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นางสาว วรรณกานต์ จรูญพรพงศ์

วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาวิทยาศาสตรมหาบัณฑิต

สาขาวิชาเภสัชศาสตร์สังคมและบริหาร ภาควิชาเภสัชศาสตร์สังคมและบริหาร

คณะเภสัชศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

ปีการศึกษา 2552 ลิขสิทธิ์ของจุฬาลงกรณ์มหาวิทยาลัย

FACTORS INFLUENCING BEHAVIOR OF PURCHASING FACIAL SKINCARE PRODUCTS

Miss Wannakan Jaroonponpong

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Science Program in Social and Administrative Pharmacy Department of Social and Administrative Pharmacy Faculty of Pharmaceutical Sciences Chulalongkorn University Academic Year 2009 Copyright of Chulalongkorn University Thesis Title

By Field of Study Thesis Advisor FACTORS INFLUENCING BEHAVIOR OF PURCHASING FACIAL SKINCARE PRODUCTS Miss Wannakan Jaroonponpong Social and Administrative Pharmacy Assistant Professor Tanattha Kittisopee, Ph.D.

Accepted by the Faculty of Pharmaceutical Sciences, Chulalongkorn University in Partial Fulfillment of the Requirements for the Master's Degree

longtee

Dean of the Faculty of Pharmaceutical Sciences

(Associate Professor Pintip Pongpech, Ph.D.)

THESIS COMMITTEE

anuchai This Chairman

(Assistant Professor Anuchai Theeraroungchaisri, Ph.D.)

Tanathe Killings Thesis Advisor

(Assistant Professor Tanattha Kittisopee, Ph.D.)

(Assistant Professor Puree Anantachoti, Ph.D.)

(Assistant Professor Saovaluck Jirathummakoon, Ph.D.)

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การโตอย่างรวดเร็วของอุตสาหกรรมเครื่องสำอางโดยเฉพาะอย่างยิ่งผลิตภัณฑ์บำรุงผิวหน้าดึงดูดให้ ผู้ประกอบการผลิตผลิตภัณฑ์มาสนองความต้องการของผู้บริโภคมากขึ้น ขณะที่ผู้บริโภคส่วนน้อยมากที่ทราบ ว่าผลิตภัณฑ์บำรุงผิวหน้าเหล่านี้ไม่มีข้อกำหนดที่ต้องได้รับกาตรวจสอบจากอย.ก่อนวางจำหน่าย ขณะเดียวกันผู้บริโภคมักไม่สนใจเรื่องความปลอดภัยของผลิตภัณฑ์บำรุงผิวหน้าเท่ากับคุณสมบัติในการบำรุง ผิวให้ดูดีขึ้น ปัจจัยต่างๆเหล่านี้ทำให้จำนวนของผลกระทบทางสุขภาพจากอันตรายของผลิตภัณฑ์เหล่านี้เพิ่ม มากขึ้นเรื่อยๆ สร้างความสูญเสียแก่บุคคลและลังคมในประเทศเป็นจำนวนมาก การศึกษานี้จึงมีวัตถุประสงค์ ในการหาปัจจัยที่ส่งผลกระทบต่อพฤติกรรมการเลือกซื้อผลิตภัณฑ์บำรุงผิวหน้าและเปรียบเทียบลักษณะที่ แตกต่างกันของกลุ่มผู้ซื้อผลิตภัณฑ์บำรุงผิวหน้าที่ปลอดภัยและกลุ่มผู้ซื้อผลิตภัณฑ์บำรุงผิวหน้าที่ไม่ปลอดภัย การศึกษานี้ใช้การเก็บตัวอย่างโดยการสุ่มตัวอย่างแบบสะดวก กับกลุ่มตัวอย่างที่เป็นผู้หญิงที่เคยมี ประสบการณ์ชื่อผลิตภัณฑ์บำรุงผิวอย่างน้อยหนึ่งชนิดในเวลา 6 เดือน จำนวน 300 คนมาตอบคำถามใน แบบสอบถามที่แบ่งเป็น 3 ส่วน ครอบคลุมปัจจัยที่ส่งผลต่อพฤติกรรมดังกล่าวทั้ง 8 ปัจจัย ผลการศึกษาพบว่า กลุ่มลูกค้าที่เลือกซื้อผลิตภัณฑ์บำรุงผิวหน้าที่ปลอดภัยจะมีอายุเฉลี่ย 23.1 ปีส่วนกลุ่มลูกค้าที่เลือกซื้อ ผลิตภัณฑ์บำรุงผิวหน้าที่ไม่ปลอดภัยจะมีอายุเฉลี่ย 21.8 ปี โดยช่วงอายุส่วนใหญ่อยู่ที่ 18-25 ปี เป็นนักศึกษา ระดับปริญญาตรี สถานภาพโสดและมีรายได้น้อยกว่า 5000 บาทต่อเดือน กลุ่มที่ซื้อผลิตภัณฑ์บำรุงผิวหน้าที่ ปลอดภัยส่วนใหญ่มักไปซื้อผลิตภัณฑ์ดังกล่าวที่ห้างสรรพสินค้าและรู้จักผลิตภัณฑ์ผ่านสื่อโทรทัศน์ ส่วนกลุ่ม ที่ซื้อผลิตภัณฑ์บำรุงผิวหน้าที่ไม่ปลอดภัยมักไปซื้อผลิตภัณฑ์ที่ตลาดนัดและรู้จักผลิตภัณฑ์ผ่านป้ายโฆษณา, คำแนะนำจากเพื่อนฝูงและคำขวนเชื่อจากคนขาย จากการศึกษายังพบความแตกต่างของคำเฉลี่ยอย่างมี นัยสำคัญทางสถิติระหว่างกลุ่มผู้ซื้อผลิตภัณฑ์บำรุงผิวหน้าที่ปลอดภัยและไม่ปลอดภัยของปัจจัยทัศนคติ การ รับรู้การควบคุมพฤติกรรม และปัจจัยเรื่องเพื่อน จากการวิเคราะห์ Logistic regression พบว่าปัจจัยการรับรู้ การควบคุมพฤติกรรมและเพื่อนมีความสัมพันธ์กับพฤติกรรมการซื้อผลิตภัณฑ์บำรุงผิวหน้าที่ปลอดภัยหรือไม่ ปลอดภัยอย่างมีนัยสำคัญทางสถิติที่ค่า odd ratio เท่ากับ 0.26และ1.81 ตามลำดับ การศึกษานี้ช่วยให้การ กำหนดวิธีการควบคุมผลิตภัณฑ์บำรุงผิวหน้าที่ไม่ปลอดภัยเหมาะสมมากขึ้นโดยเน้นการควบคุมที่ข้อมูลความ ประสิทธิผล ความปลอดภัย และงานวิจัยคุณภาพในโฆษณา จับตามองและทำการสุ่มตรวจผลิตภัณฑ์บำรุง ผิวหน้าที่จำหน่ายในตลาดนัดลย่างเป็นประจำ

กาควิชา เกล้ชศาสตร์สังคมและบริหาร ลายมือชื่อบิลิต 957 สาขาวิชา เกล้ชศาสตร์สังคมและบริหาร ลายมือชื่อ อ.ที่ปรึกษาวิทยานิพนธ์หลัก 22 ปีการศึกษา 2552 # # 5176855333 : MAJOR SOCIAL AND ADMINSTRATIVE PHARMACY KEYWORDS : PURCHASED BEHAVIOR / HEALTH BELIEVE MODEL / THEORY OF PLANED BEHAVIOR / THE KNOWLEDGE ATTITUDE AND PRACTICES THEORY / UNSAFE FACIAL SKINCARE

WANNAKAN JAROONPONPONG: FACTORS INFLUENCING BEHAVIOR OF PURCHASING FACIAL SKINCARE PRODUCTS. THESIS ADVISOR: ASSISTANT PROFESSOR TANATTHA KITTISOPEE, Ph.D., 100 pp.

The rapid growth in the cosmetic industry, especially with facial skincare products, had induced entrepreneurs to produce more skincare products to serve needs of customers while consumers slightly knew that the government did not require any mandatory testing for these products before launched to the market. At the same time, customers were not as interested in the safety information of facial skincare products as beauty effects. These factors were disturbed and added the rapid augment of health hazards that cause much loss to many people and to society in the country. So this research focused on the factors influencing of purchasing facial skincare products and endeavor to compare the characteristics of safe and unsafe facial skincare product purchasers. This research used convenient sampling method to enroll 300 women who had experience to buy at least a piece of facial skincare products within 6 months. Subjects were asked to complete the questionnaire which composed of eight influencing factors and behavior of purchasing facial skin care products.

The result found that safe and unsafe facial skincare product purchasers were 23.1 and 21.8 years old, respectively, with the range of 18-25 years old. They were student in bachelors' degree education level, and had income less than 5000 baths per month. Most of safe product purchasers bought products from department store and knew the product via television advertisements. Most of unsafe product purchasers bought products from Friday market and knew products via advertisement banner, words of mouth from friends and the seller's recommendation. There were statistically significant mean differences in Attitude, Perceived Behavioral Control and Friends factors between safe and unsafe product Logistic regression analysis showed that perceived behavioral purchasers. control(PBC) and friend factor were significantly associated with behavior of purchasing facial skincare product with odd ratio equal to 0.26 (95%CI=0.14-0.49) and 1.81 (95%CI=1.21-2.71), respectively. This study recommended that FDA or health care regulators should pay more attention on the information about effectiveness and safety and quality approved researches in the advertisement to consumers. Keeping eyes on and taking random sampling facial skincare products from Friday market should be regular scheduled.

Department : Social and Administrative Pharmacy Student's Signature.

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CHAPTER I INTRODUCTION

Rational and Background:

In Thailand, total cosmetic market costs have risen to higher than 25,000 million baht per year. The skin care product market alone has a market share of 6,000 million baht [1]. This market is not only for women because the market share for men's skin care products is growing quickly and the competition increases every year. In the year 2005 the facial skincare products for men had a prima facie case market value of 2,466 million baht, which was an increase of 25 percent [2].However, the damages done by cosmetics is not completely known. So it is an interesting topic to explore why people decide to purchase potentially dangerous skincare products, especially facial skincare products. So many things are being put into skincare products now that are carcinogenic and it is allowed because skincare products are not considered to be as serious as drugs or food.

The term skincare can cover a myriad of items relating to our skin. The skin performs several important duties for the body, as a covering it protects our bodies and has the remarkable ability to absorb applied products, partially or completely, into the bloodstream. In fact, up to 60% of the products we use on our skin are absorbed and deposited in the circulatory system [3]. Some skincare products can nourish our skin but others can cause damage because some manufacturers use harmful ingredients that would never be allowed to be taken orally, and they are absorbed into our blood circulatory system through our skin.

The growing lists of synthetic ingredients manufacturers add to their products are turning the regular skincare products into dangerous product that could cause cancer over years of sustained use. These synthetic ingredients are inexpensive, stable and have a long shelf-life. Some manufacturers like to use them, but although the majority of products appear safe in the short run the results from long-term use could be deadly. Modern skincare products contain a host of dubious ingredients that would be more at home in a test tube than on our faces. Coal tar colors, phenylenediamine, benzene, even formaldehyde, are just a few of the synthetic chemicals commonly included in shampoos, skin creams and blushes, [4] toxins which are absorbed into your skin with everyday use. Thus, there are an increasing number of women being exposed to deadly diseases through the everyday use of common skincare products bought over the counter. In addition, the frightening truth is there are no customer concerns about safety in skincare product use and the lack of government involvement has prompted companies who manufacture these types of products to not adhere to any testing standards and market products that are disposed to cause potentially damaging health risks.

Overall we can see that the rapid growth in the cosmetic industry, especially with skincare products, has induced entrepreneurs to produce more skincare products to serve the needs of customers, with most of these products being personal care and beauty products. However, consumers would be slightly unnerved to know that the government doesn't require any mandatory testing for these products before they launch to the market. As a matter of fact, a government agency found that cosmetic manufacturers could use just about any raw materials in their products and then put them on the market without needing approval by the FDA and there are no strictly enforced regulations in Thailand. At the same time, customers are not as interested in the safety information of skincare products as they are in the effects for beauty. These factors are disturbing and add to the rapid rising of health hazards that cause much loss to many people and to society in the countries. In Thailand, there is a lack of knowledge and research about the factors that drive the purchasing behavior for skincare products, especially facial products, which may cause health hazards.

This research used the factors from Theory of Planned Behavior (TPB), the Health Belief Model (HBM) and the Knowledge, Attitudes and Practices Theory (KAP) to explore the factors influencing behavior of purchasing facial skincare product.

TPB is used to rationally describe several human behaviors in different aspects. This theory argues that human behavior occurs from a group of factors such

as the behavior intention, the attitude toward behavior, subjective norms and perceived behavioral control [5].

HBM is developed to help predict compliance with preventive health recommendations, perceived value of an outcome, and expectations that one's behavior will lead to an outcome composed to be behavior [6]. This theory argues that human behavior occurs when people meet a minimum level of motivation and relevant information, a perception of vulnerability, a belief in efficacy of the intervention, and a belief that there will be no difficulties following the action. [7]

KAP is a theory that focuses on knowledge of the three variables which are knowledge (Knowledge), attitude (Attitude), and accepted practice (Practice) which may affect the social following behavior. Knowledge is a basic awareness. Most people get through the experience by learning from the response to stimulation then organize a knowledge structure of the combination of memory with psychological conditions. However, knowledge may also affect the expression of human behavior too.

The information from this study will promote more understanding in customers' behavior of purchasing safe and unsafe facial skincare products. In addition, the results can help to promote the instituting of appropriate regulations for unsafe facial skincare products. Data from the study can also be used to determine an effective way to protect customers from the health hazards which occur from unsafe facial skincare products.

Objectives of the Study:

1. To find the influencing factors that influences the behavior of purchasing facial skincare products.

2. To compare the characteristics of safe and unsafe facial skincare product purchasers.

Scope and Limitation of the Study:

Data was collected in the Amphor Muang, Nakhon Ratchchasima area. This area was chosen to collect data because Nakhon Ratchasima is a thriving province

that has the 3rd largest population in Thailand and it had many occurrences of unsafe skincare products being purchased, especially facial skincare products. Due to the budget, time constraints and unavailability of sample frame, this study used convenient sample by sampling peoples in this area. Although, convenience sampling approach is subject to bias because people select themselves as pedestrians on certain streets or as volunteers in response to posted notices, it provided some advantages. This research did not interested in working out what proportion of population gave a particular response but rather in obtaining an idea of the range of responses on finding influencing factors of purchasing facial skincare product. In addition, the factors influencing behavior of purchasing facial skincare product in this area was the interesting topic to Nakhon Ratchasima Public Health Regulation Office and there was a lack of adequate information to promote the appropriate controlling regulations too.

The Agreements Used in the Study:

The agreements set to be used in this study were as follows:

1. The facial skincare products lists put in the questionnaires were the skincare products which customers purchased during a last 6 month time frame.

2. The facial skincare products from foreign countries or unknown facial skincare products were excluded because of the inability to classify as a safe or unsafe product.

3. Any substances used as toiletries and make-up were excluded.

4. Facial skincare products that had been announced as dangerous cosmetics by the Thai FDA from August 2008 to October 2009 and facial skincare products which had unclear manufacturer information or any facial skincare products which cannot be considered as a safe skincare product were identified as unsafe skincare products in this study.

Definitions Used in the Study

A. <u>Behavior of purchasing facial skincare product</u> was defined as a person's actions in purchasing safe or unsafe facial skincare products. Behavior of purchasing facial skincare product was represented by number of safe facial skincare products

and number of unsafe facial skincare products which subject purchased them in the last 6 months.

B. <u>Facial skincare products</u> was defined as any substances in ready to use packages that people used for beauty proposes and were used only in the facial area. Any substances used as toiletries and make-up were excluded. Facial skincare products were divided into the following two categories: safe and unsafe facial skincare products.

-Unsafe facial skincare product was the facial skincare products which had been announced as dangerous cosmetics from the Thai FDA from August 2008 to October 2009. It included facial skincare products which had unclear manufacturer information or any facial skincare product which could not be considered as a safe facial skincare product.

-Safe facial skincare products were well-known counter-brand, had evidences of safety, and had no harmful result claims facial skincare products.

C. <u>Influencing factors</u> was defined as components which had the force to move a subject's behavior to bring about a particular result such as purchasing safe or unsafe facial skincare products.

D. <u>Perceived Behavioral Control</u> was defined as the volitional effect on the intention which a subject knew or felt they can control in the purchase behavior of the facial skincare product which results from a balance between the benefits of a facial skincare product and the harmful effects which can occur from that product.

E. Cue to action was defined as strategies to activate one's readiness.

F. <u>Attitude</u> was defined as a person's general feeling of favorableness or unfavorableness towards purchased facial skincare products.

G. <u>Social Norm</u> was defined as a significant person as a spouse and relatives who may have an impact on the subject's likelihood of purchased facial skincare products.

H. <u>Knowledge awareness</u> was defined as a basic awareness of information which one gets from the purchased facial skincare products experience about unsafe or safe facial skincare products. I. <u>Branding</u> was defined as subjects were acquainted with product's trademark, any symbol or some identity which identifies that facial skincare product.

J. <u>Product appearance</u> was defined as the facial skincare products' texture and their packaging.

K. <u>Skin health conscious</u> was defined as one's readiness to be concerned about skin health matters and social concern about their skin performance.

L. <u>Subjects</u> were women who had purchased facial skincare products during the last 6 months from any places.

M.<u>Demographic variable</u> was defined as the characteristics of a subject such as age, income, level of education, and marital status.

Significance of the Study

1. The updated epidemiologic information on safe and unsafe facial skincare products could used to adjust policies to protect consumers in Muang, Nakhon Ratchasima Province.

2. The informative data received from this research helped health-care provider in determining appropriate regulations to control this health-related behavior.

