FACTORS AFFECTING SATISFACTION OF PATIENTS OF PHYSIOTHERAPY CLINICS IN BANGKOK

Suphakit Thawalyawichachit

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By	Suphakit Thawalyawichachit
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Advisor	Asst. Prof. Dr. Aroonluck Vithyavijin

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..... Dean of Graduate School

(Assoc. Prof. Dr. Pichit Sukchareonpong)

Month…..…..…….. Date…....., Year…...…...

Thesis Committees

..... Chairperson

(Prof. Dr. Vanna Tulyathan)

..... Committee

(Dr. Chark Tingsabhat)

..... Committee

(Dr. Korakot Hemsathapat)

..... Advisor

(Asst. Prof. Dr. Aroonluck Vithyavijin)

SUPHAKIT THAWALYAWICHACHIT : FACTORS AFFECTING SATISFACTION OF PATIENTS OF PHYSIOTHERAPY CLINICS IN BANGKOK. ADVISOR : ASSISTANT PROFESSOR DR. AROONLUCK VITHYAVIJIN, 127 PP.

This study aims to find out the influence of patients' demographic characteristics on their satisfaction regarding service marketing mix factors. The objectives of the study are to learn which patient groups influence the level of satisfaction, and how they have the influential power on the marketing factors, so that the influence level can be prioritized accordingly. This is a quantitative study. Population of the study is the patients of physiotherapy clinics located in Bangkok only. Questionnaire was used as the tool to collect the data. The confidence level of 95 percent was set to achieve. Samples are drawn by non-probability, convenient sampling method. The samples of 412 patients responded to the questionnaires. Statistical analyses were conducted to find the influence of demographic characteristics and satisfaction regarding the service marketing mix factors. The results show that the top three overall patients satisfaction are influenced by price, people and service of the clinics. There was no statistical significance of the patient's gender and occupation found to influence on their satisfaction regarding any factors. The frequency of visits influenced on satisfaction of the patients regarding most marketing factors. It was also found that promotion by the clinics least influences the patients' satisfaction.

Keywords : satisfaction, physiotherapy, physical therapy, physiotherapy clinic, personal characteristics, 7Ps, service marketing mix

Graduate School Student's Signature .....

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Chapter 1

Introduction

Background and Importance of the Problem

Nowadays, the awareness level of personal health and well-being are much higher than in the past. Apparently, people tend to take care of themselves and deploy preventive practices in order to be healthy and stay away from sickness. Nonetheless, despite how hard people try to avoid getting sick, people are getting not so well sometimes anyway. Many illnesses can be so explicit and are able to be diagnosed and cured easily. However, many are chronic and more difficult to be recovered. These illnesses are, for examples, back pain, neck pain, or locked fingers. They generally stem from our daily activities, the way we work, the postures we act, or even our habitual movements. This type of sickness is also known as office syndrome.

Office syndrome is a group of ailments often found in office staff and employees who do routine jobs. This is due to the fact that these people are subject to inappropriate repetitive postures or manners, which, in general, counter the preferable stances according to ergonomics.

Ergonomics is a derived Greek word from Ergon (Ergo), meaning work, and Nomoi (Nomics), meaning natural laws. To translate literally, ergonomics means the rules of work. Similar to all other kinds of rules, ergonomics tells people how to perform appropriately or preferably to prevent ones from pains.

It is undeniable that people these days are working much more than in the past. Presently, work tends to be more routine and repetitive. This results in more people suffering office syndrome, simply because they do not follow the rules of work. Examples of activities leading to the office syndrome are sitting for too long, the presence of humpback-like sitting, or staring at the computer screen for a long time. These manners lead to contractions, thus, strain and then pain of the muscles. At the end, the muscles get inflamed. As a cure for the sores and pains, sufferers may visit physiotherapist to have the symptoms relieved.

In addition, it is not only the increase of the morbidity due to office syndromes. The increase of the elders also increases the demand of the physiotherapy as well. It has been reported by the Department of Provincial Administration, Ministry of Interior,

the elder population as of December 31, 2011 was around 7.8 million people, or account for 12.38 percent of the country's population (The Office of Welfare Promotion, Protection and Empowerment of Vulnerable Groups. 2011) Furthermore, it has been found that the number of the elder population has increased annually for the past several years. (Patama, Warpattanawong ; and Pramote, Prasartkul. n.d.)

As a result of increasing demands for the remedy of office syndrome, there are many newly open physiotherapy clinics throughout the country in the past several years. In addition, the study in the field of physiotherapy is getting more popular. Therefore, the sufferers have more choices with easier access to physiotherapists for the treatments of the sores and pains.

Consequently, patients need to get more satisfaction and take the best out of the variety of choices available. The clinics then need to adapt themselves strategically to suit the needs and requirements of the patients as well as to be competitive in terms of business operation. To supply and fulfill these demands, physiotherapy clinic should make itself pleasurable to visit. Though, there are many factors contributing to influence patients to visit by increasing the satisfactory level of the clients.

Currently, the patients can have variety of options of physiotherapy clinics to choose from. As of 2011, the Ministry of Public Health of Thailand announces the statistics of registered clinics throughout the country in 2011. It is interesting that 40 per cent of total physiotherapy clinics are located in Bangkok. More details and information are shown in Table 1.

Table 1 Industry Statistics-Health Care Clinic in Bangkok

Type of Clinic	Bangkok	Provincial	Total
General Clinic	1,958	5,130	7,088
Specialized Clinic	212	1,676	1,888
Dental Clinic	1,283	2,113	3,396
Specialized Dental Clinic	4	37	41
Nursing and Midwifery Clinic	23	4,302	4,325
Physiotherapy Clinic	74	111	185
Medical Laboratory Clinic	66	320	386
Thai Medical Clinic	310	335	645
Applied Thai Medical Clinic	32	31	63
Combined Clinic	87	164	251
Second Class Dental Clinic	10	29	39
Second Class Midwifery Clinic	4	517	521
Total	**4,063**	**14,765**	**18,828**

Source : Department of Health Service Support. (2011). **Countrywide Statistics of Medical Providers which Accept No In-Patients, Groupped by Type of Medical Provision, Year 2011, Information Retrieval Date : September 20, 2011**. Online.

However, it is interesting that only limited similar studies were found to have been conducted in Thailand. Therefore, it would be useful to some extent of development to understand which factors can influence the satisfaction level of patients who receive treatments at a physiotherapy clinic.

Research Problems

There are many physiotherapy clinics in Bangkok that offer remedy to ergonomics problems, or office syndrome, as well as other ailments and illnesses. At the same time, more potential patients are suffering more from office syndrome, as can be seen from the fact that the number of musculoskeletal patients has increased from 19.5 million patients in 2011 to 20.7 million patients in 2012 (National Statistics

Office). The spread of the office syndrome boosts the needs for physiotherapy clinics. Since there are more physiotherapy clinics opened ; 36 clinics in 2006 up to 74 clinics in 2011, the more challenges and competitions will be among these clinics. These competitions are mainly to serve the patients effectively and efficiently, where the ultimate results are the achievement of the satisfaction of the patients. Strategic factors needs to be specified and analyzed to gain maximum customer satisfaction as well as to make the clinic survive in this competitive environment.

Several studies are conducted worldwide to maximize the satisfaction level of patients visiting physiotherapy clinics. However, it has not been found that similar research has been conducted in Thailand.

Therefore, this brings about the questions : what are the factors influencing the patients' satisfaction of using physiotherapy clinic in Bangkok?

Research Objectives

The objectives of this research are as follows.

1. To study the demographic characteristics of the patients which influence their satisfaction level when receiving treatments at physiotherapy clinics in Bangkok.
2. To prioritize the influencing level of each factor.
3. To study the influence of personal characteristics of the patients on the satisfaction regarding the marketing factors.

Conceptual Framework

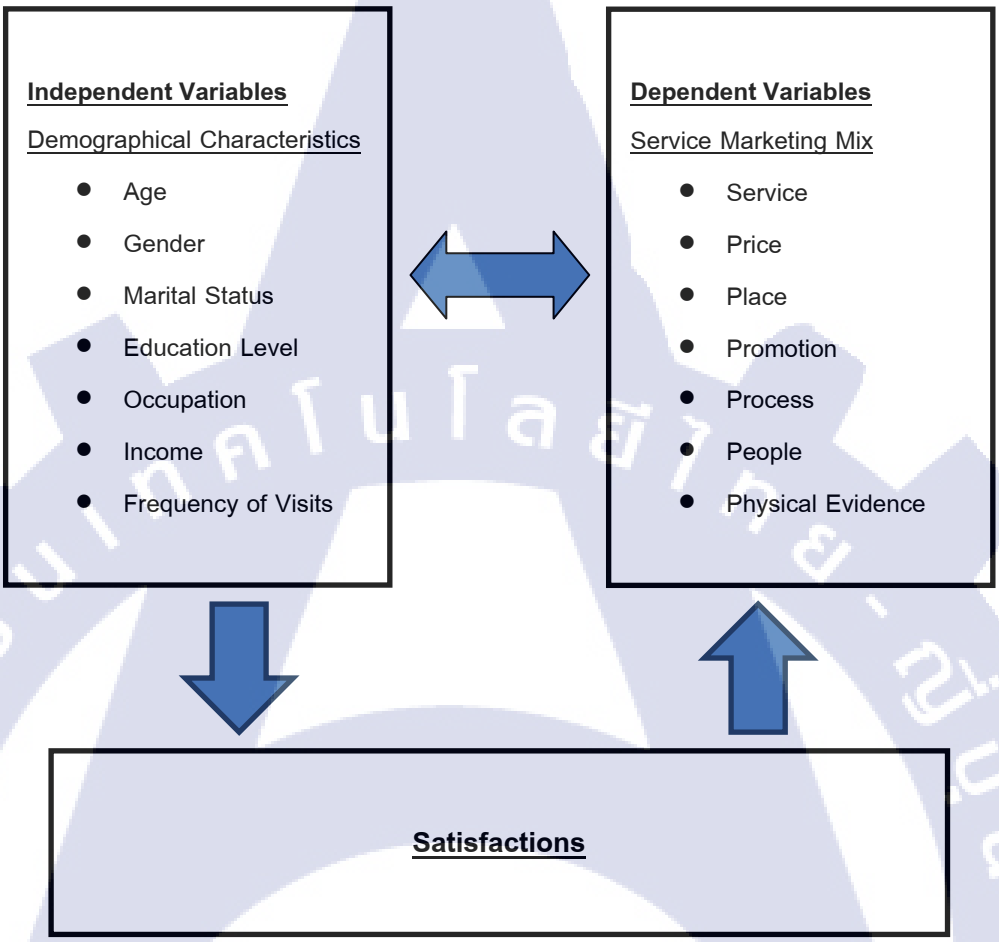

Figure 1 Conceptual Framework

Scope of the Study

This paper limits to the following aspects.

1. Population in this study is limited to the patients who visit and receive treatments from any physiotherapy clinics in Bangkok.

2. The consideration covers the marketing mix aspects with the 7-Ps concept. These aspects include the followings factors.

- Product, or in this case, service
- Price
- Place

- Promotion
- Process
- People
- Physical Evidence

3. The demographic characteristics of the patients are also considered in the scope of study as the factors which may affect the satisfaction of the physiotherapy visits. These characteristics include the following.

- Age
- Gender
- Marital Status
- Education Level
- Occupation
- Income
- Frequency of Visits

4. The independent factors are the factors mentioned in 3, whereas the dependent factors are the satisfaction of the patients who visit a physiotherapy clinic in Bangkok regarding the marketing factors mentioned in 2.

Hypotheses

This research is based on the main null hypothesis that no influences of demographic characteristics of the patients on satisfaction of the patients. The main hypothesis is divided into several sub-hypotheses. The alternative hypothesis is the opposition of the null hypothesis.

Null Hypothesis

H_0 : No influence of demographic characteristics exists on the patients' satisfaction.

Sub-Hypotheses for the Null Hypothesis are classed in 7 groups. Each group also has 7 separated hypotheses.

1. H_0-A : Gender does not influence patient satisfaction.
   1.1 H_0-A-1 : Gender does not influence satisfaction level of service quality.
   1.2 H_0-A-2 : Gender does not influence satisfaction level of price.

1.3 H_0-A-3 : Gender does not influence satisfaction level of place.

1.4 H_0-A-4 : Gender does not influence satisfaction level of promotion.

1.5 H_0-A-5 : Gender does not influence satisfaction level of process.

1.6 H_0-A-6 : Gender does not influence satisfaction level of people.

1.7 H_0-A-7 : Gender does not influence satisfaction level of physical evidence.

2. H_0-B : Age does not influence patient satisfaction.

2.1 H_0-B-1 : Age does not influence satisfaction level of service quality.

2.2 H_0-B-2 : Age does not influence satisfaction level of price.

2.3 H_0-B-3 : Age does not influence satisfaction level of place.

2.4 H_0-B-4 : Age does not influence satisfaction level of promotion.

2.5 H_0-B-5 : Age does not influence satisfaction level of process.

2.6 H_0-B-6 : Age does not influence satisfaction level of people.

2.7 H_0-B-7 : Age does not influence satisfaction level of physical evidence.

3. H_0-C : Marital status does not influence patient satisfaction.

3.1 H_0-C-1 : Marital status does not influence satisfaction level of service quality.

3.2 H_0-C-2 : Marital status does not influence satisfaction level of price.

3.3 H_0-C-3 : Marital status does not influence satisfaction level of place.

3.4 H_0-C-4 : Marital status does not influence satisfaction level of promotion.

3.5 H_0-C-5 : Marital status does not influence satisfaction level of process.

3.6 H_0-C-6 : Marital status does not influence satisfaction level of people.

3.7 H_0-C-7 : Marital status does not influence satisfaction level of physical evidence.

4. H_0-D : Education level does not influence patient satisfaction.

4.1 H_0-D-1 : Education level does not influence satisfaction level of service quality.

4.2 H_0-D-2 : Education level does not influence satisfaction level of price.

4.3 H_0-D-3 : Education level does not influence satisfaction level of place.

4.4 H_0-D-4 : Education level does not influence satisfaction level of promotion.

4.5 H_0-D-5 : Education level does not influence satisfaction level of process.

4.6 H_0-D-6 : Education level does not influence satisfaction level of people.

4.7 H_0-D-7 : Education level does not influence satisfaction level of physical evidence.

5. H_0-E : Occupation does not influence patient satisfaction.

5.1 H_0-E-1 : Occupation does not influence satisfaction level of service quality.

5.2 H_0-E-2 : Occupation does not influence satisfaction level of price.

5.3 H_0-E-3 : Occupation does not influence satisfaction level of place.

5.4 H_0-E-4 : Occupation does not influence satisfaction level of promotion.

5.5 H_0-E-5 : Occupation does not influence satisfaction level of process.

5.6 H_0-E-6 : Occupation does not influence satisfaction level of people.

5.7 H_0-E-7 : Occupation does not influence satisfaction level of physical evidence.

6. H_0-F : Income level does not influence patient satisfaction.

6.1 H_0-F-1 : Income level does not influence satisfaction level of service quality.

6.2 H_0-F-2 : Income level does not influence satisfaction level of price.

6.3 H_0-F-3 : Income level does not influence satisfaction level of place.

6.4 H_0-F-4 : Income level does not influence satisfaction level of promotion.

6.5 H_0-F-5 : Income level does not influence satisfaction level of process.

6.6 H_0-F-6 : Income level does not influence satisfaction level of people.

6.7 H_0-F-7 : Income level does not influence satisfaction level of physical evidence.

7. H_0-G : Frequency of visits does not influence patient satisfaction.

7.1 H_0-G-1 : Frequency of visits does not influence satisfaction level of service quality.

7.2 H_0-G-2 : Frequency of visits does not influence satisfaction level of price.

7.3 H_0-G-3 : Frequency of visits does not influence satisfaction level of place.

7.4 H_0-G-4 : Frequency of visits does not influence satisfaction level of promotion.

7.5 H_0-G-5 : Frequency of visits does not influence satisfaction level of process.

7.6 H_0-G-6 : Frequency of visits does not influence satisfaction level of people.

7.7 H_0-G-7 : Frequency of visits does not influence satisfaction level of physical evidence.

Alternative Hypothesis

H_1 : Influence of demographic characteristics exists on the patients' satisfaction.

Sub-Hypotheses for the Alternative Hypothesis are classified in 7 groups. Each group also has 7 separated hypotheses.

1. H_1-A: Gender influences patient satisfaction.
   - 1.8 H_1-A-1 : Gender influences satisfaction level of service quality.
   - 1.9 H_1-A-2 : Gender influences satisfaction level of price.
   - 1.10 H_1-A-3 : Gender influences satisfaction level of place.
   - 1.11 H_1-A-4 : Gender influences satisfaction level of promotion.
   - 1.12 H_1-A-5 : Gender influences satisfaction level of process.
   - 1.13 H_1-A-6 : Gender influences satisfaction level of people.
   - 1.14 H_1-A-7 : Gender influences satisfaction level of physical evidence.
2. H_1-B: Age influences patient satisfaction.
   - 2.8 H_1-B-1 : Age influences satisfaction level of service quality.
   - 2.9 H_1-B-2 : Age influences satisfaction level of price.
   - 2.10 H_1-B-3 : Age influences satisfaction level of place.
   - 2.11 H_1-B-4 : Age influences satisfaction level of promotion.
   - 2.12 H_1-B-5 : Age influences satisfaction level of process.
   - 2.13 H_1-B-6 : Age influences satisfaction level of people.
   - 2.14 H_1-B-7 : Age influences satisfaction level of physical evidence.
3. H_1-C : Marital status influences patient satisfaction.
   - 3.8 H_1-C-1 : Marital status influences satisfaction level of service quality.
   - 3.9 H_1-C-2 : Marital status influences satisfaction level of price.

3.10 H_1-C-3 : Marital status influences satisfaction level of place.

3.11 H_1-C-4 : Marital status influences satisfaction level of promotion.

3.12 H_1-C-5 : Marital status influences satisfaction level of process.

3.13 H_1-C-6 : Marital status influences satisfaction level of people.

3.14 H_1-C-7 : Marital status influences satisfaction level of physical evidence.

4. H_1-D : Education level influences patient satisfaction.

4.8 H_1-D-1 : Education level influences satisfaction level of service quality.

4.9 H_1-D-2 : Education level influences satisfaction level of price.

4.10 H_1-D-3 : Education level influences satisfaction level of place.

4.11 H_1-D-4 : Education level influences satisfaction level of promotion.

4.12 H_1-D-5 : Education level influences satisfaction level of process.

4.13 H_1-D-6 : Education level influences satisfaction level of people.

4.14 H_1-D-7 : Education level influences satisfaction level of physical evidence.

5. H_1-E : Occupation influences patient satisfaction.

5.8 H_1-E-1 : Occupation influences satisfaction level of service quality.

5.9 H_1-E-2 : Occupation influences satisfaction level of price.

5.10 H_1-E-3 : Occupation influences satisfaction level of place.

5.11 H_1-E-4 : Occupation influences satisfaction level of promotion.

5.12 H_1-E-5 : Occupation influences satisfaction level of process.

5.13 H_1-E-6 : Occupation influences satisfaction level of people.

5.14 H_1-E-7 : Occupation influences satisfaction level of physical evidence.

6. H_1-F : Income level influences patient satisfaction.

6.8 H_1-F-1 : Income level influences satisfaction level of service quality.

6.9 H_1-F-2 : Income level influences satisfaction level of price.

6.10 H_1-F-3 : Income level influences satisfaction level of place.

6.11 H_1-F-4 : Income level influences satisfaction level of promotion.

6.12 H_1-F-5 : Income level influences satisfaction level of process.

6.13 H_1-F-6 : Income level influences satisfaction level of people.

6.14 H_1-F-7 : Income level influences satisfaction level of physical evidence.

7. H_1-G : Frequency of visits influences patient satisfaction.

7.8 H_1-G-1 : Frequency of visits influences satisfaction level of service quality.

7.9 H_1-G-2 : Frequency of visits influences satisfaction level of price.

7.10 H_1-G-3 : Frequency of visits influences satisfaction level of place.

7.11 H_1-G-4 : Frequency of visits influences satisfaction level of promotion.

7.12 H_1-G-5 : Frequency of visits influences satisfaction level of process.

7.13 H_1-G-6 : Frequency of visits influences satisfaction level of people.

7.14 H_1-G-7 : Frequency of visits influences satisfaction level of physical evidence.

Expected Benefits

This study aims to determine the customer satisfaction factors and strategy how to reach the goals from visiting physiotherapy clinic. The results should also be able to create guidelines to improve the performance of the existing physiotherapy clinics. In addition, the findings can be used to set the clinic's policy and strategies for physiotherapists and involving staff to treat patients with proper manners and maximize patient satisfactory level of visiting physiotherapy clinics.

Definitions

The terms used in this study will be defined as follows.

1. **Physiotherapy clinics** : clinics run by health care professions who are specialized in physical treatment of patients suffering from physical sore and pains. It is the place where physical treatments take place and is a place where rehabilitation of physical abilities is primarily concerned as its focus. Physiotherapy clinic in this context can cover both government run and private run clinics. A division in a hospital dedicated for physiotherapy activities is included in this context.

2. **Physiotherapist** : people who possess the legal right to perform the art of physiotherapy to the patients. Physiotherapists are working in physiotherapy clinics.

3. **Patients** : people who decided to ask for services from physiotherapy clinic in Bangkok. Patients in this context can be either current patients or potential patients who are looking for or deciding which physiotherapy clinic to attend.

4. Satisfaction : the reflection of the consumer's judgments towards the perception of the outcomes of the service when compared with their expectation.

5. Services : activities provided by staff of the physiotherapy clinic. This can cover the specialized treatment, such as physical treatments and advices, as well as general services, such as hospitality. Service is considered as a tool to gain maximum patients satisfaction.

6. Prices : the costs incurred by the physiotherapy clinic due to provision of services. This covers the cost of physiotherapists, expertise, diagnoses, physical treatments, charges for the use of specialized tools and equipment, cost of medications, and so on.

7. Places : the location of physiotherapy clinics. This context expands to cover the ease of accessibility, transportation, branches, as well as communication channels which help patients to approach and have access to the physiotherapy clinics, such as website, call center, and at-home-treatment. This also includes the ease of communication and preparation of the patients such as online booking of therapy session.

8. Promotion : the marketing activities which aim to help boost the number of visiting patients to the physiotherapy clinics. This may cover advertisement on variety of media, such as internet, billboard, brochures, leaflets, public events, or even corporate social responsibility programs. Promotion may include health care campaigns as well.

9. Process : the procedures to conduct physiotherapy services which interrelate between different departments in the physiotherapy clinics, as well as services involving staff. Process aims to provide efficient and effective service for the visiting patients. Process should also be informative and accessible by patients as deemed appropriate and in timely manners.

The use of proper technology such as tools, equipment, and accessories which help the physiotherapist to do the treatment easier and better, is also considered under the definition of this factor. Technology can be found in all states of the process from session booking, pre-treatment, treatment, after-treatment, as well as billing and payment process.

10. People : all involved staff in the processes that have either direct or indirect contacts or influences to the services and the patients. This context expands to cover the skills of the physiotherapists as well.

