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RESEARCH ARTICLE

Assessing Service Quality of Sub-District Health Promotion Hospitals (SDHP) in Nakhon Si Thammarat Province, Thailand

Kittisak Sangthong
Lecturer, Faculty of Management Technology Rajamangala University of Technology Srivijaya, Nakhon Si Thammarat Campus, Thailand

Jintana Lerdsakul
Lecturer, Faculty of Management Technology Rajamangala University of Technology Srivijaya, Nakhon Si Thammarat Campus, Thailand

Putwimon Chotcharat
Researcher, Luangpusong Jantasaro for Research Foundation, Chumphon, Thailand

Ornnucha Usakun
Lecturer, Faculty of Humanities and Social Sciences, Southern College of Technology, Thailand

Siriluk Nootong
Lecturer, Faculty of Management Technology Rajamangala University of Technology Srivijaya, Nakhon Si Thammarat Campus, Thailand

Abstract
This paper delineates service user satisfaction in assessing service quality, focusing on sub-district health promotion hospital (SDHP) at two zones in Nakhon Si Thammarat Province, Thailand. The remaining dimensions of service quality will be included in the study to compare service users' perceptions with expectations. The qualitative data taken from 670 respondents were analyzed of the mean and t-tests made. It was found that the expectation was higher than the real perceptions in every aspect in both zones. It can be shown that the service of SDHP had less quality than the satisfaction expected by service users.

Keywords
Assessment, Service Quality, Sub-District Health Promotion Hospital, Primary Health Care

CORRESPONDING AUTHOR
Kittisak Sangthong, Faculty of Management Technology Rajamangala University of Technology Srivijaya, Nakhon Si Thammarat Campus, 80110 Thailand. Email: Singhanakhon_1@hotmail.com

Introduction

"Primary Health Care" was from Alma Ata declaration by the World Health Organization (WHO) in 1978. This declaration aims to drive the world communities to rush to develop the health service system of each country to be able to protect and promote the health of all populations in the world equally based on the development which is linking with the development of economy and society of each country. Besides, the definition of health is not only without diseases but also covers the state of happiness and completeness in all physical, mental, and social aspects. Furthermore, being taken care to have good health is considered as the basic right of human beings (WHO, 1978). According to the declaration mentioned above, it is found that the World Health Organization defines the meaning of Primary Health Care which covers the organizing of services at the first stage or primary level to offer the services which respond the communities and people's needs. Therefore, it makes the policy of Primary Health Care become the most important strategy through the health development not only clarify the orientation of the health development the most but also clarify the social ideology that it is not the privilege for someone of some groups only (Cueto, 2004). The management methods according to this policy in all countries are different. For Thailand, the principles and methods of Primary Health Care have been applied as strategies for developing health since 1978 and it has been developing consistently and respectively. This is because the highest goal under the principles of Primary Health Care focuses on the good health of everyone, concordant with the slogan of "Health for All in 2000 (B.E. 2543)", by using the existing service unit engaged at the first stage in each area, which is, public health station. The major role of the station is to provide people with low incomes, including those who live in the rural areas, access to necessary health services. The management of the public health station has been successful, but it has also encountered problems and obstructions. It has been changing according to the contexts of society, economy, politics, and culture. The clearest change occurred on 29 December 2008 by the government team led by then Prime Minister Abhisit Vejjajiva. They emphasized the improvement of the public health service system to have more quality and efficiency by raising the public health station to become the Sub-District Health Promotion (SDHP). The SDHP encouraged local citizens to become public health personnel in order to return and work in the locality, including developing Village Health Volunteers (VHV). Hence, 9,970 Sub-District Health Promotions have been established throughout the country (Ministry of Public Health, 2015).

Therefore, Sub-District Health Promotion is regarded as a type of essential Primary Care Unit (PCU) of the Ministry of Public Health, throughout the provinces in order to strengthen the health service. This is considered the heart of helping people access health service equally, thoroughly, qualitatively, and in accordance with their financial situation. Furthermore, the service providers themselves find their work rewarding. The primary service system, therefore, is