3. The comparative characteristics of safe and unsafe facial skincare product purchasers assisted policy makers to titrate strategies to control unsafe facial skincare used.

4. The current study extended the knowledge field of HBM, TPB and KAP.

ศูนย์วิทยทรัพยากร จุฬาลงกรณ์มหาวิทยาลัย

Figure 1: Conceptual Framework

Conceptual framework of factors influencing behavior of purchasing facial skincare products was created using the Health Belief Model, the Theory of Planned Behavior and Knowledge, Attitudes and Practices Theory the as a theoretical framework.



CHAPTER II LITERATURE REVIEW

Health hazards which occur from unsafe skincare especially facial skincare had been reported as a significant health problem. Many evidences support this problem was being found more often. To get a better understanding of these points, many published journals, books, reports and others information were critically reviewed. This literature review was undertaken by reviewing the relevant literature on 4 parts;

First part presented facts about the dangers from unsafe skincare products, second part presented the purchase behavior theory and literature, the third part presented theoretical concepts; health belief model which strongly related with dangerous behavior, theory of planned behavior which predicted behaviour by proposed that individuals would intend to perform a behavior when they evaluated it positively [8], Knowledge Attitudes and Practices theory concepts which might affect the social following. Finally, the last part focused on related researches that adapted these theories to explain the interesting behavior.

Part 1: Unsafe skincare products

Definition of dangerous cosmetics, dangerous skincare products and unsafe facial skincare products

The Food, Drug, and Cosmetic Act (FD&C Act) defined cosmetics by their intended use, as "articles intended to be rubbed, poured, sprinkled, or sprayed on, introduced into, or otherwise applied to the human body for cleansing, beautifying, promoting attractiveness, or altering the appearance"[9]. Among the products included in this definition were skin moisturizers, perfumes, lipsticks, fingernail polishes, eye and facial makeup preparations, shampoos, permanent waves, hair coloring, toothpastes, and deodorants, as well as any material intended for use as a component of a cosmetic product. According to that definition, the term cosmetics not only referred to women's makeup but to any of the following: skin-care creams, lotions, powders, sprays, perfumes, fingernail polish, permanent waves, hair coloring, deodorants, baby products, bath oils, bubble baths, and Mouthwash.

For Thailand, the Act of Cosmetic Legislation 1992 defined cosmetics as "articles intended to be rubbed, poured, sprinkled or sprayed on, introduced into, or otherwise applied to the human body for cleansing, beautifying, promoting attractiveness, or altering the appearance including other skincare products"

The meanings of cosmetics in these two countries were very similar because most of the health laws of Thailand had been initiated from those in the USA, including cosmetic legislation. As indicated above, skincare products were a sub-type of cosmetics that are applied to the skin for maintaining, nourishing and repairing the skin [10].

From above, unsafe facial skincare products in this research referred to the skincare products which were used in the facial area and had been announced as a dangerous cosmetic by Thai Food and Drug Administration (FDA) from August 2008 to October 2009[11]. More over, unsafe facial skincare products included the skincare products which had unclear manufacturer information or any facial skincare products which could not be considered as a safe facial skincare product too.

Skin damage from skincare products:

The most of people assumed that the ingredients found in beauty products had been thoroughly tested for safety well before they launch to the market. After all, the government has regulations in place for the water we drink, the food we eat and the air we breathe. One would assume that the FDA would also be overseeing the cosmetic industry to ensure the health and safety of consumers. In real, the FDA has little power when it comes to regulating the ingredients in skincare products [12].

The United Nations Environmental Program estimates that approximately 70,000 chemicals were in common use around the world with 1,000 new chemicals being introduced every year. Of all the chemicals used in cosmetics, especially

skincare products, the National Institute of Occupational Safety and Health had reported that nearly 900 are toxic although other groups attack that figure as being far too conservative[13].

The adverse effect of toxins is compounded over decades, confusing hormone receptors and slowly altering cell structure. Chemicals are transmitted into the bloodstream in a number of ways; powders have the least absorption, while oily solutions or those designed to increase moisture allow more of the chemical to be absorbed. So if compared to the toxins found in our air, soil and waterways, skincare products seem a trivial pursuit to many environmental health and consumer advocacy groups. But many of the same poisons that pollute our environment, from dioxins to petrochemicals, can be found in many of the skincare products [3].

Examples of dangerous ingredients and their effect

Skincare products are a part of daily regimen for most of people. People usually use it because it looks regular on their shelves so it seems reasonable to figure that they're safe to use, despite those unpronounceable ingredient lists.

Coal Tar

Seventy-one hair dye products evaluated were found to contain ingredients derived from coal tar. Several studies have linked long-time hair dye use to bladder cancer, non-Hodgkin's lymphoma and multiple myeloma. A research study conducted in 2001 by the USC School of Medicine found that women using permanent hair dye at least once a month more than doubled their risk of bladder cancer. The study estimates that 19 percent of bladder cancer in women in Los Angeles, California, may be attributed to permanent hair dye use. A link between hair dye and non-Hodgkin's lymphoma was established in 1992 when a study conducted by the National Cancer Institute found that 20 percent of all cases of non-Hodgkin's lymphoma may be linked to hair dye use.

While the FDA had not stepped in to prevent the use of coal tar in beauty products, it did advise consumers that reducing hair dye use would possibly reduce the risk of cancer.

Alpha Hydroxyl Acids (AHA) & Beta Hydroxyl Acids (BHA)

Alpha Hydroxyl Acids and Beta Hydroxyl Acids are commonly used in products advertised to remove wrinkles, blemishes, blotches and acne scars. With consumer complaints of burning, swelling and pain associated with AHA and BHA flooding into the FDA, the regulatory body began conducting its own research about 15 years ago. The findings linked the use of AHA and BHA with a doubling of UVinduced skin damage and a potential increased risk of skin cancer.

According to the Environmental Protection Agency, skin cancer has reached "epidemic proportions," with 1 million new cases occurring each year and one person dying every hour from the disease. The agency estimates that, at the current rate, one in five people will develop skin cancer over their lifetime. On May 21, 1992 the FDA issued a consumer warning that commercial "skin peel" products, advertised to remove wrinkles, blemishes, blotches and acne scars, could destroy the upper layers of the skin, causing severe burns, swelling, and pain. The FDA describes the following progression: "The skin initially reddens, as with sunburn, then darkens and finally peels away revealing what manufacturers claim will be "new skin." Treatments may be painful and leave permanent scars [14]. Since these initial warnings, the use of the active skin peel ingredients (AHAs and BHAs) has grown dramatically in the cosmetic industry. According to Environmental Working Group's 2004 assessment of ingredient labels for 7,500 personal care products, these acids are now added to one of every 17 products on the market, including nearly 10 percent of all moisturizers and six percent of all sunscreens. The acids are commonly used in products promoted as enhancing the youthful appearance of the skin. And the FDA has now studied the safety of AHAs and BHAs for 14 years, driven in part by the increasing use of these acids in cosmetics, as well as by the agency's estimate that AHAs and BHAs injure 1,000 people nationwide each year [15]. Most recently, the FDA's Office of Women's Health sponsored studies that have linked these ingredients to UV-induced skin damage and potential increased risks of skin cancer. The studies identified a doubling of UV damage to the skin among people using AHA-containing products [16].

According to the Environmental Protection Agency, skin cancer in the U.S. had reached epidemic proportions with more than one million new cases occurring

each year. At current rates one in five Americans is expected to develop skin cancer over their lifetime, and one American dies every hour from the disease. The use of acids in cosmetics may be contributing to current skin cancer rates. The use of these acids in sunscreens, where they appear in six percent of all products we assessed, is perplexing and counterintuitive, and may detract from the cancer protection sunscreen products normally provide.

The FDA's 14-year review process had culminated with the Agency issuing guidance on the need for product manufacturers to include sunburn warnings on their products. The guidance was finalized in 2005, and is voluntary, highlighting the agency's lack of meaningful authority over cosmetics, even on an issue that the Director of the FDA's Office of Cosmetics and Color found "alarming" [17]. Suggested warnings, a rare request from an agency that has in its history tackled only a few cosmetic safety issues in such depth, include language advising consumers to "Use a sunscreen and limit sun exposure while using this product and for a week afterwards".

The cosmetic industry's efforts to preserve the use of these acids in products began with an industry-sponsored study that showed increased UV-induced skin damage for product testers. The cosmetic trade association which called The Cosmetic, Toiletry & Fragrance Association (CTFA) presented this study to the industry's safety panel in 1996. According to the FDA, the panel approved the use of AHAs in cosmetics in June 1997 in spite of the study results and "in spite of serious safety questions submitted by a consumer group and a major manufacturer"[18]. The industry panel found that AHAs are safe for use in cosmetic products at concentrations less than or equal to 10 percent, at final formulation pHs greater than or equal to 3.5, when formulated to avoid increasing the skin's sensitivity to the sun, or when directions for use include the daily use of sun protection. For salon use, the panel found AHAs are safe for use at concentrations less than or equal to 30 percent, at final formulation pHs greater than or equal to 3.0, in products designed for brief, discontinuous use followed by thorough rinsing from the skin, when applied by trained professionals, and when application is accompanied by directions for the daily use of sun protection[19]. In their critique of industry panel recommendations, the

FDA implied that the safety panel's admonition to industry was less than useful to consumers, since AHA concentration and pH are generally not noted on all products. (The FDA does not require it.) The agency notes that consumers can request the information from the manufacturer. Comments on AHAs from the FDA's Director of the Office of Cosmetics and Color Dr. John Bailey, coming several years prior to the agency's issuance of suggested, voluntary warning language for cosmetic manufacturers, illustrates the problem inherent in a regulatory system that does not require premarket safety testing [20].

The FDA's study findings were presented to the Cosmetic Ingredient Review Board (CIR), but the panel approved the continued use of AHA and BHA "in spite of serious safety questions submitted by a consumer group and a major manufacturer," according to an FDA spokesperson. Even though one out of every 17 products analyzed by the Environmental Working Group (EWG) study contained either AHA or BHA (with nearly 10 percent being moisturizers and 6 percent sunscreens), the most that the FDA could do was suggest that products containing the ingredients carry a warning to use sunscreen and to limit sun exposure while using the product. A puzzling solution, since some of the products containing the dangerous ingredient is designed specifically for use in the sun.

Phthalates

Phthalates are industrial plasticizers widely used in personal care products to moisturize and soften skin, impart flexibility to nail polish after it dries and enhance the fragrances used in most products. Studies indicate that phthalates cause a wide range of birth defects and lifelong reproductive impairments, targeting every organ in the male reproductive system and causing problems ranging from low sperm count to serious genital deformities that can lead to an increased risk of cancer.

While the EWG only found four products with phthalate listed as an ingredient (all nail care products), there is no telling how many products actually contain it. The industry is not required to list fragrance ingredients or "trade secret" ingredients on products, and phthalates often fall into one of those two categories. In September 2004, the European Union implemented a ban on all beauty products containing

phthalates. California Assemblywoman Judy Chu has proposed a similar bill (AB 908) to be voted on later this year that would implement the same ban in the United States. Opponents of the bill, mainly the CTFA, argue that changing labeling processes would present a huge economic burden and could infringe on trade secrets. A similar bill failed just last year. Phthalates may be linked to developmental and reproductive health risks.

The industry says phthalates are safe, but some companies have dropped them in response to public concern. Essie, OPI, and Sally Hansen, for example, are removing dibutyl phthalate (DBP), which is used to prevent chipping, from nail polishes. Other big-name brands that have reformulated products to remove some phthalates include Avon, Cover Girl, Estée Lauder, L'Oréal, Max Factor, Orly, and Revlon[21]. Although phthalates show up in so many places, they're often absent from labels because disclosure is not always required. That's the case with fragrances. We tested eight fragrances and although none of the products included phthalates in its ingredient list, they all contained the chemicals. Some were made by companies that specifically told us their products were free of phthalates, and two even say as much on their Web sites. Companies that have eliminated phthalates are no doubt getting the message that people are paying more attention to ingredients. But public concern isn't the only factor driving the reformulations. Another reason is a European ban. Although the U.S. has outlawed just eight cosmetic ingredients, the European Union (E.U.) has banned more than 1,000.-For companies that make cosmetics, complying with E.U. rules makes good business sense. It's more efficient to sell the same product worldwide. It's also good PR. About 380 U.S. companies have publicly pledged their allegiance to cosmetic safety by signing the Compact for Global Production of Safe Health & Beauty Products, under which they voluntarily pledged to reformulate globally to meet E.U. standards.

The reformulation trend is likely to gain further momentum from the California Safe Cosmetics Act of 2005, which took effect only this year. Manufacturers that sell over \$1 million a year in personal-care products in the state must report any products containing a chemical that is either a carcinogen or a reproductive or developmental toxic agent. Among those that must be disclosed are

the phthalates DBP and di (2-ethylhexyl) phthalate (DEHP). California plans to make this information public, possibly on the Web, so some companies may choose to remove rather than report the ingredients [21].

Dibutyl phthalates (DBP)

Women of reproductive age should avoid using certain nail polishes, perfumes, and hair sprays containing an ingredient known to cause lifelong reproductive impairments in male rats, The Environmental Working Group, an environmental advocacy group, is cautioning. The ingredients in question are industrial chemicals that are used as plastic softeners and solvents in a wide variety of products such as Nail Polish, Perfume, Hair Spray, Toys, Detergents and Food packages

The warning was based in large part on a recently completed EWG study, in which the investigators found levels of the metabolized compound in women of childbearing age. "Women of reproductive age (20-40 years) were found to have significantly higher levels of monobutyl phthalate, a reproductive and developmental toxicant in rodents, than other age/gender groups. From a public health perspective, these data provide evidence that phthalate exposure is both higher and more common than previously suspected," the EWG investigators wrote. The investigators also speculated that the higher levels in women of reproductive age were due to the use of cosmetics such as perfume, nail polishes, and hair sprays. The extensive use of these products among women is probably leading to the inhalation and absorption of this chemical through the lungs, the investigators said.

Moreover, the report from the EWG entitled "Beauty Secrets" suggests that the substance may be responsible for the following problems, which have increased during the 1970s and '80s: declining sperm counts, increasing in sexual deformities, and increasing in testicular cancer.

The EWG says that getting any immediate regulatory action passed is virtually impossible, due to the fact that the associations are difficult to impossible to prove. Under the current regulations, the responsibility of proving that there is a public health threat from cosmetics primarily falls upon U.S. health authorities rather than the manufacturers [22].

Formaldehyde

This substance can found in nail polish, shampoos, soaps and many skin creams. But this potentially irritating preservative can be absorbed into the skin and cause allergic reactions, headaches, even asthma. The ingredient is often referred to as formalin. Its use in cosmetics is banned in Japan and Sweden. So consumer should aware by read labels carefully because products containing levels that might trigger an adverse reaction are required to carry a caution [24].

Propylene Glycol

This substance can found in suntan lotions, lipsticks and other cosmetics and toiletries. Its humectants properties are used to stop products from drying out. But it has also been linked to liver abnormalities and kidney damage. It is also known as a skin and eye irritant. So consumer should avoid it altogether and instead opt for alternative products containing glycerin or sorbitol [24].

Sodium Lauryl Sulfate

This substance can found in bubble baths, toothpastes, shampoos and lotions. This detergent, which has been found to enter the brain, heart and liver and impair the immune system, has been linked to eye irritations, skin rashes and allergic reactions. The biggest problems occur when it is mixed with other chemicals, like those typically used in toiletries, because it can form carcinogenic compounds. So the consumer can minimize the risks by using products with SLS sparingly and rinsing off quickly afterwards [24].

Talc

This substance can found in Makeup and body powders. Mineral talc has been linked to ovarian cancer and has been found to induce cancer in rodents. So should avoid using talc-based powders, especially on genital areas [24].

Methyl Methacrylate

This substance can found in nail products, primarily used in application of acrylic nails. This chemical has been linked to fungal infections, nail deformities and other problems. Prolonged exposure can lead to eye, skin and lung irritation, abnormal liver or kidney function, nervous system damage or reproductive problems. Consumer should avoid by use salons that use ethyl methacrylate which a safer bonding liquid instead [24].

Hydroquinone

This substance can found in whitening facial skincare product. This substance has been link to allergic irritation, alkaline white dot at contact area, darkness of skin, permanent vagueness [24].

Case reports on the purchasing behavior for unsafe skincare and facial skincare products.

In America, the research from The Environmental Working Group (EWG) which is a nonprofit public-interest research group known for making connections between chemical exposure and adverse health conditions has published a six-month long computer investigation evaluating the safety of over 10,000 personal care product ingredients and including 2,300 people. The investigation revealed the following information on personal care use:

-Each day, the average adult uses nine personal care products that contain 126 different chemical ingredients

-Over a quarter of a million women and one out of every 100 men use, on the average, 15 products a day

More over, the Personal Care Safety Assessment was found;

-Only 28 of the 7,500 products in the study were completely tested by the cosmetic industry's self-regulating panel

-An astounding one-third of all the products assessed contained at least one ingredient that fell under the classification of human carcinogen

-Almost 70 percent of the products reviewed were found to have ingredients that could be tainted with impurities related to cancer and other health complications

-Fifty four percent of the products violated the safety recommendations proposed by the self-regulating Cosmetic Ingredient Review Board (CIR). Some examples of unsafe ingredients in these products were discovered in diaper cream, products on the market for damaged skin such as chapped skin and other ingredients found in spray products

-Over the course of keeping watch over the cosmetic industry, the FDA has banned a mere nine personal care products [23].

In 2004, the Environmental Working Group (EWG) released the findings of a study it conducted regarding the safety of beauty care products. Compared approximately 10,000 ingredients found in 7,500 different products against lists of known and suspected chemical health hazards, the research revealed that the CIR was falling tragically short of ensuring consumer safety.

