

Private hospital model in Rayong Province that satisfied consumer needs

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ABSTRACT

This research objectives are to examine the private hospital model in Rayong Province which relations among hospital policy, hospital performance, overall total quality, and hospital personnel's public mind directly and indirectly influence customer requirements. This study used a hybrid methodology that combined quantitative and qualitative research. A questionnaire was used as the research instrument for the quantitative research investigation. A simple random selection method was used to select four hundred participants from inhabitants in Rayong, Thailand. The model confirmation was examined by the Structural Equation Model (SEM). The results illustrated those exogenous latent variables of hospital policy, hospital performance, and total quality positively have a direct effect on hospital personnel's public mind and are additionally positive towards customer requirements. The prediction for customer requirements can be made from hospital policy, hospital performance, total quality and hospital personnel's public mind with a variance of ninety-seven percent. Throughout the qualitative research of in-depth interviews with tri-angular analysis, the conclusion can be made with the fact that hospitals satisfy consumer needs and increase customers with firstly public relations communication presenting the outstanding features in medical treatment of particular hospital, secondly proactive operations with well-defined customer segmentation such as factories and business companies within the area of Rayong Province, thirdly good services that leads to word of mouth, fourthly reasonable pricing, fifthly maintaining medical standards, sixthly providing services conforming to reasonable prices, and lastly emphasizing the care and be active to the satisfaction of consumer needs.

Keywords: Private hospital model, Rayong Province, satisfaction, consumer needs.

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INTRODUCTION

From the insufficiency of public health services and the needs of the people who use the health service system, which has experienced delays in government services, several problems have subsequently arisen due to various factors such as the asymmetry of the distribution of several hospitals and health care facilities with the unbalanced public health. The shortage of medical personnel leads to the increasing needs of healthcare clients and these patients therefore began to look for private healthcare services such as private hospitals and clinics. The high population density in the areas of business services and industrial sector extensions causes more insufficiency in the state's hospitals and public health facilities, which are usually insufficient for the local population of most provinces in Thailand. Exceptionally, there are only 4 provinces that have more than 90 percent of sufficient beds: Loei with 126 percent of adequate beds, followed by Mukdahan with the

number of beds at 100 percent, Kanchanaburi at 97 percent, Pathum Thani at 94 percent, and Surat Thani at 90 percent, respectively. According to the information, these provinces obtain sufficient numbers of beds in public hospitals that meet the needs of the people residing in these areas (Nilakitsaranont, 2020).

Particularly, Rayong is one of the densely populated provinces due to the fact that Rayong is also an industrial estate province, given that this province is one of the three provinces of the Eastern Economic Corridor (EEC) project. The necessity of good-quality private hospitals is therefore meet the needs of customers. Within Rayong province, some exceedingly potential customers are affordable for good-quality private hospital services unless services are provided at reasonable prices. It can be stated that Rayong Province has consistently experienced high economic growth since the establishment of the Eastern Seaboard Industrial Estate

(Rayong) in 1994 and currently has more than 339 factories investing more than 9.0 billion US dollars, given abundance of device manufacturers of spare parts and auto parts. Specifically, 25 factories belong to the Toyota Group, while 50 factories are owned by the world auto parts manufacturers. These manufacturers have production bases in Rayong as an industrial estate. Therefore, these factors have made Rayong Province becoming the second-largest gross domestic product (GDP) in Thailand. Although it is the 57th largest province in the country, Rayong has both agricultural and industrial activities. Significantly, Rayong is also the province with the highest income per capita (Gross Province Product: GPP) in Thailand (Office of the National Economic and Social Development Council, 2022) Even though private hospitals in Rayong Province have numerous beds prepared for patients, more than 100 beds are owned by Bangkok Hospital Rayong, Chularat Rayong Hospital, Sri Rayong Hospital, Burapharux Rayong Hospital, and Mongkut Rayong Hospital. Still, these beds are seemingly not enough to meet the existing needs. The necessity of large private hospitals therefore cannot be ignored. Having large and quality hospitals will consequently help develop the country's economy, both directly and indirectly. Additionally, it will also help increase the number of employment rate. More importantly, having large private hospitals will also enhance the quality of life of Rayong citizens by allowing them to access standard medical care, which is one of the four basic human needs: housing, food, clothing, and medicine.