known as "near home and near heart", which is accepted by people and society. Its major mission is to inclusively maintain health and enhance people's capacity to maintain their own` health and that of their family and community, with a standard of quality in accordance with the appropriateness of each area's environment. The personnel in the primary service system have to treat the health of people in their area of responsibility continually and holistically, be capable of integrating the treatment in terms of health enhancement, disease protection, first aid for any diseases or health problems which are frequently found in the management areas for chronic patients, the invalid, or the dependent persons in the communities, as well as to treat patients during their last hours to die peacefully and deserve their dignity of human beings, and the service has to be based on caring by humanized heart (Starfield et al., 2005). Hence, service quality is concerned as a key and taken an important role for the Sub-District Health Promotion in order for being the primary care unit near home and near heart. Donabedian (1980) divides the service quality of hospitals into 3 main components. Structure is the characteristics of physicians and hospitals such as the sufficiency of resources, instruments, and other equipment, qualifications of physicians or health personnel, hospital status, including the type of management, budget, and structure. These can be compared as the necessary input factors of health service. Second is Process. Process consists of interactive components among physicians or other medical personnel, patients or clients, etc. that combines the activities within the group or among the groups of service providers. Finally, is Outcome. This is the users' health conditions, changes of health conditions, both present and future, including the mental and social changes which might be factors of health conditions, as well as community impacts. The Canadian Council on Health Facilities Accreditation (CCHFA, 1999) defines service quality as "a measure of the extent to which the team delivers service in accordance with expressed or implied promises to its clients."

There have been no literature reviews of the service quality measurement for the Sub-District Health Promotion in Thailand. Furthermore, there has been no empirical information over the last ten years identifying the service quality development indicating that the SDHP is a primary service unit close to patients, family, and community. Moreover, it perceives or acknowledges contexts, limitations, and environments which might affect the health conditions of the patients in the community. These are the crucial factors regarding advantages of whether patients' health care is superior to the government hospital in the city or private hospitals with more potential. Thus, the researcher is interested in assessing the service quality of the SDHP affecting the decisions on service selection.

The study was carried out in Nakhon Si Thammarat province because it has the most SDHPs in the southern region, covering 23 districts and 165 sub-districts and is responsible for a total of 1,580,687 people (Nakhon Si Thammarat Public Health Office, 2017). In addition, this research compares areas of the SDHP are situated both in densely and sparsely populated areas

(divided according to urban and rural areas). The Service Quality Model (SERVQUAL) created by Parasuraman et al. (1998) was used as the instrument for measuring the service quality. SERVQUAL includes five dimensions for service quality measurement: tangibility, reliability, responsiveness, assurance, and empathy.

The research results were applied in the strategic plan for developing the service quality according to the density of the SDHP. In view of the fact that most SDHP hospitals are located in urban areas with a large population, they have received government funding that does not correspond to the cost of providing services. This causes losses and a lack of liquidity. In contrast, SDHP hospitals in sparsely populated areas result in higher cost of services per population. These problems contributed to difficulty in arranging services (Tungkasemsamran, 2015). Since medical care is an important factor for quality of life, the government is responsible for providing equality of service and equal access to public health services.

Research Objectives

1. To assess the factors of service quality for the Sub-District Health Promotion (SDHP) in Nakhon Si Thammarat Province, according to the area density of hospitals; and

2. To compare the perceptions and expectations of the service users toward the service quality of the Sub-District Health Promotion (SDHP) in Nakhon Si Thammarat Province, according to the area density of hospitals.

Concepts and Theory

Concepts and Theory About Service

Service is defined as activities or operations for facilitation. It is activities that are done as an individual or a group to respond to others' needs (Kotler & Keller, 2012). Service is similar to a product, consisting of delivery side and receiving side. However, services are different from products because they are: 1) Intangible; 2) Heterogenous, dependent on each individual's service provider and service users' needs; 3) Inseparable, the production and consumption occur simultaneously; and 4) Perishable (Sabine, 2012).

The service users can make a decision on the quality of service during the time of service or after the service has been delivered because the production and consumption occur simultaneously (Gronroos, 2001).

Concept of Service Quality

For the concept of service quality according to the perspectives of Groonroos (1997) and Zeithaml et al., (2003), the provision of services happens between the service provider and service user. While Parasuraman et al. (1985) identify service quality as a result between the perception

and expectation of the service users since service is considered intangible, which makes the assessment of service quality more difficult than the assessment of product quality. Service quality happens during the time of delivering the service. The service quality in customers' perception is from the process of customers' assessment by comparing the perception of service delivery and the customers' expectation, whereas the concept of Buzzell and Gale (1987) indicates that service quality is an issue as mentioned above. Service quality is complicated, depending on the perspectives of the consumers, often referred to as customers. Service quality is the ability to respond to the needs of service business. Service quality is regarded as most crucial for being superior to a competitor's business. Offering service quality in accordance with the service users' expectations is critical. Service users will be satisfied with if what they receive is in accordance with what they expect or need.

Thus, service quality can be used in assessing the concept of the service users by comparing the expected service to the perceived service from the service users. If service providers can give the service in accordance with the service users' needs or can create the service which has a higher level than expected by the service users, the service users will be satisfied with the service (Parasuraman et al., 1988; Fitzsimmons & Fitzsimmons, 2004; Kotler & Anderson, 1987).