Of the 7,500 products tested by the EWG [24], a mere 28 had been evaluated for safety by the CIR. The EWG found that one in every 120 products analyzed contained ingredients certified by the government as known or probable carcinogens and that nearly one-third of the products contained ingredients classified as possible carcinogens. Astoundingly, 54 products even violated recommendations for safe use that the CIR had put in place, yet these products are still available for sale today.

Of the products tested, the worst offenders were those containing the cancercausing ingredients coal tar, alpha hydroxyl acids and beta hydroxyl acids, and those containing the hormone-disrupting ingredient, phthalate.

In Thailand, there are many cases suffering from the unsafe facial whitening product. For example, Professor Niwat Polnikorn MD., Dermatologist of Ramathibodi Hospital and on the Committee of Cosmetic and Dermal Surgery Institute said in the Kom Chud Luak Newspaper that at his clinic, there were many male patients suffering from vitiligo and blemishes caused by facial whitening products, approximately 1-2 cases per day [25].

Finally, the information from the Thai FDA states the number of patients from skincare products is rising more quickly every year with not less than 10,000 cases per year [26].

Part 2: Behavioral Theory and related literature.

There are many definitions of consumer behavior such as the actions of someone which directly relate to the affording of goods and services including past decision making processes which impact that act [31], behavior where consumers search for, purchase, evaluate, and use products and services which serve their wants or decision making behavior in purchasing and using products [32].

Consumer buying behavior also means behavior of the last customer, whether an individual or family, who buys goods and services for private consumption [33].

The questions which are used to determine the customer's behavior are the 6Ws and 1H which are composed of Who (characteristics of the consumer), What (purchase what-things that consumer want from product), Where (place of purchase), When (time of purchase), Why (objective of purchase to serve psychological and physiological wants), How (steps of the purchase, the number of purchase items and the influence on the person) [34]. This study emphasis on "What" (purchase what-things that consumer want from product: safe or unsafe facial skin care products).

Influencing factors which impacted the customer's purchase behavior [35] are:

1. Cultural factors which are composed of culture, sub-culture and social class

2. Social factors which are composed of reference groups which are divided into three levels (primary level, secondary level and inspirational level) and family

3. Individual factors which are composed of age and cycle of the product, occupation, business opportunities, life style and performance.

4. Psychology factors which are composed of motivation, perception, learning and beliefs, and attitude.

When consumer decided to buy something, the consumer decision process had passed these five levels as need of recognition, information search, alternative evaluation, purchasing decision, and post-purchase behavior [36]. Moreover, the consumer might stimulated to buy something by the marketing factors [32] which were the things that stimulate purchase decision of the consumer which are composed of product attributes, branding, packaging, labeling, product service support, marketing objective, marketing composition strategy, costs and organizational considerations.

The impact of situational factors on consumer purchasing behavior had been examined extensively in many researches. There are studies that have explored the impact of particular types of situational influences, including store atmospherics, music, colors, scent, store crowding, and merchandising [27]. Belk's framework of situational factors (1975) is a tool in analyzing the impact of situational variables on purchasing outcomes since it includes variables that might be controlled by retailers. This framework includes physical and social surroundings, task definition, temporal perspective and antecedent states. A few studies tested Belk's framework in a mall setting. Time and companionship were shown to be critical factors in purchasing behaviors of Hispanic customers in a U.S. mall setting [28]. Moreover, differences were found in shopping patterns across seasons and different countries [29].

The research of factors affecting the purchasing decision behavior for cosmetics at sales counters for a group of working women in the Bangkok area [30] found that many factors had an impact on the purchasing decision behavior for cosmetics such as the sales counter area for the cosmetics being on the first floor of the department store. The distributor's strategy was to develop new products, by making a variety of them which had good quality more visible in order to serve the demands of customers. Occupational factors significantly affected the purchasing decision behavior of that product group regarding frequency in buying and the amount of money spent for cosmetic products each times. The factor of the income salary

level per month of the women in that group in Bangkok significantly affected the amount of money spent each time.

However, the marital status factor significantly affected only the behavior of the purchasing decision. Moreover the attitude about cosmetics is significantly related to the purchasing decision behavior for cosmetics at sales counters regarding the amount of money spent for cosmetic products each time. The other attitude which is significantly related to the purchasing decision behavior for cosmetics at sales counters is perception, which gives a reason to buy the cosmetic product. The purchasing decision behavior of this group of working women in the Bangkok area was to buy face cleansing and face moisturizers with a frequency to buy-two to three times each six months. The amount of money spent for cosmetic products each time was about 1,500 baht. The target group was not specific about which cosmetics they would buy however, running out of the cosmetic was the first reason to buy. Only the sales promotion of the marketing communication factors affected the spending of money for cosmetics at sales counters for this group of working women in the Bangkok area.

Part 3: Theoretical concepts.

3.1 The Health Belief Model (HBM)

The Health Belief Model begins with assessment of the individual's perception of risk, then explores their beliefs concerning a given risk behavior and consequence, and proceeds through their recognition of the benefits of taking action, barriers to the action, and internal and external cues to such actions.[37]

This theory was developed to help predict compliance with preventive health recommendations [6]. The theory tells about the perceived value of an outcome along with expectation that one's behavior will lead to an outcome of equal behavior.

In order to comply, people need the following as a minimum level of motivation and relevant information, a perception of vulnerability, a belief in the efficacy of the intervention, a belief that no difficulties following the action [7].

This theory is ready to take action equal to a person's perceived susceptibility to a particular illness (and its severity) and the internal (e.g. demographic, sociopsychological) or external (e.g. mass media campaign, advice, physician, etc.) factors are a stimulus to act including personal evaluation of benefits vs. barriers (i.e. a cost-benefit analysis in economic terms).

Many researches had applied this theory in to their studies. A meta-analysis by Janz and Becker reviewed of 46 studies, 18 prospective and 28 retrospective found that twenty-four studies examined preventive-health behaviors (PHB), 19 explored sick-role behaviors (SRB), and three addressed clinic utilization. Summary results provided substantial empirical support for the HBM, with findings from prospective studies at least as favorable as those obtained from retrospective research. Perceived barriers proved to be the most powerful of the HBM dimensions across the various study designs and behaviors. While both were important overall, perceived susceptibility was a stronger contributor to understanding PHB than SRB, while the reverse was true for perceived benefits. Perceived severity produced the lowest overall significance ratios; however, while only weakly associated with PHB, this dimension was strongly related to SRB. On the basis of the evidence compiled, it is recommended that consideration of HBM dimensions be a part of health education programming [38].

Moreover, the studied about beliefs/knowledge effects on exercise compliance of post coronary bypass patients of Tirrell and Hart, found that perception of barriers is usually more than perceived susceptibility in predicting exercise compliance and demographic factors not related to compliance [39].

In1980, Lindsay Reid and Osborn had studied HBM predisposition factors and age effects on fire fighter exercise behaviors and found that the greater the perception of susceptibility, the less the exercise participation [40]. Slenker studied about the jogging exercise. He found that "Perceived barriers" impact 40% of variance in jogging behavior whereas "Perceived barriers", health motivation, benefits of jogging, perceived complexity of jogging, perceived severity and susceptibility to disease, and cues to action impact 56% of jogging variance. This study can be used in order to help people identify and eliminate barriers (e.g. time, family, work) to exercising [41].

A study about obese and non-obese adolescents conducted by O'Connell, found that with obese, exposure to equipment and social approval of dieting impact 23% of exercise variance but with non-obese there are no significant relationships. The problems and possibilities of this study are instrument reliable and valid. [42].

Anyway, there are some limited of HBM. For example, Sonstroem said HBM was narrowly oriented and probably cannot deal with broad behaviors such as exercise. HBM was exclusive emphasis on illness avoidance precludes other possibilities which are not illness-oriented [43]

3.2 Theory of Planed Behavior (TPB)

This theory is the extension of the theory of reasoned action [44]. The theory of reasoned action was first introduced by Fishbein. This theory says that individuals are rational actors; Behavioral Intention is highly correlated with behavior. All factors affecting behavior are mediated through attitude, subjective norms and a causal chain which assume that behavioral beliefs and normative beliefs are linked to behavioral intentions and behavior via attitude and subjective norms.

The theory of planed behavior makes the addition of control to the theory of reasoned action (the extent to which internal and external things outside of our control affect our behavior). If one tries hard and has control over internal and external factors, he will be more likely to do the behavior. Internal factors affecting control are deficiencies in skills, abilities, knowledge and adequate planning whereas external factors affecting control are time, opportunity, and dependence on cooperation of other people.

This model tells about attitudes toward behavior and subjective norms also the impact of perceived behavioral control to intention and intention impact to behavior. Later modification of this theory said attitude toward behavior and subjective norms impact intention and intention impacts to behavior but perceived behavioral control also impacts behavior.

The examples of findings of this model as following;

Ajzen and Madden's study which found that the Theory of Planned Behavior influence factors are more than the Theory of Reasoned Action in class attendance and earning an "A" grade. But perceived behavioral control operated independently of the other two factors and therefore controls, alone, seems to influence behavioral motivation [45].

More over, Ajzen and Schifter, found the theory was successful in predicting intentions to lose weight but the theory was only moderately successful in predicting actual weight loss [46]. Nevertheless, the model looks promising but does not seem to have been used much in exercise settings. The advantage in adherence studies is that they directly address barriers to participation. Barriers are built into the model. This study utilized Ajzen's Theory of Planned Behavior to predict intention to purchase dangerous cosmetics. The predictive power of this theoretical model has been established in many social and health behavior studies [47, 48, 49].

The Theory of Planned Behavior, a modified version of the Theory of Reasoned Action [50], and an expectancy value model that addresses the problem of incomplete volitional control [51]. Ajzen proposed that behavior is best predicted by intention [52]. Intention is in turn determined by attitude toward the behavior (favorable or unfavorable), subjective norms (perception of social pressures to perform or not perform the behavior) and perceived behavioral control (perception of ease or difficulty of performing the behavior). Perceived behavioral control is also assumed to have a direct link to behavior. Persons' beliefs about the outcomes (outcome evaluations) influence their attitude. Persons' beliefs about what others who are important to them want them to do (normative beliefs) and the motivation to comply with what those others want influence their subjective norm.

Persons' beliefs about the availability of resources and opportunities necessary to achieve the behavior (control beliefs) and how each of those resources and opportunities facilitates the behavior (perceived facilitation) influence their perceived behavioral control. In summary, Ajzen proposed that individuals will intend to perform behavior when they evaluate it positively, believe that important others think they should perform it, and perceive it to be under their own control [53].

3.3 The Knowledge, Attitudes and Practices Theory (KAP)

This theory is a theory that focuses on knowledge of the three variables which are knowledge, attitude, and accepted practice of agencies which may affect the social following from receiving messages that the three types of changes will occur in a manner that is consistent when audiences receive a message; enabling knowledge, affect the attitude and the final result is the cause of action.

For some addition, this theory explains that Knowledge is a basic awareness. Most people get through the experience by learning from the response to stimulation (SR) then organize a knowledge structure of the combination of memory (data) with psychological conditions therefore, it is knowledge. Remembering to choose, consistent with their psychological state of knowledge is in the process. However, knowledge may also affect the expression of human behavior [54].

Knowledge is facts; truth is the information people receive and store collected from various experiences. People may accept or reject something very reasonable. People should know about the decision to include it. They need facts or information that supports and provides answers to their questions, explained to people understanding and good attitude on any one thing, as well as the awareness of different beliefs and values with [55]. Moreover, knowledge is a basic behavior. The recall may be seen or heard by the recall include the knowledge level of knowledge about facts, attitude refers to their feelings toward this subject, as well as any preconceived ideas they may have towards it, and practice refers to the ways in which they demonstrate their knowledge and attitudes through their actions [56]. Knowledge requires the understanding of certain elements which are understanding and retention because knowledge means the ability to remember something we already understand. So knowledge can make aware of the ability to remember and recall events or experiences[57].

Part 4: Related research.

From the research of Lajunan about social psychological models be used to promote bicycle helmet use among teenagers [58]. The subjects were 965 students, age between 12-19 years old from two secondary schools in Northem Helsinki, Finland. The objective of this study was to investigate the usefulness of the Health Belief Model (HBM), Theory of Planned Behavior, attitudes, personality and behavior and the Locus of Control model in understanding the intention to promote bicycle helmet use among bicycle helmet owners. The results showed that the TPB and LC models fitted the data well, whereas the fit of the HBM model was lower than the fit of the TPB and LC models. All components of the TPB and external LC orientation were significantly related to the intention to use a helmet. The TPB together with the LC model provide a promising theoretical framework for helmet use promotion campaigns.

The research about consumer attitudes and purchase intentions in relation to organic foods in Taiwan on moderating the effects of food-related personality traits [59] aimed to understand what motives determine the consumer's attitude to organic foods in Taiwan, which in turn influences the subsequent purchase intentions. The results with 470 subjects of this research indicated the use of Ajzens Theory of Planned Behavior (TPB) in explaining the consumer's organic foods choice behavior. Moreover, the findings suggest that the food-related personality traits of food euphorbia and food involvement exert moderating effects on the relationships between some of the food choice motives and the consumers' attitudes to organic foods. However, only food involvement exerts moderating effects on the relationships between the consumer's intentions to purchase organic foods and the antecedents of the TPB except for the subjective norm in this case.

Moreover, the study about testicular self-examination was a test of the Health Belief Model and the Theory of Planned Behaviors. [60] The aim of this study was to test the utility and efficiency of the theory of planned behavior (TPB) and the health belief model (HBM) in predicting testicular self-examination (TSE) behavior. A questionnaire was administered to an opportunistic sample of 195 undergraduates aged 18–39 years. Structural equation modeling indicated that, on the basis of all the fit indices, the TPB model was the better model. However, the quality of the models was very similar. The TPB explained 50% of the variance in intention and 22% in behavior while the HBM (with self-efficacy) accounted for 56 and 21%, respectively. Self-efficacy was the most important predictor of TSE behavioral intention across both models. These findings contribute to the growing literature on the testing of multiple models in the health psychology domain.

The Theory of Planned Behavior was also used in the study of understanding soft drink consumption among female adolescents [61]. This research identified factors
that influence regular soda consumption among 707 female students, aged 13–18 years, attending North LosAngeles County public high schools. Participants completed a group-administered Theory of Planned Behavior based questionnaire. This research found that attitude, subjective norms and perceived behavioral control had statistically significant positive associations with intention, and were each significant predictors of intention to drink regular soda and together explained 64% of its variance. The strongest predictor was attitude, followed by perceived behavioral control and subjective norms. These results suggest that efforts to reduce soda consumption among female adolescents should include parents and friends. It is also important that soda should not be excessively available at home or widely accessible to teenagers at schools. Healthy eating messages for adolescents need to be developed and incorporated into existing and future campaigns to reinforce the perception that there are other healthier drinks that quench thirst and that taste good as well.

The research predicting Iron-Fortified Soy Sauce (FeSS) Consumption Intention on the application of the Theory of Planned Behavior and Health Belief Model [62] found that this model explained 35% to 55% of the variance of behavioral intention. FeSS knowledge directly and indirectly affected the intention to buy FeSS. The behavioral intention was also impacted by women's health values and the perception of perceived susceptibility and severity of iron deficiencies disease through the behavior identity and attitudes toward behavior. Cues, as an external factor, greatly affected the intention. The external control belief was a weak factor affecting intention. This information can be used to integrate TPB and HBM and be use as a guideline for this research.

คุนยวทยทรพยากร จุฬาลงกรณ์มหาวิทยาลัย

CHAPTER III METHODOLOGY

The preceding chapter mentioned about the literatures reviewed. It revealed the hazard form unsafe facial skincare products and the regulation, the purchase behavior and behavioral theory, noticeably, HBM, TPB, KAP theories and the related researches. The objectives of the current study were to find the influencing factors that influence the behavior of purchasing facial skincare products and to compare the characteristics of safe and unsafe facial skincare product purchasers.

Study Design

This study was a cross-sectional study. Convenient sampling was used to carry out in the four areas in the Amphur Muang, Nakon Ratchasima province. There were Karat Night Bazaar, Ban Pradok Friday Market, Ban Kao Night Bazaar and Save One Market. Self-administered questionnaires were used to collect the data. The staffs were available for clarifying the questionnaires instruction, obviously the questions and checked for the completeness of data before leaving the respondents.

Study Period

Accorded to the observation, the study period was set from of 1 November 2009 -31 April 2010

Study Perspective

This health-related behavior study was performed from the customers' point of view. This perspective was proposed because the express of behaviors were mainly based on individual.

Study Process

Step 1: Planned and prepared the research studyStep 2: Data collection methodsStep 3: Data analysis

Step 4: Reliability test and factor analysis

Step 1: Planned and Prepared of the Research Study

1.1 Reviewing literatures and behavior theories relevant to the study.

This step's goal was contributed to the information and knowledge about the hazard which occurred from unsafe facial skincare products, the related purchase behavior, behavior theories and the models that were used to explain and identify the factors influencing behavior of purchasing facial skincare products. This step also involved determining the selected study set and observed any theories that could be used to explain the interesting behavior.

1.2 Planning and designing the study process

After obtained sufficient primary data, the next step was to assemble them together, then designed and planed the research to be performed. The possible direction was determined based on previous studies, likely procedures, suggestions from experts and available information at the research site.

1.3 Operationalization of study concepts

Operationalization of study concepts using the conceptualization as addressed in the chapter 1. More over, Content validity was tested by experts. Reliability test was conducted by using a pilot project with 20 samples and evaluated them by using the α -coefficient of Cronbach [63]

$$\alpha \qquad = \qquad \left[\frac{n}{n-1}\right] \left[1 - \frac{\sum si^2}{s_0^2}\right]$$

When α

coefficient of consistency confidence

n = number of questions in the questionnaire

 $\sum s_i^2 =$ question variable

s_0^2 = sum of question variables

Cronbach's alpha should be more than 0.70 which is the acceptable value.

1.4 Operationalizing the concept measurements

Operationalizing the concept measurements and integrating them into the questionnaire as shown in the appendix C.