LITERATURE REVIEW

The concepts and relevant theories of private hospital management are similar to those of general organizational services, which are concerned with quality and efficiency to meet the needs and customer satisfaction. The concepts and theories of private hospital management will therefore be applied to the aim of management for organizational excellence. Critical elements will enable organizations to generate excellent performance and sustainability to compete in both present and future periods, with reference to the core values of Thailand Quality Award (TQA) criteria. This factor will encourage organizations to achieve their goals, improve results, and empower them to subsequently have the ability to compete with international organizations to improve and achieve sustainable results. Any organization that receives the National Quality Award is certainly recognized as a national model organization, given that it consists of seven key factors; (1) Leadership, (2) Strategy Setting, (3) Customer Relationship Management, (4) Performance Measurement, (5) People, (6) Work Process, and (7) Results (Thailand Productivity Institute, National Quality Award of the International, 2017; Mosadeghrad, *et al.*, 2022; and Ariffin, 2022). In the present time, with changes in various environmental factors both inside and outside, the adaptation of the current organization aids in meeting the challenges in

the future. Various management strategies have been developed to move toward the organizational structure to have high work potential (High-Performance Organization: HPO) (Karim, 2020; Mosadeghrad *et al.*, 2022). Most organizations are highly flexible with the ability to change and can cope with various pressures from inside and outside the organizations well. With corporate culture as an anchor, employees will therefore share the same values. Employees at all levels will have a bond and unity in driving the organization forward, given that they have similar work goals, a clear support plan for various conditions, and the ability to possibly analyze any circumstances that can affect work from all angles, enabling the mission to achieve its objectives with efficiency and effectiveness. Therefore, these factors will be shown through organizations with high working potential and sustainable long-term work (National Quality Award of the International, 2017; Mosadeghrad *et al.*, 2022).

Regarding the concepts and theories related to quality practice and efficiency of private hospitals, the theory of effective performance should be applied. Millett (1954) demonstrated that efficiency refers to any performance that results in satisfaction, along with being able to earn profits from business operations. This particular satisfaction refers to the satisfaction of providing services to the people by considering factors such as providing equal service, timely service, adequate service, continuity of service, and progressive service (Chavengsup *et al.*, 2021; Mosadeghrad *et al.*, 2022). Gibson *et al.* (1988) mentioned that efficiency can be defined as the ratio of an output to an efficiency measurement factor with multiple indicators, such as the rate of return on capital or capital assets, cost per unit of output, wastage rate, resource consumption, and the ratio of profit to capital expenditure (Mosadeghrad *et al.*, 2022). In addition, Laksana (2009) also proposed that the efficiency of the work of the person means completing the task with minimal loss of time and energy which includes working faster and getting a good and efficient workforce. Workers are those who intend to work at full capacity, acquiring strategies or techniques to create such high productivity. It is satisfactory and quality work with minimal consumption of costs, expenses, saving energy, and time consumption (Kalutharawithana and Jayawardena, 2017; Pathak, 2017; Sugianto *et al.*, 2020). Chavengsup *et al.* (2021) mentioned that work efficiency refers to the ability and skill of an individual's actions, or others to be better, and more prosperous in terms of individuals and the organization. At last, it will generate satisfaction and peace toward oneself, other people, and organizations (Kumaraswamy, 2012; Pathak, 2017; Ngoensoongnoen *et al.*, 2018; Chavengsup *et al.*, 2021). It might be possible to conclude that efficiency development is the development, improvement, correctness, ability, and skills in a person's work to be better than before to achieve the organization's goals, given that it will make individuals, others, and the organization successful at work, which will subsequently increase the quality of practice. The improvement of work efficiency is certainly significant to organizational development and other

social development (Kumaraswamy, 2012; Pathak, 2017; Ngoensoongnoen et al., 2018; Chavengsup et al., 2021; Mosadeghrad et al., 2022).