Theory of Expected Service

Parasuraman et al. (1988) found four factors affecting the expectations toward service quality: 1) individual need; the service users' needs as individuals; 2) verbal communication; opinions of the service quality gained from friends, relatives, or acquaintances who have used the service; 3) previous experience; it might be either satisfactory or unsatisfactory experiences; and 4) external communication; advertising and public relations, media news and information relating to the products in order to persuade and motivate the behaviors of service users or news receivers.

Perception Theory of Service Quality

The researchers studied and applied the theories of academics who have defined the meaning of service quality perception by linking with the suitable service quality. Antioned and Van Raaij, (1988) suggest that the perception of quality comes from the customers' expectations. The products or services will reach high quality whenever the customers' needs are concordant with their expectations. For the perception of high quality of products or services, customers will consider the appropriateness of use, durability, safety, convenience, trust, and frequency of service. The considerations will be qualitative when the customers have compared the real perception with the expectation toward that product or service. Moreover, Gronroos (1997) argues that the service quality perception consists of two characteristics; technical characteristics or results and duty characteristics or relationship of the process. For the technical quality, customers will consider which techniques the service providers use to satisfy the customers basic needs. The

perception of good quality occurs when the customers' needs are concordant with the perception they have experienced before. If the customers' expectations of a product or service are high, the expectation toward that product or service is influenced by marketing communication, word-of-mouth communication, organizational image, or the customers' need. The duty characteristics will be based on if the service is as good as the previous experiences of the customers.

Methodology of the Study

Service quality (SERVQUAL) is an evaluation form developed in 1985 by Parasuraman et al. as a service quality assessment. The quality of the difference between the expectations of the user and the perception of the service is measured. The concept comes from the marketing theories of Gap Model or Gap Analysis Model, as shown in Figure 1.

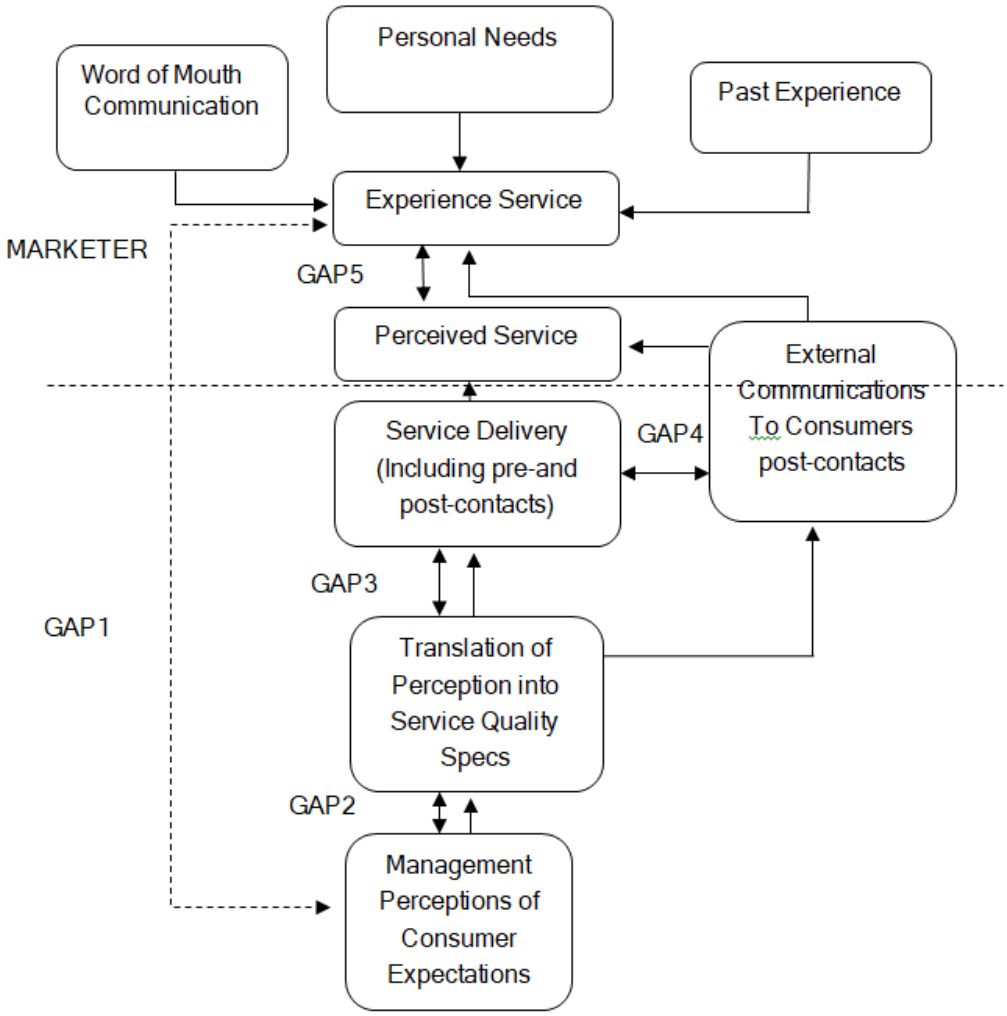

Figure 1. SERVQUAL health quality assessment model

There are five gaps occurring in each stage:

Gap 1-Positioning gap; it is the difference between the service users' expectations and the perception of the service providers about the service users' expectations toward the service quality. The service providers might not realize the crucial factors. The gap affects the assessment of service users toward service quality.