11. Physical evidences : visible and tangible objects that can have impacts to the treatment of the patients. This context covers the interior design of the physiotherapy clinics, the design and layout arrangements of the treatment rooms, calmness, neatness of the place, cleanliness of the tools, clothes for patients and tidiness of the uniform of physiotherapists and staff, comforts, as well as supplementary services such as complimentary drinks or availability of clean toilets.

12. Demographic characteristics : general information of the patients using physiotherapy clinics. The characteristics include age, gender, marital status, educational level, occupation, salary range, and their frequency of visits. The information regarding the type of physical treatment required will also be collected herewith.

13. Office Syndrome : a sickness commonly found in office workers as a result of unhealthy habits such as incorrect sitting postures under a prolonged period of time. The habits result in inflammation of tendons and muscles which lead to pains and aches.

Gantt Chart

This research will be conducted based on the time frame as shown below.

Table 2 Research Schedule

Activities	Time Period								
	2012				2013				2014
	Sep	Oct	Nov	Dec	Q1	Q2	Q3	Q4	Q1
Review of Literatures									
Research Design									
Develop Questionnaires									
Pilot Test and Revise Questionnaires									
Data Collection									
Analyze Data									
Draft the Results									
Finalization									

Chapter 2

Literature Review

This chapter aims to review literatures in order to identify the research issues in the topic “Factors Affecting Satisfaction of Patients of Physiotherapy Clinics in Bangkok”. The following literatures are to be reviewed.

1. Physiotherapy
2. Satisfaction
3. Marketing mix
4. Selection of the Physiotherapy Clinics

Physiotherapy

In order to learn more about this field, it will be worthwhile to begin with the general information and understanding of physiotherapy.

1. Introduction to Physiotherapy

According to the American Physical Therapy Association (APTA) (Hush, J. M. ; Cameron, K. ; and Mackey, M. (2011), Rothenberg, R. E. (1962), The Practice of the Art of Physical Therapy Act B.E. 2547 (2004) Physiotherapy, also known and referred to as Physical Therapy, can be described as a life science practice which has its focus on the diagnosis, remediation, preservation and enhancement of the ability of the disabled and impairments for the functional ability of the patients. The therapy may include the use of physical agents such as assistive devices, trainings and exercises, as well as medical treatments. Physiotherapy is a profession performed by physiotherapists, also known as physical therapist.

In Thailand, physiotherapy is generally considered as a college course in the faculty of science. According to the Thailand’s Physical Therapy Council (2012), there are currently 16 institutes accredited for the course. Appendix A reveals the list of the accredited institutes in Thailand. The Physical Therapy Council (2012) states further that Thailand is ranked the third in Asian in the number of schools offering this course. Thailand is ranked only after Philippines with 94 institutes, and Indonesia with 31 institutes. By regulations written in the Practice of the Art of Physical Therapy Act B.E. 2547 (A.D. 2004), physiotherapists must achieve the physical therapy license to perform

the activities of physiotherapy. Disciplines or fields and branches of physiotherapy relate with several applications are, for example, Musculoskeletal, Orthopedics, Traumatology, Rheumatology, Cardiopulmonary, Neurological, Pediatrics, Electrophysiology, Geriatrics, Ergonomics, Sporting or Community issues, and Rehabilitations. (Machado, N. P. ; and Nogueira, L. T. 2008 ; American Physical Therapy Association. 2011)

Similar to physiotherapy, there is another branch in the field of health care which is known under the name of Chiropractic. Chiropractic is similar to physiotherapy to some degree. Whereas physiotherapy concerns with the motion of the patients and find a way to improve their mobility, chiropractic focuses on manipulation of spines and joints.

2. Physiotherapy Clinics in Bangkok

Department of Health Service Support (2011) discloses that the record of the number of registered physiotherapy clinics in Bangkok, as of September 20, 2011, is 74 clinics (shown in Appendix B).

However, it is found that, according to the Bureau of Sanatorium and Art of Healing, Department of Health Service Support (2011), the request form for opening a clinic does not include chiropractic as a clinical therapeutic practice. Yet there are still many clinics offering chiropractic therapy. It is possible only if these clinics are opened with the physiotherapy license. Also, the Minister of Public Health's writes in the Article 1 (6) in Department of Health Service Support (2002) the Ministerial Regulation B.E. 2545 and only defines the need of physiotherapist for physiotherapy clinic without any mentioning or referencing to the chiropractic practitioners.

Table 3 Thailand Population (In Million People) From 2005 Forecasted Until 2035

Year	Childhood	Working Age	Elderly
2548 (2005)	14.3	41.5	6.4
2553 (2010)	13.2	43	7.5
2558F* (2015)	12.3	43.3	9
2563F* (2020)	11.2	42.9	11
2568F* (2025)	10.4	41.9	12.9
2573F* (2030)	9.8	40.1	14.6
2578F* (2035)	9.1	38.4	15.9

* where F denotes forecasts of the population figures

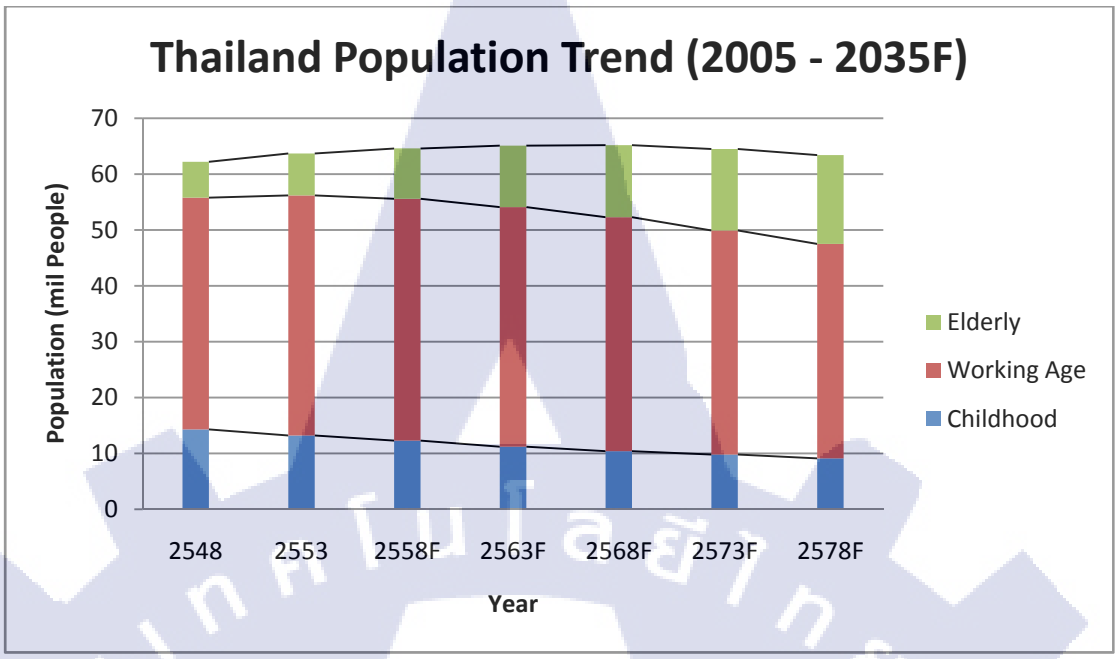

Figure 2 Thailand Population (In Million People) From 2005 Forecasted Until 2035

Source : Patama, Warpattanawong ; and Pramote, Prasartkul. (n.d.). **Thai Population in the Future**. Online.

In general, people visiting physiotherapy clinic comprise of 2 groups : middle age (working age) and elderly people (from the age of 60 and over). Statistically, the population of these groups is shown in Table 3 and Figure 2.

It can be assumed that, from statistical evaluation, the population of these potential patient groups is getting higher in number. As the portion of the target clients grow, it can be foreseen that there will be a tendency of increment of the demand for physiotherapy treatment. Therefore, the number of physiotherapy will also following this increasing trend as well.

Satisfaction

Since this research is regarding patient satisfaction, therefore, it is valuable to understand and browse through the literatures in the field of satisfaction. More emphasize will be placed on the satisfaction of the patients in regards to medical service provider, quality in health service sector, literatures related with health

organizations, patient satisfactions, service section, and factors related with health service utilization are also to be included.

1. Satisfaction in General

Kotler ; and Keller (2009) define satisfaction as a reflection of consumers' judgments towards the perception of the outcomes of products or services as compared with their expectation. Similarly, most other definitions are also a comparison of a gap level between the expectation and the perception towards product and service, and many of them include the satisfaction in the health care service sector. (Neufeldt, V. ; Guralnik, D. B. 1994 ; Coovadie, Mahomed Yusuf. 2008 ; Reisberg, Marni. 1996 ; Machado, N. P. ; and Nogueira, L. T. 2008 ; Anderson, E. A. ; and Zwelling, L. A. 1996 ; citing Kotler ; and Keller. 2009)

While satisfaction compares perception and expectation, it can be seen that the perception can come in variety of forms and that also include the product quality. In physiotherapy, which is considered in a service section of economy, which will be described later in this chapter, the quality of the service is then put on focus.

2. Service Quality in Health Service Sector

Reisberg, Marni (1996) cited Desatnick, R. L. (1987) that service is the new standard which the customers measure the performance of an organization. It is thus a focus to study the service quality and its evaluation in the health sector.

Service Quality Scale was studied to measure the quality of service done in general, including health and life science. The main model or framework in service quality can be considered to be SERVQUAL model, developed by Zeithaml, Parasuraman ; and Berry in 1985 (Coovadie, Mahomed Yusuf. 2008). Originally there were ten dimensions developed from the framework in this model. Nonetheless, a review by the framework developers led to a reduction to just five main aspects or dimensions described and applicable to the service quality. These dimensions are (1) reliability, (2) assurance, (3) tangibility, (4) empathy and (5) responsiveness. (Zeithaml, Parasuraman ; and Leonard, Berry. 1990 ; Al-Azmi, N. ; et al. 2012 ; Mahdzir, M. N. ; and Ismail, A. 2012 ; Coovadie, Mahomed Yusuf. 2008 ; Brady, C. A. ; and Cronin, J. J. 2001) This can be made acronym "RATER". (Wikipedia. 2005)

Studies done by Al-Azmi, N. ; et al. (2012), Richard, M. D. ; and Allaway, A. W. (1993), and Mahdzir, M. N. ; and Ismail, A. (2012) referred to as SERVQUAL scale. This scale is developed from the total quality management perspective (Al-Azmi, N. ;

et al. 2012). The use of this scale is to balance the customer satisfaction, profitability, as well as quality (Mahdzir, M. N. ; and Ismail, A. 2012). Coovadie, Mahomed Yusuf (2008) cited Zeithaml, Parasuraman ; and Leonard, Berry (1990) that the SERVQUAL measures the gap between expectation and the perception of the clients. This gap will be the defining parameter for satisfaction level which has been developed based on organizational psychology's equity theory (Goldstein, M. S. ; Elliot, S. D. ; and Guccione, A. A. 2000). The idea of satisfaction in health care is developed from a comparison between the perceived feelings and the expectation of the patients. Diogenes, Diogenes, T. P. M. ; Mendonca, K. M. P. P. ; and Guerra, R. O. (2009) discussed that the satisfaction comes mainly from therapist-patient relationship and interactions in different aspects. Examples are the courtesy shown at treatment sessions, attentive communication, both verbally and nonverbally, interpersonal relationship, and expressions. This is referred to in the previous studies as the factors which influence the satisfaction of the clients as well. Furthermore, satisfaction level may contribute to informal world-of-mouth distribution. (Goldstein, M. S. ; Elliot, S. D. ; and Guccione, A. A. 2000 : 854)

Therefore, the measurements stemmed from these parameters are related with patients characteristics, such as socio-demographic information, health related patient behavior, such as the rehabilitation services, as well as provider-patient interaction, such as attitude of the therapist and the exchange of meaningful and relevant information to the patients by the physiotherapist. (Devreux, I. C. N. ; et al. 2012 ; Machado, N. P. ; and Nogueira, L. T. 2008) The expected outcomes once the SERVQUAL parameters are met are the productivity, increase of market share, loyalty of the clients, increase of reputation, as well as the increase in satisfaction to both the patients and the staff.

In addition, Al-Azmi, N. ; et al. refer to Grover ; et al. (Al-Azmi, N. ; et al. 2012 ; citing Grover ; et al. 2004) in the sense that total quality management elements also cover the behavioral factors of stakeholders, non-behavioral factors of supplies, tools and techniques used, human factors, and functional factors. Service quality affects the attitude towards the consumer satisfactory level (Al-Azmi, N. ; et al. 2012 ; Hatamizadeh, N. ; et al. 2012 ; citing De Man ; et al. 2002) Total quality management mindset for quality in service segment is also referred to by Anderson, E. A. ; and Zwelling, L. A. (1996) in regards to quality management for health care.

Javetz, R. ; and Stern, Z. (1996) stated that the healthcare segment has become more competitive marketwise. With the consumer awareness on their health, quality of the service in health service segment has become more in attention. Therefore, in order to gain competitive advantage as a health service provider, the service quality needs to be considered and customer satisfaction is the key factor to success. According to Coovadie, Mahomed Yusuf (2008), improvements in service quality can lower operating costs, increase profit margin, create impressions on the clients' minds, as well as their willing to pay extra for quality services. James (Coovadie, Mahomed Yusuf. 2008 ; citing James. 2005) argued that the healthcare industry is shifting from competition based on price to competition based on quality and performance. Health care service provider needs to allocate their resources to create an impact the clients' perceptions towards the service quality provided. (Anderson, E. A. ; and Zwelling, L. A. 1996)

3. Service Quality and Patient Satisfaction

Reisberg, Marni (1996 : 12) states the ten psychological needs of customers ; (1) they need to be in control, (2) they need to feel that they are directed towards their goals, (3) they need to feel good about themselves and they prefer to interact with those who can make them feel this way, (4) they need to be treated appropriately, (5) they need to be treated with friendliness and warmness which can create trust and confidence on them, (6) they need to know what is going on and why it is done, (7) they need to feel safe and secure, (8) they like the approval of others, (9) they want to feel important and want to be recognized, and (10) they need a sense of belonging. It may be noticed that several elements in the study of Reisberg, Marni (1996) are similar to the previous studies referred to (Zeithaml, Parasuraman ; and Leonard, Berry. 1990), Brady, C. A. ; and Cronin, J. J. (2001). These parameters can directly affect the satisfactory level of patients in physiotherapy session.

Mongkolrat, S. ; and Pongpanich, S. (2009) examined the customer satisfaction index of foreign patients attending a private hospital based on five satisfactory factors acronymically "HEART": Hearty, Empathy, Attention, Relationship and Trust. The Hearty factor is the most satisfactory factor. Similar to the results of the study of Kawlaeid, N. ; et al. (2004) which found that the attention of the staff is significantly related to the satisfactory level of the patients ($p < 0.01$).

Hatamizadeh, N. ; et al. (2012) mentioned seven main dimensions as patients' satisfying factors ; (1) physical environment, (2) physical accessibility, (3) time accessibility, (4) financial accessibility, (5) quality of care and quipments, (6) personnel's social interaction, and finally (7) equity.

Machado, N. P. ; and Nogueira, L. T. (2008) studied the relationship between demographic with satisfaction in physiotherapy. It has been found that the patients consider factors like ease of access to the service, waiting time, and treatment time can be the factors for satisfaction.

The dimensions of patient satisfaction as given by Goldstein, M. S. ; Elliot, S. D. ; and Guccione, A. A. (2000 : 855) are given hereunder.

1. Access : Physical location of facility, hours of operation, telephone access, appointment waiting time, waiting time in waiting room.

2. Administrative Technical Management : ambience of facility, parking, payment/claims processing, quality assurance programs.

3. Clinical Technical Management : Qualifications of staff, including clinical skills of physical therapists, technical skills of physical therapist assistants, technical skills of any others on staff providing care, explanation of care given.

4. Interpersonal Management : Responses to complaints or suggestions, warmth/friendliness of physical therapist (s), warmth/friendliness of other staff members, appropriate amount of time spent with each patient, respect for patient privacy.

5. Continuity of Care : Intent to continue to have condition managed by provider, knowledge of patient's history by the therapist, patient's recommendation of the therapist to others, general satisfaction with intervention received. These last 2 items infer that the patient will continue care with the same therapist if he or she is satisfied with the intervention received." (Goldstein, M. S. ; Elliot, S. D. ; and Guccione, A. A. 2000 : 855)

Apart from the abovementioned, Roush, S. E. ; and Sonstroem, R. J. (1999) denote that common dimensions for satisfactions in health service include (1) provider conduct, such as techniques, competencies, as well as personal attributes, (2) accessibility and convenience, (3) finances, such as fee level, arrangements for payments, (4) the physical environment, such as the decorations, appearances and tools and equipment, and lastly (5) the expectation level of the clients themselves.

These also agree to and in the similar direction with denotes made by previous and other various researchers.

According to Gronroos, C. A. (1984), the satisfaction dimensions can also come from the technical and functional dimensions. Gronroos, C. A. states further that the functional dimensions can outweigh the technical dimension when the results are met (Gronroos, C. A. 1984 ; Coovadie, Mahomed Yusuf. 2008). An example may be when there is a deviation in techniques used while the functions of the technique and the result remain. This satisfaction factor tends to be more descriptive. Coovadie, Mahomed Yusuf (2008) claims that the technical-functional dimension model does not include environmental aspects.

In general, it is found that, based on SERVQUAL parameter, the highest satisfactory score goes to the parameter assurance. According to Mahdzir, M. N. ; and Ismail, A. (2012), assurance factor gives p=0.03, while for Al-Azmi, N. ; et al. (2012) the satisfactory level of assurance is also the highest at the Cronbach alpha of 0.97. The variable “feeling of security”, which might be comparable to assurance parameter, was included in the questionnaires of Devreux, I. C. N. ; et al. (2012) and similarly the result turns out that this variable makes significant expectation ; 93.3 per cent, 79.4 per cent, and 78.6 per cent based on different types of hospital surveyed. This is also notable on the study of Monnin, D. ; and Perneger, T. V. (2002) that the feeling of security, which was not included in the questionnaires, is one of significant parameters for such study and satisfaction.

Satisfaction level based on gender has little or no significant difference (Roush, S. E. ; and Sonstroem, R. J. 1999 ; Mahdzir, M. N. ; and Ismail, A. 2012 ; Monnin, D. ; and Perneger, T. V. 2002 ; Kawlaeid, N. ; et al. 2004). However, Al-Azmi, N. ; et al. (2012) found differently, that the gender can also be a significant factor. It might be presumed that it is a result of cultural diversification.

Diogenes, T. P. M. ; Mendonca, K. M. P. P. ; and Guerra, R. O. (2009) summarized that Goldstein, M. S. ; Elliot, S. D. ; and Guccione, A. A. (2000) developed a tool to measure patients’ satisfaction with physiotherapy, whose Cronbach’s alpha is 0.99, which can be a useful tool for measuring patient satisfaction. Diogenes, T. P. M. ; Mendonca, K. M. P. P. ; and Guerra, R. O. (2009), states that the study of Goldstein, M. S. ; Elliot, S. D. ; and Guccione, A. A. (2000) is steadily refined.

Kawlaeid, N. ; et al. (2004) found that there is no significant influence between the patients' characteristics, such as age, gender, or education, and the satisfaction level. Only monetary factor, such as the health care benefit, can have significant influence ($p < 0.05$).

Marketing Mix

Just like other sector, service industry also needs to do marketing analysis in order to be competitive in the market. The results from doing market research can help the service providers to understand more about the market situation and get to know the trend and the pathway to make a proper offer that is suitable for the market needs. Therefore, the basic knowledge and literature of related marketing will be covered in this paper in order to meet with the objective of the research.

Marketing Mix Theory for Service Sector is one of the very useful tools for marketing analysis. This tool is crucial to analyze the position of the business in the market. This is also applicable for service sector. There are several papers in regards with the marketing mix for service segment. Examples are Beaven, D. J. ; and Scotti, D. J. (1990), Sterling, J. U. ; and Lamber, D. M. (1989), Collier, D. A. (1991), Sippasinee, Barret (2012), Wilawan, Phaosateanpun (2009) and so forth.

Beaven, D. J. ; and Scotti, D. J. (1990 : 8-9) present the idea that the marketing mix for service segment involves the consumers in some degree. They also claimed that the conventional four-P's is inaccurate to represent and describe services implementation framework. Therefore, the marketing mix should vary from the traditional ones.

However, Sterling, J. U. ; and Lamber, D. M. (1989) denote that the marketing mix is important for service segment if apply correctly, at least in the logistic service which is the main objective of their paper. The view point of Collier, D. A. (1991), Pheng, L. S. ; and Ming, K. H. (1997), and Willcock, S. (2008) agree with those of Sterling, J. U. ; and Lamber, D. M. (1989), that the marketing mix with conventional four-Ps is still applicable to the service sector. However, Collier, D. A. (1991), Pheng, L. S. ; and Ming, K. H. 1997 ; citing Kottler ; and Keller. 2009), Borden, N. H. (1965) and McCarthy, Eugene J. (1960), propose further that there should be additional three factors to sum up the seven-Ps. The framework of seven-Ps has been deployed in many other studies.

The conventional marketing mix, or referred to earlier in the term four-Ps, contains 4 basic components: Product, Price, Place, and Promotion. There are also 3 additional Ps to be covered and make up the seven-Ps : Personal, Process, and Physical Evidence or Presentation, which also relate to the service sector in particular. (Kottler, P. ; and Keller, K. 2009 ; Piyapan, Klanklin. 2000 ; Nanthanatch, Boonyaphrom. 2011 ; Collier, D. A. 1991 ; Sterling, J. U. ; and Lamber, D. M. 1989 ; Beaven, D. J. ; and Scotti, D. J. 1990 ; Willcock, S. 2008 ; Sippasinee, Barret. 2012 ; Wilawan, Phaosateanpun. 2009) Note that the term personal is named differently, as participants, by Collins, B. ; and Payne, A. F. T. (1991), and as people, by Willcock, S. (2008) and Pheng, L. S. ; and Ming, K. H. (1997).

Sippasinee, Barret (2012) and Wilawan, Phaosateanpun (2009) studied the relationship between marketing mix factors (seven-Ps) which influence the selection and the use of spa services in Phuket. Their results agree with the fact that only four-Ps cannot cover the dimensions required by the service customers to fulfill their needs and create their satisfactions. Rather, the aspects of seven-Ps are important to ensure the satisfaction of the clients. This case may be used as a baseline for the study in this research because of the similarity of the business setting as well as the similarity of the assumptions.

The implication for each parameters in the seven-Ps are as follows.

1. Service

Service is the same dimension as the Product under conventional four-Ps for non-service business. The term service itself can already provide a broad spectrum of coverage. A service is not only about the moment of the providing a particular service, but it must include the scope, preparation, arrangement, and the benefits of the service. All are included under this dimension. The focus of this dimension is the quality of service, which leads to the customers' satisfaction.

2. Price

Price refers to the monetary value of paid to receive a service. It is the cost that the consumer has to pay. The customer generally compares the cost price and the value of such service. The decision of purchasing will be made once the customer feels that the value of the service they will get is higher than the price they will have to pay.