Exceedingly, services provision in private hospitals are usually performed regarding the service quality and medical care that can meet the needs, given that a significant factor like Service Quality cannot be neglected to be considered since it will be determined as an overview of positive attitudes toward services. In the context of a private hospital, it consists of 1) the tangible of the service (Tangible), or things that customers can touch, such as construction, medical equipment, and facilities, 2) Responding to customers (Responsiveness), or easy access to convenient and quick services, 3) Confidence in service providers (Assurance) doctors, medical personnel, including a support department that has the knowledge, ability and skills to provide services, and 4) Empathy to customers (Empathy) (Karim, 2020; Mosadeghrad et al., 2022). These components are used to measure customer satisfaction of hospital services effectively. Service quality is the crucial factor that points toward the customer's satisfaction in most organizations. Therefore, the organization can create satisfaction levels for the customers by integrating service quality components into the organization management to raise awareness among customers rather than word-of-mouth communication (Karim, 2020; Islam et al., 2020). The ability to care, be generous, concerned, and attention to customers are the basic principles that will be based on the SERVQUAL Model, a tool to assess the perceived satisfaction that the service users want. It consists of assurance, tangible, empathy, and responsiveness to customers (Responsiveness) through perceptions and expectations of private hospital customers (Kumaraswamy, 2010; Kalutharawithana and Jayawardena, 2017; Pathak, 2017; Ngoensoongnoen et al., 2018).

For private hospitals to be able to meet the needs of service users, these private hospitals require missions, policies, and systematic organizational operations that include effective private hospital management hospital policies (Hospital Policy: HPo). The systematic operation of an organization with quality and efficiency requires a clear mission in hospital management (Mission), including the preparation of a plan for both short-term and long-term operations, concrete action, as well as a strategy for operating with clear goals (Thiengkamol, 2007; Stokes et al., 2016; Mosadeghrad et al., 2022). These factors will stimulate hospitals to perform according to the mission set. In addition, there is an implementation or performance (Hospital Performance: HPe) which consists of front service (Front Service), the front line that will create the first impression with the service recipients, nursing care, treatment, general services such as dispensing rooms, laboratories, accounting rooms, finance, along with other personnel such as shifters, wheelchair shifters, and cleaning staff (Ariffin, 2022; Mosadeghrad et al., 2022). Total quality management factors of the hospital (Total Quality: TQ) cover safety quality, environment quality, equipment quality, medicine and medicine supply quality (Kaewhao

et al., 2015; UNDP, 2017; Pathak, 2017; Ngoensoongnoen et al., 2018; Mosadeghrad et al., 2022). If any private hospitals can manage and operate according to the aforementioned factors to cover efficiency and quality, they will be able to meet the needs of service users. Both health care consultants and medical treatment both physical and mental delivered will make service users loyal to the hospitals as speaking firmly and sustainably. Thus, these implementations will lead private hospitals to become health service providers that subjectively serve customer needs (Kittinarat and Nakhonsri, 2017; Karim, 2020; Islam et al., 2020).

In addition to the aforementioned factors that comprise efficient private hospital management as requiring quality policies, the hospital operation and overall quality management factors are required for consideration to be able to meet the needs of service users. Some other complicating factors should also be taken into account as it can support those various factors; Public Mind (Public Mind) of personnel who perform duties in all departments to produce results that can frequently meet the needs of customers (Karim, 2020; Islam et al., 2020n; Ariffin, 2022; Mosadeghrad et al., 2022). Any private hospital personnel who obtain public mind will perform their duties willingly by providing comfort circumstances to make it possible to serve with self-awareness in the importance of their duties, taking pride in the work. Having a potential self-public mind can be caused by having a person who is a role model, who might even be inspired by celebrities, world leaders, and executives as their prototype. Plus, that personnel who have a public mind will provide services (service mind) with responsibility and full ability in their own duties (Jongwutiwes et al., 2012b; Thiengkamol, 2012h; Kaewhao et al., 2015; Klangburum et al., 2015; Thiengkamol, 2016). This can be identified as a mediated factor that can support the formation of private hospitals in responding to the needs of customers. The needs of customers can include those satisfied customer requirements, ethical requirements from service providers, concern requirements, cure requirements, and tangible satisfaction requirements.

In conclusion, to precisely perceive that the private hospital model is required to manage all aforementioned factors as responding to the needs of service users in Rayong province in a concrete way, this research study will be conducted according to the research hypothesized model with Linear Structural Relations (LISREL) to confirm the model developed from hypothesis to empirical data that collected sample group who are customers of private hospitals in Rayong Province, Thailand.