Gap 2-Specification gap; this is the difference between the service providers' perception toward the service users' expectation and the service users' needs toward the service quality regarding regulations and standards about the service quality. This gap affects the service quality in the service users' perspectives.

Gap 3-Delivery gap; this is a gap occurring from the service providers between the regulations and standards relating to service quality and real service given to the service users. This gap affects the service quality and real service given to the service users. According to the service users' standpoint, this gap affects service quality.

Gap 4-Communication gap; it is a gap occurring from the service providers who provide the service to the service users and communication with the service users in terms of the service. The external communication affects the service users' expectations. This gap affects the service quality from the service users' standpoints.

Gap 5-Perception gap; this is the difference between the internal perception of the service users and the service expectation, which explains the difference between the service needed by the service users and the real service received by the service users. From the factors affecting all four gaps above.

The gap of quality (Gap 5) is regarded as the major principle of service quality. The difference between the service users' expectation to get the best service and the real service they receive is considered as the crucial concept of this SERVQUAL assessment model. The narrower the gap, the better the service quality. Therefore, the service users have to reduce Gap 5 to as little as possible in order to provide excellent services to the users.

The service quality from the service users' perspective can be considered from the expectation and perception of the service. SERVQUAL was developed in 1988 by Parasuraman et al. It has been widely accepted and used to assess service quality. Assessing service quality according to the concept of SERVQUAL is divided into two parts, which include service expectation and service perception. Previously, service quality consisted of ten aspect, with the number later decreased to five aspects, which are: 1) Tangibility; the external aspects that can be seen by the service users such as facilities, equipment, and instruments, or surroundings where the services are provided; 2) Reliability; services without any errors, in line with the promises given by the service providers; 3) Responsiveness; speed of response, willingness to offer service, and

capability of solving problems quickly; 4) Assurance; resulting from service providers who are knowledgeable and have the potential to give service, giving service politely, and the ability to communicate with the service users effectively; and 5) Empathy; interest in and caring about the service users' needs. The SERVQUAL depends on two parts; customers' expectations and customers' perceptions. The data from the questionnaires were used to show the level of service quality, which is the difference between expectations and perceptions toward the service (gaps in service quality):

Service Quality = Score of Perception Service – Score of Expectation Service

[Service Quality = PS – ES]

If the scores of services perception is higher than the scores of services expectation, or the scores result of service quality becomes positive (PS > ES), it can be interpreted that the service quality is at a good level or the service users are satisfied. If the scores of services perception is equal to the services expectation (PS = ES), it can be interpreted that the service quality is at a moderate level. Furthermore, if the scores of services perception is less than the scores of services expectation, or the scores of service quality become negative (PS < ES), it can be interpreted that the service quality is at a low level or the service users are unsatisfied. The SERVQUAL is useful for assessing all service qualities such as the services of hotels, restaurants, banks, health providers (e.g., overall services of hospitals), etc. Applying the SERVQUAL to assess service quality helps the service providers realize the Gap-5 according to the Service Quality Model used to explain the service quality. It can be used to adjust, improve, or develop service qualities to be better and able to give service in accordance with the service users' expectations. The structure of the conceptual framework is to study the service quality of the Sub-District Health Promotion (SDHP) in Nakhon Si Thammarat Province from the synthesis of the concept and theory of Parasuraman et al. (1988), as shown in Figure 2.