1.5 Measurement's tools

After all processes, the researcher designed tools for data collections. Questionnaires were composed of three parts as shown below:

Part 1: Behavior of purchasing facial skincare products.

Part 2: The model's components (influencing factors).

Part 3: Demographic characteristics of subject.

The questionnaire was tested content validity by thesis committee. Thus, Questionnaire's reliability was tested by Cronbach's alpha. Both results were shown in table 1 as below;

Table 1: The	e Cronbach's	s alpha o	of each	influencing	factor.
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E.	Component	RT.
Influencing factors	(Question No.)	Cronbach's alpha
60	v	
Attitude	1,2,3,4,5,15,16	0.782
Social Norm	19,20,21,22,23	0.756
Skin Health Conscious	17,18	0.607
Perceived Behavioral Control	7,12,13,14,32	0.765
Cue to action	6,8,9,10,11	0.818
Knowledge Awareness	27,28,29,30	0.660
Product Appearance	33,34,35	0.767
Branding	24,25,26	0.888

More over, 8 availability well trained staffs were divided as 2 staffs per collected place at Karat Night Barzar, Ban Pradok Friday Market, Ban Kao Night Barzar and Save One Market place. Thus, the staffs were trained by researcher as the staff must to clarifying the questionnaires instruction to subjects before completed data, must told every subjects that they must refill the name of purchased facial skincare products as much as they remember, then chose the most used facial skincare product to refill in the questionnaire and answer all of the followed question by thought about it only. More over, the staff team must obviously the questions and checking the completeness of data before leaving the subjects.

The Research Setting

This research was conducted since 1 November 2009 to 31 April 2010. The research site was on Amphor Muang, Nakhon Ratchasima Province because this province had good economics that could promote widely spread of unsafe facial skincare products especially at any Friday market that distributes all over the municipal area (Amphor Muang). Nakhon Ratchasima province is the third largest province which located at the northeast of in Thailand.

Study population

There were 86,830 peoples. (information is from the register of private statistic works, Nakhon Ratchasima City municipal February, 2010). This research, however, targeted only women in the municipal area of Muang, Nakhon Ratchasima because the nature of facial skincare use occurred mostly in women.

Sample size

The sample size required in this research was calculated by the formula of Polit [64] which was the most widely used method for multiple regression analysis. To calculate multiple regressions, the estimated population effect size is as follows:

$$\gamma = \frac{R^2}{1 - R^2}$$

The value of R^2 was assumed by using the effect size between small ($R^2 = 0.02$) and moderate ($R^2 = 0.13$), which was 0.07. Next, the following formula was applied:

$$N = \frac{L}{\gamma} + k + 3$$

Where, N = estimated number of subjects needed

- L = table value for the desired alpha and power k = number of predictors
- r = estimated effect size

This research plans to examine eight factors influencing behavior of purchasing skincare products, with a moderate to small effect size from the literature review (R^2 between 0.02 to 0.13 where I choose 0.07), a power of 0.80 and an alpha of 0.05. With $R^2 = .07$, the estimated population effect size (γ) is 0.075(0.07 : 0.93). According to the Power Analysis Table for Multiple Regression, the value of L is equal to 18.81. Therefore,

$$N = (18.81 / 0.075) + 8 + 1 = 259.8$$

Finally, a sample size of this research was about 300 women in Muang, Nakhon Ratchasima municipal area. This sample size was needed to detect R^2 of 0.07, eight predictors, 5% chance of a Type I error, and 20% chance of a Type II error.

1.6 The Ethics Committee

This thesis had already approved by the Faculty Ethic Committee on 1 April 2010. Data was collected after the approval.

Step 2: Data Collection Methods

This research used a cross-sectional approach method during the period of 1 April 2010 to 31 April 2010. Self-administered questionnaires were used. It composed of three parts as shown below:

Part 1: Purchasing behavior of skincare products.

Part 2: The model components (factors influencing behavior of purchasing facial skincare products).

Part 3: Demographic characteristics of the subject.

Convenient sampling at random was occurred at Karat Night Barzar, Ban Pradok Friday Market, Ban Kao Night Barzar and Save One Market place in municipal area at Nakhon Ratchasima.

First of all, the staff must ask subject. If she had at least one facial skincare product purchased experience in the last six months, she would include into the study. Then data collectors gave the self-administered questionnaire to her and clarified the questionnaires instruction. When subject had already completed the questionnaire, the staff must check the completeness of questionnaire before left the subject. One questionnaire had excluded from the study due to the missing data. Thus, there were 299 data entered into the SPSS program for classifying and analyzing process.

Step 3: Data Analysis

Subsequent to data collection, all information was analyzed by the SPSS program to search the correlation and relations.

Data was entered into the Statistical Package for the Social Sciences statistical software (SPSS, Inc., Chicago, version 16). Simple descriptive statistics (t-test) was used to analyze the mean and frequency of the data. Central tendency measurements and 95% confidence intervals were utilized to summarize the distribution of variables and the invariability. The Multiple Regression Analysis was used to examine the associations among the influencing factors and behavior of purchasing facial skincare products. P value of 0.05 is considered significant for all statistical tests conducted.

Descriptive statistics

In this part, general characteristics of the subject such as demographic characteristics, the descriptive data of each item and the behavior of purchasing facial skincare products data were described. The results were presented by mean, standard deviation, frequency, percentage and t-test score.

Inferential statistics

All data was reported in the aggregate, and then the main hypothesis was generated from the conceptual framework.

Research Questions: What were the influencing factors that influence the behavior of purchasing facial skincare products?

This research questions consisted of nine independent variables and one dependent variable which was purchase behavior of facial skincare products. The purchase behavior had reflexes by number of safe facial skincare product and number of unsafe facial skincare product, therefore, researchers assigned Multiple Regression Analysis (with 95% confidencetial interval) to identify these social cognitive factors that influence the behavior of purchasing facial skincare products

Step 4: Reliability test and factor analysis

We did not run the factory analysis in the pilot study because the number of sample was not enough. Therefore, the exploratory factor analysis was conducted from the actual data received. After conducting exploratory factor analysis, the result found only 7 factors. We decided to rearrange our conceptual framework which showed in figure 2 and new definitions showed as below:

1. <u>Attitude</u> was defined as a person's general feeling of favorableness or unfavorableness towards purchased facial skincare products. Attitude toward safe or unsafe facial skincare purchasing was operationalized into 8 items as suggested by factor analysis.

Question Number 1: Buying this facial skincare product is very valuable. Question Number 3: Using this facial skincare make me look good. Question Number4: Using this facial skincare product makes me feel more confident.

Question Number 5: Using this facial skincare product makes me attractive.

Question Number 15: Using this facial skincare product will slow down skin degeneration.

Question Number 16: This facial skincare product makes skin healthier.

Question Number 17: Not having beautiful facial skin make me not accepted in society.

Question Number 18: Having healthy facial skin will win have half of a game.

2. <u>Cue to action</u> was defined as strategies to activate one's readiness. As a results of factor analysis, there were 4 items represented cue to action as following.

Question Number 13: I buy this facial skincare because it is inexpensive

Question Number 9: I buy this facial skincare product because of the discount promotion.

Question Number 10: I buy this facial skincare product because of having something extra promotion.

Question Number 11: I buy this facial skincare product because of having a discount coupon

3. <u>Perceived Behavioral Control</u> was defined as the volitional effect on the intention which a subject knew or felt they can control in the purchase behavior of the facial skincare product which resulted from a balance between the benefits of a facial skincare product and the harmful effects which could occur from that product. Seven items represented perceived behavioral control as suggested by factor analysis were as below:

Question Number 12: I decide to buy this facial skincare by myself.

Question Number 32: I am confident that this facial skincare is certainly safe.

Question Number 27: Before buying this facial skincare product, I search its effectiveness information.

Question Number 28: Before buying this facial skincare product, I search its safety information.

Question Number 24: I buy this facial skincare product because I know its brand.

Question Number 25: I buy this facial skincare product because it is a well-known brand.

Question Number 26: I buy this facial skincare product because it has quality approved researches.

4. <u>Social Norm</u> was defined as a significant person as a spouse and relatives who may have an impact on the subject's likelihood of purchased facial skincare products. As suggested by factor analysis, the concept was operationalized into 3 items as the following:

Question Number19: My husband or boyfriend makes me buy this facial skincare product.

Question Number 20: My parent and relatives make me buy this facial skincare product.

Question Number 21: My brother or sister makes me buy this facial skincare product.

5. <u>Knowledge awareness</u> was defined as a basic awareness of information which one gets from the purchased facial skincare products experience about unsafe or safe facial skincare products. It was operationalized to 3 items as a result from factor analysis.

Question Number 2: I feel pleasure after buying this facial skincare product.

Question Number 29: The facial skincare products available in Friday market have tendency to be unsafe products.

Question Number 30: All facial skincare products must be approved by Thai FDA before launching into the market.

6. <u>Availability</u> was defined as the convenience and easiness to purchase facial skincare products. As a result of factor analysis, there were only 2 items presented the availability as showed below:

Question Number 7: I conveniently buy this facial skincare around my neighborhood.

Question Number 14: I can buy this facial skincare at anywhere.

7. <u>Friends</u> were defined as people who live around the subject and may have an impact on the subject's likelihood of purchased facial skincare products. Two items presented the concept of friend as the factors analysis suggested.

Question Number 22: My friends make me buy this facial skincare product. Question Number 23: I buy this facial skincare product because people around me get good results from using it.

Our independent variable (number of purchasing safe or unsafe facial skincare product) shows non-normal distribution, thus, we used another variable which were the question for chose safe or unsafe facial skincare product as the dependent variable. Therefore, the operationalization of behavior of purchasing facial skincare product concept was rearranged to be as a person's actions in purchasing safe or unsafe facial skincare product.

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Figure 2: Conceptual Framework



The new reliability of questionnaire was tested using Cronbach's alpha. The results were shown in table 2 as below;

	Component	
Influencing factors	(Question No.)	Cronbach's alpha
Attitude	1,3,4,5,15,16,17,18	0.915
Cue to action	13,9,10,11	0.841
Perceived Behavioral Control	12,32,27,28,24,25,26	0.891
Social Norm	19,20,21	0.851
Knowledge awareness	2,29,30	0.585
Availability	7,14	0.515
Friends	22,23	0.597

The new operationalization of the concept of behavior (purchasing facial skincare products) had 2 attributes which were purchasing safe facial skincare products and unsafe facial skincare products, therefore, researcher assigned Mutiple Logistic Regression Analysis (with 95% confidencetial interval) instead of Multiple Regression Analysis as result showed in chapter 4.



CHAPTER IV RESULTS

As early mentioned, behavior of purchasing unsafe facial skincare product was recognized as a problem that potentially harm individual health. Moreover, it made economic and social lost presented in many literatures as presented on chapter II. Many attempts had devoted to figure out the influencing factor on behavior of purchasing facial skincare product. With these disclosures, healthcare policy personals were able to create appropriate regulation to avoid risks and lost. However, this study had sought to find the factors that influence behavior of purchasing facial skincare products and to compare the characteristics of safe and unsafe facial skincare product purchasers. As research methods were detailed in preceding chapters, this chapter presented end results of this research. Overall, it was generally divided into 4 parts as follow;

1. Demographic and behavior of purchasing facial skincare products.

2. Frequency and descriptive data of the influencing factors.

3. Relationship between behavior of purchasing facial skincare products and influencing factors.

4. Logistic regression analysis of purchasing behavior of facial skincare products and influencing factors.

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Part 1: Demographic and behavior of purchasing facial skincare products.

A total of 300 subjects from Karat Night Bazaar, Ban Pradok Friday Market, Ban Kao Night Bazaar and Save One Market were recruited into the study. They were enrolled based on inclusion criteria as women who had at least one facial skincare product purchased in the last six months. The period of data collection was from 1 April 2010 to 31 April 2010. After collecting data, one questionnaire had been excluded because of missing data. So, there were 299 data entered into the study. Data could divide into 205 safe purchasers and 94 unsafe purchasers. Demographic and purchasing behaviors of all subjects were summarized in percentage and chi-square value among purchasing group as shown in table 3 and 4.

1 6556	Unsafe purchased	Safe purchased	· · · · · · · · · · · · · · · · · · ·			
Demographic characteristic	group (%) N=94	group (%) N= 205	Pearson Chi- Square	Significant (P-value)		
Education level						
• Lower than high school	10.6	9.3				
• High school	19.1	12.2				
• Certificate/vocational	12.8	9.3	5.303	0.258		
• Bachelor's degree	56.4	65.9		9		
• Higher than Bachelor's degree	1.1	3.4	0.012	Ň		
Occupation	1 T N		121	5161		
• Student	70.2	71.7				
Government official	3.2	4.4				

Table3: Demographic characteristics and chi-square test of safe and unsafe facial skincare purchasers

	Unsafe purchased	Safe purchased	Chi-so	luare test
Demographic characteristic	group (%) N=94	group (%) N= 205	Pearson Chi- Square	Significant (P-value)
• Employee	22.3	15.1	3.985	0.408
Business owner	3.2	6.8		
State Enterprises	1.1	2.0		
Income per month	//			
• Lower or equal to 5000 Baths	54.3	54.6		
• 5001-10000 Baths	31.9	26.3		
• 10001-15000 Baths	7.4	7.8	5.705	0.336
• 15001-20000 Baths	4.3	2.4		
• 20001-30000 Baths	1.1	4.9		
• More than 30001 Baths	1.1	3.9		
Marital status				
• Single	85.1	82.0	~	
Marriages	12.8	16.6	Ð.	
• Separate	1.1	0.0	3.333	0.504
• Divorced	1.1	1.0		
• Widowed	0.0	0.5		

Table 3 showed demographic characteristic between 2 purchaser groups which were safe facial skincare product purchaser and unsafe facial skincare product purchaser. Most of subjects were 20 years old and 79.4 percentages of subjects were teenager in the age of 18-25 years old. They were students in the bachelor degree education and had income less than 5,000 baht per month. Chi-square test was conducted. It was founded that there was no different in demographic characteristic between these 2 groups except age which had significant difference between

purchased groups (t-test significant equal to 0.03). The average age of safe and unsafe facial skincare product purchaser group was 23.1 ± 6.8 and 21.8 ± 3.5 years old, respectively. T-test showed that average age of these two groups were statistically significant different (p=0.03).

	Unsafe	Safe	Chi-squ	iare test
Domain	purchased	purchased	Pearson	significant
	group (%)	group (%)	Chi-	(P-value)
	N=94	N=205	Square	
Purchased place				
• Department store	14.9	49.8		
• Friday market	60.6	3.9		
• Convenient store	3.2	14.6	1.297	0.000*
Grocery shop	16.0	18.0		
Dermatological clinic	0.0	4.4		
• Catalogue or direct sale	4.3	4.9		
Drug store	1.1	4.4		
Advertisements media				
• Television	18.1	37.1		
Magazines	23.4	28.8		
• Internet	21.3	16.1	30.024	0.000*
Radio	8.5	15.1		5
• Other media	28.7	2.9		
Influencing person	6			0
• Spouse or boyfriend	3.2	4.9		125
• Fiends	57.4	38.5		
• Co-worker	2.1	2.9		
• Family	6.4	12.2	20.095	0.005*

Table4: Chi-square test for purchase place, media, and influencing persons between safe and unsafe facial skincare product purchaser.

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	Unsafe	Safe	Chi-square test	
Domain	purchased	purchased	Pearson	significant
	group (%)	group (%)	Chi-	(P-value)
	N=94	N=205	Square	
Doctor	1.1	4.9		
• seller	11.7	5.4		
• Myself	18.1	26.8		
• Advertisement	0	4.4		

Table 4 showed that most of safe facial skincare products purchasers went to buy products at department store and gave more attention to television advertisements while most of unsafe facial skincare products purchasers went to the Friday market and gave more attention to other media such as advertisement banner, word from mouth to mouth and the seller's recommendation. So, the most influencing person for both groups was friends. This result and factor analysis confirmed researcher's decision to separate friends as sole factor from social norm shown in the conceptual framework. From chi-square test, the result also showed that there were statistically significant associated among purchased place, advertisement, influencing person with behavior of purchasing facial skincare products (p-value<0.001, <0.001, and = 0.005, respectively).

The result also found that most of safe facial skincare product purchasers (47.3%) bought 1 item of safe facial skincare product and most of unsafe facial skincare product purchasers (61.7%) bought 1 item of unsafe facial skincare product during the last 6 months. However, safe facial skincare product purchasers still bought 1 and 2 items of unsafe facial skincare product during the last six months (8.3% and 0.5%, respectively). The unsafe facial skincare products found in this study were Madam, Kunaim (From Friday market), White face cream, Rose cream, Dr.jura cream, Richy cream, Pop cream, Seaweed cream, and Tantawan cream. There was a significant different between safe and unsafe purchasers in term of number of unsafe facial skincare product buying (chi-square test, p-value<0.001).

Part 2: Frequency and descriptive data of the influencing factors.

The items represented social cognitive factors in the questionnaire were categorized into 7 groups using factor analysis were showed in the new theoretical framework which were attitude (8 items), knowledge awareness (3 items), social norm(3 items), friends(2 items), availability(2 items), perceived behavioral control(7 items), and cue to action(4 items). Agreement Likert Scale ranging from 1-5 which 1 represented the strongly disagree and 5 represented the strongly agree. The agreement level of each item was reported by mean and standard deviation. Moreover, independent t-test was used to compare the mean difference between purchaser groups as shown in table 5 and 6.

Influencing factors	Safe purchased group (Mean ± S.D.)	Unsafe purchased group (Mean ± S.D.)	t-test significant
Attitude	3.35±0.74	3.13±0.99	0.05*
Knowledge awareness	3.99±0.62	3.84±0.77	0.107
Social norm	2.68±0.95	2.73±0.89	0.66
Cue to action	2.75±0.89	2.86±0.32	0.32
Friends	3.01±0.89	3.32±0.74	0.00*
Availability	3.71±0.70	3.56±0.70	0.08
Perceived behavioral control	3.78±0.65	3.32±0.61	0.00*

Table 5: Mean, standard deviation, and t-test of each influencing factor.