As a component in the price, the coverage of health care benefits may also influence the patients as well. Researches by Kawlaeid, N. ; et al. (2004), Hatamizadeh, N. ; et al. (2012) show that the patients tend to perceive higher satisfaction if their expenses are covered by health care insurance or the health care benefits.

3. Place

Place refers to the channel of promotion of the product and service. It may refer to the physical location of the shop, as well as the access channel to the purchase. The location of the shop is another crucial factor for the success and failure of the service business. Since the patients and the physiotherapists must be present together for a treatment service to take place, the ease of accessibility will be very much concerned.

4. Promotion

Promotion is a communication between the consumer and the service provider to create the buying needs. Promotions can be done through sales channels. There are several types of channel that can be used and different channels can have different effectiveness. Therefore, integrated marketing communication may be used to improve the effectiveness of promotion. It needs proper consideration towards the customer group to create good promotional campaign.

5. Person

Person or people can be a very crucial factor in any business. Particularly, the service sector has a particular characteristic of inseparability. This means that the service provided will be reflected directly by the people providing the service. People can make differentiation to business by means of being a value adding agent. This helps create more competitiveness when the people is competitive, professional, and skillful. Well trained people can handle the situation and the clients more effectively and promptly, with better expertise, attitude, personality, professionalism, and interrelationship to the clients. The well trained can also handle unexpected situations and problems better. Therefore, it is clear that people is an important factor that makes difference to the business. The competitiveness of staff directly relates with the customer satisfaction.

6. Process

Process is the methods or procedures to work properly. The aim of having process is to deliver the services as planned and match with the customer expectation. The well designed and proven processes should ensure repeating customer satisfactions. Process can be considered in its complexity and divergence. The complexity of the process refers to the difficulty to get through the process, while the divergence of the process refers to the flexibility and freedom to mix and match or adapt some of the available options.

7. Physical Evidence

Physical Evidence, or Presentation, refers to the images or the physical and viewable settings which the customers can easily perceive. The presentation will directly reflect the image of the service. For example, a clean restaurant will be much more attractive than the dirtier restaurant, as the customers tend to perceive immediately that the cleaner restaurant will provide better and cleaner food than of less clean restaurant. The presentation may cover the atmosphere of the location, design, interior arrangements, zoning, privacy, neatness and cleanliness of the servicing areas, credibility of the service practitioners, as well as the use of proper equipment and technology.

Sippasinee, Barret (2012) concluded that all marketing mix factors have high influences on the choice made by the clients. Among the seven components, process and physical experience are the most influencing factors.

The results of the study of Yupaporn, Angkulwanich (2010), based on product (student uniform) rather than service, found that gender, age, income level and education level can influence the place of purchase.

In the service factor, Suchada, Buathongsuk (2010) studied the utilization of internet banking in relation with the marketing mix. The results find that the most important factor is the process (ease of operation and accuracy), then followed by the place (convenience of the place) and then by price (waive of the service fee for internet banking).

In addition, Sawang, Mulintha (2005) studied the satisfaction from the marketing mix of the cargo service. The main factor that affects the satisfaction is the price, and followed by physical appearance, process and service respectively.

Selection of the Physiotherapy Clinics

As this research is about physiotherapy clinic, hence, it is considered to be in a service sector or the tertiary sector of economy. As mentioned earlier, there have been no satisfaction research on physiotherapy found to be conducted in Thailand, the basic research in the selection of services and some other backgrounds are taken from similar study from other fields.

In general, service business shares similar characteristics. In other words, whether it is a hotel service provider, barber service provider, or physiotherapy clinic, they share some features so that they are offering services as their products.

Service is known as the tertiary sector of economics. (Fisher, Allan. 1933 ; Kennessey, Zoltan. 1987 ; Rosenberg, Matt. 2007) as developed by Colin Clark and Jean Fourastie's three-sector hypothesis. In this hypothesis, the primary economic sector makes use of natural resources. The activities in this section are the retrieval or production of raw materials and the raw materials will then be fed to the secondary sector, industrial sector, for further production to be finished goods.

The tertiary sector of the economy is also known as service sector or service industry. This sector offers intangible products in the form of service activities rather than the finished goods. The production of services in this sector tends to need the input of knowledge and time in order to be performing, productive, and sustainable. There are a variety of services provided. For example, banking, trading, and professional services such as medicine and engineering, as well as consumer services are considered to be in this tertiary sector. As a result, physiotherapy falls in this category.

While economists nowadays already consider splitting information generation and information providing as a new quaternary sector (Kennessey, Zoltan. 1987) or the decision makers as the quinary sector (Rosenberg, Matt. 2007), this extent will not be covered in this literature review.

Service business has its own characteristics. Lamb, C. W. ; Hair, J. F. ; and McDaniel, C. (2011 : 336-337) and Macintyre, M. ; Parry, G. ; and Angelis, J. (2011 : 20-22) described several characteristics of services as follows. These characteristics will be used as criteria for satisfactory factors : Intangibility, Inseparability, Heterogeneity, Perishability, and Ownership.

As service is intangible, people feel the lack of quality of being perceivable by touch. This makes the consumer need to be more careful to make a choice on service. Richard, M. D. ; and Allaway, A. W. (1993 : 59) state in their paper that the survival of service business comes from the ability to provide superior services. In addition, Amyx, D. ; Mowen, J. C. ; and Hamm, R. (2000 : 273) did a research related to the clients' choice based on satisfaction of the health related service provider. They raised an example in the United States of America that the patients are eager for the importance of ability to select a doctor. This shows the important of the requirement of the patients to seek their own treatment even the service is intangible.

The satisfaction of the patients is a crucial factor that induces the choice of health care services. (Al-Amin, M. ; Makarem, S. C. ; and Pradhan, R. 2011 ; Miller, L. ; and May, D. 2006) Amyx, D. ; Mowen, J. C. ; and Hamm, R. (2000) says that the results can vary depending on the group of the patients or the clients to make choices. However, the study of Manthei et al. (Amyx, D. ; Mowen, J. C. ; and Hamm, R. 2000 ; citing Manthei et al. 1982) says differently. Rather, it might not be the satisfaction, but it is the success of the treatment that induces the choice of treatment provider.

Al-Amin, M. ; Makarem, S. C. ; and Pradhan, R. (2011) define a model that describes the patients' choice to visit a hospital in the United States of America as inpatients based on several parameters. The results show that the facility is also of importance. The parameters include the quality of care, cleanliness of the facility, attitude of the staff, and hospital's reputation. (Al-Amin, M. ; Makarem, S. C. ; and Pradhan, R. 2011 : 209)

Furthermore, according to the sum of researches by Boscarino, J. ; and Steiber, S. R. (1982) Javalgi, R. G. ; Rao, S. R. ; and Thomas, E. G. (1991), and Tay, A. (2003), cited in Al-Amin, M. ; Makarem, S. C. ; and Pradhan, R. (2011), Mori (Miller, L. ; and May, D. 2006 ; citing Mori. 2005), and Willcock, S. (2008), the choice of the patients also related to the proximity factor, which means the location of the hospital and ease of accessibility, parking facility, waiting time, recommendation by others, reputation including the success rate of operation, cost of care, past experience with the hospital, staff personality, facility comfort, as well as the equipment and technology used. These parameters are useful as they are very much similar to the literatures in regards to the patient's satisfaction. Among these, the most important factor according to the study of Boscarino, J. ; and Steiber, S. R. (1982) found to be

proximity for general hospital, and the specialty of the doctor, for specialist hospitals. This might be implied that the study of the physiotherapy clinic may be classified as a specialist group and the specialty of the practitioners are of great importance. Al-Amin, M. ; Makarem, S. C. ; and Pradhan, R. (2011) noted the disparity of the two studies of Boscarino and Steiber in the 80s and of Javalgi, R. G. ; Rao, S. R. ; and Thomas, E. G. (1991 : 209) in the 90s as possibly involvement of the patients to choose their own treatment. Similarly, a research done by Mori (Miller, L. ; and May, D. 2006 ; citing Mori. 2005) finds that 76 per cent of the patients want to be involved in decision making process regarding their treatment. In addition, the appointment time and practitioner are also the consequences. Tay, A. (2003) noted that the patients are willing to pay for the incurred transportation cost to get a better treatment. This may explain why proximity can be of less importance for specialist hospital as proposed by the finding of Boscarino, J. ; and Steiber, S. R (1982).

There is no fix measurement to measure intangibility features. This might explain why different patient groups can feel and react differently towards the treatment and service provided. Therefore, the level of satisfaction will also be different depending on individuals, as well as the choice of services provider to be made.

However, many aspects of services are the combination of both tangible and intangible aspects. In physiotherapy concept, its room and physical locations are the tangibles, while the practices of the therapists are the intangibles. Both aspects are already covered by several studies as described above.

Several factors can directly relate to the demand for utilization of health service (Ching, Panfila. 1992). In addition, many studies also find out that they share several common factors. The factors are listed as followings.

1. Income

The families with higher income tend to attend more medical services because they are able to afford the cost. For them, the preventive care is provided in addition to curative measures. (Ching, Panfila. 1992 ; Hatamizadeh, N. ; et al. 2012 ; Machado, N. P. ; and Nogueira, L. T. 2008 ; Janejira, Thongmaytha. 2009)

2. Price

As the income is concerned, the price is a result of the similar consideration. It generates negative demand for health care as it increases. This applies to the choice made between public facilities and private health care choice. (Ching, Panfila. 1992 ;

Al Azmi et al, 2012 ; Roush, S. E. ; and Sonstroem, R. J. 1999 ; Jutharat, Praparattanapan. 2003 ; citing Heller. 1976) Likewise, the non-monetary factor such as time-price, or the opportunity cost, can affect the demand also. Ching, Panfila (1992) denotes that the price to be considered is in fact the “out-of-pocket price”. Many other studies also suggest that price can be an important factor for satisfaction of clients. (Hatamizadeh, N. ; et al. 2012 ; Janejira, Thongmaytha. 2009)

3. Health Insurance

This can be viewed as the financing plan to secure health services. It helps reduce the cost of care in terms of the out-of-pocket price and also raise the utilization of the health care system as well. (Ching, Panfila. 1992 ; Hatamizadeh, N. ; et al. 2012 ; Machado, N. P. ; and Nogueira, L. T. 2008)

4. Age

Generally the childhood and the elderly people tend to attract the demands for health care more than the working age or the adulthood. (Ching, Panfila. 1992 ; Devreux, I. C. N. ; et al. 2012) Machado, N. P. ; and Nogueira, L. T. (2008) found that, at least in Brazil, the average age of the patients is around fifty years old. To be specific, the mean ages of patients in private clinic, municipal clinic, and state clinic are 56.5, 49.2, and 48.8 years old respectively. The standard deviation figure is greater in private clinic at 14.5, while lower in others, at 11.2 and 10.9 respectively. The maximum age of all three types of clinics according to Machado, N. P. ; and Nogueira, L. T. (2008) is 91 years old and the minimum age of all is 20 years old.

5. Gender

Ching, Panfila (1992) concluded that according to Akin, Guilkey ; and Popkin (1981) (Ching, Panfila. 1992 ; citing Akin, Guilkey ; and Popkin. 1981). gender makes no significant difference to a health care. However, the perception that women have low economic value for some societies may lead to the fact that there might be lower use of health care system for female gender. This might as well only applicable to Filipino culture or society. In addition, studies of Roush, S. E. ; and Sonstroem, R. J. (1999), no significant difference has been reported on gender factor. Machado, N. P. ; and Nogueira, L. T. (2008) and Diogenes, T. P. M. ; Mendonca, K. M. P. P. ; and Guerra, R. O. (2009) found that female patients in Brazil attend the physiotherapy session more than male patients. In Nigeria, a study of Obebiyi, D. O. ; et al. (2009) finds out the similar results.

6. Education

People with higher education tend to realize their illness since the early symptoms phases. Therefore, they tend to be attending the medical services more willingly to seek early treatment for preventive services. Education applies to the patients themselves as well as the parents of the potential patients. (Ching, Panfila. 1992 ; Machado, N. P. ; and Nogueira, L. T. 2008 ; Devreux, I. C. N. ; et al. 2012 ; Obebiyi, D. O. ; et al. (2009) ; Janejira, Thongmaytha. 2009)

7. Health Knowledge, Health Needs and Beliefs

The efficiency to maintain healthiness depends largely on the general understanding to the illness and the beliefs towards the health. This spans through the understanding of dietary, hygienic, as well as all preventive measures to keep them healthy. For people who want to be healthy, their needs are to make themselves healthy by looking for good food, shelters, and will do all means to run away from illness. Ching, Panfila. 1992 ; Devreux, I. C. N. ; et al. 2012)

8. Distance and Transportation to Health Care Source

Sometimes the location of the accommodation or the distance to the nearest health care can hinder people to have access to the service. The further the distance the less the demand for the health care will be due to the view that travelling to the health care service can be a difficulty for both time and spending. (Ching, Panfila. 1992) Transportation also plays role. Important factors are, for example, parking lot availability. (Diogenes, T. P. M. ; Mendonca, K. M. P. P. ; and Guerra, R. O. 2009 ; Monnin, D. ; and Perneger, T. V. 2002 ; Janejira, Thongmaytha. 2009)

After reviewing of related literatures, it has been found that there are some features which are useful concepts that can be used in this study. These concepts are the way how people feel satisfied with the provided service. It is interesting to know the factors that can influence the satisfaction level of the receiver of the services, in this case the patients. Some features from the previous studies are tabulated herewith.

Table 4 Some of the Studies Related to this Study

Study	Physiotherapy	Satisfaction	Demographic	Marketing Mix	Service Choice
Jutharat, Praparattanapan (2003)			✓	✓	✓
Janejira, Thongmaytha (2009)			✓	✓	✓
Thananoppa, Suwadit (2011)			✓	✓	✓
Nanthanatch, Boonyaphrom (2011)				✓	✓
Piyapan, Klanklin (2000)				✓	✓
Pacharamon, Phromsuan ; and Piyathida, Kuhiranrat (2001)			✓	✓	✓
Wichsinee, Siwabaworn ; and Ittikorn, Khandech (n.d.)		✓		✓	✓
Al-Amin, M. ; Makarem, S. C. ; and Pradhan, R. (2011)		✓	✓		✓
Amyx, D. ; Mowen, J. C. ; and Hamm, R. (2000)				✓	✓
Anderson, E. A. ; and Zwelling, L. A. (1996)		✓	✓		✓
Beaven, D. J. ; and Scotti, D. J. (1990)		✓	✓	✓	
Boscarino, J. ; and Steiber, S. R. (1982)		✓		✓	✓
Brady, C. A. ; and Cronin, J. J. (2001)		✓	✓	✓	
Ching, Panfila. (1992)			✓		✓
Coovadie, Mahomed Yusuf. (2008)		✓	✓		
Debono, D. ; and Travaglia, J. (2009)		✓	✓	✓	
Desatnick, R. L. (1987)		✓		✓	
Devreux, I. C. N. ; et al. (2012)	✓	✓	✓		
Diogenes, T. P. M. ; Mendonca, K. M. P. P. ; and Guerra, R. O. (2009)	✓	✓	✓		
Goldstein, M. S. ; Elliot, S. D. ; and Guccione, A. A. (2000)	✓	✓	✓		
Gronroos, C. A. (1984)		✓	✓	✓	
Hatamizadeh, N. ; et al. (2012)		✓	✓		✓
Hush, J. M. ; Cameron, K. ; and Mackey, M. (2011)	✓	✓	✓		
Javalgi, R. G. ; Rao, S. R. ; and Thomas, E. G. (1991)	✓	✓			✓

The literatures and concepts retrieved from this chapter shall be used as the guideline for the study of this paper. This research will be applying the marketing mix, which contains and covers the dimensions from the other satisfaction researches, with the demographic parameters, to see the correlation between these parameters and the satisfaction of the patients visiting physiotherapy clinics in Bangkok.

Since there has been no similar study found conducted in Thailand, this research should extend the understanding of the expectation of satisfaction level of patients visiting physiotherapy in Bangkok. The result of this study may contribute to an improved service in the physiotherapy field and possibly find an additionally missing parameter that is required by the locals. The details of the methodology and the tools will be described in the next chapter.

Chapter 3

Research Methodology

This study aims to investigate the influencing factors on the satisfaction of patients visiting and using physiotherapy clinics in Bangkok. Quantitative research will be accomplished by survey research method. The research methodology will be described in this chapter.

Research Methodology

This research is conducted by means of questionnaire surveys to collect necessary data. The data will include the influencing factors how one decides which physiotherapy clinic to visit and receive physiotherapy treatments with satisfaction in return.

1. Secondary Data

Secondary data collection is done by reviewing the existing literatures, previous researches, textbooks, manuals, and other documents and sources.

2. Primary Data

Primary data is a collection of data gathered directly from the source. In this research, the source is the patients who have already been visiting physiotherapy clinics in Bangkok. The gathering of data is done by the use of questionnaires. The collected data included the patients' demographic characteristics, their opinions on the marketing mix factors of the physiotherapy clinics in general as well as their feelings and opinions about the influencing factors on patient satisfactions.

In this research, the frame of the population comes from the list of physiotherapy clinics registered in 2011 and located in Bangkok. The list of these clinics is taken from the Ministry of Public Health of Thailand. Appendix B shows the names of the overall pool members.

Sampling Method

Population

The population in this study is set as the patients and potential patients of physiotherapy clinics in Bangkok. As the information retrieved from the Ministry of

Public Health, the number of registered physiotherapy clinic in Bangkok in 2011 is 74 clinics, as shown in Appendix B. Even the exact number of the registered physiotherapy clinics is known, the number of existing patients remains unknown.

Sampling Technique

The samples will be taken from the population group. This sample group represents the overall population at the confidence interval of 95 percent at the error of not exceeding 5 percent. The samples will be taken from participating physiotherapy clinics whose patients are drawn by convenience sampling.

Sample criteria are as follows.

1. Samples are the age of 18 years and over, working either fulltime, part time, or being students.
2. The participating samples are preferably, but not limited to, Thais.
3. Samples have taken treatment at least once, to achieve the high reliability of the data and to prevent the possibility of confusion about physiotherapy process in their first visits.
4. Samples are willing to participate in the study.

Convenience sampling is used because there might be difficulties to have the agreement for the survey with all listed physiotherapy clinics. This means that the probability sampling could be difficult to recruit the samples. Convenience here refers to the agreement of accessibility to the sources. The subjects or samples from this recruit shall be readily approachable and participate. The questionnaires are then distributed and collected through the physiotherapy clinics.

The physiotherapy clinics will be contacted prior to the distribution of the questionnaires. The formal letter issued by the Thai-Nichi Institute of Technology (TNI) will be needed to create the trustworthiness and credibility of the researcher.

The patients will not be forced to fill out the questionnaires if they are not willing to participate in the research.

Once the questionnaires are filled, the researcher will visit the clinics and collect the questionnaire for data processing, analyses, and interpretation of the results.

Since the total number of patients who are using the services of physiotherapy clinics in Bangkok is unknown, the number of samples will be calculated based on the indefinite population equation.

$$n = \frac{Z^2}{4E^2}$$

Source : Kanlaya, Vanichbuncha. (2003). **Statistics for Management and Research**. p. 26.

where : n denotes the sample size
Z is the statistical value at the required confidence level
E is the acceptable error level from the research

The Z value is the times of standard deviation of the mean under the normal distribution curve. This study focuses on the confidence interval of 95 percent, therefore the Z is found to be 1.96. See Figure 3.

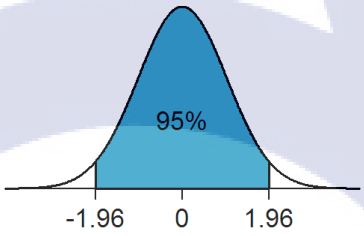

Figure 3 Z-value of the Standard Deviation Under Normal Distribution

Source : Wikipedia. (2008). **NormalDist1.96.png**. Online.

The acceptable error in this study is defined at 5 percent, so the E value is then 0.05.

Therefore, we can compute the estimated number of samples to reach the confidence interval of 95 percent with an error of not exceeding 5 percent from the following calculation.

$$n = \frac{Z^2}{4E^2}$$

$$n = \frac{1.96^2}{4 \times 0.05^2}$$
$$n \cong 385$$

Therefore, we need at least 385 samples for this research.

The number of questionnaires will be prepared with around 15 percent extra to prevent any unexpected circumstances as well as to be used for reliability test by means of Cronbach's Alpha method (Cronbach, L. J. 1970). Thus, the questionnaires will be prepared at 500 copies and distributed.

The self administered questionnaire is a tool to collect all necessary primary data. Then the data collected will be analyzed and the influences between independent and dependent variables will be tested according to the null hypotheses set.

Making of the Tool

The tool in this research is questionnaire. This section describes the methodology of creating the questionnaires.

1. Secondary data is studied by means of literature review in order to create a boundary of the study and to set the objectives and the purposes of the study.

2. Create the questionnaires based on the reviewed literature defining the data to be collected to answer the research problems.

3. Bring the created questionnaires to check for content validity by the experts. Their suggestions and comments are used to revise the questionnaires.

4. Bring the revised questionnaires in for a reliability test with the pilot sample group. The 40 pilot samples were drawn by the convenience sampling as described earlier. The reliability can be assured by means of Cronbach's Alpha Coefficient, which measures the internal consistency. The questionnaires are to be considered acceptable if the Conbach's alpha exceeds 0.7 (Cronbach, L. J. 1970)

5. Distribute the questionnaires to the samples to collect data for analyses and interpretation.

Variables used in the Study

1. Independent variables

Independent variables are demographical characteristics : age, gender, marital status, educational level, occupation, average income, and frequency of visits.

2. Dependent variables

Dependent variables are satisfactory level regarding service marketing mix factors: service, price, place, promotion, process, people, and physical evidence.

Questionnaire Contents

The questionnaires' contents are divided into 3 parts.

1. Part I : This part contains general questions regarding the demographical information of the patients or physiotherapy service users

2. Part II : This part contains the questions about the opinions on the factors that influencing on the satisfaction with the using of physiotherapy services in Bangkok. The 41 questions are structured and close-ended. The responses are using the 5 point Likert scale, where 1 denotes lowest influences and 5 denotes highest influences.

Table 5 shows the interpretation of the scores according to the Likert scale.

Table 5 Interpretation of the Score According to the Likert Scale

Opinion	Score	Average Score	Interpretation
Totally Agree	5	4.21 – 5.00	Highest Satisfaction
Agree	4	3.41 – 4.20	High Satisfaction
Moderate	3	2.61 – 3.40	Moderate Satisfaction
Disagree	2	1.81 – 2.60	Less Satisfaction
Totally Disagree	1	1.00 – 1.80	Least Satisfaction

3. Part III : This part contains open-ended questions which the patients can provide additional comments, feelings, and attitude towards the services of the physiotherapy clinics.

This questionnaire is derived from previous researches based on the studies of Devreux, I. C. N. ; et al. (2012), Roush, S. E. ; and Sonstroem, R. J. (1999), Monnin, D. ; and Perneger, T. V. (2002), Al-Azmi, N. ; et al. (2012), Obebiyi, D. O. ; et al.

(2009) Diogenes, T. P. M. ; Mendonca, K. M. P. P. ; and Guerra, R. O. (2009), and Jutharat, Praparattanapan (2003). Several dimensions in the questionnaires are taken, grouped, and revised or modified from different questionnaires. The detailed information is presented in the Appendix D.