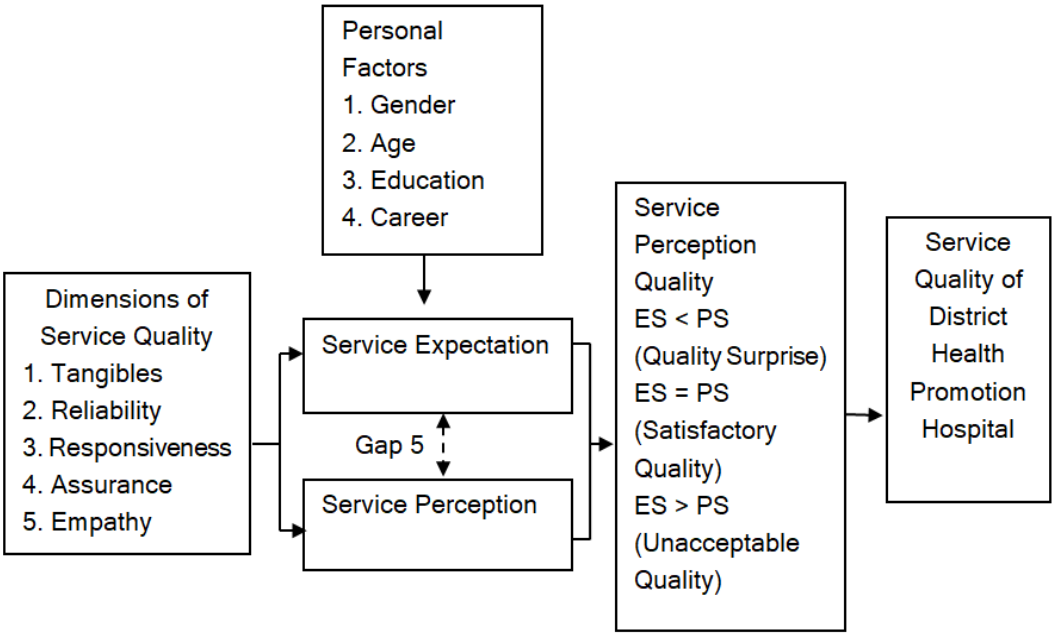

Figure 2. Research Framework

Data Collection and Sampling

Data collection and sampling in this study was carried out using a cross-sectional method. The population was 67 Sub-District Health Promotion Hospitals (SDHP) in Nakhon Si Thammarat Province, consisting of 147 hospitals in 14 districts. The sample group was selected by using Multi - Stage Cluster method as follows:

Stage 1; This was organized by district areas, categorized into two aspects, which included the districts that had abundant Sub-District Health Promotion Hospitals, which was defined as more than 20 hospitals (3 districts) and rare Sub-District Health Promotion Hospitals, which were less than 10 hospitals (11 districts), for a total of 70 hospitals.

Stage 2; These were randomized according to the distribution proportion of the sample group to cover every area in each district by using the Stratified Random Sampling method. The criterion used for stratification was a number of hospitals in each district, with 50% of all hospitals located in each district selected.

Stage 3; Simple Random Sampling of each district by drawing lots in order to get the abundant Sub-District Health Promotion Hospitals of the 3 districts, which consisted of 35 hospitals, and the rare Sub-District Health Promotion Hospitals, consisting of 11 districts and 32 hospitals. This provided a total sample of 67 hospitals.

Stage 4; The researcher selected the Purposive Sampling method by determining the sample group in the Sub-District Health Promotion Hospitals, 10 persons each, for a total of 670 participants.

Stage 5; The researcher used the Accidental Sampling method with the people who used the service at the Sub-District Health Promotion Hospitals during the time of data collection. The details are shown in Table 1.

Table 1. The details of Sub-District Health Promotion Hospitals (SDHP) in Nakhon Si Thammarat province

Areas of Sub-District Health Promotion Hospitals	Population Size		Sample Group Size	
	Hospital	Population (person)	Hospital	Population (person)
Dense	77 (from stage 2)	545,414	35 (from stage 3)	350 (from stage 4)
Sparse	70 (from stage 2)	358,714	32 (from stage 3)	320 (from stage 4)
Total	147	904,128	67	670

The instrument used was a questionnaire using the concept of service quality developed by the researcher, by adjusting information from the relevant literature with the instrument of service quality assessment from SERVQUAL. The questions covered all five dimensions used for determining the service quality; Tangibility, Reliability, Responsiveness, Assurance, and Empathy. The contents were adjusted as appropriate, and the quality of instrument was found out by examining the content validity by having the questionnaire examined by experts before the actual data collection. Finally, the language and content coverage were considered, as well as calculating the questions by the Index of Item Objective Congruence (IOC) method. Questions that had the value of IOC > 0.5 (Kline, 2011) were selected. The results from the Item Objective Congruence (IOC) revealed that it had values between 0.66 - 1.00. The researcher then tested the adjusted questionnaire to analyze the reliability to find out the α-coefficient. The value should have been between 0.60 – 1.00. It was found that the reliability of perception was equal to .75, .75, .74, .80, and .81, whereas the reliability value of the expectation was equal to .82, .80, .85, .88, and .86. The overall reliability of this questionnaire was .95. There was internal concordance and its reliability was at a high level, which could be used with the real sample group (Cronbach, 1990). The statistics used for data collection included frequency, percentage, mean, standard deviation, and paired t-test. The data collection was between April and June 2019.