Mean agreement scores of attitude, friends and perceived behavioral control in safe facial skincare product purchaser group were statistically significantly higher than unsafe facial skincare product purchaser group. In contrast, mean agreement score of friend influencing the purchase in safe facial skincare product purchaser group were statistically significant lower than unsafe facial skincare product purchaser group.

Influencing factors	Safe purchased group (Mean ± S.D.)	Unsafe purchased group (Mean ± S.D.)	t-test significant
Attitude	N. C.		
Question Number 1.	3.62±0.83	3.22±0.94	0.000*
Buying this facial skincare	i -		
product is very valuable.	7		
Question Number 3.			
Using this facial skincare make	3.53±0.84	3.32±1.04	0.084
me look good.			
Question Number 4.			
Using this facial skincare product	3.40±0.90	3.20±1.12	0.118
makes me feel more confident.	A CHOM		
Question Number 5.			
Using this facial skincare product	2.98±1.06	2.91±1.20	0.634
makes me attractive.			
Question Number 15.			
Using this facial skincare product	3.32±0.89	3.06±1.11	0.036*
	5.52±0.89	5.00±1.11	0.030
will slow down skin degeneration.			
Question Number 16.	0		
This facial skincare product	3.52±0.87	3.21±1.14	0.023*
makes skin healthier.	10101		0
Question Number 17.			0.7
Not having beautiful facial skin	2.88±1.25	2.90±1.29	0.868
make me not accepted in society.	A V	3116	61
Question Number 18.			
Having healthy facial skin will	3.53±1.21	3.14±1.36	0.013*
maying meaning factal skill will	5.33±1.21	J.14±1.30	0.015

Table 6: Mean, standard deviation, and t-test of each item in the questionnaire.

Influencing factors	Safe purchased group (Mean ± S.D.)	Unsafe purchased group (Mean ± S.D.)	t-test significant
win have half of a game.			
Cue to action	0 =		
Question Number 13.	i .		
I buy this because it is inexpensive	2.87±1.11	3.18±1.03	0.022*
Question Number 9.I buy this facial skincare productbecauseofthediscountpromotion.	2.82±1.11	2.82±0.94	0.968
Question Number 10. I buy this facial skincare product because of extra promotion.	2.70±1.09	2.74±1.02	0.75
Question Number 11. I buy this facial skincare product because of having a discount coupon	2.62±1.00	2.70±1.02	0.510
Perceived Behavioral Control Question Number 12. I decide to buy this facial skincare by myself.	3.96±0.79	3.55±0.84	0.000*
Question Number 32. I am confident that this facial skincare is certainly safe.	3.91±0.81	3.43±0.77	0.000*

Influencing factors	Safe purchased group (Mean ± S.D.)	Unsafe purchased group (Mean ± S.D.)	t-test significant
Question Number 27. Before buying this facial skincare product, I search its effectiveness information.	3.66±0.89	3.14±0.86	0.000*
Question Number 28. Before buying this facial skincare product, I search its safety information.	3.67±0.87	3.17±0.89	0.000*
Question Number 24. I buy this facial skincare product because I know its brand.	3.63±0.85	3.30±0.84	0.002*
Question Number 25. I buy this facial skincare product because it is a well-known brand.	3.81±0.85	3.33±0.75	0.000*
Question Number 26. I buy this facial skincare product because it has quality approved researches.	3.81±0.84	3.33±0.78	0.000*
Social Norm Question Number19. My husband or boyfriend makes me buy this facial skincare product.	2.66±1.12	2.73±1.00	0.586
Question Number 20. My parent and relatives make me buy this facial skincare product.	2.68±1.05	2.76±1.01	0.552

Influencing factors	Safe purchased group (Mean ± S.D.)	Unsafe purchased group (Mean ± S.D.)	t-test significant
Question Number 21.			
My brother or sister makes me	2.71±1.08	2.71±0.99	0.967
buy this facial skincare product.			
Knowledge awareness	2 -		
Question Number 2.			
I feel pleasure after buying this	3.84±0.63	3.72±0.61	0.122
facial skincare product.			
Question Number 29.			
The facial skincare products	3.90±1.12	3.83±1.10	0.625
available in Friday market have	67.0		
tendency to be unsafe products.	A Carlo		
Question Number 30.			
All facial skincare products must	4.22±0.87	3.97±0.99	0.027
be approved by Thai FDA before	are e		
launching into the market.			
<u>Availability</u>		62	
Question Number 7.			
I conveniently buy this facial	3.77±0.83	3.63±0.80	0.178
skincare around my			
neighborhood.		10100	~
Question Number 14.		17117	
I can buy this facial skincare at	3.66±0.88	3.50±0.85	0.135
anywhere.		-	0
Friends	91980	2818	181
Question Number 22.		0 TIL	1011
My friends make me buy this	2.82±1.09	3.17±1.06	0.011*
facial skincare product.			

Influencing factors	Safe purchased group (Mean ± S.D.)	Unsafe purchased group (Mean ± S.D.)	t-test significant
Question Number 23.			
I buy this facial skincare product	3.20±0.98	3.47±0.77	0.010*
because people around me get			
good results from using it.			

There were only 4 out of 8 items represented attitude that were significantly different agreement. They were item 1,15,16,18 in the questionnaire which were "Buying this facial skincare product is very valuable", "Using this facial skincare product will slow down skin degeneration", "This facial skincare product makes skin healthier", and "Having healthy facial skin will win have half of a game". All items represented perceived behavior control had significantly different agreement score between safe and unsafe facial skincare product purchasers as shown in table 5. All items represented concept of friends had significantly different agreement score between safe and unsafe facial skincare product purchasers.

Although, mean score of agreement of cue to action concept was not significant different in both groups, some agreement score of items represented this concept were significant different. They was item 13 in the questionnaire which was "I buy this because it is inexpensive". Unsafe facial skincare purchaser more agree that they buy the product because it is inexpensive than safe facial skincare purchaser.

The result of question 1 which was "Buying this facial skincare product is very valuable" indicated that safe facial skincare product purchasers felt valuable for safe facial skincare product whereas unsafe facial skincare product purchasers felt not sure about unsafe facial skincare product's valuable. Mean agreement score of safe facial skincare product purchasers group in question 15,16,18 which were "Using this facial skincare product will slow down skin degeneration", "This facial skincare product makes skin healthier", and "Having healthy facial skincare product purchasers. Safe facial skincare product purchasers had higher outcome belief to lead purchasing behavior.

Safe facial skincare product purchasers group had the higher mean agreement score of question 32, 27, 28 which were "Before buying this facial skincare product, I search its safety information.", "Before buying this facial skincare product, I search its effectiveness information.", "I am confident that this facial skincare is certainly safe." It showed that information lead purchasing behavior of safe facial skincare product purchasers.

In contrast, unsafe facial skincare product purchasers group had higher mean agreement score of in question 13, 9, 10, 11 which were "I buy this because it is inexpensive", "I buy this facial skincare product because of the discount promotion.", "I buy this facial skincare product because of extra promotion", "I buy this facial skincare product because of having a discount coupon" than safe facial skincare product purchasers group. It could be interpreted that price lead purchasing behavior in unsafe facial skincare product purchasers. The higher mean agreement score of unsafe facial skincare product purchasers group in question 22, 23 which were "My friends make me buy this facial skincare product.", "I buy this facial skincare product because people around me get good results from using it." showed that friend also lead purchasing behavior in unsafe facial skincare product purchasers.

Finally, as the results mentioned above, we could summarize that product's outcome belief and information searching led purchasing behavior in safe facial skincare product purchasers group. Friend and price led purchasing behavior in unsafe facial skincare product purchasers group.

Part 3: Relationship between behavior of purchasing facial skincare products and influencing factors.

Since the attribute of purchasing facial skincare products behavior was operationalized to be a categorical scale (safe and unsafe product purchase), t-test was used as statistics implement for comparing means agreement score of each influencing factor between safe and unsafe facial skincare product purchaser groups. If means were significantly difference, we could assume that influencing factor had relationship with behavior. Furthermore, chi-square was used to find the correlation between purchased place and behavior of purchasing facial skincare product as mentioned in the part 1.

Part 4: Logistic Regression analysis of purchasing behavior of facial skincare products and influencing factors.

Logistic Regression analysis was used to find the associations among influencing factors and behavior of purchasing facial skincare products. This model had overall prediction ability equal to 18.0% (Cox&Snell R²). The odds ratio of each influencing factor domain among safe purchased group and unsafe purchased group had shown in table 7,

Influencing factors	Odds ratio	95%CI	P-value
Attitude	1.21	0.75-1.96	0.439
Knowledge awareness	1.12	0.71-1.76	0.618
Social norm	1.12	0.74-1.69	0.588
Perceived Behavioral Control	0.26	0.14-0.49	0.000*
Cue to action	1.10	0.71-1.71	0.670
Friends	1.81	1.21-2.71	0.004*
Availability	0.76	0.48-1.19	0.232

Table7: Odds ratio among influencing factors and behavior of purchasing facialskincare products.

Influencing factors	Odds ratio	95%CI	P-value
Age	0.96	0.89-1.04	0.317
Education Level-lower than high school	0.84	0.06-11.46	0.898
Education Level-high school	1.75	0.14-21.71	0.662
Education Level- certificated/vocational	1.86	0.14-24.32	0.636
Education Level-bachelors' degree	1.14	0.10-12.77	0.913
Occupation-student	0.95	0.06-15.12	0.971
Occupation-government official	4.37	0.12-157.44	0.420
Occupation-employee	1.48	0.10-21.65	0.777
Occupation-business owner	0.56	0.03-10.49	0.701
Income per month-lower than 5000 Baht	4.70	0.21-103.15	0.326
Income per month-5001to10000 Baht	5.77	0.27-121.86	0.260
Income per month- 10001to15000Baht	4.74	0.21-109.15	0.331
Income per month- 15001to20000Baht	4.69	0.19-115.18	0.345
Income per month- 20001to30000Bath	0.95	0.04-21.59	0.973

Influencing factors	Odds ratio	95%CI	P-value
Status-single	0.25	0.00-45.41	0.598
Status-marriage	0.26	0.00-47.20	0.610
Status-divorced	0.15	0.00-48.23	0.517

Logistic regression analysis provided that the perceived behavioral control factors and friends factor were significantly associated with behavior of purchasing facial skincare product (p-value<0.01 and 0.004, respectively). There was a negative association between the perceived behavioral control factors and behavior of purchasing facial skincare product with adjusted odd ratio equaled 0.26. Friend factor positively associated with behavior of purchasing facial skincare product with adjusted odd ratio equaled 1.81.

The odd ratio of perceived behavioral control factor was 0.26 (95%CI=0.14-0.49). This meant that when the PBC factor increased 1 scale, whereas other factor constant, the probability of subject to chose unsafe facial skincare product would decrease 74% (from (0.26-1)*100)) compared with safe facial skincare product. The odd ratio of friends factor was 1.81 (95%CI=1.21-2.71). This meant that when the friends factor increased 1 scale, whereas other factor constant, the probability of subject to chose unsafe facial skincare product. The friends factor increased 1 scale, whereas other factor constant, the probability of subject to chose unsafe facial skincare product would increase 81% (from (1.81-1)*100)) compared with safe facial skincare product.

In conclusion, the current study showed that the influencing factors for behavior of purchasing facial skincare product in term of safe and unsafe product purchase were perceived behavioral control factors and friend factors.

CHAPTER V DISCUSSION AND CONCLUSIONS

The rapid growth in the cosmetic industry, especially with facial skincare products, had induced entrepreneurs to produce more skincare products to serve needs of customers while consumers slightly knew that the government did not require any mandatory testing for these products before launched to the market. At the same time, customers were not as interested in the safety information of facial skincare products as beauty effects. These factors were disturbed and added the rapid raising of health hazards that cause much loss to many people and to society in the country. Nowadays, there were lack of knowledge and research about the factors influencing behavior of purchasing facial skincare products especially the unsafe facial skincare product. So this research focused on the factors influencing of purchasing safe and unsafe facial skincare products and endeavor to compare the characteristics of safe and unsafe facial skincare product purchasers. This research used convenient sampling method to enroll 300 women at random who had experience to buy at least a piece of facial skincare products within 6 month. Then the subject was asked to complete the questionnaire which composed of eight domain of influencing factors. After data collection, independent t-test was used to compare means score of influencing factors among safe and unsafe product purchasers. Additionally, logistic regression analysis was used to identify the influencing factors with the behavior of purchasing facial skincare product. The association was reported in odd ratio. The information received from this research can help healthcare policy makers and regulators to promote the appropriate regulations for unsafe facial skincare products especially in Nakhon Ratchasima Municipal area. The strategies suggested such as campaigns to encourage teenager to aware of product safety information and to not believe in words of mouth from friends or advertisements. FDA or health care policy regulator must keep eyes on low price facial skincare products because people were more likely to buy unsafe products because of cheap price without concerning safety and effectiveness. Most of unsafe skincare products were available at Friday market place as showed in the result, therefore, taking random sampling facial skincare products from Friday market should be regular scheduled.

1. Demographic and behavior of purchasing facial skincare product.

The most of subjects are 20 years old and 79.4 percentages of subjects are teenager in 18-25 years old. They were students in bachelors' degree education level, and had income less than 5,000 baths per month. Both of safe and unsafe facial skincare product purchaser groups had mostly purchased one item of facial skincare products. Meanwhile, both groups had a chance to purchase both of safe and unsafe facial skincare. Unsafe facial skincare products founded in this study were Madam, Kunaim (From Friday market), White face cream, Rose cream, Dr.jura cream, Richy cream, Pop cream, Seaweed cream, and Tantawan cream.

Most of safe facial skincare product purchasers bought their facial skincare product from department store while most of unsafe facial skincare product purchasers bought their facial skincare product from the Friday market. Safe facial skincare product purchasers got information about the product via the advertisements on television, whereas unsafe facial skincare product purchasers knew the product from other media such as advertisement banner, word from mouth to mouth and the seller's recommendation. The decision to buy safe or unsafe facial skincare products was most influenced by friends. Anyway, this result was consistent to the common life situation that friend would be told friend about the thing they had good experience as wording from mouth to mouth. Most of advertise wording that impact to subjects were "white fast", "white naturally", "white and smooth, healthy, look like Korea girl", and "ageless". From chi-square test, it was found that the purchased place, advertisements and influencing person had statistically significant relationship with behavior of purchasing facial skincare products with the Pearson's chi-square equal 1.297, 30.024, and 20.095, respectively.

Additionally, the researcher also found that the FDA's campaign about reading facial skincare product's label before it was purchased were more statistically significant accepted in safe facial skincare product purchasers than in unsafe facial skincare product purchasers (Appendix D).

2. Influencing factors.

This research used the self-administrative questionnaire with staffs to clarify questionnaires' instruction and check the completeness. The questionnaire were composed of 8 groups of influencing factors; attitude (8 items), knowledge awareness (3 items), social norm (3 items), friends (2 items), availability (2 items), perceived behavioral control (7 items), cue to action (4 items) and demographic variable (5 items).

Cue to action factor was operationalized with 4 items which were composed "I buy this facial skincare because it is inexpensive", "I buy this facial skincare product because of the discount promotion", "I buy this facial skincare product because of having something extra promotion", and "I buy this facial skincare product because of having a discount coupon". This conceptualization of this concept as strategies to activate one's readiness in this study was similar to marketing strategy in the field of marketing research. Though, the cue to action factor showed no significantly relationship with purchase behavior of facial skincare product, average agreement score of item "I buy this facial skincare because it is inexpensive" in the unsafe facial skincare product purchasers was significantly higher than in the safe facial skincare product purchasers As a result, price strategy was still dominated the customer decision to buy facial skin care products.

The result was found that mean score of attitude in safe facial skincare product purchasers was higher than unsafe facial skincare product purchasers. However, they were not all items showed significantly higher agreement score in safe facial skincare product purchasers than unsafe facial skincare product purchasers. The significant higher score were item 1,15,16,18 in the questionnaire which were "Buying this facial skincare product is very valuable", "Using this facial skincare product will slow down skin degeneration", "This facial skincare product makes skin healthier", and "Having healthy facial skin will win have half of a game". The safe facial skincare product purchasers were more concern about the outcome of utilization than unsafe facial skincare product purchasers. They perceived that the products they bought provided good outcome. The unsafe facial skincare product purchasers were not so much concern about the outcome of the products.

Average score of perceived behavioral control was higher in safe facial skincare product purchasers than unsafe facial skincare product purchasers. This concept was operationalized by 7 items which were "I decide to buy this facial skincare by myself", "I am confident that this facial skincare is certainly safe", "Before buying this facial skincare product, I search its effectiveness information", "Before buying this facial skincare product, I search its safety information", "I buy this facial skincare product because I know its brand", "I buy this facial skincare product because it is a well-known brand", "I buy this facial skincare product purchasers were more confident in the products than unsafe facial skincare product purchasers and they had more self-efficacy than unsafe facial skincare product purchasers in making decision to buy the products.

Knowledge awareness was operationalized by 3 items which were "I feel pleasure after buying this facial skincare product", "The facial skincare products available in Friday market have tendency to be unsafe products", and "All facial skincare products must be approved by Thai FDA before launching into the market". Even though, agreement score of knowledge awareness was not statistically significant different in both groups, score of each item was still higher in the safe facial skincare product purchasers than unsafe facial skincare product purchasers. At first, we planned to use KAP theory as a theoretical framework in this study, therefore, we tried to use the concept of knowledge into our conceptual framework. The operationalization of this concept was weak. From these 3 items, this concept should be called as safety awareness instead of knowledge awareness.