The questionnaire is presented both in English and Thai language.

The 40 test questionnaires are tested and the reliability is accepted according to Cronbach's Alpha.

Once the questionnaire is approved and accepted for use, an issue of formal letter from TNI asking for the support of the clinics to distribute the questionnaire will be sent out. Such letter is to assure the clinics that the study is creditable academic research.

The cover letter containing the introduction to the study as well as the objectives of the study will be prepared along with the letter from TNI and a response form to be provided to ask for the willingness to participate in this study. The list of the willing response will be collected.

Data Collection

For those clinics which agree to participate in the research, the 500 questionnaires are distributed through different physiotherapy clinics in Bangkok. The questionnaires are placed at the clinics. The number of the questionnaires per clinic depends on the number of participating clinics. The more clinics willing to participate in this study, the average number of questionnaires per clinic will be reduced.

In this study, there were 14 clinics participating in the data collection.

The data collection is done as per the convenience of the researcher and the clinics. If the number of response is insufficient, the extension of time to collect the data was required.

Reliability of the Tool

In this study, the validity and reliability of the tool is examined as follows.

1. Validity

Validity examination contains the spectrum of the content validity, whether the questionnaires adhere to the set research objectives and concepts and parameters, as

well as the use of the proper words and translation. The validity examination is done by experts assigned by TNI.

Content Validity Index (CVI) is used to check the validity of the questions (Polit, D. F. ; and Beck, C. T. 2008). CVI value can be achieved from the collection of the scores given by the assigned experts to each question in the questionnaire. These experts will look for the correlation between the questions in the questionnaire and the research problems for interpretation. Each expert shall provide the score based on the scale of 1 to 4 where :

Scale 1 denotes the lack of relevancy between the questions and the definition of the research problems. The question should be discarded.

Scale 2 denotes the needs of major improvement of the questions to answer to create proper relationship of the research problems.

Scale 3 denotes the needs of minor improvement of the questions to answer the research problems.

Scale 4 denotes the questions are acceptable to answer the research questions without any revision.

CVI is the ratio of the number of questions scored at 3 or 4 over all questions. The questionnaire is presumed valid if the CVI value exceeds 0.8. In other words, at least 80 percent of the questions in the questionnaire must score either 3 or 4 to get the questionnaire approved.

For the questionnaire in this study, the CVI was rated over 0.8 and thus considered approved for data collection.

2. Reliability

Reliability test is done by means of the use of pretest questionnaire. The procedure of the reliability test starts by using 40 copies of the questionnaire for trial with selected samples. The result from these pretest questionnaires will be tested for Cronbach's alpha by computer software package. The questionnaire is considered reliable if the Cronbach's alpha value exceeds 0.7.

It was found that the Cronbach's Alpha from the pilot test was 0.712. Therefore, the questionnaire is considered reliable and thus acceptable for data collection.

Analysis and Interpretation

The analysis and interpretation in this study is done by the use of computer software package. After data collection, the completeness of the data from the questionnaires will be checked. The input will be coded into the computer software package, SPSS version 20.

In this research, the reliability is set at the significant level of 0.050. Several statistical results are applied as follows.

1. Descriptive statistics

Descriptive statistics include mean, standard deviation (SD), percentage, and frequency. Descriptive statistical results are applicable to the patients' personal demographic information.

2. Inferential statistics and test of hypotheses to test the influences of the independent variables on dependent variables. That is the individual demographic characteristics regarding the service marketing mix factors of satisfactions. Chi Square statistics are deployed if the data of variables are nominal. In addition, Analysis of Variance will also be used with certain parameters to see how pairs of elements react with each others. The results shall show how independent variables have influences on the dimensions of satisfaction of the use of physiotherapy clinic in Bangkok.

Chapter 4

Findings and Discussion

This chapter reveals the results from the collection of questionnaires on "Factors Affecting the Satisfaction of Patients of Physiotherapy Clinics in Bangkok". The results are discussed and compared to other previous studies for meaningful outcomes.

The questionnaires of 500 copies were sent out and the returns were 412 copies, which accounted for 82.4 percent. As the required number of respondents to reach the confidence level of 95 percent shall be 385 responses as per the calculation of indefinite population equation (Kanlaya, Vanichbuncha. 2003). The number of returned questionnaires reached the minimum requirement.

As an overview for this chapter, it is divided into 3 parts. The first part (General Findings of the Respondents) presents basic information of the patients who answer the questionnaires. The next part (Analyses of the Influences of Personal Demographic Factors on 7P Factors) will be the analyses of the influences of the independent variables and the dependent variables by testing hypotheses. Finally, the last part (Discussions) will interpret, discuss, and compare the results of this study with other previous studies to find a common ground for physiotherapy atmosphere in Bangkok, and answer all the research problems of this study.

General Findings of the Respondents

This part will summarize personal demographical details of the respondents. Demographical information collected includes gender, age, marital status, education levels, occupations, income levels, and frequency of visits.

Table 6 Number of Respondents Classified by Personal Demographic Factors

Demographic factors	Number of People	Percentage
1. Gender		
Male	181	43.9
Female	231	56.1
Total	412	100
2. Age		
≤ 20 years old	38	9.2
21 - 30 years old	50	12.1
31 - 40 years old	88	21.4
41 - 50 years old	136	33.0
51 - 60 years old	81	19.7
61 - 70 years old	17	4.1
71 - 80 years old	2	.5
> 80 years old	0	0
Total	412	100
3. Marital Status		
Single	136	33.0
Married	267	64.8
Divorced	4	1.0
Widow	5	1.2
Total	412	100
4. Education		
< Bachelor degree	43	10.4
Bachelor degree	263	63.8
Master degree	96	23.3
Doctoral degree	10	2.4
Total	412	100
5. Occupation		
Students	47	11.4
Civil Servant / State Owned Enterprise	83	20.1
Private Sector Employees	174	42.2
Business Owners	53	12.9
Freelance	13	3.2
Homemaker	20	4.9
Retired	20	4.9
Others	2	0.5
Total	412	100

Table 6 Number of Respondents Classified by Personal Demographic Factors (Continued)

Demographic factors	Number of People	Percentage
6. Income		
≤ 5,000 Baht	28	6.8
5,001 – 10,000 Baht	31	7.5
10,001 – 20,000 Baht	21	5.1
20,001 – 30,000 Baht	73	17.7
30,001 – 40,000 Baht	86	20.9
40,001 – 50,000 Baht	84	20.4
50,001 – 70,000 Baht	52	12.6
70,001 – 100,000 Baht	12	2.9
> 100,000 Baht	9	2.2
Missing Data	16	3.9
Total	412	100
7. Frequency of Visits		
Over 8 times a month	35	8.5
8 times a month (Approx. Twice a week)	0	0.0
4 times a month (Approx. Once a week)	4	1.0
Twice a month	168	40.8
Once a month	171	41.5
Below once a month	32	7.8
Missing	2	0.5
Total	412	100

(n = 412)

Table 6 shows that the majority of the respondents are women (56.10%), compared with the male respondents (43.90%).

People between age group of 41 and 50 years old composed of 33% of all feedback (33%). The next group is the age group between 31 and 40 years old (21.4%), and the third group up is the age group of 51 to 60 years old (19.7%). It is interesting to find that the top three participant groups are those who are in the working ages (74.1%) out of total responses.

Most of the patients who responded to the questionnaires are married (64.8%). Unfortunately, there were too few responses by the divorced and widowed patients (2.2% combined).

Similar to the marital status, the majority of the respondents only clustered in one education group. Most of the education level is bachelor degree (63.8%), and then followed by master degree (23.3%).

The majority of the respondents are working in the private sectors (42.2%). Next group is the patients in civil servants or state owned enterprises (20.1%).

Regarding the income of the participants of the questionnaires, it is found that the majority of the respondents have the income between 30,001 and 50,000 Baht (41.3%). This income range comprises of 2 sub-ranges ; that is, 30,001 to 40,000 Baht (20.9%) and the group of 40,001 to 50,000 Baht (20.4%).

Most patients visit the physiotherapy clinic once or twice a month (82.3%). Then, the patients either come more often than 8 times a month (8.5%), or less than once a month (7.8%).

Analyses of the Influences of Personal Demographic Factors on 7P Factors

This part presents the responses according to the influence of personal demographic characteristics on the satisfaction of the patients regarding 7Ps marketing mix factors. Overall, the satisfactory level of the patients can be interpreted as shown in Table 7 and the findings can be found in Table 8 below.

Table 7 Interpretation of Average Score

Average Score	Interpretation
4.21 – 5.00	Highest Satisfaction
3.41 – 4.20	High Satisfaction
2.61 – 3.40	Moderate Satisfaction
1.81 – 2.60	Less Satisfaction
1.00 – 1.80	Least Satisfaction

Table 8 Satisfaction Value ($\overline{X}$) and their Standard Deviation (S.D.) for 7Ps Factors

7Ps factor	$\overline{X}$	S.D.	Interpretation
Service (Product)	4.2660	.2837	Highest Satisfaction
Price	4.3147	.4318	Highest Satisfaction
Place	4.0830	.3874	High Satisfaction
Promotion	3.9041	.6278	High Satisfaction
Process	4.1990	.3998	High Satisfaction
People	4.3039	.2726	Highest Satisfaction
Physical Evidence	4.1248	.3275	High Satisfaction

(n = 412)

* The maximum satisfaction scores 5, the minimum scores 1.

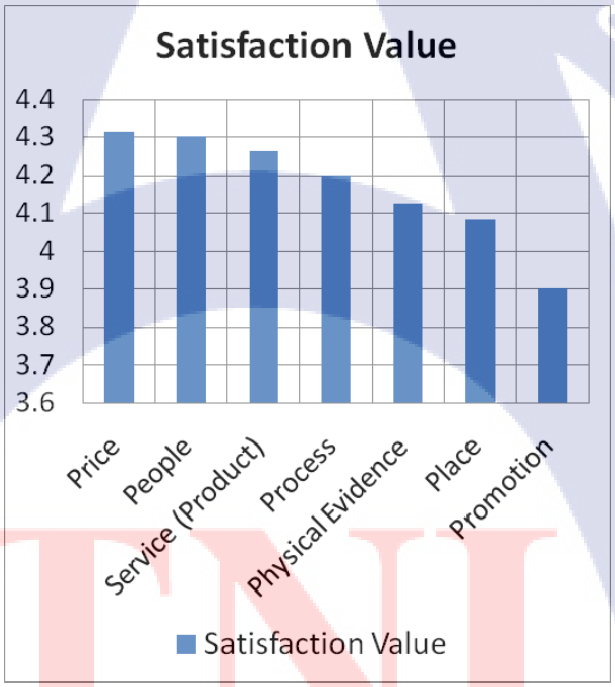

Figure 4 Overall Satisfaction of the Respondents

In Table 8 and Figure 4, the results are ranked by the satisfaction mean score value in Price (highest), People, Service (Product), Physical Evidence, Process, Place, and Promotion (lowest) respectively.

The analyses by each demographic characteristic with each 7Ps factor are given in the following sections. The demographic characteristics used as independent

variables: gender, marital status, education, occupation, and frequency of visits were tested using Chi-Squared statistics to find the p-value. The independent variables : age and income were tested by using Analysis of Variance F-test to find the p-values. The p-value of less than 0.05 denotes the significance of the variables. In other words, any hypothesis testing results in the p-value lower than 0.05 can be interpreted that the independent variables (demographic characteristics) do have influence on the dependent variables (service marketing mix factors 7Ps).

Test of Hypotheses

1. Influences of Personal Demographic Characteristics on Satisfaction

The hypotheses to be tested are :

H_0-x : "XXX" does not influence on patient satisfaction

H_1-x : "XXX" influences on patient satisfaction

Where : x: "XXX" represents independent variables :

A : Gender, B : Age, C : Marital Status, D : Education,

E : Occupation, F : Income Level, or G : Frequency of Visits

The results of analyses are shown in the table below.

Table 9 Results of Overall Hypotheses Test of Personal Demographic Variable with each of 7Ps Factors

Independent Variable	Hypothesis	Tests	p-value	Result
Gender	H_0-A	Chi-Square	.571	Accepted
Age	H_0-B	F-test	.000	Rejected
Marital Status	H_0-C	Chi-Square	.000	Rejected
Education Level	H_0-D	Chi-Square	.005	Rejected
Occupation	H_0-E	Chi-Square	.060	Accepted
Income	H_0-F	F-test	.000	Rejected
Frequency of Visits	H_0-G	Chi-Square	.000	Rejected

* defined significant when the p-value does not exceed 0.05

Five of the null hypotheses are rejected : age, marital status, education level, income, and frequency of visits. In other words, these 5 independent variables influence on patient satisfaction.

The rejected results of the hypotheses are further investigated as shown in the next sections.

2. Influence of Gender on Satisfaction Regarding the Marketing Factors

The tests for each sub hypothesis to find the influences of Gender on Satisfaction (Hypothesis H_0-A-1 to Hypothesis H0-A-7) were done and the values are summarized and shown in Table 10.

The hypotheses to be tested are :

H_0-A-y : Gender does not influence patient satisfaction level on “YYY” marketing factor

H_1-A-y : Gender influences patient satisfaction level on “YYY” marketing factor

Where y : “YYY” represents marketing factors :

1 : service, 2 : price, 3 : place, 4 : promotion

5 : process, 6 : people, or 7 : physical evidence

The results of test of hypotheses are shown in the table below.

Table 10 The Influence of Gender on Satisfaction Regarding 7Ps Marketing Factors

Marketing Factor	Hypothesis	Chi Square	p-value	Result
Service	H_0-A-1	.694	.707	Accepted
Price	H_0-A-2	1.877	.391	Accepted
Place	H_0-A-3	3.508	.173	Accepted
Promotion	H_0-A-4	.156	.925	Accepted
Process	H_0-A-5	3.863	.145	Accepted
People	H_0-A-6	1.629	.443	Accepted
Physical Evidence	H_0-A-7	1.094	.579	Accepted

* defined significant when the p-value does not exceed 0.05

Table 10 reveals that tests of each sub-hypothesis agree with the overall test, that all null sub-hypotheses under gender factor are accepted. Therefore, gender does not have any influence on patient satisfaction regarding to each of the marketing factors.

3. Influence of Age on Satisfaction Regarding the Marketing Factors

The tests for each sub hypothesis to find the influences of Age on Satisfaction (Hypothesis H_0-B-1 to Hypothesis H_0-B-7) were done.

The hypotheses to be tested are :

H_0-B-y : Age does not influence patient satisfaction level on “YYY” marketing factor

H_1-B-y : Age influences patient satisfaction level on “YYY” marketing factor

Where y : “YYY” represents marketing factors :

1 : service, 2 : price, 3 : place, 4 : promotion

5 : process, 6 : people, or 7 : physical evidence

The values are summarized and shown in Table and

Figure

Table 11 The Influence of Age and 7Ps Factors of Satisfaction

Factor	Hypothesis	F-test	p-value	Result	See further in Appendix C
Service	H_0-B-1	3.178	.005	Rejected	Table 22
Price	H_0-B-2	2.711	.014	Rejected	Table 23
Place	H_0-B-3	2.150	.047	Rejected	Table 24
Promotion	H_0-B-4	4.791	.000	Rejected	Table 25
Process	H_0-B-5	.461	.837	Accepted	
People	H_0-B-6	1.505	.175	Accepted	
Physical Evidence	H_0-B-7	2.643	.016	Rejected	Table 26

* defined significant when the p-value does not exceed 0.05

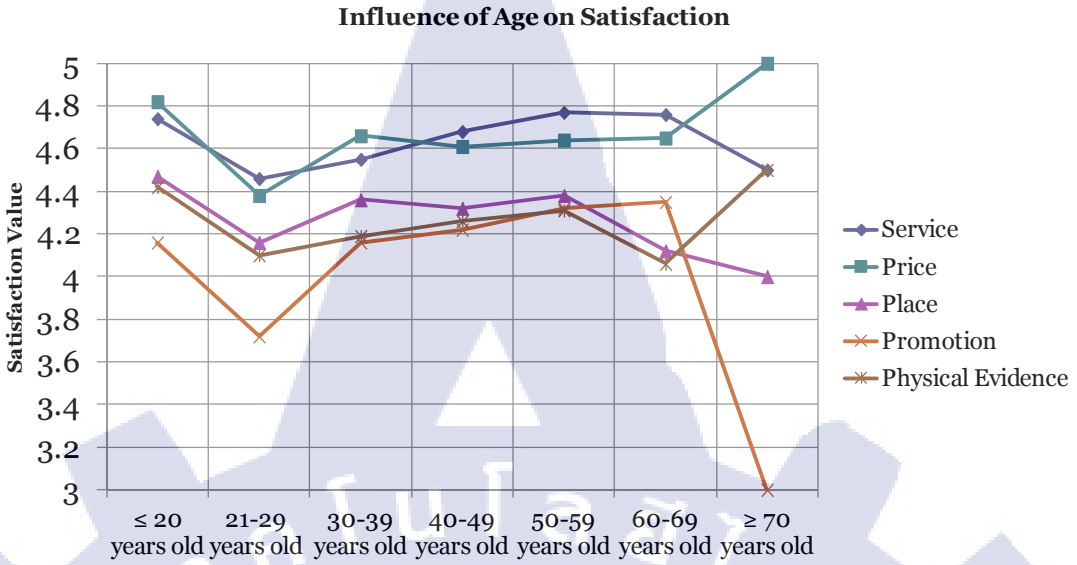

Figure 5 Influences of Age on Satisfaction

The results from Table 11 show that different age groups influence the satisfaction differently. To investigate the relationship of each pair, the Post-Hoc multiple comparison tests were performed for the rejected hypotheses by using the Least Significant Difference (LSD) method.

Age-Service

The results of Post-Hoc LSD multiple comparison tests found that as the age increases from 21 years old up to 69 years old, the satisfaction level in the service quality is increasing. The age group between 21-29 years old is significantly not satisfied with the service compared to all other age groups. The highest satisfied group on service factor is the patients of age 50-59 years old, while the satisfaction of the patients older than 70 years old drops from the age group of 60s. However, the drop is insignificant and does not have influence on the general satisfaction level because the number of respondents were only 2 people.

Age-Price

Regarding the price, the most unsatisfied age group comes from the patients of age 21-29 years old. The satisfaction level follows an increasing trend as the age increases. The satisfaction level seems to level off between the age of 30 and 70.

Therefore, the significance of the price is influenced by the patients of the age group 21-29 mainly.

Age-Place

The young patients, aged less than 20, are relatively very satisfied with the place factor. This age group feels happier on the place more than the patients aged group of 21-29 and 60-69 years old. The middle age patients do not give any significance to the place. However, as the age passes over 60 years old, satisfactory level seems to be dropping, but insignificantly because the number of respondents was only 2 people.

Age-Promotion

Promotion is stable in the relatively low value area. The groups that significantly feel that promotion is needed are the group of patients aged 21-29 and those over 70. These groups are lower than all others. Despite the patients aged over 70 having low satisfaction value, it is worth to note that the number of responses is too low and may not reflect the reality.

Age-Physical Evidence

The patients aged below 29 are sensitive to the satisfaction of physical evidence. The patients aged below 20 can be easily satisfied by the environments and surroundings of the clinics. However, this likeliness drops as the age increases to 21-29 years old. They become stable during the age 30-39 and starts to appreciate the surroundings again from the age above 39. Before the patients do not see the beauty in the surrounding environments again when they are in the age of 60-69. The patients aged older than 70 years old does not have any significance appreciation on physical evidence because of the low number of respondents.

4. Influence of Marital Status on Satisfaction Regarding Marketing Factors

The tests for each sub hypothesis to find the influences of Marital Status on Satisfaction (Hypothesis H_0-C-1 to Hypothesis H_0-C-7) were done.

The hypotheses to be tested are :

H_0-C-y : Marital status does not influence patient satisfaction level on “YYY” marketing factor

H_1-C-y : Marital status influences patient satisfaction level on “YYY” marketing factor

Where y : “YYY” represents marketing factors:

1 : service, 2 : price, 3 : place, 4 : promotion

5 : process, 6 : people, or 7 : physical evidence

The values are summarized and shown in Table 12 and Figure 6.

Table 12 The Influence of Marital Status on Satisfaction Regarding the 7Ps Factor

Factor	**Hypothesis**	**Chi Square**	**p-value**	**Result**	**See further in Appendix C**
Service	H_0-C-1	24.852	.000	Rejected	Table 27
Price	H_0-C-2	6.389	.381	Accepted	
Place	H_0-C-3	4.461	.615	Accepted	
Promotion	H_0-C-4	19.243	.004	Rejected	Table 28
Process	H_0-C-5	7.172	.305	Accepted	
People	H_0-C-6	12.160	.059	Accepted	
Physical Evidence	H_0-C-7	11.338	.078	Accepted	

* defined significant when the p-value does not exceed 0.05

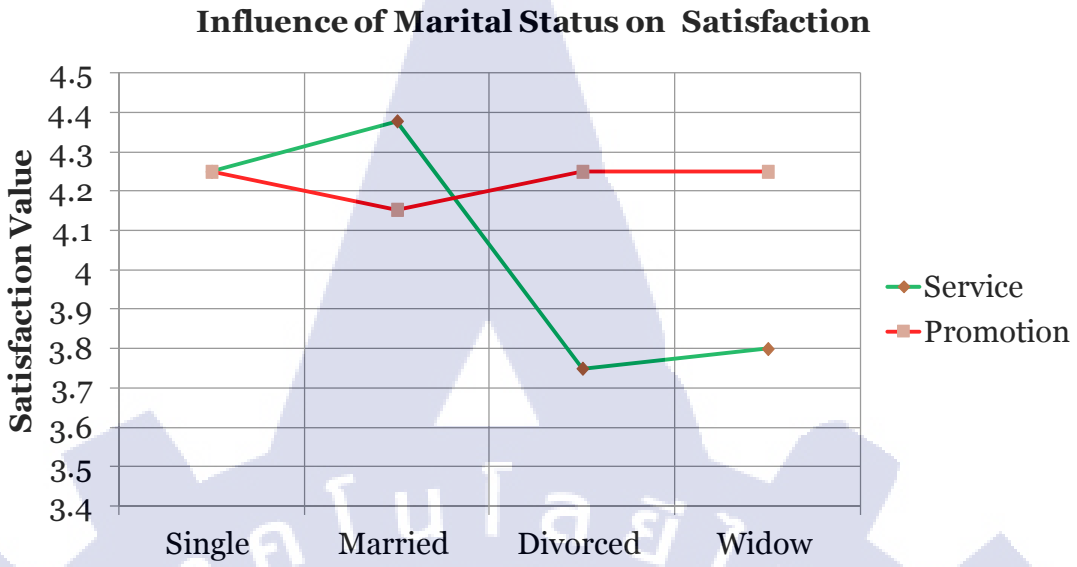

Figure 6 Influence of Marital Status on Satisfaction

The results in Table 12 and Figure 6 show that different marital status influences the patient satisfaction differently. The comparison of the satisfaction value of the rejected aspects is shown in Figure 6.

Due to the fact that there were too few responses by the divorced and the widowed groups, the analyses on the influences of marital status on satisfaction cannot be made.