Research objective

The objective of this research study is to examine the relations among Hospital Policy (HPo), Hospital Performance (HPe), Total Quality (TQ), Public Mind of personnel (PM) and Customer Requirement (CR) and verify the structural relationship between private hospital models in Rayong Province that satisfied customer needs.

METHODS

Research design

The research design was a hybrid methodology research by adopting quantitative research and qualitative research. The quantitative research employed a field survey method for data gathering, related primary data from the simple sampling of the target population with the questionnaire. A set of structured questionnaires was conducted as a research instrument for interviewing and gathering data from the sample group. The in-depth interview form was used to interview 3 target groups.

Population and sample

The total population of Rayong province in the Eastern region of Thailand was 743,787 people. The sample number was subsequently determined by using Yamane’s formula with a confidence interval of 0.05 (Yamane, 1973). At least 400 private hospital customers participated in the data collection method. A simple random sampling technique was used for data collection from 400 private hospital customers. The in-depth interview of qualitative research was confirmed by 13 interview participants and divided into three groups

including 1) high-level executives and Chief Operating Officers of private hospitals in Rayong consisting of 5 doctors and nurses; 2) 3 academicians and public health officials responsible for supervising private hospitals in Rayong; and 3) 5 people who have been using hospital services for more than 5 years.

Data analysis

The descriptive statistics used were frequency, percentage, mean and standard deviation. The inferential statistics adopted was Structural Equation Model (SEM) and analyzed with LISREL version 8.30 by considering on Chi-Square value differs from zero with no statistical significance at 0.05 level, or Chi-Square/df value with lesser or equal to 5, RMSEA (Root Mean Square Error Approximation) value and RMR (Root Mean Square Residual) with lesser than 0.05 including index level of model congruent value, GFI (Goodness of Fit Index) and critical number, and index level of model congruent value, AGFI (Adjust Goodness of Fit Index) between 0.90 and 1.00 (Rovinelli and Hambleton, 1977). The content analysis and the content consistency of opinions were conducted with triangular analysis for qualitative research (Thiengkamol, 2016).

Table 1. Constructs, observed variable and reliability.

Constructs	Observed variables	Cronbach’s alpha	Items
1. Hospital Policy (HPo)	X1: Mission	0.926	28
	X2: Plan		
	X3: Action		
	X4: Strategy		
2. Hospital Performance (HPe)	X5: Front Service	0.920	28
	X6: Nursing Care		
	X7: Treatment		
	X8: General Service		
3. Total Quality (TQ)	X9: Safety Quality	0.928	28
	X10: Environment Quality		
	X11: Equipment Quality		
	X12: Medicine and Medicine Supply Quality		
4. Public Mind (PM)	Y5: Self-public mind	0.935	35
	Y6: Service mind		
	Y7: Self-awareness		
	Y8: Responsibility		
5. Customer Requirement (CR)	Y9: Role model	0.946	28
	Y1: Ethic Requirement		
	Y2: Concern Requirement		
	Y3: Cure Requirement		
	Y4: Tangible Satisfaction Requirement		

Research instrument and measurement of quantitative research

The content and structural validity were determined by

Item Objective Congruent (IOC) with 5 experts in the aspects of public health, hospital management, social science, and social research methodology. The reliability was completed by collecting the sample group from 50

people of private hospital customers of an adjacent province, Chonburi Province in the Eastern region of Thailand. The reliability was determined by Cronbach's Alpha as illustrated in Table 1 (Cronbach, 1951). Confirmatory factor analysis of each latent variable was conducted thereafter to confirm the measurement of the observed variables. Moreover, the content validity was more than 0.5 for all questions of interviewing questions.

RESULTS

Demographic characteristics of sample group

The demographic characteristics of the sample group concluded from the questionnaires, illustrate the average age of 35.66 years; among them were 223 males (55.75%), and 350 Buddhists (87.50%). Their native habitat is in Rayong Province with 400 (100.00%),

nuclear family with 213 (53.25%), and lived in their own house with 265 (66.25%). They had an average income per month of 25,197.48 Baht, marital status of married with 184 (45.00%), and graduated with a diploma degree or high vocational certificate with 179 (44.75%).