Research Results

The analysis results of mean and standard deviation of the real perception toward the service quality factors of the Sub-District Health Promotion Hospitals (SDHP) in Nakhon Si Thammarat Province in each aspect, by categorizing according to the degree of density of hospitals, it was found that the service users had the real perception of service quality at a high level through both areas. Table 2 shows that the Sub-District Health Promotion Hospitals located at the dense areas ($\bar{X}$) = 3.89, S.D. = 0.642) had a perception of service quality lower than the Sub-District Health Promotion Hospitals located in the sparse areas ($\bar{X}$) = 3.92, S.D. = 0587.). The details are shown in Table 2.

Table 2. Mean and standard deviation of real perception toward the service quality factors of the categorized by health dimensions and the density of hospitals.

Health Dimensions	Dense Zone			Sparse Zone		
	($\bar{X}$)	(S.D)	Perceptions	($\bar{X}$)	(S.D)	Perceptions
1. Tangibility	3.68	0.502	High	3.95	.509	High
2. Reliability	3.86	0.649	High	3.60	.546	High
3. Responsiveness	3.94	0.709	High	3.94	.659	High
4. Assurance	3.94	0.729	High	4.00	.650	High
5. Empathy	4.04	0.625	High	4.13	.571	High
Average SERVQUAL Score	3.89	0.642	High	3.92	.587	High

In Table 3, the results of the analysis of mean and standard deviation of the expectation level toward the service quality factors of the SDPHs, according to the density of the hospitals, it was found that the service users had the expectation toward service quality at high levels through both areas. The Sub-District Health Promotion Hospitals located in the dense areas ($\bar{X}$) = 4.78, S.D. = 0.398) had expectation of service quality higher than the Sub-District Health Promotion Hospitals located in the sparse areas ($\bar{X}$)= 4.70, S.D. = 0.447). The details are shown in Table 3.

Table 3. Mean and standard deviation of the expectation level for the service quality factors categorized by health dimensions and the density of hospitals.

Health Dimensions	Dense Zone			Sparse Zone		
	($\bar{X}$)	(S.D)	Perceptions	($\bar{X}$)	(S.D)	Perceptions
1. Tangibility	4.79	0.398	Highest	4.66	.490	Highest
2. Reliability	4.78	0.412	Highest	4.63	.459	Highest
3. Responsiveness	4.81	0.387	Highest	4.75	.418	Highest
4. Assurance	4.82	0.372	Highest	4.73	.434	Highest
5. Empathy	4.74	0.424	Highest	4.73	.437	Highest
Average SERVQUAL Score	4.78	0.398	Highest	4.70	.447	Highest

Comparing the difference between the real perception and the expectation of the service quality factors of the SDHPs in each health dimension, by categorizing according to the density of hospitals, it was found that the SDHPs located in the dense and sparse areas had the difference of the mean between the real perception and expectation as in each aspect as a whole equal to -0.89 and -0.76 respectively. When considering the service quality factors in each aspect of the SERVQUAL, it was found that the SDHPs located in the dense and sparse areas had the mean of real perception less than the expectation (PS < ES). It can be shown that the service of the SDHPs had less quality than the satisfaction expected by service users. The service users of SDHPs located in the dense areas had the satisfaction less than the service users of the SDHPs located at the sparse areas. The details are shown in Table 4.

Table 4. The difference between the real perception (PS) and the expectation (ES) on the service quality factors by categorizing according health dimensions to the density of hospitals

Health Dimensions	Dense Zone			Sparse Zone		
	(PS)	(ES)	(PS-ES)	(PS)	(ES)	(PS-ES)
1. Tangibility	3.68	4.79	-1.11	3.95	4.66	-0.71
2. Reliability	3.86	4.78	-0.92	3.60	4.63	-1.03
3. Responsiveness	3.94	4.81	-0.87	3.94	4.75	-0.81
4. Assurance	3.94	4.82	-0.88	4.00	4.70	-0.67
5. Empathy	4.04	4.74	-0.70	4.13	4.73	-0.60
Average SERVQUAL Score	3.89	4.78	-0.89	3.93	4.69	-0.76

The question items of each aspect which had high gap in order to show that the Sub-District Health Promotion Hospitals in Nakhon Si Thammarat province have to improve their service quality in each aspect in order to improve, as shown in Table 5.

Table 5. The improvement of their service quality which classify by sparse zone and dense zone of hospitals

Dimension (Sparse Zone)	Difference
1. Tangibility	
1.1 Sub-District Health Promotion has up-to-date instruments and equipment;	-1.50
1.2 Sub-District Health Promotion has sufficient facilities (such as seats, water, and equipment used for health care, etc.)	-1.22

Table 5. The improvement of their service quality which classify by sparse zone and dense zone of hospitals (Cont.)