5. Influence of Education Level on Satisfaction Regarding Marketing Factors

The tests for each sub hypothesis to find the influences of Education on Satisfaction (Hypothesis H_0-D-1 to Hypothesis H_0-D-7) were done.

The hypotheses to be tested are :

H_0-D-y : Education level does not influence patient satisfaction level on "YYY" marketing factor

H_1-D-y : Education level influences patient satisfaction level on "YYY" marketing factor

Where y : "YYY" represents marketing factors :

1 : service, 2 : price, 3 : place, 4 : promotion

5 : process, 6 : people, or 7 : physical evidence

The results are shown in the table below in Table 13 and Figure 7.

Table 13 The Influence of Education on Satisfaction Regarding the 7Ps Factor

Factor	Hypothesis	Chi Square	p-value	Result	See further in Appendix C
Service	H_0-D-1	23.046	.001	Rejected	Table 29
Price	H_0-D-2	9.395	.153	Accepted	
Place	H_0-D-3	4.135	.658	Accepted	
Promotion	H_0-D-4	12.850	.045	Rejected	Table 30
Process	H_0-D-5	3.655	.723	Accepted	
People	H_0-D-6	3.755	.710	Accepted	
Physical Evidence	H_0-D-7	10.567	.103	Accepted	

* defined significant when the p-value does not exceed 0.05

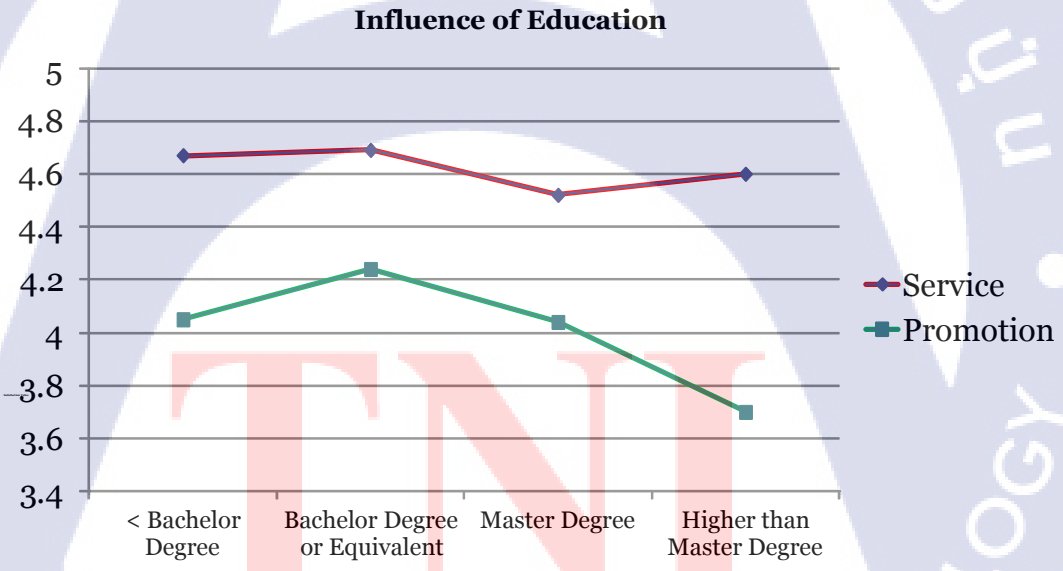

Figure 7 Influence of Education on Satisfaction

The results in Table 13 and Figure 7 show that different education level influences satisfaction level of the patients differently.

Education-Service

The majority of the respondents think that the service provides highest satisfaction. This is especially true for the patients with education up to bachelor degree (69.2% and 67.4% for below bachelor and bachelor level accordingly). However, when the education level goes up to a higher level than bachelor degree, that are master and doctoral degree, the satisfactory requirements seem to get higher. For patients with master degree, the maximum satisfaction drops to 54.2% (See further in Appendix C. Table 29).

Education-Promotion

Promotion is weak for the patients with lower than bachelor level (25.6%) of this group only moderately satisfy with the promotion of the clinics. Most of the patients in this group rated at high satisfaction rather than highest satisfaction (44.2%) (See further in Appendix C. Table 30).

6. Influence of Occupation on Satisfaction Regarding the Marketing Factors

The tests for each sub hypothesis to find the influences of Occupation on Satisfaction (Hypothesis H_0-E-1 to Hypothesis H_0-E-7) were done.

The hypotheses to be tested are :

H_0-E-y : Occupation does not influence patient satisfaction level on “YYY” marketing factor

H_1-E-y : Occupation influences patient satisfaction level on “YYY” marketing factor

Where y : “YYY” represents marketing factors :

1 : service, 2 : price, 3 : place, 4 : promotion

5 : process, 6 : people, or 7 : physical evidence

The results of analyses are shown in Table 14 below.

Table 14 The Influence of Occupation on Satisfaction Regarding the 7Ps Factors

Factor	Hypothesis	Chi Square	p-value	Result
Service	H_0-E-1	6.319	.958	Accepted
Price	H_0-E-2	23.090	.059	Accepted
Place	H_0-E-3	17.168	.247	Accepted
Promotion	H_0-E-4	22.285	.073	Accepted
Process	H_0-E-5	11.149	.674	Accepted
People	H_0-E-6	11.177	.672	Accepted
Physical Evidence	H_0-E-7	17.313	.240	Accepted

* defined significant when the p-value does not exceed 0.05

The results of each sub-hypothesis tests agree with the overall test, that all null sub-hypotheses under occupation factor are accepted. Therefore, occupation does not have any influence on patient satisfaction regarding each of the marketing factors.

7. Influence of Income on Service

The tests for each sub hypothesis to find the influence of Income on Satisfaction (Hypothesis H_0-F-1 to Hypothesis H_0-F-7) were done.

The hypotheses to be tested are :

H_0-F-y : Income does not influence patient satisfaction level on “YYY” marketing factor

H_1-F-y : Income influences patient satisfaction level on “YYY” marketing factor

Where y : “YYY” represents marketing factors :

1 : service, 2 : price, 3 : place, 4 : promotion

5 : process, 6 : people, or 7 : physical evidence

The results of the analyses are shown in Table 15 and Figure 8.

Table 15 The Influence of Income on Satisfaction Regarding the 7Ps Factors

Factor	Hypothesis	F-test	p-value	Result	See further in Appendix C
Service	H_0-F-1	2.535	.011	Rejected	Table 31
Price	H_0-F-2	2.935	.003	Rejected	Table 32
Place	H_0-F-3	1.162	.321	Accepted	
Promotion	H_0-F-4	2.351	.018	Rejected	Table 33
Process	H_0-F-5	.751	.646	Accepted	
People	H_0-F-6	2.694	.007	Rejected	Table 34
Physical Evidence	H_0-F-7	3.300	.001	Rejected	Table 35

* defined significant when the p-value does not exceed 0.05

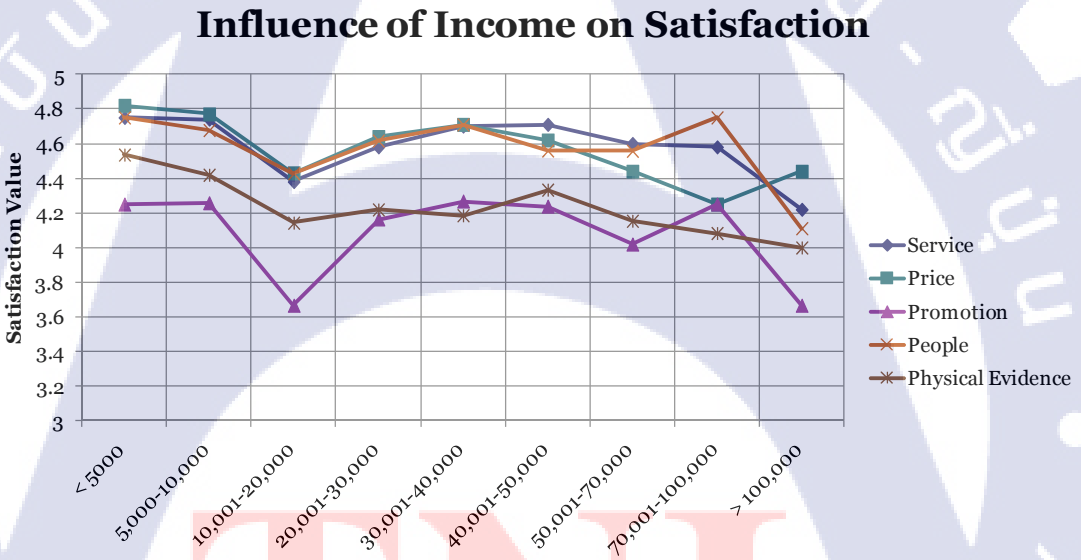

Figure 8 Influence of Income on Satisfaction

The results in Table 15 and Figure 8 show that different income level influence the patients' satisfaction differently. The rejected hypotheses are tested further by the Post-Hoc multiple comparison tests using the LSD method.

The major findings of the influence of Income on Satisfaction regarding the marketing factors are :

1) The patients with the same income group tend to behave similarly or in the same direction regarding service, people and price on satisfaction.

2) Patients with income of 10,001-20,000 Baht have least influence on satisfaction, especially, regarding promotion.

8. Influence of Frequency of Visits on Satisfaction Regarding Marketing Factors

The tests for each sub hypothesis to find the influences of Frequency of Visits on Satisfaction (Hypothesis H_0-G-1 to Hypothesis H_0-G-7) were done.

The hypotheses to be tested are :

H_0-G-y : Frequency of Visits does not influence patient satisfaction level on "YYY" marketing factor

H_1-G-y : Frequency of Visits influences patient satisfaction level on "YYY" marketing factor

Where y : "YYY" represents marketing factors :

1 : service, 2 : price, 3 : place, 4 : promotion

5 : process, 6 : people, or 7 : physical evidence

The results of analyses are shown in Table 16 and Figure 9.

Table 16 The Influence of Frequency of Visits on Satisfaction Regarding the 7Ps Factor

Gender	Hypothesis	Chi Square	p-value	Result	See further in Appendix C
Service	H_0-G-1	30.561	.000	Rejected	Table 36
Price	H_0-G-2	42.680	.000	Rejected	Table 37
Place	H_0-G-3	22.550	.004	Rejected	Table 38
Promotion	H_0-G-4	33.897	.000	Rejected	Table 39
Process	H_0-G-5	27.023	.001	Rejected	Table 40
People	H_0-G-6	120.682	.000	Rejected	Table 41
Physical Evidence	H_0-G-7	15.187	.056	Accepted	

* defined significant when the p-value does not exceed 0.05

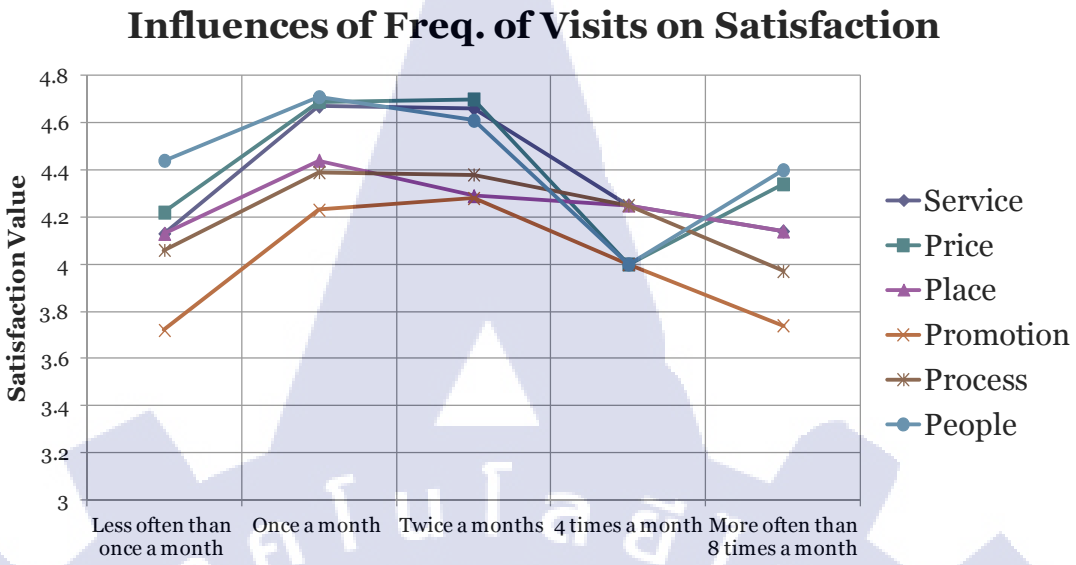

Figure 9 Influence of Frequency of Visits on Satisfaction

Frequency of Visits influences the satisfaction regarding most of the marketing factors. Different frequency of visits also influence on patient satisfaction differently. The rejected hypotheses from the tests shown in Table 16 are subject to the Post-Hoc multiple comparison tests using the LSD method.

The major findings of influence of Frequency of Visits on Satisfaction regarding the marketing factors are (See Table 16 and Figure 9)

1) Patients who come once or twice a month have the highest satisfactions regarding almost all marketing factors (service, price, place, promotion, process, and people) except physical evidence. It can be interpreted that they do not care about physical evidence of the clinics.

2) The patients tend to be influenced similarly or in the same directions on satisfaction regardless how often they visit the clinics.

9. Overall Summary

To conclude independent factors that influence the satisfaction regarding each marketing factor.

Table 17 Conclusion of Acceptance/Rejection of Null Hypotheses of All Relations

7Ps / Char.	Test	Service (P1)		Price (P2)		Place (P3)		Promotion (P4)		Process (P5)		People (P6)		Physical Evidence (P7)	
Gender	$\chi 2$	.707	Accept	.391	Accept	.173	Accept	.925	Accept	.145	Accept	.443	Accept	.579	Accept
Age	F	.005	Reject	.014	Reject	.047	Reject	.000	Reject	.837	Accept	.175	Accept	.016	Reject
Marital Status	$\chi 2$	.000	Reject	.381	Accept	.615	Accept	.004	Reject	.305	Accept	.059	Accept	.078	Accept
Education	$\chi 2$	.001	Reject	.153	Accept	.658	Accept	.045	Reject	.723	Accept	.710	Accept	.103	Accept
Occupation	$\chi 2$	.958	Accept	.059	Accept	.247	Accept	.073	Accept	.674	Accept	.672	Accept	.240	Accept
Income	F	.011	Reject	.003	Reject	.321	Accept	.018	Reject	.646	Accept	.007	Reject	.001	Reject
Frequency of Visits	$\chi 2$	.000	Reject	.000	Reject	.004	Reject	.000	Reject	.001	Reject	.000	Reject	.056	Accept

* defined significant when the p-value does not exceed 0.05

In Table 17, it can be concluded that the demographic characteristics of the patients which influence the satisfaction level of the patients of physiotherapy clinics in Bangkok are : age, marital status, education level, average income, and frequency of visits, while gender and occupation do not play any roles on satisfaction.

The frequency of visits impacts satisfaction regarding the marketing factors : service, price, place, promotion, process, and people except physical evidence. Age of the patients influences on satisfaction regarding service, price, place, promotion, and physical evidence except process and people. Income of the patients influences on satisfaction regarding service, price, promotion, people, and physical evidence except place and process. Marital status and education level influence on satisfaction regarding service and promotion.

10. Additional Patients Suggestions

In response to the open-ended questions, patients raise and emphasize useful tips to improve satisfactory level.

Service : The clinic should include variety of physiotherapy fields. Some clinics at the moment, especially a small one, only provide limited types of treatment, mainly musculoskeletal system. Extension of the clinic to cover other fields of physiotherapy, such as neurological rehabilitations, can help increase the satisfaction as well as increase the size of business. The existing patients can help introduce new patients who are suffering in other fields to the clinic by word of mouth advertising.

Additional supportive service, such as X-Ray, should be available to support the patients, if possible. However, this point is dependent on the size of the clinic as well as the investment budget and expectation of its returns.

Place : Parking space is an important factor for physiotherapy clinics. Since the patients of the clinics have already had some physical difficulties, the patients would definitely prefer a place with ease of accessibility. This not only includes a ramp, but also a walk from the parking lots. The parking should be sufficiently available and wide enough for the patients on wheelchairs.

Online information is also important. Some clinics, especially small ones, do not have an owned website. The information on the place and address is not available online for ease of reference. Introducing online information provision can result in additionally new patients.

Process : As a part of the online information, online scheduling is a system to help the patients make appointment with their regular physiotherapists. This facilitates scheduling, rescheduling, postponement, or cancellation fast and easy.

One of the patient also suggested that, in average, the waiting time in the clinic should be no longer than 15 minutes. It is understandable if the patient is not a walk-in patient and have scheduled with the assigned physiotherapist.

Some patients can reimburse some of the costs of treatments with their company or employers or by health care benefits. It is better if the patients can get a treatment without having to make an advance payment before claiming for the reimbursement from the visits.

People : Friendly staff is most important. This is also consistent with the findings from this study that people factor comes in the top three factors to satisfy the patients.

Physical Evidence : The waiting lounge should be fit with entertainments components, such as television, or music to listen to, while waiting. It is also suggested that the wireless connection (Wi-Fi) should also be provided during waiting.

As the cleanliness is one of the main concerns of the patients, the outlook of the bed sheets or equipment in contact with patients, should be cleaned and changed upon a scheduled time.

Discussions

1. Discussion

It is found that there are more female patients (56.1%) than male patients (43.9%). Nonetheless, the percentages of both genders are not too much different from each other. This may be assumed that the female patients, in general, slightly concern about their healthiness and wellbeing more than the male counterparts. While many of the sicknesses leading to a visit to physiotherapy clinics are less serious and non-acute. Male patients generally do not visit the physiotherapy clinics to receive treatments, because they believe that the symptoms can be relieved naturally.

The age groups of the patients are clustered from 31 to 60 years old (74.1%). These age groups are mainly middle ages and are in the working age range. This may stem from the fact that these age groups are from Generation X, who have started to

build their wealth for quite some times. They can afford to take care of their personal health issues themselves. They concern their wellbeing much more than in the past. They tend to believe that the wealth they acquire is not worthwhile if they are not healthy enough to enjoy it. Unlike those from baby boomer generation, who tends to save the money more than spending it for personal wellbeing, the concept of spending is different.

Furthermore, these age groups are the potential patients to the physiotherapy clinics, because the groups comprise of working age and middle age groups. The younger group of working age can suffer from incorrect and prolonged unhealthy postures due to working positions and environment. This younger patient group requires treatments due to office syndrome such as aches and pains of necks and shoulders as a result of prolonged working with computers and documents. Similarly, the older patients are suffering from the pains of the muscles due to deterioration and weakening of the musculoskeletal system. For example, we may see that the older patients are suffering from the knee pains. Therefore, these age groups are the group of patients who are the potential patients.

For the marital status, the married-single ratio is approximately 2 to 1 while divorced and widow patients are scarce (2.2%).

The majority of the sample is holding bachelor degree (64.8%) and followed by master degree (23.3%). These people are educated and consider that their wellbeing and their comforts are worthwhile for their money. These education levels also reflect the majority of the Bangkok population. In general, the people of Bangkok are holding bachelor up to master degrees. Therefore, these higher education groups can be the potential patients.

While the majority of the patients are working as employees in private sectors (42.2%) and civil servant/state-owned enterprises (20.1%), there are also business owners (12.9%) and students (11.4%) visiting the clinics also. The benefits of private company employees are that they might get some reimbursements by the employers for their treatment expenses as a fringe benefit. Similarly, the employees of state-owned enterprises and the civil servants get similar supports from their employers.

The income of the people are quite wide in the ranges, but clustered from 20,001 to 50,000 Baht (59%). Despite physiotherapy is necessary for patients regardless of the income level, it may be assumed that the patients who earn more

might be visiting hospitals rather than the clinics. The costs of treatments of the clinics can be lower than those from the hospitals. Clinics may attract the patients up to certain income range accordingly.

The patients are visiting mainly either once or twice a month (82.3%). This can be presumed that there are Influence of the frequency of visits and the symptoms. Some symptoms are acute and curable in only a single or a few visits. Some symptoms or some sicknesses may be chronic and therefore require regular visits. The more serious ailments such as the rehabilitation from car accidents or broken arms recoveries may require higher frequency of visits. However, the patients may consider the visits to hospitals rather than the clinics as they may require some special equipment to support and assist the exercises for rehabilitation purposes.

2. Ranking of Influenced Service Marketing Mix Factors

Overall, the factors that affect the satisfactory level can be ranked by highest satisfactory value as price, people, service, process, physical evidence, place, and promotion in that order.

Price

This may be interpreted that the patients are considering the price over other aspects. This may be true and in line with the findings found above, that the employees in the private segment tend to attend more treatments if they can get either full or partial supports from their workplace on their treatment costs. If the treatment expenses cannot be subsidized by their workplace, they need to consider if such sickness is too expensive or worthwhile to attend over the price they have to pay for. In addition, especially in Thailand, the field of physiotherapy is still not considered as high value of treatment as ones received from doctors.

Rather, physiotherapists are still considered similar to nursing occupations, where in fact physiotherapy is more close to the physician field. Anyhow, it can be noticed that the standard deviation of the price factor are quite high. This may be a result of the fact that not all patients fully agree that the price is the main factor to consider the satisfactory of visiting the physiotherapy clinic.

Price relates to the patients' age, income, and frequency of visit. It is clear that income is linked with the price or cost of treatment. In addition, if the patients have

chronic sickness and need to attend the treatment regularly, the cost of treatment will start to become their burden.

People

The first runner up factor, the people, or to be specific for this case, the physiotherapists, who treat the patients and the related staff, are considered. It can be seen from the results that the mean value of price and people aspects are not much different : 4.3147 for price against 4.3039 for the people factor. However, the standard deviation for the people dimension is considerably low as .2726 against the standard deviation of .4318 for price. Therefore, it is questionable if price factor really weighs over people factor. Not to mention that the people factor has the lowest deviation of all parameters.

It is interesting that, despite people is ranked second in the line, there is no significant difference found on this people factor. It may think of this as a skill and the fame or the recognition of the physiotherapists by the public can override the other considerations. In other words, to be treated by a good physiotherapist, all genders, all age, all occupation, for example, have no difference in the satisfaction to get the treatments. However, there are only two factors that significantly influence the satisfaction on people factor. They are the income and frequency of visits. This also makes sense when the affordability came in concern. The results showed that only little income factor does impact the satisfaction in people dimension. Therefore, this may be interpreted that physiotherapists and staff of the clinic are a major factor that either draw patients in or push them away.

Service

Service is the next in the rank. It is known that physiotherapy is classed in the service industry. The service is done by the people. This may be the result why people and service generally go together. The servicing staff has to be very friendly to the patients.

The service refers, but not limited to, the use of correct and effective treatment techniques and equipment, or the way the service is offered or treated on the patients. It is the thus one of the key major components for the successes of

physiotherapy clinics. When the price is reasonable and is made accessible to patients, it is when the competencies fall fully on people and service.

Service is a dimension that is affected by many patient demographic characteristics. It can be satisfied differently by different age group, marital status, education, income, and frequency of visit. Patients with different characteristics definitely have different expectation, satisfactory threshold, and so forth. Therefore, it is relatively difficult to implicitly say that a particular service fits everyone. Even the superior service has its dislikes.