Results of direct and indirect effects exogenous variables affecting endogenous variables

Results of linear structural relationship analysis and analysis of the direct and indirect effect of exogenous variables of Hospital Policy (HPo), Hospital Performance (HPe), and Total Quality (TQ) influencing endogenous variables of Public Mind (PM) of private hospital personnel and Customer Requirement or needs in Rayong Province. The results are shown in Figure 1 and Table 2.

Table 2. Direct and indirect effects of exogenous variables on endogenous variables.

Causal variables	Resulted variables							
	PM			CR				
	TE	IE	DE	TE	IE	DE		
HPo	0.22** (0.065)	-	0.22** (0.065)	0.41 (0.13)	0.15** (0.016)	0.26** (0.051)		
HPe	0.27** (0.071)	-	0.27** (0.071)	0.44** (0.12)	0.19** (0.019)	0.25** (0.084)		
TQ	0.28** (0.081)	-	0.28** (0.081)	0.42** (0.11)	0.19** (0.036)	0.23** (0.078)		
PM	-	-	-	0.69** (0.089)	-	0.69** (0.089)		
$\chi^2 = 303.20; df = 156; CN=310.88$			P = 0.00000			$\chi^2 / df = 1.944$		
GFI = 0.94; AGFI = 0.92			RMSEA = 0.044			RMR = 0.0093		

Table 2 shows the linear structural relationship between the cause and effect variables of the public mind and the variable of private hospital personnel in creating the needs of customers in Rayong Province. There is harmony with the empirical data by considering that the chi-square value divided by degrees of freedom (χ^2 / df) is less than or equal to 5 ($\chi^2 / df = 1.944$). It is accepted that the model based on the research hypothesis is consistent with the empirical data. There are also other statistical values of harmony that are supported. It is the goodness index (Goodness of Fit Index: GFI) and the adjusted goodness index (Adjusted Goodness of Fit Index: AGFI) were 0.94 and 0.92, respectively. The accepted values are GFI > 0.90, AGFI > 0.90, and the Critical N (CN) value = 310.88, which was greater than 200, indicating that the model was consistent with the empirical data.

Linear structural relationship analysis

The influence coefficients can be drawn as shown in Figure 1.

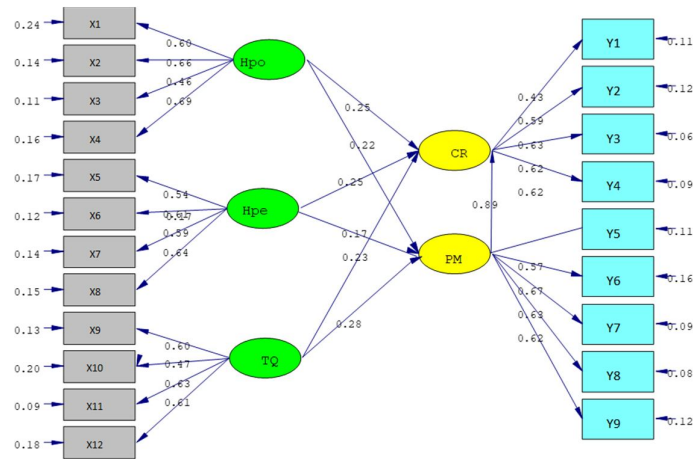
As shown in Figure 1, the results of the direct and indirect effect of the exogenous variables of Hospital

Policy (HPo), Hospital Performance (HPe), and Total Quality (TQ) influencing endogenous variables of Public Mind (PM) of private hospital personnel and the endogenous variables or resulted variable of Customer Requirement or needs in Rayong Province were as follows:

- 1) The exogenous variable of Hospital Policy (HPo) has a direct effect on the Public Mind of private hospital personnel (PM) with an effect of 0.22 at a statistical significance level of 0.01. It also has direct and indirect effects on the endogenous variables or resulting variable of Customer Requirement (CR) with effects of 0.26 and 0.15 at a statistical significance level of 0.01.
- 2) The exogenous variables of Hospital performance (HPe) have a direct effect on the public mind of private hospital personnel (PM) with an effect of 0.27 at a statistical significance level of 0.01. It also has direct and indirect effects on the endogenous variables or resulting variable of Customer Requirement (CR) with effects of 0.25 and 0.19 at a statistical significance level of 0.01.
- 3) The exogenous variables of Total Quality (TQ) have a direct effect on the Public Mind of private hospital personnel (PM) with an effect of 0.28 at a statistical significance level of 0.01. It also has direct and indirect

effects on the endogenous variables or resulting variable of Customer Requirement (CR) with effects of 0.23 and 0.19 at a statistical significance level of 0.01.
4) The endogenous variables or mediated variable the

Public Mind of private hospital personnel (PM) has a direct effect on the endogenous variables or resulting variable of Customer Requirement (CR) with effects of 0.69 at a statistical significance level of 0.01.



