighbors and colleagues have suggested you to buy OTOP food products. | () | () |
| 53. Your friends, neighbors and colleagues have influenced your decision to buy OTOP food products. | () | () |

54. Have you eaten OTOP food products?

- Yes (**skip to no. 36**) No

55. The reason(s) that you never eat OTOP food products.

(can answer more than one)

- Price is expensive Difficult to buy
 Product is not good quality Other (**please specify**)....

56. Have you received the information about OTOP food products?

- Yes No (**skip to Part 4**)

57. Where do you get the information about OTOP food products?

(can answer more than one)

- Television Radio
 Newspapers Magazines
 Billboards Leaflets
 Word by mouth Internet
 Other (**please specify**).....

Part 4: Intention to buy OTOP food products.

Instruction: Please tick (✓) in the blanket that appropriate with your answer.

58. Do you intend to buy OTOP food products?

- Yes No
because..... because.....

59. Do you intend to buy OTOP food products to other?

- Yes No (**skip to Part 5**)
because..... because.....

60. You will buy OTOP food products for whom. **(can answer more than one)**

- Parent Brother/sister
 Spouse or children Relatives
 Friends or colleagues Neighbors
 Other (**please specify**).....

Part 5: General information of respondents.

Instruction: Please tick (✓) in the blanket that appropriate with your answer or fill answer in the space.

61. How old are you.....years.

62. Your gender

() Male () Female

63. Your highest education

() Finished primary school () Finished secondary school
() Finished high school () Finished vocational school
() Finished bachelor's degree () More than bachelor's degree

64. Your currently occupation

() Student () Housewife
() Labor () Government officer
() Business employee () Business owner
() Other (please specify).....

Thank you for your kindness to answer the questionnaire



BIOGRAPHY

NAME	Ms. Rajitphan Jantarach
DATE OF BIRTH	August 12, 1981
PLACE OF BIRTH	Lumpang, Thailand
INSTITUTION ATTENDED	Faculty of Pharmacy Silpakorn University, Thailand Bachelor of Science (Pharmacy) 1999 – 2004 ASEAN Institute for Health Development Mahidol University, Thailand Master of Primary Health Care Management 2006 – 2007
FELLOWSHIP	Self-support
PRESENT POSITION	Food and Drug Administration, Ministry of Public Health Nonthaburi, Thailand