Process

Process is ranked just after service. The process may include the working procedures of the clinics. This shows that the simpler the process, or if the patients can receive treatments more easily and conveniently, the more preferable the clinics will be. This fact comes from the fast pacing culture where everyone has access to information fast and they need response quickly. Process can be made better by optimizing workflow. It is also a key to link many other satisfactory factors together.

Process is only affected by the frequency of visit. This is presumed that all patients, regardless of their age, gender, income, or whatsoever, know that they have to go through a certain process. However, for any patients that must come often, the repetitive or unnecessary processes, if any, can be a hindrance for them to receive treatments. The redundancy of the process can result in difference in satisfactions.

Physical Evidence

After the process comes the physical evidence. This factor also reflects the trusts and dependability of the patients on the clinic. It is the image how the patients will perceive. Clinics with good physical evidence will, in turn, result in the satisfactions of the physiotherapy clinics. This factor tells clearly that the more proper the appearance of the overall treatment, the more professionalism the clinic shall depict. Physical evidence includes the appearance, instruments, clothing, as well as the arrangement of the environments, and everything that can be seen, touched, used, or anything tangible. This is closely related to the place factor which follows.

Place

Place is the second to last factor which patients consider for their satisfactions. This factor can be assumed to be influential especially for people with difficulties of accessing the facilities. It also refers to the proximity in terms of location. In addition, place can also be the contact point with the patients. There is no doubt should place and frequency of visit are related.

Promotion

Finally, the factor promotion is mild influential of all. Promotion is restricted to certain level in health industry. In addition, promotion may be only affect the image of the physiotherapy clinic, but the health status of the patients cannot be controlled and is independent of the promotion of the clinic. Therefore, due to the mentioned fact, it is presumable that the patients may consider the promotion as lowest of satisfactory factor. Promotion, by the way, is subject to a variety of independent factors. They are age, marital status, education level, income and frequency of visits.

Comparisons to Other Previous Studies

According to Kottler, P. ; and Keller, K. (2009) customer satisfaction is the reflection of consumers' judgments on the perception of the outcomes of services compared to the expectation. In the context of physiotherapy clinics, the expectations can come as a combination of different aspects. This viewpoint is similar to those of Reisberg, Marni (1996), who states that the service quality in health care service is in fact measuring the performance of the organization as a whole, that is, not separately by any individual dimension.

When the findings in this study are summarized and brought together, they can then be compared with the findings from other studies. Similarities and differences among various heath care studies can be pointed out. The differences are in terms of cultures, geographical locations of the studies, and perspective of the patients.

Despite this study does not follow completely the SERVQUAL model (Wikipedia. 2005), it is undeniable that the basics and philosophy used to conduct the study, and the construct of the questionnaires, inherit the idea of SERVQUAL components in some extent. With the additional 7Ps marketing mix philosophy, the questionnaires of this study are in part similar and comparable to SERVQUAL model.

Zeithaml, Parasuraman ; and Leonard, Berry (1985) introduced the five components of SERVQUAL model as Reliability, Assurance, Tangibility, Empathy, and Responsiveness, while these components are known in this study as the 7Ps factors : people, service, physical evidence and place. Previous studies show that all service quality (SERVQUAL) dimensions have impacts on patients satisfaction. The study of Al-Azmi, N. ; et al. (2012) took place in Saudi Arabia and Mahdzir, M. N. ; and Ismail, A. (2012) took place in Malaysia where the strongest impact of patient satisfaction comes from Assurance factor. While Assurance refers to the knowledge and courtesy of physiotherapists and their ability to inspire trusts and confidences on the patients during visiting and receiving treatments. The Assurance factor is comparable to the 7Ps' People factor.

In this study, the first factor which ranked highest among the 7Ps is the price, which is not listed in the SERVQUAL model. This is similar to a finding of Kawlaeid, N. ; et al. (2004), Janejira, Thongmaytha (2009), Machado, N. P. ; and Nogueira, L. T. (2008) and Hatamizadeh, N. ; et al. (2012) which stated that the patients tend to perceive higher satisfaction when the expenses are covered by health care insurances, or other health care benefits. Moreover, Ching, Panfila (1992), Al-Azmi, N. ; et al. (2012), Roush, S. E. ; and Sonstroem, R. J. (1999), Jutharat, Praparattanapan (2003) made a remark on the price choice between private or public healthcare providers.

This is the consideration of the patients on the price factor. The studies by Kawlaeid, N. ; et al. (2004), Machado, N. P. ; and Nogueira, L. T. (2008), Kawlaeid, N. ; et al. (2004) and Hatamizadeh, N. ; et al. (2012) found that income and other monetary-related benefits, such as health insurance coverage, impacts the satisfaction of the patients. It was found that the satisfaction index increases as the healthcare expenses are covered by health care insurance or health benefits. Some patients comment that it would be better if the clinic can accept direct debiting the cost of treatment to the insurance companies when possible. In addition, for other service sector like in logistics, Sawang, Mulintha (2005) found that the price is also the number one factor which the clients concern most. In this context of Bangkok clinics, the research studied the affecting characteristics include age, income level and frequency of visits. Both genders agree on the price factor, while the group of 21-29 years old prefers the economy price. They consider that the costs of treatments are worthwhile. The price is affected by income in some industry. Suchada, Buathongsuk (2010) reveals that the

price factor only ranks the third, after process and place in the study on utilization of internet banking service.

The second and third rankings are people and service factor in this 7Ps research concept. This can be compared with the Assurance factor in SERVQUAL model. Richard, M. D. ; and Allaway, A. W. (1993) stated that business survival comes from a provision of superior service provided by competent people, with professional team, skillful and well trained physiotherapists who also have non-skill related such as attitude, personality, professionalism and interpersonal skill. These findings of this study are in line with that of Richard, M. D. ; and Allaway, A. W. which showed that patients will be happier when they can select the doctor, in this case the physiotherapist, by themselves. Robert, J. Manthei ; Raphael, L. Vitalo ; Allen, E. Ivey. (1982), Amyx, D. ; Mowen, J. C. ; and Hamm, R. (2000) found a similar statement, that the success of treatment, in this context, the service, induces the choice of selection of treatment providers. The choice of treatment provider reflects the satisfactory the patients cast. This is interestingly that the people factor comes as the second choice in the 7Ps influential factor in Thailand context, after the Price, which was not included in SERVQUAL model.

Besides, Coovadie, Mahomed Yusuf (2008) study in South Africa revealed that results of service matters. Diogenes, T. P. M. ; Mendonca, K. M. P. P. ; and Guerra, R. O. (2009) found that interaction and relationship between patients and therapists determining the patients' satisfactory levels. This conclusion confirms to the findings of this study that, besides the price, people and service come as the top priority for gaining patients satisfactions.

Even though no information on the nationality of the patients were recorded, it is found that the result of this study shows close findings to the study of Kawlaeid, N. ; et al. (2004) and Mongkolrat, S. ; and Pongpanich, S. (2009) who examined the satisfaction of foreign patients. The result indicated that attention of the staff to the patients contributes significantly to achieve patients' satisfaction.

Hatamizadeh, N. ; et al. (2012) found that the patients consider factors like ease of acccess to the service, waiting time, and treatment time can be crucial to gain satisfaction. This is the process factor according to the 7Ps service marketing mix.

In many researches of Roush, S. E. ; and Sonstroem, R. J. (1999), Mahdzir, M. N. ; and Ismail, A. (2012), Monnin, D. ; and Perneger, T. V. (2002), and

Kawlaeid, N. ; et al. (2004), the results show no relationship between gender and patients satisfaction. This study also reveals the same result that gender has no impact on the satisfaction of the patients. These findings are different to those of Al-Azmi, N. ; et al. (2012), which may be presumed the results of cultural differences.

Chapter 5

Conclusion and Recommendation

The study on “Factors Affecting the Satisfactory of Patients of Physiotherapy Clinic in Bangkok” has found that the demographic characteristics have influential power to the satisfaction of the patients. The samples for this research are from the pool of patients of physiotherapy clinics in Bangkok area. This research uses questionnaires as the research tool. The questionnaire was created, reviewed, revised, and evaluated and approved for use by experts designated by TNI. Pretests were done with the samples of 40 patients in order to check for the Cronbach’s Alpha Coefficient. The results show that the questionnaire has the Cronbach’s Alpha Coefficient of 0.712, which is higher than 0.7 (Tira, Thipsook. 2012). Therefore, the questionnaire is applicable for use.

The collection of the information was done by non probability sampling. The respondent number is 412, account for the 82.4 percent of the distributed questionnaires, and exceeds the required number of 385 samples.

Conclusion

1. Personal characteristic of the patients

The majority of the patients are female, account for 56.1 percent, aged mainly between 31-60 years old. The average age of the patients is 40.88 years old. Approximately two third of the patients are married and holding bachelor degree and higher degrees. Higher education (Master and Doctoral degree) accounts for only 25.7 percent of all responses. Most patients, 42.2 percent, are working in private sectors, then followed by state enterprise or civil servant positions. Average income of the respondents is between 20,001 to 50,000 Baht, account for 59 percent. In general, patients are receiving the treatment either once or twice a month, taking the share of 82.3 percent of all samples.

2. Influential Marketing Mix Factor of Satisfactory

As the patients are relatively satisfied with the overall satisfaction, the study found that they prefer certain aspects over the others. It has been found that the ranking of the factors by the satisfactory level can be seen as follows.

Table 18 Ranking of Influential Marketing Mix Factor of Satisfactory

7Ps factor	$\overline{X}$	S.D.	Interpretation
Price	4.3147	.4318	Highest Satisfaction
People	4.3039	.2726	Highest Satisfaction
Service	4.2660	.2837	Highest Satisfaction
Process	4.1990	.3998	High Satisfaction
Physical evidence	4.1248	.3275	High Satisfaction
Place	4.0830	.3874	High Satisfaction
Promotion	3.9041	.6278	High Satisfaction

For each of the hypothesis, the tabulated summary is shown herewith.

Table 19 Summary of Hypotheses Test Results

7Ps / Char.	Service	Price	Place	Promo.	Proc.	People	Physical Evidence
Gender	✓	✓	✓	✓	✓	✓	✓
Age	✗	✗	✗	✗	✓	✓	✗
Marital Status	✗	✓	✓	✗	✓	✓	✓
Education	✗	✓	✓	✗	✓	✓	✓
Occupation	✓	✓	✓	✓	✓	✓	✓
Income	✗	✗	✓	✗	✓	✗	✗
Visit Freq.	✗	✗	✗	✗	✗	✗	✓

Where : ✗ denotes rejection of null hypotheses

✓ denotes acceptance of null hypotheses

Recommendations for Physiotherapy Clinics

Improvement of the Top Three Marketing Factors

Patients at physiotherapy clinics in Bangkok are satisfied by price, people, service, physical evidence, process, place and promotion in that order.

Satisfaction is always measured as the gap between expectations and the perceived experience. As seen already that different characteristics may affect satisfaction differently, some approach to enhance patient satisfaction may be as follows. The top three priorities should be considered in gaining and maintaining the highest patients' satisfaction.

Price

As the result shows that price is the most important concern that makes patients satisfied, the treatment price should be in-line with other physiotherapy clinics. If it is possible for the clinic to make a contract with insurance company, this can increase patients' satisfaction. Pricing can come in treatment packages forms. Price competitiveness does not refer to the economic value. However, the patients will consider overall factors including the people and service, as well as other factors, such as, the use of state of the art equipment, to consider the worthiness of the treatment costs. It is recommended that the target group for price strategy is the patients aged below 30 years old.

The patients with age below 20 are all students, while the patients with the age between 21-30 years old are working with income to be able to pay for the cost of treatment. It is worthwhile for them to be healthy. Some of them are even subsidized for the costs of treatments by their employers or by health insurance.

People

Skillful physiotherapist is an invaluable asset for the clinic. Training and skill enhancement is necessary to increase patient satisfaction. They need to be trained well, and updated to the latest techniques and equipment, full of experiences, and trustworthy. Not only the technical skill, but social skills are also necessary. The recruitment of the staff must also consider the personalities, such as, friendliness and out-going, since they have to be in direct contact with the patients. Patients without

higher degrees may communicate more often with the staff or physiotherapists concerning the process and treatments.

Service

Patients who are suffering from the sickness need to be heard and to be treated fairly and effectively. To improve the service quality, the target group can be put on the patients of the age between 40 and 69. These patients are sensitive to the satisfaction from treatments received. If the ailments can be analyzed well, and if the cures are well provided and can cure their sickness, then the satisfaction seems to be higher. This means that the patients are looking for competent and skillful physiotherapists. They will expect for the outcomes which ease their pains and discomforts. Therefore, correct analysis of the sickness is crucial, where physiotherapists and staff play important role to satisfy the patients.

Physiotherapy clinics should focus on the monthly and fortnightly patients who contribute mostly to the satisfaction scores. They are the key to gain satisfaction. These patients shall be treated with the uniform standard of service and cares.

Extensions of physiotherapy clinics to include variety of physiotherapy fields, and availability of accessories treatment equipment can attract additional patients.

Other Factors

In addition to the top three most important marketing factors, others factors : place, promotion, process, and physical evidence, are also important. There are a number of possibilities to improve those factors to increase patients' satisfaction.

Privacy of the treatment room is some concerns for smaller sized clinics. The more privacy, the higher the costs of maintaining the clinic will be. Online information can be useful to improve information flow. This may contain, for example, operating time, map to the clinic, treatments provided, and so forth. Parking availability and sufficiency are consideration factors of the patients to select a physiotherapy clinic to visit. Provision of the parking can attract more patients.

Process is crucial when the patients have to visit frequently. Patients want simpler processes. Once they arrive at the clinic, they prefer just to wait for the treatment, pay, and leave, without filling out forms and answer questions repeatedly. More tedious processes shall be taken care by trained staff of the clinic. Preparations

prior to the treatment can be done in advance for the patients with appointments. Computerized patients' records database is useful for clinics with branches. Waiting time should be limited to no more than 15 minutes for patients with appointments.

Physical evidence, such as, cleanliness and promptness of service affects the patients' perception on the clinics. The equipment shall look clean and be in ready-for-use conditions. Educational brochures and posters related to common physiotherapy related sickness, such as, office syndrome or orthopedics ailments, may be readily available around the clinics.

Normally, the patients prefer to have their regular physiotherapists for the treatment, rather than just treated by any random physiotherapists. The patients do not like to change their physiotherapists in each visit. Therefore, the availability and scheduling of patient-physiotherapists is important. This can be achieved by computerized scheduling.

It is necessary to keep the clinic tidy, clean, and private in order to impress and attract patients and make them satisfied. Sufficient and comfortable parking lots with ease of accessibility are necessary for a physiotherapy clinic to have more patients.

Major Difficulties and Limitations of the Study

The major difficulties for this research come from the collection of the data. The number of respondents required to be at least 385 copies who are scattering around Bangkok area. Consequently, the distribution and collection of questionnaires from the respondents took longer. Therefore, this makes the collection difficult and requires some helps from those who can easily access physiotherapy clinics.

Suggestions for Future Studies

For further studies, it is recommended that additional quantitative researches might be conducted in order to learn more information about each of influencing marketing mix factors. The researches might also be done qualitatively by in-depth interview to learn about meaningful patients' demands to lead to their happiness and satisfactions. Different ailments may contribute to different satisfactions also.

Besides the satisfaction of the patients, it is also interesting to learn about the satisfaction of the physiotherapists as well. There should be follow-up studies of the patient-therapists relationship and happiness of both parties after the treatment.

It is also possible to see if the relationships among independent variables, such as the age group and education level, are closely related to each other.

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APPENDICES

Appendix A.

List of Accredited Institutes for Physiotherapy Degree in Thailand

Table 20 List of Accredited Institutes for Physiotherapy Degree in Thailand (Translated)

No.	Institution	Degree name	Valid Until
1	Chulalongkorn University	Bachelor of Science (Physiotherapy) Developed 2004 Curriculum	9 Apr 2014
2	Thammasrt University	Bachelor of Science (Physiotherapy) Developed 2009 Curriculum	2 Feb 2016
3	Khon Kaen University	Bachelor of Science (Physiotherapy) Developed 2008 Curriculum	9 Apr 2014
4	Naresuan University	Bachelor of Science (Physiotherapy) Developed 2008 Curriculum	15 Jul 2015
5	Srinakharinwirot University	Bachelor of Science (Physiotherapy) Developed 2008 Curriculum	2 Mar 2016
6	Mahidol University	Bachelor of Science (Physiotherapy) Developed 2007 Curriculum	9 Apr 2014
7	Chiang Mai University	Bachelor of Science (Physiotherapy) Developed 2005 Curriculum	9 Apr 2014
8	Rangsit University	Bachelor of Science (Physiotherapy) Developed 2009 Curriculum	9 Apr 2014
9	Huachiew Chalermphrakiat University	Bachelor of Science (Physiotherapy) Developed 2009 Curriculum	9 Apr 2014
10	Christian University	Bachelor of Science (Physiotherapy) Developed 2009 Curriculum	19 Oct 2015
11	Walailuck University	Bachelor of Science (Physiotherapy) New 2006 Curriculum	9 Apr 2014
12	Songklanakarin University	Bachelor of Science (Physiotherapy) New 2006 Curriculum	25 Mar 2015
13	Mae Fah Luang University	Bachelor of Science (Physiotherapy) New 2006 Curriculum	9 Apr 2014
14	Payao University	Bachelor of Science (Physiotherapy) Developed 2007 Curriculum	2 Feb 2012
15	St. Louis College	Bachelor of Physiotherapy New 2008 Curriculum	19 Oct 2015
16	Burapa University	Bachelor of Physiotherapy New 2010 Curriculum	2 Feb 2516

Appendix B.

Registered Physiotherapy Clinics in Bangkok as of September, 2011

Table 21 Registered Physiotherapy Clinics in Bangkok as of September, 2011

ชื่อสถานพยาบาล	เวลาเปิดทำการ	เลขที่กิจการ
C Care Chiropractic & Physiotherapy	Monday - Saturday 11.00 - 19.00 hr	10106001654
Praneet Physical Therapy Clinic	Monday - Friday 09.00 – 19.00 hr, Saturday 08.30 – 15.00 hr, Sunday 09.00 – 12.00 hr	10106000155
Healing Hand Physical Therapy Clinic	Daily 09.00 - 20.00 hr	10106001353
D Spine Physical Therapy Clinic	Monday - Saturday 9.30 - 14.00 hr	10106001753
D Kine Physical Therapy Clinic	Monday - Saturday 8.00 - 20.00 hr	10106001252
KM 8 Physical Therapy Clinic	Daily 09.00 - 18.30 hr Closed on Friday and Sunday	10106001348
Siam Chiro Physical Therapy Clinic	Daily 10.00 - 20.00 hr	10106000354
Natural Healing Physical Therapy Clinic	Sunday - Thursday 08.30 - 19.00 hr Saturday 08.30 - 12.00 hr	10106000649
Duangporn Physical Therapy Clinic	Monday - Saturday 10.00 - 20.00 hr	10106000651
Wirada Physical Therapy Clinic	Daily 10.00 - 20.00 hr	10106001452
Prachachuen Physical Therapy Clinic	Monday - Friday 16.30 - 20.30 hr, Saturday - Sunday 09.00 - 20.00 hr	10106000348
Kid Dee Physical Therapy Clinic	Monday - Friday 12.30 - 20.30 hr, Saturday 10.30 - 17.30 hr	10106000253
33 Physical Therapy Clinic	Monday - Friday 17.00 - 20.00 hr , Saturday 09.00 - 15.00 hr	10106000352
PK Physical Therapy Clinic	Daily 9.00 - 20.00 hr	10106000951
Holistic Health System Physical Therapy Clinic	Saturday - Thursday 09.00 - 17.00 hr	10106000255
Bunrungrad Physical Therapy Clinic	Daily 08.00 - 20.00 hr	10106001050
71 Physical Therapy Clinic	Monday - Friday 17.00 - 21.00 hr, Saturday - Sunday 09.00 - 20.00 hr	10106000248
NP Physical Therapy Clinic	Monday - Friday 16.30 - 20.00 hr, Saturday - Sunday 09.00 - 18.00 hr	10106000750
Woranach Physical Therapy Clinic	Monday - Friday 09.00 - 21.00 hr Saturday - Sunday 9.00 - 17.00 hr	10106001053

Table 21 Registered Physiotherapy Clinics in Bangkok as of September, 2011 (Continued)

ชื่อสถานพยาบาล	เวลาเปิดทำการ	เลขที่กิจการ
Thawalporn Physical Therapy Clinic	Monday - Sunday 10.00 - 20.00 hr	10106001352
Suanson Physical Therapy Clinic	Monday - Saturday 17.00 - 21.00 hr, Sunday 09.00 - 17.00 hr	10106000848
Bang Khae Physical Therapy Clinic	Tuesday - Friday 11.00 - 20.00 hr, Saturday - Sunday 09.00 - 18.00 hr	10106001248
Sai 2 Physical Therapy Clinic	Monday - Saturday 09.00 - 20.00 hr, Holiday 09.00 - 18.00 hr	10106000746
Noparat Physical Therapy Clinic	Daily 09.00 - 21.00 hr	10106000751
Archapon Physical Therapy Clinic	Daily 08.00 - 20.00 hr	10106000752
PT Bangna Physical Therapy Clinic	Monday - Friday 17.00 - 20.00 ,Saturday - Sunday 09.00 - 20.00 hr	10106000854
Por Peang Physical Therapy Clinic	Monday - Friday 11.00 - 19.00 hr, Saturday - Sunday 12.00 - 16.00 hr	10106001151
Physical Therapy Clinic	Monday - Friday 09.00 - 20.00 hr, Saturday 09.0 - 12.00 hr Closed on Sunday	10106000452
Kanya Physical Therapy Clinic	Monday - Saturday 09.00 - 20.00 hr, Sunday 09.00 - 16.00 hr	10106001351
Charma Physical Therapy Clinic	Monday , Wednesday , Friday , Saturday 09.00 hr - 22.00 hr	10106001046
Wilawan Physical Therapy Clinic	Monday - Friday 17.00 - 20.00 hr Saturday - Sunday 09.00 - 16.00 hr	10106000454
Natural Healing Hualamphong Physical Therapy Clinic	Daily 10.00 - 19.00 hr Closed on Friday	10106001052
Tai Physical Therapy Clinic	Monday ,Wednesday ,Friday 17.00 - 20.00 hr Sunday 09.00 - 12.00 hr	10106000552
Lumpini Physical Therapy Clinic	Monday - Friday 09.00 - 17.00 hr	10106001652
Silom Physical Therapy Clinic	Monday - Friday 17.00 - 20.00 hr	10106000445
Convergo Physical Therapy Clinic	Monday - Friday 08.00 - 16.00 hr, Saturday - Sunday 08.00 - 11.00 and 18.00 - 20.00 hr	10106001453
Saladaeng Physical Therapy Clinic	Monday - Friday 10.00 - 20.00 hr, Saturday - Sunday 10.00 - 17.00 hr	10106000150
Sukhapibal 1 Physical Therapy Clinic	Tuesday - Sunday 08.30 - 18.30 hr	10106000949