Chi-Square=303.20, df=156, P-value=0.00000, RMSEA=0.044

Figure 1. Private hospital model in Rayong Province that satisfied consumer needs.

Considering the structural equation, it can be stated that the causal variables of Hospital Policy (HPo), Hospital performance (HPe), and Total Quality (TQ) and mediated variable of the public mind of private hospital personnel (PM) can explain the variation of the resulted variable of Customer Requirement (CR) with 97.00 percent. Plus, these 3 causal variables can also explain the variation of mediated variable the public mind of private hospital personnel (PM) with 77.00 percent as the following equations.

$$CR = 0.69 \cdot PM + 0.26 \cdot HPo + 0.25 \cdot HPe + 23 \cdot TQ \quad (1)$$

$$R^2 = 0.97$$

From Equation 1, the mediated variable the Public Mind of private hospital personnel (PM) has the highest effect on the resulting variable of Customer Requirement (CR) with an effect of 0.69. Subsequences are Hospital Policy (HPo) has an effect of 0.26, Hospital performance (HPe) has an effect of 0.25 and Total Quality (TQ) has an effect of 0.23, respectively. This information can explain the variation of the resulting variable of Customer Requirement (CR) with 97.00.

$$PM = 0.22 \cdot HPo + 0.27 \cdot HPe + 28 \cdot TQ \quad (2)$$

$$R^2 = 0.77$$

From Equation 2, the exogenous variable of Total Quality (TQ) has the highest effect on the mediated variable the public mind of private hospital personnel (PM) with 0.28. Subsequences are that hospital performance (HPe) has an effect of 0.27, and Hospital Policy (HPo) has an effect of 0.22 respectively. It can

explain the variation of the variation of mediated variable in the public mind of private hospital personnel (PM) with 77.00 percent.

Result of qualitative research with tri-angular analysis

Using in-depth interviews, the result of a tri-angular analysis from 3 groups of interview participants including 1) high-level executives of private hospitals in Rayong, and Chief Operating Officers consisting of 5 doctors and nurses; 2) 3 academicians and public health officials responsible for supervising private hospitals in Rayong; and 3) 5 people who have been using hospital services for more than 5 years, is shown as Table 3.

DISCUSSION

From the research results in Figure 1 of the private hospital model in Rayong Province that satisfied the customers' needs, there is a consensus that latent variables outside private Hospital Policy (Hospital Policy: HPo), Hospital Performance (HPe), Private Hospital Overall Quality (Total Quality: TQ) are the cause variables can have a direct effect latent variables mediating private hospital personnel (Public Mind: PM) and endogenous latent variable of Customer Requirement (CR). Including indirectly influencing the latent variable within the results, namely the needs of service users in Rayong Province (Customer Requirement: CR), which is consistent with many

research that there is also a direct effect on the public mind of hospital personnel private hospital personnel (PM) that is a mediated variable to cause indirectly effect to the needs of private hospital customers in Rayong Province (CR) by causing indirect effect that makes service users have the highest satisfaction by changing the consumption behavior to use the service in private hospitals again and again. This is also conformed to several studies that have been conducted to change environmental conservation behavior as it was found that the public mind of personnel can change behavior, such as Jongwutiwes et al. (2012b), who studied the Causal Relationship Model of Hospital Environmental Management. The result revealed that the public mind can cause changes in conservation behavior in various areas such as consumption behavior, energy conservation behavior waste management behavior, etc. Additionally, it is also in line with the research of Deerada et al. (2014) who conducted a research study on the causal relationship model of women empowerment for global warming alleviation. The result demonstrated that empowering women in the public mind will also advocate changing environmental conservation behaviors to mitigate global warming. Noticeably, a direct effect of the component of the public mind of private hospital personnel can be captured towards the needs of customers of private hospitals in Rayong Province (CR), with a large influence that can cause indirect influences that make clients have the highest satisfaction by changing their consumption behavior. This result is also consistent with the study of Thienkamol (2012), who studied the model of environmental education and psychological factors based on the inspiration of the public. Thienkamol's (2012) research study found that the public mind can cause changes in conservation behavior in various contents such as consumption behavior, energy conservation behavior, waste management behavior, etc.