Dimension (Sparse Zone)	Difference
2. Reliability	
2.1 The personnel of the Sub-District Health Promotion give the standardized and good treatment and correctly according to the academic principles;	-1.30
2.2 Sub-District Health Promotion has entirely services and is in line with the health problems.	-1.23
3. Responsiveness	
3.1 The numbers of personnel of the Sub-District Health Promotion are sufficient for the services;	-1.31
3.2 The personnel of the Sub-District Health Promotion give the services on time according to the appointment.	-0.78
4 Assurance	
4.1 The patients feel safe and sure that getting treatment at the Sub-District Health Promotion can relieve their symptoms;	-1.27
4.2 The personnel of the Sub-District Health Promotion can explain the symptoms, causes, methods, steps duration, and treatment alternatives, as well as the practices after getting treatment, which make the patients feel confident through the treatment.	-0.72
5. Empathy	
5.1 The personnel of the Sub-District Health Promotion give service with polite words and manner, including calm and friendly;	-0.81
5.2 The personnel of the Sub-District Health Promotion pay attention, respect, and give precedence.	-0.73
1. Tangibility	
1.1 Sub-District Health Promotion has up-to-date medical instruments and equipment;	-1.43
1.2 The internal environments of the Sub-District Health Promotion are appropriate for giving treatment to the patients (such as cleanliness, ventilation).	-1.08
2. Reliability	
2.1 Sub-District Health Promotion has entirely services and in accordance with health problems;	-1.15
2.2 The personnel of the Sub-District Health Promotion give skillful services and can inform/answer the questions clearly.	-0.97
3. Responsiveness	
3.1 The personnel of the Sub-District Health Promotion have the readiness and help patients with quickness and correctness;	-1.00
3.2 The personnel of the Sub-District Health Promotion give services on time according to the appointment.	-0.97

Table 5. The improvement of their service quality which classify by sparse zone and dense zone of hospitals (Cont.)

Dimension (Sparse Zone)	Difference
4. Assurance	
4.1 The patients feel safe and sure that when they get treatment at the Sub-District Health Promotion, their symptoms will get relief.	-0.98
4.2 The personnel of the Sub-District Health Promotion can describe the symptoms, causes, methods, steps, duration, and alternatives of treatments, as well as the practice after getting treatment, which makes the patients feel confident to the treatment.	-0.95
5. Empathy	
5.1 The personnel of the Sub-District Health Promotion give opportunities to ask the questions and they are willing to reply to all those questions;	-0.89
5.2 The personnel of the Sub-District Health Promotion pay attention and give precedence.	-0.88

Table 6 shows that in terms of the testing results of research hypothesis by using the Paired Simple t-test method, it indicated that the service users of the Sub-District Health Promotion Hospitals (SDHP) in Nakhon Si Thammarat province had the real perception and expectation toward the service quality differently. The expectation was higher than the real percept in every aspect, in both the sparse and dense areas. This is in accordance with the hypothesis with a statistical significance at .001 level.

Table 6. Hypotheses testing of mean differences between dense and sparse zones

Dimensions (Sparse Zone)	Perceptions		Expectation		t- value	p
	($\bar{X}$)	(S.D)	($\bar{X}$)	(S.D)		
1. Tangibility	4.04	0.352	4.66	0.301	29.787***	.000
2. Reliability	3.60	0.267	4.63	0.238	55.156***	.000
3. Responsiveness	3.94	0.417	4.75	0.365	28.015***	.000
4. Assurance	4.02	0.411	4.73	0.391	25.417***	.000
5. Empathy	4.13	0.362	4.73	0.392	21.944***	.000
Dimensions (Sparse Zone)	Perceptions		Expectation		t- value	p
	($\bar{X}$)	(S.D)	($\bar{X}$)	(S.D)		
1. Tangibility	3.68	0.307	4.79	0.352	47.372***	.000
2. Reliability	3.86	0.414	4.78	0.365	37.258***	.000
3. Responsiveness	3.94	0.508	4.81	0.364	29.856***	.000
4. Assurance	3.94	0.542	4.83	0.322	28.217***	.000
5. Empathy	4.02	0.310	4.75	0.352	27.444***	.000