Table 21 Registered Physiotherapy Clinics in Bangkok as of September, 2011 (Continued)

ชื่อสถานพยาบาล	เวลาเปิดทำการ	เลขที่กิจการ
Navamin Physical Therapy Clinic	Daily 9.00 - 20.00 hr	10106001253
D Spine Langsuan Physical Therapy Clinic	Daily 14.00 - 20.00 hr	10106001251
Na Kaya Physical Therapy Clinic	Monday - Friday 10.00 - 20.00 hr, Saturday 10.00 - 16.00 hr	10106000251
Health Therapy Physical Therapy Clinic	Daily 08.30 - 17.30 hr	10106001051
Langsuan Physical Therapy Clinic	Monday - Saturday 09.00 - 20.00 hr, Sunday 09.00 - 17.00 hr	10106000153
Somsak Physical Therapy Clinic	Daily 08.00 - 17.00 hr	10106000451
Sino Thai Physical Therapy Clinic	Tuesday - Sunday 10.00 - 19.00 hr	10106000853
Bangkok Physical Therapy Clinic	Monday - Saturday 8.30 - 19.30 hr	10106000953
Lanluang Physical Therapy Clinic	Monday - Friday 17.00 - 20.00 hr	10106000252
Dechakom Physical Therapy Clinic	Monday - Thursday 08.00 - 19.00 hr, Friday - Sunday 08.00 - 17.00 hr	10106000148
Peam Sukkaphab Physical Therapy Clinic	Daily 08.00 - 22.00 hr	10106000849
Natchapim Physical Therapy Clinic	Monday - Friday 10.00 - 20.00 hr,Saturday - Sunday 09.00 - 17.00 hr	10106000654
329 Physical Therapy Clinic	Daily 09.00 - 12.00 hr	10106000152
Spirit Physical Therapy Clinic	Daily 9.00 - 19.00 hr	10106000254
Charan 14 Physical Therapy Clinic	Daily 08.00 - 21.00 hr	10106000149
Sathu Physical Therapy Clinic	Monday - Friday 17.00 - 20.00 hr, Saturday 13.00 - 20.00 hr, Sunday 09.00 - 18.00 hr	10106001552
Natural Therapy Physical Therapy Clinic	Monday - Saturday 09.00 - 18.00 hr	10106000954
Romklao Physical (old) Therapy Clinic	Daily 15.00 - 21.00 hr	10106000948
Romklao Physical Therapy Clinic	Daily 08.00 - 21.00 น	10106000653

Table 21 Registered Physiotherapy Clinics in Bangkok as of September, 2011 (Continued)

ชื่อสถานพยาบาล	เวลาเปิดทำการ	เลขที่กิจการ
Ladkrabang Physical Therapy Clinic	Monday - Saturday 16.00 - 20.00 hr	10106000147
Brainergy Physical Therapy Clinic	Monday - Friday 16.30 - 21.00 hr , Saturday - Sunday 09.00 - 20.00 hr	10106000753
Town in Town Physical Therapy Clinic	Daily10.00 - 21.00 hr	10106001153
Back and Spine Physical Therapy Clinic	Daily 10.00 - 19.00 hr	10106000453
D Spine Thonglor Physical Therapy Clinic	Daily 14.00 - 20.00 hr	10106001152
Sawanglok Physical Therapy Clinic	Daily 11.00 - 18.00 hr	10106000754
D Spine Pattanakarn Physical Therapy Clinic	Daily 08.00 - 13.00 hr	10106001554
Ramkamhaeng 157/2 Physical Therapy Clinic	Daily 08.00 - 20.00 hr	10106000551
Natural Healing Ramkamhaeng Physical Therapy Clinic	Sunday - Thursday 08.30 - 19.00 hr Friday 08.30 - 12.00 hr	10106001154
Supreme Physical Therapy Clinic	Daily 09.00 - 21.00 hr	10106000553
Ariya Physical Therapy Clinic	Monday - Friday 10.00 - 20.00 hr,Saturday - Sunday 9.00 - 19.00 hr	10106000154
Sathong Physical Therapy Clinic	Monday - Friday 09.00 - 18.00 hr,Saturday - Sunday 09.00 - 16.00 hr	10106000450
PK Phetkasem 81 Physical Therapy Clinic	Daily 10.00 - 20.00 hr Closed on Friday	10106001553
Nanthaphat Physical Therapy Clinic	Daily 08.00 - 20.00 hr	10106000353
Rainbow Arokaya Physical Therapy Clinic	Tuesday - Sunday 9.00 - 20.00 hr	10106000151
T and S Physical Therapy Clinic	Daily 08.00 - 20.00 hr	10106001354
Physio Plus Physical Therapy Clinic	Daily 8.00 - 20.00 hr	10106001451

Appendix C.

Test Results

Table 22 Multiple Comparison Tests for Age-Service Satisfaction

Multiple Comparisons of Mean Difference in Age Groups (LSD Method)									
Service	**Mean**	**SD**	**≤ 20 years old**	**21-29 years old**	**30-39 years old**	**40-49 years old**	**50-59 years old**	**60-69 years old**	**≥ 70 years old**
≤ 20 years old	**4.74**	0.4463		**.277***	**.191***	**.060**	**-.029**	**-.028**	**.237**
21-29 years old	**4.46**	0.5425	**-.277***		**-.085**	**-.216***	**-.305***	**-.305***	**-.040**
30-39 years old	**4.55**	0.5448	**-.191***	**.085**		**-.131***	**-.220***	**-.219**	**.045**
40-49 years old	**4.68**	0.4696	**-.060**	**.216***	**.131***		**-.089**	**-.088**	**.176**
50-59 years old	**4.77**	0.4264	**.029**	**.305***	**.220***	**.089**		**.001**	**.265**
60-69 years old	**4.76**	0.4372	**.028**	**.305***	**.219**	**.088**	**-.001**		**.265**
≥ 70 years old	**4.50**	0.7071	**-.237**	**.040**	**-.045**	**-.176**	**-.265**	**-.265**	
Total	**4.65**	0.4932							

(n = 412)

*. The mean difference is significant at the 0.05 level.

Table 23 Multiple Comparison Tests for Age-Price Satisfaction

Multiple Comparisons of Mean Difference in Age Groups (LSD Method)									
Price	**Mean**	**SD**	**≤ 20 years old**	**21-29 years old**	**30-39 years old**	**40-49 years old**	**50-59 years old**	**60-69 years old**	**≥ 70 years old**
≤ 20 years old	**4.82**	0.3929		**.436***	**.157**	**.205***	**.174**	**.169**	**-.184**
21-29 years old	**4.38**	0.6667	**-.436***		**-.279***	**-.230***	**-.262***	**-.267**	**-.620**
30-39 years old	**4.66**	0.5650	**-.157**	**.279***		**.049**	**.017**	**.012**	**-.341**
40-49 years old	**4.61**	0.5329	**-.205***	**.230***	**-.049**		**-.032**	**-.037**	**-.390**
50-59 years old	**4.64**	0.5317	**-.174**	**.262***	**-.017**	**.032**		**-.005**	**-.358**
60-69 years old	**4.65**	0.4926	**-.169**	**.267**	**-.012**	**.037**	**.005**		**-.353**
≥ 70 years old	**5.00**	0.000	**.184**	**.620**	**.341**	**.390**	**.358**	**.353**	
Total	**4.62**	0.5513							

(n = 412)

*. The mean difference is significant at the 0.05 level.

Table 24 Multiple Comparison Tests for Age-Place Satisfaction

Multiple Comparisons of Mean Difference in Age Groups (LSD Method)									
Place	**Mean**	**SD**	**≤ 20 years old**	**21-29 years old**	**30-39 years old**	**40-49 years old**	**50-59 years old**	**60-69 years old**	**≥ 70 years old**
≤ 20 years old	**4.47**	0.5569		**.314***	**.110**	**.150**	**.091**	**.356***	**.474**
21-29 years old	**4.16**	0.5095	**-.314***		**-.204***	**-.164**	**-.223***	**.042**	**.160**
30-39 years old	**4.36**	0.5070	**-.110**	**.204***		**.040**	**-.019**	**.246**	**.364**
40-49 years old	**4.32**	0.5147	**-.150**	**.164**	**-.040**		**-.059**	**.206**	**.324**
50-59 years old	**4.38**	0.5824	**-.091**	**.223***	**.019**	**.059**		**.265**	**.383**
60-69 years old	**4.12**	0.3321	**-.356***	**-.042**	**-.246**	**-.206**	**-.265**		**.118**
≥ 70 years old	**4.00**	0.000	**-.474**	**-.160**	**-.364**	**-.324**	**-.383**	**-.118**	
Total	**4.33**	0.5284							

(n = 412)

*. The mean difference is significant at the 0.05 level.

Table 25 Multiple Comparison Tests for Age-Promotion Satisfaction

Multiple Comparisons of Mean Difference in Age Groups (LSD Method)									
Promotion	**Mean**	**SD**	**≤ 20 years old**	**21-29 years old**	**30-39 years old**	**40-49 years old**	**50-59 years old**	**60-69 years old**	**≥ 70 years old**
≤ 20 years old	**4.16**	0.7176		**.438***	**-.001**	**-.063**	**-.163**	**-.195**	**1.158***
21-29 years old	**3.72**	0.7570	**-.438***		**-.439***	**-.501***	**-.601***	**-.633***	**.720**
30-39 years old	**4.16**	0.7714	**.001**	**.439***		**-.061**	**-.162**	**-.194**	**1.159***
40-49 years old	**4.22**	0.7668	**.063**	**.501***	**.061**		**-.100**	**-.132**	**1.221***
50-59 years old	**4.32**	0.6486	**.163**	**.601***	**.162**	**.100**		**-.032**	**1.321***
60-69 years old	**4.35**	0.7019	**.195**	**.633***	**.194**	**.132**	**.032**		**1.353***
≥ 70 years old	**3.00**	0.000	**-1.158***	**-.720**	**-1.159***	**-1.221***	**-1.321***	**-1.353***	
Total	**4.16**	0.7568							

(n = 412)

*. The mean difference is significant at the 0.05 level.

Table 26 Multiple Comparison Tests for Age-Physical Evidence Satisfaction

Multiple Comparisons of Mean Difference in Age Groups (LSD Method)									
Physical Evidence	**Mean**	**SD**	**≤ 20 years old**	**21-29 years old**	**30-39 years old**	**40-49 years old**	**50-59 years old**	**60-69 years old**	**≥ 70 years old**
≤ 20 years old	**4.42**	0.5517		**.321***	**.228***	**.164**	**.112**	**.362***	**-.079**
21-29 years old	**4.10**	0.5051	**-.321***		**-.093**	**-.157***	**-.209***	**.041**	**-.400**
30-39 years old	**4.19**	0.3971	**-.228***	**.093**		**-.064**	**-.115**	**.134**	**-.307**
40-49 years old	**4.26**	0.4713	**-.164**	**.157***	**.064**		**-.051**	**.199**	**-.243**
50-59 years old	**4.31**	0.4910	**-.112**	**.209***	**.115**	**.051**		**.250***	**-.191**
60-69 years old	**4.06**	0.4287	**-.362***	**-.041**	**-.134**	**-.199**	**-.250***		**-.441**
≥ 70 years old	**4.50**	0.7071	**.079**	**.400**	**.307**	**.243**	**.191**	**.441**	
Total	**4.24**	0.4775							

(n = 412)

*. The mean difference is significant at the 0.05 level.

Table 27 Multiple Comparison Tests for Marital Status-Service Satisfaction

Satisfaction of Physiotherapy Clinic Service Classified by Marital Status								
	Satisfaction Value	**SD**	**Min**	**Low**	**Moderately**	**High**	**Max**	**Total**
Single	4.2500	0.5439	0 (0.0%)	0 (0.0%)	3 (2.2%)	59 (43.4%)	74 (54.4%)	136 (100%)
Married	4.3783	0.4503	0 (0.0%)	0 (0.0%)	0 (0.0%)	75 (28.1%)	192 (71.9%)	267 (100%)
Divorced	3.7500	0.5000	0 (0.0%)	0 (0.0%)	0 (0.0%)	4 (100.0%)	0 (0.0%)	4 (100%)
Widow	3.8000	0.4472	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (20.0%)	4 (80.0%)	5 (100%)
Total	4.3228	0.4932	0 (0.0%)	0 (0.0%)	3 (0.7%)	139 (33.7%)	270 (65.5%)	412 (100%)

(n = 412)

* defined maximum satisfaction at the mean value of 5.0000

Table 28 Multiple Comparison Tests for Marital Status-Promotion Satisfaction

Satisfaction of Physiotherapy Clinic Promotion Classified by Marital Status								
	Satisfaction Value	**SD**	**Min**	**Low**	**Moderately**	**High**	**Max**	**Total**
Single	4.2500	0.7876	0 (0.0%)	0 (0.0%)	45 (33.1%)	52 (38.2%)	39 (28.7%)	136 (100%)
Married	4.1536	0.7166	0 (0.0%)	0 (0.0%)	42 (15.7%)	111 (41.6%)	114 (42.7%)	267 (100%)
Divorced	4.2500	0.9574	0 (0.0%)	0 (0.0%)	2 (50.0%)	1 (25.0%)	1 (25.0%)	4 (100%)
Widow	4.2500	0.8367	0 (0.0%)	0 (0.0%)	1 (20.0%)	2 (40.0%)	2 (40.0%)	5 (100%)
Total	4.1869	0.7568	0 (0.0%)	0 (0.0%)	90 (21.8%)	166 (40.3%)	156 (37.9%)	412 (100%)

(n = 412)

* defined maximum satisfaction at the mean value of 5.0000

Table 29 Multiple Comparison Tests for Education-Service Satisfaction

Satisfaction of Physiotherapy Clinic Service Classified by Education Level								
	Satisfaction Value	**SD**	**Min**	**Low**	**Moderately**	**High**	**Max**	**Total**
< Bachelor Degree	4.67	0.4741	0 (0.0%)	0 (0.0%)	0 (0.0%)	14 (32.6%)	29 (67.4%)	43 (100%)
Bachelor Degree or Equivalent	4.69	0.4625	0 (0.0%)	0 (0.0%)	0 (0.0%)	81 (30.8%)	182 (69.2%)	263 (100%)
Master Degree	4.52	0.5425	0 (0.0%)	0 (0.0%)	2 (2.1%)	42 (43.8%)	52 (54.2%)	96 (100%)
Higher than Master Degree	4.60	0.6992	0 (0.0%)	0 (0.0%)	1 (10.0%)	2 (20.0%)	7 (70.0%)	10 (100%)
Total	4.65	0.4932	0 (0.0%)	0 (0.0%)	3 (0.7%)	139 (33.7%)	270 (65.5%)	412 (100%)

(n = 412)

* defined maximum satisfaction at the mean value of 5.0000

Table 30 Multiple Comparison Tests for Education-Promotion Satisfaction

Satisfaction of Physiotherapy Clinic Promotion Classified by Education Level								
	Satisfaction Value	**SD**	**Min**	**Low**	**Moderately**	**High**	**Max**	**Total**
< Bachelor degree	4.05	0.7545	0 (0.0%)	0 (0.0%)	11 (25.6%)	19 (44.2%)	13 (30.2%)	43 (100%)
Bachelor degree or equivalent	4.24	0.7514	0 (0.0%)	0 (0.0%)	50 (19%)	100 (38%)	113 (43%)	263 (100%)
Master degree	4.04	0.7666	0 (0.0%)	0 (0.0%)	26 (27.1%)	40 (41.7%)	30 (31.3%)	96 (100%)
Higher than Master Degree	3.70	0.4830	0 (0.0%)	0 (0.0%)	3 (30%)	7 (70%)	0 (0%)	10 (100%)
Total	4.16	0.7568	0 (0.0%)	0 (0.0%)	90 (21.8%)	166 (40.3%)	156 (37.9%)	412 (100%)

(n = 412)

* defined maximum satisfaction at the mean value of 5.0000

Table 31 Multiple Comparison Tests for Income-Service Satisfaction

Multiple Comparisons of Mean Difference in Income Groups (LSD Method)											
Service	**Satis. Value**	**SD**	**< 5000**	**5,000-10,000**	**10,001-20,000**	**20,001-30,000**	**30,001-40,000**	**40,001-50,000**	**50,001-70,000**	**70,001-100,000**	**> 100,000**
< 5000	4.75	0.4410		.008	.369*	.175	.052	.036	.154	.167	.528*
5,000-10,000	4.74	0.4448	-.008		.361*	.167	.044	.028	.146	.159	.520*
10,001-20,000	4.38	0.4976	-.369*	-.361*		-.194	-.317*	-.333*	-.215	-.202	.159
20,001-30,000	4.58	0.5249	-.175	-.167	.194		-.122	-.139	-.021	-.008	.353*
30,001-40,000	4.70	0.4620	-.052	-.044	.317*	.122		-.017	.102	.114	.475*
40,001-50,000	4.71	0.4545	-.036	-.028	.333*	.139	.017		.118	.131	.492*
50,001-70,000	4.60	0.5336	-.154	-.146	.215	.021	-.102	-.118		.013	.374*
70,001-100,000	4.58	0.5149	-.167	-.159	.202	.008	-.114	-.131	-.013		.361
> 100,000	4.22	0.6667	-.528*	-.520*	-.159	-.353*	-.475*	-.492*	-.374*	-.361	
Total	4.64	0.4932									

(n = 396)

*. The mean difference is significant at the 0.05 level.

Table 32 Multiple Comparison Tests for Income-Price Satisfaction

Multiple Comparisons of Mean Difference in Income Groups (LSD Method)											
Price	**Satis. Value**	**SD**	**< 5000**	**5,000-10,000**	**10,001-20,000**	**20,001-30,000**	**30,001-40,000**	**40,001-50,000**	**50,001-70,000**	**70,001-100,000**	**> 100,000**
< 5000	4.82	0.3900		.047	.393*	.178	.112	.202	.379*	.571*	.377
5,000-10,000	4.77	0.4250	-.047		.346*	.130	.065	.155	.332*	.524*	.330
10,001-20,000	4.43	0.5976	-.393*	-.346*		-.215	-.281*	-.190	-.014	.179	-.016
20,001-30,000	4.64	0.5620	-.178	-.130	.215		-.065	.025	.202*	.394*	.199
30,001-40,000	4.71	0.5056	-.112	-.065	.281*	.065		.090	.267*	.459*	.265
40,001-50,000	4.62	0.5126	-.202	-.155	.190	-.025	-.090		.177	.369*	.175
50,001-70,000	4.44	0.6076	-.379*	-.332*	.014	-.202*	-.267*	-.177		.192	-.002
70,001-100,000	4.25	0.8660	-.571*	-.524*	-.179	-.394*	-.459*	-.369*	-.192		-.194
> 100,000	4.44	0.7265	-.377	-.330	.016	-.199	-.265	-.175	.002	.194	
Total	4.62	0.5513									

(n = 396)

*. The mean difference is significant at the 0.05 level.

Table 33 Multiple Comparison Tests for Income-Promotion Satisfaction

Multiple Comparisons of Mean Difference in Income Groups (LSD Method)											
Promotion	**Satis. Value**	**SD**	**< 5000**	**5,000-10,000**	**10,001-20,000**	**20,001-30,000**	**30,001-40,000**	**40,001-50,000**	**50,001-70,000**	**70,001-100,000**	**> 100,000**
< 5000	4.25	0.6455		-.008	.583*	.086	-.017	.012	.231	0.000	.583*
5,000-10,000	4.26	0.6816	.008		.591*	.094	-.009	.020	.239	.008	.591*
10,001-20,000	3.67	0.7303	-.583*	-.591*		-.498*	-.601*	-.571*	-.353	-.583*	0.000
20,001-30,000	4.16	0.7640	-.086	-.094	.498*		-.103	-.074	.145	-.086	.498
30,001-40,000	4.27	0.7581	.017	.009	.601*	.103		.029	.248	.017	.601*
40,001-50,000	4.24	0.7383	-.012	-.020	.571*	.074	-.029		.219	-.012	.571*
50,001-70,000	4.02	0.7794	-.231	-.239	.353	-.145	-.248	-.219		-.231	.353
70,001-100,000	4.25	0.8660	0.000	-.008	.583*	.086	-.017	.012	.231		.583
> 100,000	3.67	0.7071	-.583*	-.591*	0.000	-.498	-.601*	-.571*	-.353	-.583	
Total	4.16	0.7568									

(n = 396)

*. The mean difference is significant at the 0.05 level.

Table 34 Multiple Comparison Tests for Income-People Satisfaction

Multiple Comparisons of Mean Difference in Income Groups (LSD Method)											
People	**Satis. Value**	**SD**	**< 5000**	**5,000-10,000**	**10,001-20,000**	**20,001-30,000**	**30,001-40,000**	**40,001-50,000**	**50,001-70,000**	**70,001-100,000**	**> 100,000**
< 5000	4.75	0.4410		.073	.321*	.134	.041	.190	.192	0.000	.639*
5,000-10,000	4.68	0.4752	-.073		.249	.061	-.032	.118	.120	-.073	.566*
10,001-20,000	4.43	0.5071	-.321*	-.249		-.188	-.281*	-.131	-.129	-.321	.317
20,001-30,000	4.62	0.4896	-.134	-.061	.188		-.093	.057	.059	-.134	.505*
30,001-40,000	4.71	0.4567	-.041	.032	.281*	.093		.150*	.152	-.041	.598*
40,001-50,000	4.56	0.4994	-.190	-.118	.131	-.057	-.150*		.002	-.190	.448*
50,001-70,000	4.56	0.5015	-.192	-.120	.129	-.059	-.152	-.002		-.192	.447*
70,001-100,000	4.75	0.4523	0.000	.073	.321	.134	.041	.190	.192		.639*
> 100,000	4.11	0.6009	-.639*	-.566*	-.317	-.505*	-.598*	-.448*	-.447*	-.639*	
Total	4.61	0.4912									

(n = 396)

*. The mean difference is significant at the 0.05 level.

Table 35 Multiple Comparison Tests for Income-Physical Evidence Satisfaction

Multiple Comparisons of Mean Difference in Income Groups (LSD Method)											
Physical Evidence	**Satis. Value**	**SD**	**< 5000**	**5,000-10,000**	**10,001-20,000**	**20,001-30,000**	**30,001-40,000**	**40,001-50,000**	**50,001-70,000**	**70,001-100,000**	**> 100,000**
< 5000	4.54	0.5079		.116	.393*	.317*	.350*	.202*	.382*	.452*	.536*
5,000-10,000	4.42	0.5642	-.116		.276*	.200*	.233*	.086	.266*	.336*	.419*
10,001-20,000	4.14	0.4781	-.393*	-.276*		-.076	-.043	-.190	-.011	.060	.143
20,001-30,000	4.22	0.4786	-.317*	-.200*	.076		.033	-.114	.065	.136	.219
30,001-40,000	4.19	0.3914	-.350*	-.233*	.043	-.033		-.147*	.032	.103	.186
40,001-50,000	4.33	0.4990	-.202*	-.086	.190	.114	.147*		.179*	.250	.333*
50,001-70,000	4.15	0.4595	-.382*	-.266*	.011	-.065	-.032	-.179*		.071	.154
70,001-100,000	4.08	0.2887	-.452*	-.336*	-.060	-.136	-.103	-.250	-.071		.083
> 100,000	4.00	0.5000	-.536*	-.419*	-.143	-.219	-.186	-.333*	-.154	-.083	
Total	4.25	0.4775									

(n = 396)

*. The mean difference is significant at the 0.05 level.