The Customer Requirements (CR) component of private hospitals in Rayong province acquired four observed variables to confirm the measurement of CR. The results indicated that the Cure Requirement (Y3) had the highest value, followed by the Ethical

Requirement (Y1) of service providers, Concern Requirement (Y2), and the need to achieve concrete satisfaction in medical care, or Tangible Satisfaction Requirement (Y4). This result conformed to the research of Muangphrom (2019) on people's satisfaction with the service quality of Thonburi Hospital which revealed that customers need understanding, sympathy, and responsiveness from service providers. It is also in line with the research of Saenkham (2023) who studied the satisfaction of service quality of Kasemrad Hospital, and Ramkhamhaeng Hospital. The researcher found that the satisfaction with the service quality of Kasemrad Hospital and Ramkhamhaeng Hospital, as a whole, was in the aspect of credibility responding to the needs of service users, and the physical aspect that can be touched and the accessibility of providing fast service. This is in accordance with the research of Saikhapha (2020), whose research had been conducted on the satisfaction factors of service recipients in private hospitals that have received Joint Commission International (JCI) standard, outpatient department in Bangkok. The research results found that the service quality factor, image factor, trust factor and health awareness factor are correlated with the satisfaction factor of private hospital customers. Additionally, it is also in line with the research of Chavengsub et al. (2021) which studied service quality related to service user satisfaction in Chularat 3 International Hospital. The research results found that convenient service provider coordination, information received from service providers, and expenses used are related to customer satisfaction. It is also in line with the research of Jaikla (2023) who studied factors affecting satisfaction in using the services of Kasemrad Sriburin Hospital of service users in Chiang Rai Province. The research results found that 1. Reliability, 2. Record history correctly, 3. Responding to customers, 4. Safe medication management, 5. Nursing appropriately, 6. Giving confidence to customers, 7. Reliable diagnosis, 8. Customer sympathy, and 9. Concrete aspects of service respectively, have effects on overall service satisfaction.

Therefore, the private hospital model in Rayong Province that satisfied consumer needs can be shown in Figure 2.

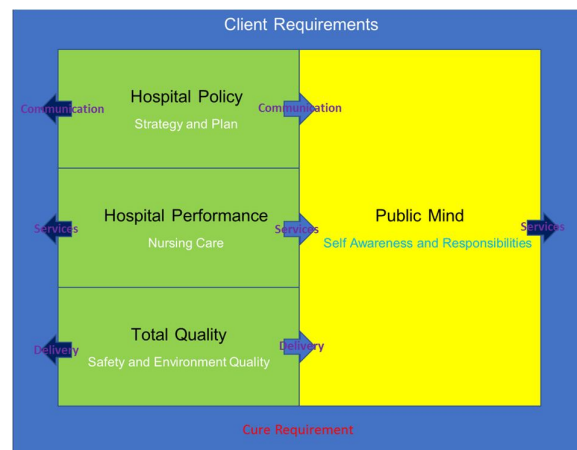


Figure 2. Private hospital model in Rayong Province that satisfied consumer needs.

Table 3. Result of tri-angular analysis from in-depth interviews.