The agreement score of availability factors was not statistically significant different in both groups. Availability concept was operationalized by 2 items as a result of factor analysis which were "I conveniently buy this facial skincare product around my neighborhood" and "I can buy this facial skincare at anywhere". However, score of both items was still higher in the safe facial skincare product purchasers than unsafe facial skincare product purchasers. The result can be interpreted that safe facial skincare products were more available than unsafe facial skincare products.

In the contrast, agreement score of social norm was lower in safe facial skincare products than unsafe facial skincare products, although it was not statistically significant different in both groups. Social norm in this study was operationalized base on spouse and relatives as their significant persons and not include friends because of the factor analysis result. Thus, the three item represented social norm were "My husband or boyfriend makes me buy this facial skincare product", "My parent and relatives make me buy this facial skincare product", and "My brother or sister makes me buy this facial skincare product". These significant persons had more influences on buying decision in the unsafe facial skincare product purchasers than safe facial skincare product purchasers.

The agreement score of the influence of friends on buying decision was statistically significant higher in the unsafe facial skincare product purchasers than safe facial skincare product purchasers. As a result of factor analysis, the two items conveyed friend concept in this study were "My friends make me buy this facial skincare product" and "I buy this facial skincare product because people around me get good results from using it". Friends had more influences on buying decision in the unsafe facial skincare product purchasers than safe facial skincare product purchasers. Since the average age of sample in this study was in the range of 18-25 years old, friend factor had significant relationship with facial skincare purchase. The results might not be able to apply to other age group.

3. Relationship of influencing factors and behavior of purchasing facial skincare products.

Logistic Regression Analysis was used to find the associations among influencing factors and behavior of purchasing facial skincare products. The result found that only the perceived behavioral control (PBC) factors and friends factor were statistically significantly associated with behavior of purchasing facial skincare product with the odd ratio equal to 0.26 (95%CI=0.14-0.49) and (95%CI=1.81 1.21-2.71), respectively. The more perceived behavior control, the less likely to buy

unsafe facial skincare products would be. When the agreement score of perceived behavior control increased 1 unit, the opportunity to buy unsafe facial skincare products decreased 74 % [(odd ratio -1) x 100].

The definition of perceived behavioral control from theory of Planed Behavior was similar to the balance of perceived barriers and perceived benefit in the Health Belief Model. This result harmonized with the study of Janz & Becker [38]. They found that Perceived Barriers factor and Perceived Susceptibility were the most powerful predictors of health preventive behavior. Furthermore this research's results were supported with the result of Schifter & Ajzen [46] which found that social norm, attitude, and perceived behavioral control was successful in predicting intentions to lose weight as can be considered as health related behavior same as facial skincare use. However, there were alike the study of Kassem N.O.et al [61] which found that attitude, subjective norms and perceived behavioral control had statistically significant positive associations with intention to consume soft drink. Our study showed that there were not statistically significant relationship among demographic characteristic with behavior of purchasing facial skincare product same as the study of Tirrell & Hart [39] which found that the demographic characteristic was not relates to exercise compliance behavior.

The current study identified that there was a significant relationship between friends and behavior of purchasing safe or unsafe facial skincare product after adjusted for other variable. The odd ratio of friends factor equal to 1.81 (95%CI=1.21-2.71). The more friend influences, the more likely to buy unsafe facial skincare products would be. When the agreement score of friend factor increased 1 unit, the opportunity to buy unsafe facial skincare products increased 81 % [(odd ratio -1) x 100 = (1.81-1) x 100]. When friends recommend the unsafe skincare product even though they knew that it may cause harmful, they were more likely to purchase unsafe facial skincare product.

PBC and friend were significantly associated with safe or unsafe facial skincare product purchase. Thus, the brand well-known and words of mouth from friends about effectiveness, safety information and quality approval influenced safe or unsafe facial skincare product purchase. This study recommended that FDA or health care regulators should pay more attention on the information about effectiveness and

safety information and quality approved researches in the advertisement to consumers. They must also keep eyes on products available in Friday market place because they were more likely to buy unsafe products here. More over that, the characteristic of safe purchased facial skincare was likely to search the facial skincare product before purchase. In contract, the unsafe facial skincare product purchasers were not interested in searching information but believed in friend's suggestion and liked cheap products. FDA should restrictly control the information in any media.

Limitations of the Study.

1. To identify influencing factors on behavior of facial skincare products, this study intensely focused only on the some constructs form the HBM, TPB and KAP model. More useful concepts of influencing factors related to this behavior should be investigated in future research.

2. This study use self-administrative questionnaire with restriction of time and budget. The questionnaire was adjusted only one time. Therefore, it made the reliability knowledge awareness, availability, and friend was low and consisted of few items.

3. Number of subjects in the pilot study was not enough for factor analysis, thus, the study did not use the factor analysis to re-check harmony of items in each concept in the conceptual framework. The factor analysis after the data collecting process caused the rearrange of items to represent the concept in the conceptual framework in this study.

4. This study used convenient sample. The results could not generalize to other population. This study's sample group was teenager so the result of this study might not apply to other age groups.

Recommendation and Suggestions

1. This study focused on the consumers who were students at the bachelor's degree and had range of age at 18-25 years old. Other age groups or education level were recommended to study.

2. In-depth interview was recommended to find out more details about consumer perception toward purchasing safe or unsafe facial skincare products.

3. This study used 5 point likert's agreement scale which included the scale of 3 (not sure). This brought the most samples represented score 3 which not clarify subject's agreement. In order to force the subjects made agreement, 4 or 6 point likert's scale might appropriate to use and put another choice as "can not answer" instead of the middle choice as "not sure".


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APPENDICES

APPENDIX A

เอกสารข้อมูลคำอธิบาย/ คำชี้แจงสำหรับอาสาสมัครที่เข้าร่วมการวิจัย (Patient of Participant Information Sheet)

ชื่อโครงการศึกษาวิจัยเรื่อง (ภาษาไทย)	ปัจจัยที่มีผลต่อพฤติกรรมการซื้อผลิตภัณฑ์บำรุงผิวหน้า
ชื่อผู้วิจัยหลัก (ภาษาไทย)	นางสาว วรรณกานต์ จรูญพรพงศ์
หน่วยงานที่ทำการศึกษาวิจัย	คณะเภสัชศาสตร์ ภาควิชาเภสัชสังคมศาสตร์และการบริหาร
โทรศัพท์ (สามารถติดต่อได้ 24 ชั่วโมง)	089-7141473

ท่านได้รับเชิญให้เข้าร่วมการศึกษาวิจัยเรื่อง ปัจจัยที่มีผลต่อพฤติกรรมการซื้อผลิตภัณฑ์บำรุงผิวหน้า ก่อนที่ท่านจะตัดสินใจให้ความยินยอมเข้าร่วมการศึกษาวิจัยนี้ ผู้วิจัยใคร่ขอขี้แจงรายละเอียดของ โครงการวิจัยให้ท่านทราบ และขอให้ท่านทำความเข้าใจขั้นตอนที่ผู้วิจัยจะขอให้ท่านปฏิบัติ โดยก่อนเริ่ม ดำเนินการวิจัยโดยการตอบแบบสอบถาม ผู้วิจัยจะขอทำการ สอบถามข้อมูล เพื่อดูว่าท่านมีคุณสมบัติตาม เกณฑ์คัดเลือกเข้าร่วมการวิจัยหรือไม่ ว่าท่านเคยซื้อผลิตภัณฑ์บำรุงผิวหน้าอย่างน้อย1ชิ้นในระยะเวลา 6เดือน หรือไม่ หากใช่ ผู้วิจัยจะดำเนินการแจกแบบสอบถามให้ท่านตอบตามความเป็นจริงจำนวน 1 ชุด ซึ่งอาจใช้เวลา ทำประมาณ 5 นาที โดยตลอดเวลาที่ตอบแบบสอบถามนั้น ผู้วิจัยจะอยู่ในบริเวณนั้นด้วยเพื่ออธิบายวิธีการทำ แบบสอบถามในแต่ละส่วน และช่วยตอบข้อซักถาม และข้อสงสัยต่างๆ โดยผู้เข้าร่วมการวิจัยจะสามารถใช้ เวลานานเท่าใดในการตัดสินใจก็ได้

กรุณาอ่านข้อมูลต่อไปนี้ด้วยความรอบคอบ และสอบถามถึงข้อสงสัยต่างๆ โดยไม่ลังเล

1. บทนำ

เนื่องจากปัจจุบันในประเทศไทยตลาดผลิตภัณฑ์บำรุงผิวหน้ามีการเจริญเติบโตอย่างรวดเร็วทั้งผลิตภัณฑ์ บำรุงผิวในซายและหญิงซึ่งได้ดึงดูดให้ผู้ผลิตเข้ามาในตลาดเพิ่มมากขึ้นตามความต้องการของผู้บริโภคที่เพิ่ม มากขึ้น แต่ความปลอดภัยและความเสียหายที่เกิดจากการใช้ผลิตภัณฑ์เหล่านี้กลับยังไม่มีการศึกษาและระบุ อย่างแน่ชัด แม้ในผลิตภัณฑ์บำรุงผิวเหล่านี้จะมีการผสมสารอันตรายต่างๆลงไป ก็ยังสามารถพบได้ใน ท้องตลาดทั่วไปเนื่องจากผลิตภัณฑ์เหล่านี้ไม่ได้มีการควบคุมอย่างเคร่งครัดเหมือนในอาหารและยา ในแต่ละปี ประเทศไทยมีรายงานผู้บริโภคที่ได้รับความเสียหายจากการใช้ผลิตภัณฑ์บำรุงผิวหน้าอันตรายเหล่านั้นเป็น จำนวนมากแต่กลับแทบไม่พบการศึกษาเกี่ยวกับพฤติกรรมสุขภาพที่เสี่ยงดังกล่าวเลย ดังนั้นผู้วิจัยจึงสนใจที่จะ ศึกษาถึงปัจจัยทางพฤติกรรมศาสตร์ที่ทำให้ผู้บริโภคเลือกที่จะซื้อผลิตภัณฑ์บำรุงผิวหน้าที่อาจก่อให้เกิด อันตรายเหล่านี้ขึ้น

2. วัตถุประสงค์ของการวิจัย

เพื่อหาปัจจัยที่ส่งผลต่อพฤติกรรมการซื้อผลิตภัณฑ์บำรุงผิวหน้า

เพื่อเปรียบเทียบระดับการมีผลกระทบต่อพฤติกรรมของแต่ละปัจจัยระหว่างกลุ่มพฤติกรรมการซื้อที่ ปลอดภัยและไม่ป<mark>ล</mark>อดภัย

วิธีการศึกษาวิจัย

หากท่านยินยอมเข้าร่วมการวิจัย ผู้วิจัยจะขอให้ท่านตอบแบบสอบถามซึ่งมีสามส่วน

ส่วนที่ 1 มี 2 ข้อ ส่วนที่ 2 มี 38 ข้อ ส่วนที่ 3 มี 5 ข้อ

เวลาที่ใช้ในการตอบแบบสอบถามประมาณ 5 นาที โดยท่านมีสิทธิที่จะไม่ตอบข้อหนึ่งข้อใดหากท่านรู้สึกไม่ สบายใจที่จะตอบ

4. ความเสี่ยง ความไม่สบาย และผลข้างเคียงที่อาจเกิดขึ้น

ไม่มี เนื่องจากการตอบแบบสอบถามนี้เป็นความลับและผู้ตอบแบบสอบถามทำการตอบแบบสอบถามด้วย ตนเอง ข้อมูลทั้งหมดจะถูกทำลายทันทีที่วิเคราะห์ผลเสร็จ

5. ผลประโยชน์ที่อาจจะได้รับ

ท่านจะไม่ได้รับประโยชน์โดยตรงใดๆ จากการศึกษานี้" แต่ผลการศึกษาจะถูกนำไปใช้ประมวลและ วิเคราะห์เพื่อนำไปใช้ประกอบการตัดสินใจเลือกนโยบายการควบคุมพฤติกรรมที่เกี่ยวข้องกับสุขภาพเหล่านี้ได้ อย่างเหมาะสมและเป็นการขยายความรู้ในการประยุกต์ใช้ทฤษฎีทางพฤติกรรมศาสตร์

ค่าใช้จ่ายและค่าชดเชย

ไม่มี แต่ให้เป็นของที่ระลึกสำหรับการสละเวลาตอบแบบสอบถาม

7. เงินชดเชยสำหรับการบาดเจ็บหรืออันตรายที่อาจเกิดขึ้น

ไม่มี

8. สิทธิในการถอนตัวออกจากการศึกษาวิจัย

ท่านมีสิทธิ์ในการหยุดตอบหรือไม่ตอบคำถามที่ท่านไม่ต้องการตอบเมื่อใดก็ได้ โดยไม่มีผลกระทบใดๆ ทั้งสิ้น

9. การรักษาความลับของบันทึกทางการแพทย์ และข้อมูลการศึกษาวิจัย

ข้อมูลทั้งหมดจะถือเป็นความลับ และไม่มีการเปิดเผยเป็นรายบุคคล

10. การเปิดเผยข้อมูลการศึกษาวิจัย

ข้อมูลการศึกษาวิจัยจ<mark>ะถูกนำมาป</mark>ระมวล<mark>และราย</mark>งานผลเป็นภาพรวมเท่านั้น ไม่มีการระบุชื่อของท่านหรือ

ใส่รหัสในแบบสอบถาม จึงไม่สามารถเชื่อมโยงถึงตัวผู้ตอบแบบสอบถาม

11. การสอบถามข้อสงสัย

หากมีข้อสงสัยสามารถติดต่อ น.ส. วรรณกานต์ จรูญพรพงศ์

นักศึกษาระดับปริญญาโท คณะเภสัชศาสตร์ ภาควิชาเภสัชสังคมศาสตร์และการบริหาร จุฬาลงกรณ์

มหาวิทยาลัย

โทร. 089-7141473

เบอร์โทรศัพท์คณะกรรมการจริยธรรม ฝ่ายวิจัย คณะเภสัชศาสตร์ จุฬาฯ โทร.02-218-8256

หากท่านต้องการร้องเรียนการปฏิบัติของผู้วิจัยที่ไม่เป็นไปตามข้อมูลในเอกสารคำชี้แจง ท่านสามารถแจ้ง คณะกรรมการจริยธรรม ฝ่ายวิจัย คณะเภลัชศาสตร์ จุฬาลงกรณ์มหาวิทยาลัยได้ที่หมายเลขโทรศัพท์02-218-

APPENDIX B

ID number _____

แบบสอบถาม วิทยานิพนธ์เรื่อง ปัจจัยที่ส่งผลต่อพฤติกรรมการซื้อผลิตภัณฑ์บำรุงผิวหน้า

แบบสอบถามนี้ เป็นส่วนหนึ่งของการศึกษาตามหลักสูตร วิทยาศาสตร์มหาบัณฑิต สาขาเภสัชสังคมศาสตร์และ การบริหาร คณะเภสัชศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย ประจำปีการศึกษา 2551 โดยมีวัตถุประสงค์เพื่อ ศึกษา การแพร่กระจายของการซื้อและใช้ผลิตภัณฑ์บำรุงผิวและศึกษาปัจจัยการรับรู้ทางสังคมที่ส่งผลต่อการเลือกซื้อ ผลิตภัณฑ์บำรุงผิว ผลการศึกษาจะนำไปใช้ในการพัฒนานโยบายเกี่ยวกับการแพร่กระจายผลิตภัณฑ์บำรุงผิวให้ มีความปลอดภัยในกลุ่มผู้บริโภค แบบสอบถามชุดนี้ แบ่งเป็น 3 ส่วน ดังนี้ ส่วนที่1 แบบสอบถามเกี่ยวกับพฤติกรรมการซื้อผลิตภัณฑ์บำรุงผิว ส่วนที่2 แบบสอบถามเกี่ยวกับองค์ประกอบของทฤษฏีที่ส่งผลต่อการซื้อผลิตภัณฑ์บำรุงผิว ส่วนที่3 แบบสอบถามเกี่ยวกับองค์ประกอบของทฤษฏีที่ส่งผลต่อการซื้อผลิตภัณฑ์บำรุงผิว

ส่วนที่1 แบบสอบถามเกี่ยวกับพฤติกรรมการซื้อผลิตภัณฑ์บำรุงผิว

<u>คำชี้แจง</u> กรุณาเติมคำในช่องว่างตามความเป็นจริงของท่านให้สมบูรณ์ที่สุด

กรุณาระบุรายชื่อ ยี่ห้อของผลิตภัณฑ์บำรุงผิว หรือลักษณะ ข้อมูลอื่นๆเท่าที่จำได้ของผลิตภัณฑ์บำรุงผิว(ไม่ รวมเครื่องอาบน้ำและเครื่องสำอางแต่งหน้าให้มีสีสัน)ที่ท่านได้ซื้อมาใช้ในช่วง 6 เดือนที่ผ่านมา(หากที่เขียนไม่ พอ สามารถเขียนเพิ่มด้านหลังได้)

ชื่อผลิตภัณฑ์บำรุงผิวที่ซื้อใน ระยะ 6เดือน	สถานที่ซื้อ	ในกรณีจำชื่อไม่ได้กรุณาระบุ ลักษณะ หรือข้อมูลอื่น ๆ
a nui an		
คุนยวท		EU113
หาวงกรร		ລື້າທາວລັ
		911216

*****ให้ท่านเลือกผลิตภัณฑ์ที่ท่านได้ซื้อใช้บ่อยที่สุดจากตารางด้านบนมาเพียงผลิตภัณฑ์เดียว คือ______****

คำถามด้านล่างทั้งหมดนี้ ให้ท่านตอบโดยนึกถึงชื่อผลิตภัณฑ์ที่ท่านได้เลือกมาด้านบนเพียงชื่อเดียว เท่านั้น