Table 36 Multiple Comparison Tests for Frequency of Visits-Service Satisfaction

Satisfaction of Physiotherapy Clinic Service Classified by Frequency of Visit								
	Satisfaction Value	**SD**	**Min**	**Low**	**Moderately**	**High**	**Max**	**Total**
Less often than once a month	4.13	0.5606	0 (0.0%)	0 (0.0%)	2 (6.3%)	17 (48.6%)	13 (48.6%)	32 (100%)
Once a month	4.67	0.5774	0 (0.0%)	0 (0.0%)	0 (0.0%)	50 (29.2%)	121 (70.8%)	171 (100%)
Twice a months	4.66	0.4637	0 (0.0%)	0 (0.0%)	0 (0.0%)	52 (31.0%)	116 (69.0%)	168 (100%)
Four times a month	4.25	0.4562	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (50.0%)	2 (50.0%)	4 (100%)
More often than 8 times a month	4.14	0.6016	0 (0.0%)	0 (0.0%)	1 (2.9%)	17 (48.6%)	17 (48.6%)	35 (100%)
Total	4.57	0.4932	0 (0.0%)	0 (0.0%)	3 (0.7%)	138 (33.7%)	269 (65.6%)	410 (100%)

(n = 410)

* defined maximum satisfaction at the mean value of 5.0000

Table 37 Multiple Comparison Tests for Frequency of Visits-Price Satisfaction

Satisfaction of Physiotherapy Clinic Price Classified by Frequency of Visits								
	Satisfaction Value	**SD**	**Min**	**Low**	**Moderately**	**High**	**Max**	**Total**
Less often than once a month	4.22	0.6391	0 (0.0%)	0 (0.0%)	5 (15.6%)	15 (46.9%)	12 (37.5%)	32 (100%)
Once a month	4.69	0.8165	0 (0.0%)	0 (0.0%)	3 (1.8%)	47 (27.5%)	121 (70.8%)	171 (100%)
Twice a months	4.70	0.4865	0 (0.0%)	0 (0.0%)	2 (1.2%)	47 (28%)	119 (70.8%)	168 (100%)
Four times a month	4.00	0.5004	0 (0.0%)	0 (0.0%)	1 (25%)	2 (50%)	1 (25%)	4 (100%)
More often than 8 times a month	4.34	0.7064	0 (0.0%)	0 (0.0%)	3 (8.6%)	17 (48.6%)	15 (42.9%)	35 (100%)
Total	4.62	0.5513	0 (0.0%)	0 (0.0%)	14 (3.4%)	128 (31.2%)	268 (65.5%)	410

(n = 410)

* defined maximum satisfaction at the mean value of 5.0000

Table 38 Multiple Comparison Tests for Frequency of Visits-Place Satisfaction

Satisfaction of Physiotherapy Clinic Place Classified by Frequency of Visits								
	Satisfaction Value	**SD**	**Min**	**Low**	**Moderately**	**High**	**Max**	**Total**
Less often than once a month	4.13	0.5500	0 (0.0%)	0 (0.0%)	3 (8.1%)	22 (68.8%)	7 (21.9%)	32 (100%)
Once a month	4.44	0.5000	0 (0.0%)	0 (0.0%)	2 (1.2%)	91 (53.2%)	78 (45.6%)	171 (100%)
Twice a months	4.29	0.5057	0 (0.0%)	0 (0.0%)	4 (2.4%)	111 (66.1%)	53 (31.5%)	168 (100%)
Four times a month	4.25	0.5214	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (75%)	1 (25%)	4 (100%)
More often than 8 times a month	4.14	0.5536	0 (0.0%)	0 (0.0%)	3 (8.6%)	24 (68.6%)	8 (22.9%)	35 (100%)
Total	4.33	0.5284	0 (0.0%)	0 (0.0%)	12 (2.9%)	251 (61.2%)	147 (35.9%)	410 (100%)

(n = 410)

* defined maximum satisfaction at the mean value of 5.0000

Table 39 Multiple Comparison Tests for Frequency of Visits-Promotion Satisfaction

Satisfaction of Physiotherapy Clinic Promotion Classified by Frequency of Visits								
	Satisfaction Value	**SD**	**Min**	**Low**	**Moderately**	**High**	**Max**	**Total**
Less often than once a month	3.72	0.8168	0 (0.0%)	0 (0.0%)	14 (43.8%)	13 (40.6%)	5 (15.6%)	32 (100%)
Once a month	4.23	0.8165	0 (0.0%)	0 (0.0%)	28 (16.4%)	76 (44.4%)	67 (39.2%)	171 (100%)
Twice a months	4.28	0.7335	0 (0.0%)	0 (0.0%)	28 (16.7%)	65 (38.7%)	75 (44.6%)	168 (100%)
Four times a month	4.00	0.7117	0 (0.0%)	0 (0.0%)	1 (25.0%)	2 (50.0%)	1 (25.0%)	4 (100%)
More often than 8 times a month	3.74	0.7289	0 (0.0%)	0 (0.0%)	17 (48.6%)	10 (28.6%)	8 (22.9%)	35 (100%)
Total	4.17	0.7568	0 (0.0%)	0 (0.0%)	88 (21.5%)	166 (40.5%)	156 (36.7%)	410 (100%)

(n = 410)

* defined maximum satisfaction at the mean value of 5.0000

Table 40 Multiple Comparison Tests for Frequency of Visits-Process Satisfaction

Satisfaction of Physiotherapy Clinic Process Classified by Frequency of Visits								
	Satisfaction Value	**SD**	**Min**	**Low**	**Moderately**	**High**	**Max**	**Total**
Less often than once a month	4.06	0.4528	0 (0.0%)	0 (0.0%)	4 (12.5%)	22 (68.8%)	6 (18.8%)	32 (100%)
Once a month	4.39	0.5000	0 (0.0%)	0 (0.0%)	5 (2.9%)	94 (55.0%)	72 (42.1%)	171 (100%)
Twice a months	4.38	0.5437	0 (0.0%)	0 (0.0%)	5 (3.0%)	95 (56.5%)	68 (40.5%)	168 (100%)
Four times a month	4.25	0.5464	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (75.0%)	1 (25.0%)	4 (100%)
More often than 8 times a month	3.97	0.5644	0 (0.0%)	0 (0.0%)	4 (11.4%)	28 (80.0%)	3 (8.6%)	35 (100%)
Total	4.32	0.5538	0 (0.0%)	0 (0.0%)	18 (4.4%)	242 (50.0%)	150 (36.6%)	410 (100%)

(n = 410)

* defined maximum satisfaction at the mean value of 5.0000

Table 41 Multiple Comparison Tests for Frequency of Visits-People Satisfaction

	Satisfaction of Physiotherapy Clinic People Classified by Frequency of Visits							
	Satisfaction Value	**SD**	**Min**	**Low**	**Moderately**	**Highly**	**Maximum**	**Total**
Less often than once a month	4.44	0.4971	0 (0.0%)	0 (0.0%)	0 (0.0%)	18 (56.3%)	14 (43.8%)	32 (100%)
Once a month	4.71	0.8165	0 (0.0%)	0 (0.0%)	0 (0.0%)	49 (28.7%)	122 (71.3%)	171 (100%)
Twice a months	4.61	0.4885	0 (0.0%)	0 (0.0%)	0 (0.0%)	65 (38.7%)	103 (61.3%)	168 (100%)
Four times a month	4.00	0.4535	0 (0.0%)	0 (0.0%)	1 (25.0%)	2 (50.0%)	1 (25.0%)	4 (100%)
More often than 8 times a month	4.40	0.5040	0 (0.0%)	0 (0.0%)	0 (0.0%)	21 (60.0%)	14 (40.0%)	35 (100%)
Total	4.62	0.4912	0 (0.0%)	0 (0.0%)	1 (0.2%)	155 (37.8%)	254 (62.0%)	410 (100%)

(n = 410)

* defined maximum satisfaction at the mean value of 5.0000

Appendix D.

Creation of Questionnaire

D.1 Questionnaire Guidelines

Questionnaires in this study adopt and rely on the preliminary ideas listed in the previous studies as follows.

Attitude towards Service

Question	Reference
Welcome and hospitality of the staff of physiotherapy clinic	Jutharat, Praparattanapan (2003) ; Diogenes, T. P. M. ; Mendonca, K. M. P. P. ; and Guerra, R. O. (2009)
Providence of information regarding the treatment such as treatment plan, what will be done to the patients during the treatment program, explanation during the session, and at the end of the treatment	Al-Azmi, N. ; et al. (2012) ; Monnin, D. ; and Perneger, T. V. (2002) ; Devreux, I. C. N. ; et al. (2012) ; Diogenes, T. P. M. ; Mendonca, K. M. P. P. ; and Guerra, R. O. (2009)
Quality of the information the patients received regarding the future care and treatment	Monnin, D. ; and Perneger, T. V. (2002)
Convenience due to the operating hours of the physiotherapy clinic	Al-Azmi, N. ; et al. (2012) ; Diogenes, T. P. M. ; Mendonca, K. M. P. P. ; and Guerra, R. O. (2009)
Feeling of security at all times during the treatment	Monnin, D. ; and Perneger, T. V. (2002) ; Devreux, I. C. N. ; et al. (2012) ; Diogenes, T. P. M. ; Mendonca, K. M. P. P. ; and Guerra, R. O. (2009)
Extent to which treatment was adapted to your problem	Monnin, D. ; and Perneger, T. V. (2002) ; Devreux, I. C. N. ; et al. (2012)
Privacy, courtesy and respect provided by the staff and the clinic	Diogenes, T. P. M. ; Mendonca, K. M. P. P. ; and Guerra, R. O. (2009)

Attitude towards Price

Question	Reference
Quality of treatment received justifies the fees paid	Al-Azmi, N. ; et al. (2012) ; Jutharat, Praparattanapan (2003)
Quality of other services other than treatment justifies the fees paid	Jutharat, Praparattanapan (2003) ; Roush, S. E. ; and Sonstroem, R. J. (1999)
Medical service fees are acceptable in comparison with medical service benefits	Al-Azmi, N. ; et al. (2012)

Attitude towards Place

Question	Reference
Ease of access to the facility of physiotherapy clinic including its location	Monnin, D. ; and Perneger, T. V. (2002) ; Obebiyi, D. O. ; et al. (2009) ; Jutharat, Praparattanapan (2003) ; Diogenes, T. P. M. ; Mendonca, K. M. P. P. ; and Guerra, R. O. (2009) ; Roush, S. E. ; and Sonstroem, R. J. (1999)
Comfort of the provided facility both in general area as well as treatment facility	Monnin, D. ; and Perneger, T. V. (2002) ; Obebiyi, D. O. ; et al. (2009) ; Diogenes, T. P. M. ; Mendonca, K. M. P. P. ; and Guerra, R. O. (2009)
Calm, tranquility, and relaxing atmosphere of the provided facility	Monnin, D. ; and Perneger, T. V. (2002) ;
Availability and sufficiency of car park	Diogenes, T. P. M. ; Mendonca, K. M. P. P. ; and Guerra, R. O. (2009) Jutharat, Praparattanapan (2003)
Reputation of the physiotherapy clinic	Jutharat, Praparattanapan (2003)

Attitude towards Promotion

Question	Reference
Providence of information of the treatment available via different channels such as websites, bulletin board	Jutharat, Praparattanapan (2003)
Social responsibility activities such as seminars or training to prevent possible office syndrome	Jutharat, Praparattanapan (2003)

Attitude towards Process

Question	Reference
Waiting time in clinic is reasonable	Al-Azmi, N. ; et al. (2012) ; Jutharat, Praparattanapan (2003) ; Diogenes, T. P. M. ; Mendonca, K. M. P. P. ; and Guerra, R. O. (2009)
Ease and convenience of administrative and admission procedure	Monnin, D. ; and Perneger, T. V. (2002) ; Jutharat, Praparattanapan (2003) ; Roush, S. E. ; and Sonstroem, R. J. (1999)
Simplicity of scheduling and time to get appointment	Monnin, D. ; and Perneger, T. V. (2002) ; Obebiyi, D. O. ; et al. (2009) ; Diogenes, T. P. M. ; Mendonca, K. M. P. P. ; and Guerra, R. O. (2009)
Well organized system of the clinic	Jutharat, Praparattanapan (2003) ; Obebiyi, D. O. ; et al. (2009)

Attitude towards Person

Question	Reference
The staff has a sincere interest and willing in solving the patients' problems.	Al-Azmi, N. ; et al. (2012) ; Monnin, D. ; and Perneger, T. V. (2002)
The behavior of the staff instills confidence in patients, put them at ease and reassure them.	Al-Azmi, N. ; et al. (2012) ; Monnin, D. ; and Perneger, T. V. (2002) ; Roush, S. E. ; and Sonstroem, R. J. (1999)
Patients feel safe in interactions with staff.	Al-Azmi, N. ; et al. (2012) ; Diogenes, T. P. M. ; Mendonca, K. M. P. P. ; and Guerra, R. O. (2009) Devreux, I. C. N. ; et al. (2012) ; Monnin, D. ; and Perneger, T. V. (2002)
Staff is courteous with patients.	Al-Azmi, N. ; et al. (2012) ; Jutharat, Praparattanapan (2003) ; Monnin, D. ; and Perneger, T. V. (2002)
The staff of the hospital has the knowledge to answer patients' questions accurately and perform correctly.	Al-Azmi, N. ; et al. (2012) ; Obebiyi, D. O. ; et al. (2009)
Staff gives prompt service and attention to patients with courtesy and helpfulness.	Al-Azmi, N. ; et al. (2012) ; Monnin, D. ; and Perneger, T. V. (2002)
Staff tells patients when services will be performed and what to be performed next.	Al-Azmi, N. ; et al. (2012) ; Obebiyi, D. O. ; et al. (2009)
The expertise of the physiotherapists working at the clinic	Jutharat, Praparattanapan (2003) ; Obebiyi, D. O. ; et al. (2009)

Attitude towards Physical Evidence

Question	Reference
The physiotherapy clinic has a modern equipment and technology.	Al-Azmi, N. ; et al. (2012)
The physical facility as well as the tools looks clean and appealing.	Jutharat, Praparattanapan (2003) ; Diogenes, T. P. M. ; Mendonca, K. M. P. P. ; and Guerra, R. O. (2009) ; Al-Azmi, N. ; et al. (2012) ; Obebiyi, D. O. ; et al. (2009)
Direction indicators to help you find your way around and in hospital building	Monnin, D. ; and Perneger, T. V. (2002)
Dress and appearance of staff	Jutharat, Praparattanapan (2003) ; Al-Azmi, N. ; et al. (2012)
Materials associated with the service such as brochures and statements are visually appealing in the physiotherapy clinic.	Al-Azmi, N. ; et al. (2012)

Overall

Question	Reference
Overall, you are satisfied with the service of this physiotherapy clinic.	Al-Azmi, N. ; et al. (2012) ; Monnin, D. ; and Perneger, T. V. (2002) ; Diogenes, T. P. M. ; Mendonca, K. M. P. P. ; and Guerra, R. O. (2009) ; Devreux, I. C. N. ; et al. (2012) ; Roush, S. E. ; and Sonstroem, R. J. (1999)
Based on the provided service, you will return to this physiotherapy clinic.	Diogenes, T. P. M. ; Mendonca, K. M. P. P. ; and Guerra, R. O. (2009) ; Al-Azmi, N. ; et al. (2012)
Would you recommend to people close to you to visit this physiotherapy clinic?	Monnin, D. ; and Perneger, T. V. (2002) ; Diogenes, T. P. M. ; Mendonca, K. M. P. P. ; and Guerra, R. O. (2009) ; Al-Azmi, N. ; et al. (2012)

D.2 Questionnaire

The questionnaire is shown in the following section.

Questionnaire

This questionnaire is about factors influencing the satisfaction of visiting physiotherapy clinic in Bangkok. Please check (✓) the choices that match you the most.

Part 1 : General Information

1. Gender

( ) Male ( ) Female

2. Age

( ) 20 years old and below
( ) 21-29 years old
( ) 30-39 years old
( ) 40-49 years old
( ) 50-59 years old
( ) 60-69 years old
( ) 70 years old and over

3. Marital Status

( ) Single ( ) Married
( ) Divorced ( ) Widow

4. Education Level

( ) < Bachelor degree
( ) Bachelor degree or equivalent
( ) Master degree
( ) Higher than Master Degree

5. Occupation

( ) Students

( ) Civil Servant / State Owned Enterprise

( ) Private Sector Employee

( ) Business Owner

( ) Freelance

( ) Homemaker

( ) Retired

( ) Others (please specify) .....

6. Personal Income (Baht)

( ) < 5000 ( ) 5,000-10,000 ( ) 10,001-20,000

( ) 20,001-30,000 ( ) 30,001-40,000 ( ) 40,001-50,000

( ) 50,001-70,000 ( ) 70,001-100,000 ( ) > 100,000

7. Frequency of visits to physiotherapy clinic

( ) More often than 8 times a month

( ) 8 times a month

( ) 4 times a month

( ) Twice a month

( ) Once a month

( ) Less often than once a month

Part 2 : Factors that influence the satisfaction of physiotherapy clinic
1 denotes least influence on satisfaction, 5 denotes highest influence on satisfaction

Note that 1 refers to totally disagree, and 5 denotes totally agree

No.	Question	1	2	3	4	5
1	Staff provide good welcome for your visits at physiotherapy clinic					
2	Staff provide good hospitality during your visits at physiotherapy clinic					
3	Provision of information regarding the treatment such as treatment plan, what will be done to the patients during the treatment program, explanation during the session, and at the end of the treatment					
4	Quality of the information the patients received regarding the future care and treatment is sufficiently provided.					
5	Operating hours of the physiotherapy clinic are appropriate and satisfactory					
6	You have the feeling of security at all times during the treatment					
7	Extent to which treatment was adapted to your problems affect your satisfaction, flexibility of the treatments					
8	You are satisfied with privacy of the clinic.					
9	You are satisfied with courtesy provided by the staff of the clinic.					
10	Quality of treatment received justifies the fees paid					
11	Quality of other services other than physical treatment justifies the fees paid					
12	Medical service fees are acceptable in comparison with medical service benefits					
13	Location of the physiotherapy clinic is good.					

No.	Question	1	2	3	4	5
14	It is easy to access the facility of physiotherapy clinic					
15	Provided facility in general area as well as in treatment facility are comfortable.					
16	The facility provides calm and relaxing atmosphere					
17	Availability and sufficiency of car park					
18	Reputation of the physiotherapy clinic is important and affect your satisfaction					
19	Provision of information of the treatment available via different channels such as websites, bulletin board					
20	Social responsibility activities such as seminars or training to prevent possible office syndrome may interest you to use physiotherapy clinic more					
21	Waiting time in clinic is reasonable					
22	Ease and convenience of administrative and admission procedure at clinic are provided (eg. HN number tracking, etc.)					
23	The clinic has simple scheduling and ease of making an appointment					
24	The clinic has a good organized system.					
25	The staff has a sincere interest and willing to solve the patients' problems.					
26	The behavior of the staff instills confidence in patients, put them at ease and reassure them.					
27	Patients feel safe in interactions with staff.					
28	Staff is courteous to patients.					
29	The staff has the knowledge to answer patients' questions accurately and perform the treatments correctly and appropriately.					
30	The staff has the knowledge to perform the treatment correctly and appropriately.					
31	Staff gives immediate attention and provides services to patients with courtesy and helpfulness.					

No.	Question	1	2	3	4	5
32	Staff tells patients when services will be performed and what to be done next.					
33	The physiotherapists working at the clinic are experts and professional.					
34	The physiotherapy clinic has modern equipment and technology.					
35	The physical facility looks appealing.					
36	The tools used look clean and appealing.					
37	Direction indicators to help you find your way and get around the facility easily					
38	Dress and appearance of staff are good					
39	Materials associated with the service such as brochures and statements are visually appealing in the physiotherapy clinic.					
40	Overall, you are satisfied with the service of this physiotherapy clinic.					
41	Based on the provided service, you will return to this physiotherapy clinic.					
42	You want to recommend to people close to you to visit this physiotherapy clinic.					

Part 3 Treatment-Related Information

No.	Question	Answer
1	What symptoms bring you to physiotherapy clinic? (More than 1 answer is possible)	☐ Orthopedic problem (such as shoulder, back, or knee pain, adhesive capsulitis) ☐ Neurological problem (such as hemiparesis, paralysis) ☐ Rehabilitation ☐ Scoliosis ☐ Others (please specify) .....
2	What treatment did you receive? (More than 1 answer is possible)	☐ Manual Therapy ☐ Modality ☐ Exercise ☐ Hydrotherapy ☐ Others (please specify) .....
3	How long does it take for the physiotherapy treatment session today?	☐ Less than 20 minutes ☐ 20-30 minutes ☐ 30-45 minutes ☐ 45-60 minutes ☐ More than 60 minutes
4	How much did you pay for the treatment today?	☐ Less than 500 Baht ☐ 500 – 1,000 Baht ☐ 1,001 – 1,500 Baht ☐ 1,501 – 2,000 Baht ☐ More than 2,000 Baht
5	Is the cost of today's treatment justified?	☐ Should be greatly reduced ☐ Should be reduced ☐ Satisfied ☐ Can be increased ☐ Can be greatly increased
6	What are your feelings about the location of this clinic, such as the availability of parking space, facility, etc.?	☐ Excellent ☐ Good ☐ Average ☐ Poor

No.	Question	Answer
7	How long it takes to travel to the clinic?	☐ Less than 20 minutes ☐ 20-30 minutes ☐ 30-45 minutes ☐ 45-60 minutes ☐ More than 60 minutes
8	To rate the score for the location of this clinic, how many points will you give? (1 denotes worst location and 10 denotes best)	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10
9	How did you get to know this physiotherapy clinic?	☐ Already known of ☐ Internet / Search Engine ☐ Suggested by a Friend or Family ☐ Brochure / Pamphlet ☐ Walked by
10	How long was the waiting time since you come in the clinic until you get the treatment?	☐ Less than 5 minutes ☐ 5 – 10 minutes ☐ 11 – 15 minutes ☐ 16 – 20 minutes ☐ More than 20 minutes
11	Please rate the process to get you through the clinic.	☐ Excellent ☐ Good ☐ Average ☐ Poor
12	How are you treated or cared by the physical therapist? Are you satisfied? How?	☐ Excellent ☐ Good ☐ Average ☐ Poor
13	What is the cleanliness and tidiness of the place?	☐ Excellent ☐ Good ☐ Average ☐ Poor

No.	Question	Answer
14	What are your opinions on the cleanliness and tidiness of the staff, facility, and instruments?	☐ Excellent ☐ Good ☐ Average ☐ Poor
15	Are you treated by only one physiotherapist?	☐ Yes ☐ No
16	Do you think that being treated by only 1 physiotherapist is better in terms of the treatment results?	☐ Yes ☐ No
17	Are you satisfied by the physiotherapist who treated you?	☐ Yes ☐ No

Part 4 Suggestions

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