Subject of interview	Comments from interview participants			Tri-angular analysis
	High-level executives	Public health officials	Customers	
Hospital policy	Hospital staff should understand the hospital's mission, policy, plan, operation, and strategy which focus on customers' needs.	Hospitals should study customers' needs and analyze their strengths and weaknesses to be able to identify the hospital's mission, policy, plan, operation, and strategy	Hospitals should study and analyze customers' information and needs in order to identify their mission, policy, plan, operation, and strategy. Hospitals should also keep improving their services.	All three groups have common comments that hospitals should study and analyze customers' needs and develop the hospital's mission, policy, plan, operation, and strategy which share common grounds with its staff.
Hospital performance	Hospital staff must have morality, a service mind, and a professional standard of working in order to provide enthusiastic service of nursing care and medical treatment.	Hospital executives must lead the organization by setting clear values and vision, mission, plan, and strategy then communicate to staff to understand and focus on the quality of services.	Hospital staff must understand the hospital's plan, strategy, policy, and direction in order to provide similar quality services.	All three groups have common comments that executives must set the vision and communicate to staff in order to understand and be able to focus on service quality, enthusiasm, moralistic, service mind, and professionalism to satisfy customer's needs.
Total quality of services	Hospitals must obtain at least the Healthcare Accreditation (HA) standard and Joint Commission International (JCI) standard for high-quality hospitals.	Hospital staff must have qualified knowledge especially doctors and nurses with ethics. Staff must be friendly to all customers. Hospital equipment must be efficient, quality, and safe. The hospital environment must be modern, clean, hygienic, and safe.	Hospitals should hire skilled and experienced staff. Staff must be regularly trained and updated with the know-how and knowledge. All equipment must always be updated with modern technology for quality medical treatment. Staff must act their services actively.	All three groups have common comments that staff must acquire knowledge and know-how, especially doctors and nurses with ethics. Staff must be friendly to customers. Equipment should be of high quality and updated to modern technology. The hospital environment should be a safe and modern place.
The public mind of hospital staff	Staff are responsible for taking care of the customers and the community which focuses on sincere and dedicated treatment and care for not only patients but also, their relatives. Medical staff must have ethics and a public mind, not refusing any services on any occasion.	Hospitals must have staff that have a public mind of the social services that could also support the community. Staff must provide friendly and quality services from when customers visit the hospital until they complete the services.	Staff must have a public mind, responsibilities, helpfulness, care treatment, merciful, well-communicated, friendliness, honesty, and promise to the improvement of their knowledge and skill.	All three groups have common comments that staff must have a public mind, responsibilities, helpfulness, well care and dedicated treatment, merciful, friendliness, honesty, sincerity, and, communication. Staff should acquire and improve knowledge and skills.
Satisfying customer needs	Customers should be well-treated with reasonable expense charges and a good total service experience.	Staff must be reliable and have a public mind. Staff must respect the patients' rights, and also must provide good advice to the patients with kindness.	Staff should be highly trained in medical knowledge, along with having a well communicative skills, well understanding of patients' minds, and be merciful. Hospitals should provide services with pricing campaigns regularly.	All three groups have a common comment that medical staff must have high medical skills and deep knowledge with good communication skills, and merciful, and public mind. Hospitals should have services with pricing campaigns of reasonable expenses.

Table 3. Continues.

Increasing customers	Good medical treatment standards with responsiveness and well care should be provided to customers. Focusing on preventive treatment with qualified medical staff and equipment is also necessary.	Hospitals should communicate and provide information on the service strengths of particular treatments. Providing proactive services will help target more customers in Rayong. A reasonable price charge is also necessary.	Hospitals must have good facilities, and environment, and also be able to develop customer relationships and customer loyalty programs. Hospitals should provide marketing campaigns regularly, especially targeting customer segments in Rayong.	All three groups have a common comment that the hospital should provide information on the strengths of treatment and focus on targeting the customer segment in Rayong. High medical standards and treatment should always be considered in order to generate word of mouth in promoting the hospital.
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RECOMMENDATION

1. Results from the quantitative research can be used to model private hospitals that satisfy consumer needs in Rayong Province to apply in other provinces in Thailand Including other countries in Southeast Asia that have similar economic and cultural structures to Rayong Province. Furthermore, foreign investors who want to invest in private hospitals in Rayong Province, which is an EEC area where foreign investment is promoted, can use this model to study and be able to apply for their projects.
2. Existing private hospitals in Rayong Province can apply the results of quantitative research to apply the private hospital model that satisfies consumer needs to manage the hospital to have good quality, good efficiency, and public mind of the staff for the continued growth of the hospital business.
3. The result of qualitative research can be studied with other variables to support management for more dimensions.
4. The result of qualitative research can be appropriately applied to other private organizations socially, culturally and economically.

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