ส่วนที่2 แบบสอบถามเกี่ยวกับองค์ประกอบของทฤษฎีที่ส่งผลต่อการซื้อผลิตภัณฑ์บำรุงผิว คำซื้แจง กรุณาทำเครื่องหมาย / ในช่องที่ตรงกับความคิดเห็นของท่านมากที่สุด

	รายละเอียด	ไม่เห็น ด้วย อย่างยิ่ง	ไม่เห็น ด้วย	ไม่ แน่ใจ	เห็น ด้วย	เห็น ด้วย อย่าง ยิ่ง
1.	การซื้อผลิตภัณฑ์บำรุงผิวหน้า ดังกล่ <mark>าวข้</mark> างต้นเป็นสิ่งที่คุ้มค่ามาก	3				
2.	ตอนที่ได้ซื้อผลิตภัณฑ์บำรุงผิวหน้า ชิ้นนี้ฉันรู้สึกดี <mark>มา</mark> ก					
3.	การซื้อผลิตภัณฑ์บ <mark>ำ</mark> รุงผิวหน้าชิ้นนี้ มาใช้ทำให้ฉันดู <mark>ด</mark> ีขึ้น					
4.	การซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้ มาใช้ทำให้ฉันมีความมั่นใจมากขึ้น					
5.	การซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้ มาใช้ทำให้คนรอบข้างหลงรักฉัน			₹		
6.	ฉันซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้ ตามคำพูดในโฆษณา เช่น ผิวขาว อมชมพู สวยแบบสาวเกาหลี ฯลฯ			Ū	~	
7.	ฉันซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้ ได้สะดวก ใกล้บ้าน	N)	Ň	1	117	
8.	ฉันอยากซื้อผลิตภัณฑ์บำรุงผิวหน้า ชิ้นนี้เพราะใครๆก็ซื้อ	ปท	12	n	ยา	ล้
9.	ฉันซื้อผลิตภัณฑ์บำรุงผิวชิ้นนี้เพราะ มีโปรโมชั่นลดราคา					

	รายละเอียด	ไม่เห็น ด้วย อย่างยิ่ง	ไม่เห็น ด้วย	ไม่ แน่ใจ	เห็น ด้วย	เห็น ด้วย อย่าง ยิ่ง
	 ฉันซื้อผลิตภัณฑ์บำรุงผิวชิ้นนี้เพราะ มีโปรโมชั่นของแถม 					
	 1. ฉันซื้อผลิตภัณฑ์บำรุงผิวชิ้นนี้เพราะ มีโปรโมชั่นให้คูปองส่วนลด 					
	 ฉันตัดสินใจซื้อผลิตภัณฑ์บำรุง ผิวหน้าชิ้นนี้ด้วยตัวฉันเอง 					
	 ฉันซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้ เพราะมีราคาถูก 					
	 ฉันซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้ ได้ทั่วไป 					
	 การใช้ผลิตภัณฑ์บารุงผิวหน้าชิ้นนี้ จะทำให้ผิวเสื่อมช้าลง 					
	 ผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้ทำให้ ผิวมีสุขภาพดีขึ้น 	12.5		5)	
	 การที่มีผิวหน้าไม่สวยจะทำให้ไม่ได้ รับการยอมรับในสังคม 					
6	 หากมีสุขภาพผิวหน้าที่ดีก็มีชัยไป กว่าครึ่ง 	ທີ	9.11	10	24	
	 แฟนหรือสามีฉันทำให้ฉันซื้อ ผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้ 	110	-			
	 20. พ่อ แม่ ญาติฉันทำให้ฉันซื้อ ผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้ 	ЦŶ	17	11	ยา	6
	21. พี่น้องฉันทำให้ฉันซื้อผลิตภัณฑ์					

	รายละเอียด	ไม่เห็น ด้วย อย่างยิ่ง	ไม่เห็น ด้วย	ไม่ แน่ใจ	เห็น ด้วย	เห็น ด้วย อย่าง ยิ่ง
	บำรุงผิวหน้าชิ้นนี้					
22.	เพื่อนฉันทำให้ฉันซื้อผลิตภัณฑ์ บำรุงผิวหน้าชิ้นนี้					
23.	ฉันซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้ เพราะเห็นคนอื่นรอบตัวฉันใช้ ได้ผล <mark>ด</mark> ี					
24.	ฉันซื้อผลิตภัณฑ์บำรุงผิวหน้าซิ้นนี้ เพราะเป็นยี่ห้อที่ฉันรู้จัก					
25.	ฉันซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้ เพราะ เป็นยี่ห้อที่ได้รับการยอมรับ อย่างกว้างขวาง					
26.	ฉันซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้ เพราะ เป็นยี่ห้อที่มีผลการวิจัย รับรองคุณภาพ	1)	
27.	ก่อนฉันซื้อผลิตภัณฑ์บำรุงผิวหน้า ชิ้นนี้ฉันได้หาข้อมูลเกี่ยวกับ ประสิทธิภาพของผลิตภัณฑ์ชิ้นนี้มา ก่อนแล้ว		,			
28.	ก่อนฉันซื้อผลิตภัณฑ์บำรุงผิวหน้า ชิ้นนี้ฉันได้หาข้อมูลเกี่ยวกับความ ปลอดภัยของผลิตภัณฑ์ชิ้นนี้มา ก่อนแล้ว	119	111 111	11	กล ยา	
29.	ผลิตภัณฑ์บำรุงผิวหน้าในตลาดนัด ทั่วไป มีโอกาสมากที่จะเป็น ผลิตภัณฑ์บำรุงผิวอันตราย					

รายละเอียด	ไม่เห็น ด้วย อย่างยิ่ง	ไม่เห็น ด้วย	ไม่ แน่ใจ	เห็น ด้วย	เห็น ด้วย อย่าง ยิ่ง
 30. ผลิตภัณฑ์บำรุงผิวหน้าทุกชนิดก่อน จะ นำมาวางขายได้ต้องได้รับการ รับรองจาก อย. ก่อนเท่านั้น 					
31. ก่อนซื้อผลิตภัณฑ์ชิ้นนี้ฉันได้ดูว่า ฉลากมีข้อมูลครบถ้วนเกี่ยวกับ ส่วนประกอบ วันที่ผลิต ชื่อผู้ผลิต หรือไม่					
32. ฉันมั่นใจว่าผลิตภัณฑ์บำรุงผิวหน้า ชิ้นนี้ปล <mark>อด</mark> ภัยแน่นอน					
33. ฉันซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้ เพราะกล่อง,ขวด,กระปุก บรรจุครีม สวยงาม น่าใช้					
34. ฉันซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้ เพราะมีกลิ่นหอมน่าใช้	11.21				
35. ฉันซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้ เพราะเนื้อครีมสวยงาม น่าใช้)	

<u>คำชี้แจง</u> กรุณาเติมคำในช่องว่างตามความเป็นจริงของท่านให้สมบูรณ์ที่สุด

36. คำพูดจากโฆษณาหรือคนรอบข้างที่โดนใจและทำให้ฉันซื้อผลิตภัณฑ์ดังกล่าวข้างต้น

คือ

37. กรุณาเรียงลำดับสื่อโฆษณาที่ทำให้คุณอยากซื้อผลิตภัณฑ์บำรุงผิวชิ้นนี้จากมากไปหาน้อย

(ใส่หมายเลข 1=มากที่สุด, 2=รองลงมา ฯลฯ)

____ โทรทัศน์

___ ີວິทຍຸ

__ นิตยสาร

_____ Internet

____อื่นๆ(โปรดระบุ____)

38. คนที่มีส่วนสำคัญที่สุดที่ทำให้ฉันตัดสินใจซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้ คือ (กรุณาใส่เครื่องหมาย

/	หน้าข้	¹ ้อที่เลื	<u>ค</u> กเพี	ะเงข้เคเ	เดียว)
/	111011				ыла)

สามี หรือ แฟน	เพื่อนๆ ผู้ร่วมงาน
ครอบครัว	แพทย์ คนขาย
อื่นๆ(โปรดระบุ)
ส่วนที่3 แบบสอบ <mark>ถามเกี่ยวกับข้อมูลทั่วไป</mark> ข	องผู้ตอบแบบสอบถาม
<u>คำชี้แจง</u> กรุณาเติมคำในช่องว่างตามความเป็นจ	ริงของท่านให้สมบูรณ์ที่สุด
39. อายุ ปี	
<u>คำชี้แจง</u> กรุณาทำเครื่ <mark>องหมายในช่องว่างตามคว</mark>	ามเป็นจริงของท่าน
40. ระดับก <mark>าร</mark> ศึกษ <mark>าสู</mark> งสุด	
□1) ต่ำกว่ามั <mark>ธย</mark> มศึกษาตอนปลาย	2) มัธยมศึกษาตอนปลาย
□3) อนุปริญญา/อาชีวศึกษา	่ □4) ปริญญาตรี
□5) สูงกว่าปริญญาตรี	
41. อาชีพ	
🗌 1) นักเรียน นิสิต นักศึกษา	2) ข้าราชการ
่ []3) ลูกจ้าง/พนักงาน	🗌 4) เจ้าของกิจการส่วนตัว
□5) พนักงานรัฐวิสาหกิจ	□6) อื่นๆ ระบุ
42. รายได <mark>้ต่อ</mark> เดือนของท่าน	
□1) ต่ำกว่าหรือเท่ากับ 5,000 บาท	่ □2) 5,001 – 10,000 บาท
่ □3) 10,001 – 15,000 บาท	่ □4) 15,001– 20,000 บาท
่ □5) 20,001 – 30,000 บาท	่ □6) 30,001 บาทขึ้นไป
43. สถานภาพ	
่ []1) โสด	□2) แต่งงาน
่ ี่	่ []4) หย่า
5) คู่สมรสเสียชีวิต	

___ุจบแบบสอบถาม_



Item	N	Range	Mean	Std. Deviation
<u>Attitude</u> This purchased facial skincare product is very valuable.				
การซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นดังกล่าวข้างต้นเป็น สิ่งที่คุ้มค่ามาก	299	2.00-5.00	3.4967	0.88275
Feeling pleasure after buying this facial skincare product. ดอนที่ได้ซื้อผลิดภัณฑ์บำรุงผิวหน้าชิ้นนี้ฉันรู้สึกดี มาก	299	2.00-5.00	3.8067	0.62497
This facial skincare make me look good. การซื้อผลิตภัณฑ์บำรุงผ <mark>ิว</mark> หน้าชิ้นนี้มาใช้ทำให้ลันดูดี ขึ้น	299	1.00-5.00	3.4667	0.90828
This facial skincare product make me feel more confident. การซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้มาใช้ทำให้ลันมี ความมั่นใจมากขึ้น	299	1.00-5.00	3.3667	0.97058
This facial skincare product make me attractive. การซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้มาใช้ทำให้คน รอบข้างหลงรักฉัน	299	1.00-5.00	2.9600	1.10263
This facial skincare product will slow down skin degeneration. การใช้ผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้จะทำให้ผิวเสื่อม ช้าลง	299	1.00-5.00	3.2400	0.96895
This facial skincare product make skin more healthy. ผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้ทำให้ผิวมีสุขภาพดีขึ้น	299	1.00-5.00	3.4233	0.96984

Table 7: Range, mean and standard deviation of each item in the questionnaire.

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Item	N	Range	Mean	Std. Deviation
Social norm Buying the facial skincare product is influenced by husband or boyfriend แฟนหรือสามีฉันทำให้ฉันซื้อผลิตภัณฑ์บำรุงผิวหน้า ชิ้นนี้	299	1.00-5.00	2.6867	1.08277
Buying the facial skincare product is influenced by father, mother or relatives. พ่อ แม่ ญาติฉันทำให้ฉันชื้อผลิดภัณฑ์บำรุงผิวหน้า ชิ้นนี้	299	1.00-5.00	2.7033	1.03871
Buying the facial skincare product is influenced by brother or sister. พี่น้องฉันทำให้ฉันซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้	299	1.00-5.00	2.7100	1.05020
Buying the facial skincare product is influenced by friends. เพื่อนฉันทำให้ฉันซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้	299	1.00-5.00	2.9333	1.08912
Buying the facial skincare product is influenced by people around me using this product well. ฉันซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้เพราะเห็นคนอื่น รอบดัวฉันใช้ได้ผลดี	299	1.00-5.00	3.2800	0.92255
<u>Skin Health Conscious</u> Face being not beautiful is not acceptable. การที่มีผิวหน้าไม่สวยจะทำให้ไม่ได้รับการขอมรับ ในสังคม	299	1.00-5.00	2.8833	1.25764

Item	Ν	Range	Mean	Std. Deviation
If you have healthy facial skin, you will have half winning. หากมีสุขภาพผิวหน้าที่ดีก็มีชัยไปกว่าครึ่ง	299	1.00-5.00	3.4067	1.27017
Perceived Behavioral Control				
This facial skincare is easily accessible and available. จันซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้ได้สะดวก ใกล้ บ้าน	299	1.00-5.00	3.7200	0.82292
I decide to buy this facial skincare by myself. ฉันตัดสินใจซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้ด้วยตัว ฉันเอง	299	1.00-5.00	3.8333	0.82532
I decide to buy this facial skincare due to cheap prize. ฉันซื้อผลิตภัณฑ์ชิ้นนี้เพราะมีราคาถูก	299	1.00-5.00	2.9667	1.09371
I can buy this facial skincare anywhere. ฉันซื้อผลิตภัณฑ์บำรุงผิวชิ้นนี้ได้ทั่วไป	299	1.00-5.00	3.6133	0.87543
I feel confident that this facial skincare is safe. ฉันมั่นใจว่าผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้ปลอดภัย แน่นอน	299	1.00-5.00	3.7567	0.82445
Cue to action I buy this facial skincare				
า ouy uns racial skineare according to the advertisement. จันซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้ตามคำพูดใน โฆษณา เช่น ผิวขาวอมชมพู สวยแบบสาวเกาหลี ฯลฯ	299	1.00-5.00	3.2733	1.07197

Item	N	Range	Mean	Std. Deviation
I buy this facial skincare because everyone use it. ฉันซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้เพราะใครๆก็ ซื้อ	299	1.00-5.00	3.1900	0.96454
I buy this facial skincare due to low cost promotion. ฉันซื้อผลิตภัณฑ์บำรุงผิวชิ้นนี้เพราะมีโปรโมชั่น ลดราคา	299	1.00-5.00	2.8233	1.05633
I buy this facial skincare due to additional free products. ฉันซื้อผลิตภัณฑ์บำรุงผิวชิ้นนี้เพราะมีโปรโมชั่น ของแถม	299	1.00-5.00	2.7167	1.06151
I buy this facial skincare because there is a discount coupon ฉันซื้อผลิตภัณฑ์บำรุงผิวชิ้นนี้เพราะมีโปรโมชั่น ให้ลูปองส่วนลด	299	1.00-5.00	2.6467	1.00258
Knowledge Before buying this facial skincare, I know the effectiveness of this product. ก่อนฉันซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้ฉันได้หา ข้อมูลเกี่ยวกับประสิทธิภาพของผลิตภัณฑ์ชิ้นนี้มา ก่อนแล้ว	299	1.00-5.00	3.5000	0.91257
Before buying this facial skincare, I know the safety of this product. ก่อนฉันซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้ฉันได้หา ข้อมูลเกี่ยวกับความปลอดภัยของผลิตภัณฑ์ชิ้นนี้มา ก่อนแล้ว	299	1.00-5.00	3.5167	0.90135

Item				Std.
	Ν	Range	Mean	Deviation
The skincare products in Friday market have tendency to be unsafe products. ผลิตภัณฑ์บำรุงผิวหน้าในตลาดนัดทั่วไปมีโอกาส มากที่จะเป็นผลิตภัณฑ์บำรุงผิวอันตราย	299	1.00-5.00	3.8733	1.11119
All facial skincare products must be approved by Thai FDA only before they are on market. ผลิตภัณฑ์บำรุงผิวหน้าทุกชนิดก่อนจะนำมา วางงายได้ต้องได้รับการรับรองจากอย.ก่อน เท่านั้น	299	1.00-5.00	4.1400	0.91462
luct appearance I buy this facial skincare product due to its beautiful bottle or box. ฉันซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้เพราะกล่อง ,ขวด,กระปุก บรรจุครีมสวยงาม น่าใช้	299	1.00-5.00	3.1533	1.03282
I buy this facial skincare product due to its good smelling. ฉันซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้เพราะมีกลิ่น หอมน่าใช้	299	1.00-5.00	3.1133	1.01518
I buy this facial skincare product because the cream is good. ฉันซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้เพราะเนื้อครีม สวยงาม น่าใช้	299	1.00-5.00	3.0400	1.04661

0	0
0	0

Item	N	Range	Mean	Std. Deviation
Branding	1	Kange	Wican	Deviation
I buy this facial skincare because I know its branding ฉันซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้เพราะเป็นยี่ห้อ ที่ฉันรู้จัก	299	1.00-5.00	3.5267	0.85931
I buy this facial skincare due to its well-known branding. ฉันซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้เพราเป็นยี่ห้อที่ ได้รับการขอมรับอย่างกว้างขวาง	299	1.00-5.00	3.6633	0.84797
I buy this facial skincare because it has research- approved quality. ฉันซื้อผลิตภัณฑ์บำรุงผิวหน้าชิ้นนี้เพราะ เป็นยี่ห้อ ที่มีผลการวิจัยรับรองคุณภาพ	299	1.00-5.00	3.6600	0.85254



 Table 8: Mean standard deviation and t-test of FDA's campaign about reading

 facial skincare product's label before it was purchased.

item	Safe purchased group (Mean ± S.D.)	Unsafe purchased group (Mean ± S.D.)	t-test significant
Before purchased this product, I had already read the label completely.	4.00±0.82	3.44±0.82	0.000*



NAME LIST OF THE DANGEROUS COSMETIC ANOUNCED BY THAI FDA (UPDATE ON OCTOBER, 2009)