* p value = .001

Discussion and Conclusion

The typical service users at the Sub-District Health Promotion (SDHP) in Nakhon Si Thammarat province: most were female, ages between 41 – 50 years old, graduated high school, worked in agriculture, and had monthly income of between 5,001 - 10,000 baht. The analysis results of the Mean and Standard Deviation of the level of the real perception toward the factors of service quality in the hospitals both in terms of service users' dense areas and sparse zones in each aspect, revealed that the perception of the service quality was at a high level in both areas. For the Sub-District Health Promotion located at the sparse zones, the service users perceived overall service quality at the highest mean. Mean and Standard Deviation of the expectation level of the factors of service quality in the hospitals in both dense and sparse zones of the service users in each aspect found that the level of expectation toward the service quality at the highest level for both dense and light areas. For the Sub-District Health Promotion located at the dense zones, the service users had the expectation of the overall service quality at the highest mean. The service users of both zones had the expectation that the Sub-District Health Promotion should have up-to-date medical instruments and equipment the highest level (Gap 1.43, 1.50; Table 5). When comparing the real perception to the expectation toward the service quality of the Sub-District Health Promotion for both areas, both dense and light areas had the difference of real perception and overall expectation of -0.89 and -0.46, (Table 4), respectively. When comparing the service quality of each item of the SERVQUAL, the Sub-District Health Promotion for both areas had all five aspects of service quality, with a Mean of real perception less than the expectation (PS < ES) (Table 4). It indicates that both dense and light areas had service quality lower than the satisfaction expected by the service users (Table 5). This is because the trend of health service needs has been increasing according to the changing numbers and structures of populations, including the one and all health insurance system. However, most of the Sub-District Health Promotions had the limitation of potentials and effective mechanisms on management, which made them unable to give service proactively in order to provide health care effectively, including sufficient and effective nursing services. This is because the Sub-District Health Promotion has to give services to people of all ages, in nursing homes, private homes, and in the community, as well as patients of all ages. Thus, it makes for a large number of service users. The Ministry of Public Health has improved the services for public health by investing to developing the government health system in all standardized levels and to develop the network of delivery to reach efficiency that can link both government and private sectors. The health insurance system is not sufficient to meet the service users' needs, not reaching a sufficient and thorough quality, including having various alternatives. For this kind to happen, the government has to increase the potential of the Sub-District Health Promotion to develop the public health system in order to offer the qualitative services that people can access, including being able to respond

the people's expectations until it leads to the satisfaction and participation in managing health according to the standards of a modern public health service system. This is in accordance with the concepts of Lewis and Booms (1983); Gronroos (1997), and Voon (2006) who agreed that service quality is what the customers expect to receive from services. If the service can respond the service users' needs, it will cause the service users to be satisfied with, feel loyal to, appreciate, and return to use the services repeatedly. According the research results, the service users had the real perception less than the expectation toward the service quality. This is not in accordance with the concept of Parasuraman et al. (1985) and Reichheld and Sasser (1990), who said that service quality was a result of service users who were satisfied. Good service quality would rely on the realization of the service users received exactly what wanted and perceived that it was better than expected. For this concept of good service quality, the service users had to have the real perception higher than their expectation.

These results were accordance with Anbari and Tabaraic (2013), who studied service quality in an Iran hospital, using the concept of SERVQUAL, confirming that patients had real perceptions less than expectations. These results were similar to Pepraph and Ataraph (2014), who assessed patient satisfaction using SERVQUAL model in a study of Sunyani regional hospital, Ghana. Papanikolaou and Zygiaris (2014) studied service quality perceptions in primary health care centers in Greece. Moreover, the results are also similar to AlFraihi, Famco, and Latif (2016), who studied measurements of quality of hospital service via SERVQUAL model. Regarding the above researchers, all indicated that the service quality of the hospitals was at a low level or the service users felt unsatisfied. This is regarded as assessing service quality of the service users in a negative way. Hence, it is necessary that the Sub-District Health Promotion increase the service quality in order to get a positive result from the service users through the quality assessment, which will lead to good results, satisfaction, loyalty, and repeated use of the service. This can reduce the congestion of service use in city hospitals and reduce the burdens of the service users from the travel expenses and time wasted due to travel.

Recommendations

Assessing service quality of the Sub-District Health Promotion (SDHP) in Nakhon Si Thammarat province by using the SERVQUAL model found that it had lower service quality than expected by the service users in every aspect (PS < ES) throughout both areas. The highest expectation was wanting the Sub-District Health Promotion to have up-to-date instruments and equipment. Hence, to increase the potential of service, it has to build a good health service system, increase the confidence of the service users about equality of access to the technologies of medical instruments and equipment, which includes medicines, medical products, vaccines, and medical technologies that are qualitative, safe, effective, and efficient. The Ministry of Public

Health has to organize up-to-date and suitable instruments and equipment because the structures of Sub-District Health Promotion have been expanding the services increasingly. It is necessary to survey the requirements for medical durable articles, including the medical supplies and medicine, in order that the health care can be entirely covered. This will aid in making the Sub-District Health Promotion reach potentials of service users' health care, which is increasingly complicated. The goal is to allow all people to be able to access health care quickly, on time, and safely, which will result in a reduced rate of illness, including the death and disability rates. This makes the citizens have a good and healthy and live in a happy society.

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