- 1. Prai Sod, natural herbs for acne and blemish
- 2. Second Cream under the Magnate brand
- 3. Anti-blemish Green Tea Cream under Magnate brand
- 4. UV protection and anti-blemish Wind Surf lotion
- 5. Wind Surf cream
- 6. UV protection with allantoin Edgard lotion
- 7. Easy Herb Night Bright Melasma cream
- 8. Wan Nang Sao herbal cream
- 9. Skin-care SG lotion
- 10. Tamarind Herbal cream
- 11. Mena Facial cream
- 12. Tomatoes Herbal cream
- 13. Lemon Herbal cream
- 14. UV protection cucumber cream (special formula)
- 15. Anti-blemish Sow cream
- 16. Skin care Best Beauty cream
- 17. Skin care Best lotion
- 18. **3P** lotion
- 19. Anti-blemish Pigment
- 20. Whitening-facial Mook cream
- 21. Volk Intensive Lifting cream USA
- 22. IFSA
- 23. Sticky-orange cream in yellow case with blue rim
- 24. Sticky-brown cream in yellow case with blue rim
- 25. Whitening-facial cosmetic cream IFSA
- 26. Green Tea Cosmetic cream DR. JAPAN
- 27. The Winner Tamarind cream (concentrated formula)
- 28. Wan Sao Noi Herbal cream
- 29. Lips cream (pink nipple before bed)
- 30. Anti-blemish cream (morning-before bed)
- 31. applied under axilla and groin before bed
- 32. Prim Melano-whitenase A
- 33. Prim Brighten and Re-whiten
- 34. Three Day natural anti-blemish cream (White formula)
- 35. Three Day Brighten and Re-whiten
- 36. Three Day natural E-plus (anti-acne and blemish cream)
- 37. White Noni and Honey cream
- 38. Cucumber Herbs
- 39. Green 4 cream
- 40. Yellow Curcuma 5 cream
- 41. Vital Essence Good Night Cream
- 42. S.N.K. Kaew Khaow Whitening Cream
- 43. PC cream (tomatoes cream)
- 44. Skin care Pretty cream

- 45. AHA whitening night cream
- 46. whitening skin care products
- 47. P-care cream (Ginger anti-acne and blemish cream)
- 48. PC Ginger cream (concentrated special formula)
- 49. FC Tamarind herbal cream
- 50. FW. Young Rice Milk cream
- 51. FW. Young Rice Milk Herbal cream
- 52. 3-Tree Days Natural Acne cream (white formula)
- 53. 3-Tree Days Natural UV protection and blemish protection lotion
- 54. Sha-Bu-Ae Rice Milk & White Cream
- 55. Sha-Bu-Ae Tamarind & White cream
- 56. Edgard anti-acne and blemish cream
- 57. Baby face Plai-Sod herbal cream
- 58. Baby face skin care cream
- 59. Mook-Tri-Tra whitening cream (anti-acne and blemish)
- 60. Yan Hee cream (anti-acne and blemish)
- 61. Sheep cream
- 62. Miss Japan Green Tea cream
- 63. Ni Pat anti-blemish cream
- 64. Boucheron cream
- 65. B Best Beauty skin care cream
- 66. Anna cosmetic skin care cream
- 67. JAB CREAM Whitening cream
- 68. The Winner Tamarind Herbal cream
- 69. Anna cosmetic Anna lotion
- 70. B Best Beauty Best lotion
- 71. DO DO Whitening cream
- 72. Mui Lee Hiang cream for acne and blemishes
- 73. Pan-V UV-protection herbal lotion
- 74. DO DO Vitamin C lotion
- 75. none
- 76. Tawan Doctor cream
- 77. Tawan Doctor herbal cream
- 78. Taleena cream (aloevera cream)
- 79. Acne and blemish herbal cream
- 80. J Leena serum Whitening Zerum (evening 1)
- 81. J Leena Serum Whitening Face (morning 2)
- 82. Baoju Whitening cream Night cream
- 83. Wan Tip herbal cream
- 84. Faylacis Night cream FS-202
- 85. Yanko Day cream
- 86. Yanko Night cream
- 87. Faylacis cream
- 88. CTA cream
- 89. Qian Mei cream (in green case with ginseng)
- 90. Q care (anti-blemish)
- 91. Q care (Curcuma skin care cream)

- 92. Preame cream (anti-wrinkle cream)
- 93. Preame UV-protection lotion
- 94. Preame anti-blemish lotion
- 95. Preame anti-acne cream
- 96. Q2 anti-blemish cream
- 97. Wan Nang Pa Ya whitening facial cream
- 98. Pan-V acne and blemish herbal cream
- 99. Pan-V UV-protection herbal lotion
- 100. Mikolite 3 Mikomuszuree cream
- 101. milky white fluids in plastic bags
- 102. Alpha-Mikomuszuree cream
- 103. Mayavee 4 Mikomuszuree cream
- 104. Mayavee 3 Mikomuszuree cream
- 105. Miss Day anti-acne and blemish cream
- 106. Q2 facial whitening and skin care cream
- 107. Chin Chun Su face cream
- 108. Tanaka herbal cream (detox formula)
- 109. Qian Mei yellow cream
- 110. Qian Mei white cream
- 111. Qian Mei (yellow cream)
- 112. Qian Mei (white cream)
- 113. ECOL-C anti-blemish cream set
- 114. FAR-ACT FRECKLE cream set and SUPER FAR-ACT
- 115. FAR-ACT 101 anti-blemish cream set
- 116. Lovely Skin (flat box)
- 117. Lovely Skin (tall box)
- 118. not identified the manufacturer
- 119. Anti-acne and blemish Dr. Niwat cream
- 120. Anti-blemish cream (brand not identified)
- 121. Rama clinic anti-blemish cream set
- 122. DC Rama Disco lotion
- 123. 99 DC anti-blemish set
- 124. Topsyne aloe medicated cream
- 125. Plai Sod natural herbal cream
- 126. TOTO Medicated cream
- 127. Tory Pearls cream (both round and oval box)
- 128. Win Surf UV-protection lotion
- 129. Sri Sawad anti-blemish cream set
- 130. Umaporn Beauty anti-blemish cream set
- 131. Parichart anti-blemish set
- 132. Dr. Thana anti-blemish set
- 133. Hollywood Anti-Age cream set
- 134. Anti-blemish cream (in plastic box)
- 135. Top Gel
- 136. Nipat anti-blemish cream
- 137. S.G. skin care lotion
- 138. Fara Sunscreen lotion

- 139. Fara White Soft Lotion
- 140. Fara UV-protection lotion
- 141. Satong anti-acne and blemish cream
- 142. Satong whitening lotion
- 143. Pan Joice anti-blemish cream
- 144. Pan Joice anti-blemish lotion
- 145. Pan Joice UV-protection lotion
- 146. Pan Joice acne cream
- 147. Sticky orange cream in white plastic box 450 g.
- 148. Sticky orange cream in yellow plastic box 450 g.
- 149. Anti-acne and blemish herbs in white plastic box with blue rim
- 150. Curcuma cream in green box with golden rim
- 151. Curcuma cream in blue box with golden rim
- 152. A.E. skin care cream
- 153. A.E. SPF 15 UV protection cream
- 154. A.E. anti-acne and blemish lotion
- 155. Kaow Pruksa Pan Whitening Night cream
- 156. Lae Now Whitening Night cream
- 157. Air-port cold towel
- 158. Skin care lotion
- 159. MV Rama skin care cream
- 160. Pop Popular Fruitamin cream
- 161. Pop Popular Fruitamin lotion
- 162. Edgard UV-protection lotion with allantoin
- 163. Fade Out whitening facial cream
- 164. Honey facial massage herbs
- 165. Pearls facial whitening herbs
- 166. Kitosan skin care herbs
- 167. Night cream 2 before bed (healthy skin Institute)
- 168. Hair growth product
- 169. 3 Tree Days Natural Duo Beauty Lightening formula
- 170. 3 Days Brighten and re-whiten
- 171. A.E. UV-protection and anti-acne and blemish cream
- 172. Anti-blemish cream number 1
- 173. Pong Pradit facial massage herbs
- 174. Pong Pradit whitening facial herbs
- 175. Jantaraporn anti-acne and blemish herbs
- 176. Supplementing Night cream NO.1
- 177. Three Days Brightening & Re-whitening sunscreen lotion
- 178. Three Days Brightening & Re-whitening anti-blemish cream
- 179. Pop Popular Fruitamin cream with AHA
- 180. SG skin fresh lotion
- 181. Melacare Demelanizing Anti-blemish cream
- 182. Melacare Demelanizing UV-protection lotion
- 183. Mui Lee Hiang Pearls cream
- 184. Cucumber cream

- 185. Plai Sod anti-blemish cream
- 186. Wan Nang Paya Herbal Lightening cream with Vitamin E
- 187. P-Care Ginger anti-blemish cream
- 188. Plai Sod P-Care cream (Grade A)
- 189. Melacare anti-blemsh cream
- 190. Melacare UV-protection lotion
- 191. Rose anti-blemish cream
- 192. A.E. skin care cream
- 193. A.E. anti-acne and blemish lotion
- 194. Win Surf lotion
- 195. Anti-Far Skin Care lotion and anti-blemish
- 196. Anti-Far Whitening cream
- 197. Anti-acne and blemish cream (applied before bed)
- 198. S.G. skin care lotion
- 199. Legano Hair Bleaching Powder
- 200. Legano Blonder Bleaching cream
- 201. Tan Ta Wan Skin Care cream (applied before bed)
- 202. New Fresh Care cream
- 203. Rody Rosedew RDQBW
- 204. Plai Sod natural herbs
- 205. Magnate Second cream
- 206. Magnate Green Tea anti-blemish cream
- 207. Win Surf anti-blemish and UV-protection lotion
- 208. Win Surf cream
- 209. Edgard UV-protection lotion with allantoin
- 210. Easy Herbs Night Bright Melasma cream
- 211. Wan Nang Sao herbal cream
- 212. S.G. skin care lotion
- 213. Tamarind herbal cream
- 214. Mena Facial cream
- 215. Tomatoes Herbal cream
- 216. Lemon Herbal cream
- 217. Cucumber UV-protection cream (special formula)
- 218. Sow Anti-blemish cream (pink box)
- 219. Best Beauty skin care cream
- 220. Best skin care lotion
- 221. 3P lotion
- 222. Blemish pigment
- 223. Pearls Whitening Facial cream
- 224. Volk Intensive Lifting cream USA
- 225. IFSA sticky orange cream
- 226. Sticky orange cream (yellow box with blue rim)
- 227. Sticky brown cream (yellow box with blue rim)
- 228. IFSA whitening facial cream
- 229. Dr. Japan Green Tea cream
- 230. The Winner Tamarind cream (concentrated formula)
- 231. Wan Sao Noi herbal cream (grade A)
- 232. Lips cream (pink nipple before bed)

- 233. Anti-blemish cream (morning- before bed)
- 234. applied under axilla and groin before bed
- 235. Prim Melano-whitenase A acne cream (with 1.1 Prim cream)
- 236. Prim Melano-whitenase A anti-sunscreen lotion
- 237. Prim Brighten and Re-whiten cream
- 238. Prim Brighten and Re-whiten anti-sunscreen lotion
- 239. Three Days Natural anti-acne and blemish cream (whitening formula)
- 240. Three Day Natural UV-protection lotion
- 241. Three Day Brighten and Re-whiten cream
- 242. Three Day Brighten and Re-whiten blemish protection lotion
- 243. Three Day Natural E-plus anti-acne and blemish cream
- 244. White noni and honey cream
- 245. Cucumber Herbs
- 246. Green 4 cream
- 247. Yellow Curcuma 5 cream
- 248. Vital Essence Good Night cream
- 249. S.N.K. Kaew Khaow Whitening Cream
- 250. PC cream (tomatoes cream)
- 251. Skin care Pretty cream
- 252. AHA whitening night cream
- 253. White Care Whitening facial cream (Milky Yoghurt)
- 254. White Care Bleaching skin cream (Milky Yoghurt)
- 255. White Care Whitening facial cream (Milky Fruit)
- 256. White Care Bleaching skin cream (Milky Fruit)
- 257. White Care Whitening facial cream with 3.1 white care developer (Milky Fruit)
- 258. White Care Bleaching skin cream with 3.2 white care (Milky Fruit)
- 259. White Perfect cream Developer 3%
- 260. White Perfect Powder
- 261. White Lady with 5.1 white lady cream developer
- 262. White Lady with 5.2 white lady bleaching skin cream
- 263. White Lady with 6.1 white lady cream developer
- 264. White Lady with 6.2 white lady bleaching skin cream
- 265. White Lady with 7.1 white lady cream developer
- 266. White Lady with 7.2 white lady bleaching skin cream
- 267. P-care cream (Ginger anti-acne and blemish cream)
- 268. PC Ginger cream (concentrated special formula)
- 269. FC Tamarind herbal cream
- 270. FW. Young Rice Milk cream
- 271. FW. Young Rice Milk Herbal cream
- 272. Win Surf cream
- 273. 3-Tree Days Natural Acne cream (white formula)
- 274. 3-Tree Days Natural UV protection and blemish protection lotion
- 275. Win Surf UV-protection lotion
- 276. Sha-Bu-Ae Rice Milk & White Cream
- 277. Sha-Bu-Ae Tamarind & White cream

- 278. Edgard anti-acne and blemish cream
- 279. Baby face Plai-Sod herbal cream
- 280. Baby face skin care cream
- 281. Edgard UV-protection lotion with allantoin
- 282. Plai Sod anti-acne and blemish herbs
- 283. Mook-Tri-Tra whitening cream (anti-acne and blemish)
- 284. Yan Hee cream (anti-acne and blemish)
- 285. Sheep cream
- 286. Miss Japan Green Tea cream
- 287. Ni Pat anti-blemish cream
- 288. Boucheron cream
- 289. B Best Beauty skin care cream
- 290. Anna cosmetic skin care cream
- 291. JAB CREAM Whitening cream
- 292. The Winner Tamarind Herbal cream
- 293. Anna cosmetic Anna lotion
- 294. B Best Beauty Best lotion
- 295. DO DO Whitening cream
- 296. Mui Lee Hiang cream for acne and blemishes
- 297. Pan-V UV-protection herbal lotion
- 298. DO DO Vitamin C lotion
- 299. B Best Beauty skin cream
- 300. Nang Fa Ginseng Herbs
- 301. Anna Cosmetic UV-protection cream
- 302. Anna Cosmetic 2004 anti-blemish cream
- 303. Anna Cosmetic cream (night cream)
- 304. Anna Cosmetic 2004 skin care lotion
- 305. Anna Cosmetic 2004 anti-blemish and skin care cream
- 306. Mikomuszuree Mayavee 3
- 307. Mikomuszuree Mayavee 4
- 308. Mikomuszuree Rasamee Ramuo
- 309. New Care Skin Care lotion
- 310. New Care anti-blemish cream
- 311. Miss Lilly
- 312. Thai natural herbs anti-acne and blemish cream (grade A 100 %)
- 313. Plai Sod natural herbs
- 314. Whitening facial cream (concentrated formula)
- 315. D White Night cream
- 316. Q 2 anti-blemish cream
- 317. Miss Day anti-acne cream
- 318. Miss Day anti-blemish cream
- 319. Mui Lee Hiang
- 320. Anti-blemish cream
- 321. Nang Fa whitening facial cream
- 322. Spirulina Baby Face
- 323. Wan Nang Pa Ya Whitening facial cream

- 324. Lemon grass with Ginger anti-blemish cream
- 325. Plai Sod natural herbs (grade A)
- 326. Three Days Natural E-Plus
- 327. Melacare UV-protection lotion
- 328. Melacare blemish cream
- 329. Pearls whitening facial cream
- 330. Wan Nang Pa Ya whitening facial herbal cream
- 331. S.G. skin care lotion
- 332. Angel care whitening facial cream
- 333. Edgard anti-acne and blemish cream with allantoin
- 334. Three Days anti-aging and blemish cream
- 335. Three Days UV-protection and anti-blemish lotion
- 336. Three Days natural acne cream (whitening formula)
- 337. Three Days Natural UV-protection and anti-blemish lotion
- 338. Wan Nang PaYa PNT herbal cream
- 339. Win Surf UV-protection lotion
- 340. Win Surf cream
- 341. Kone" sunscreen lotion
- 342. Kone" whitening cream
- 343. Wan Nang Sao herbal cream
- 344. lemon herbal cream with vitamin E
- 345. Tomatoes herbal cream
- 346. Lenow night skin care cream
- 347. Qian Li
- 348. The Winner Tamarind herbs (concentrated formula)
- 349. Far-Act anti-blemish cream
- 350. Anti-Far anti-blemish and skin care lotion
- 351. Far-Act 101 anti-blemish cream
- 352. Anti-Far anti-blemish and skin care lotion and Far-Act 101 antiblemish cream set
- 353. CN anti-Far Whitening cream
- 354. Anti-Far anti-blemish and skin care lotion with anti-Far Whitening cream
- 355. CN Clinic 99 Far-Act anti-blemish cream (special formula)
- 356. Anti-Far anti-blemish and skin care lotion with CN Clinic 99 antiblemish cream (special formula)



BIOGRAPHY

Wannakan Jaroonponpong was born in Nakhon Ratchasima, Thailand, on June 6, 1984. She graduated from Suranaree Wittaya School in 2002 and received her Bachelor of Science degree in Pharmacy with second class honour from Khon Kaen University in March 2007. Wannakan worked in Novartis (Thailand) Co,Ltd. from 2007 to 2008,P.Phaya Hospital from 2008 to 2009 and Novo Nordisk(Thailand) Pharma Co, Ltd. from 2009 to Present (2010) in the position of pharmacist. She entered the Degree of Master of Science in Social and Administrative Pharmacy Program, Faculty of Pharmaceutical Science at Chulalongkorn University in 2008.

