FACTORS RELATED TO HOSPITAL ACCREDITATION OF COMMUNITY HOSPITAL DURING COVID-19 OUTBRAKE

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Abstract: *Background: The health system is responsible for providing services as well as providing services for everyone to access that are safe and good quality. Currently, health problems are changeable and complex, especially the COVID-19 pandemic, which is also related to health legislation. Therefore, a good quality health system is critical.*

Methods: *This Cross-sectional survey study was conducted from July 2021 - March 2023 using a sample of 384 of 11 community hospitals. Spearman's rank correlation coefficient was used to analyze.*

Results: *The results showed that the samples had an average age of 39 years (S.D.=10.15), an average time of work 13 years (S.D.=10.19), with a bachelor's degree of 73.18%, while 38.80% were a nurse. In addition, samples had knowledge and attitude on the hospital accreditation (HA) at a high level of 68.49%, and 47.92% (=.85 S.D.=.11; = 4.05, S.D.= .40 respectively). But organization, process, and outcomes are at a moderate level of 54.17%,55.47%, and 58.85% (=3.93, S.D.=.55, 3.96 S.D.=.54, =3.85 S.D.=.57 respectively). Most hospitals had HA at level 3 (81.82%). Furthermore, the knowledge factors related to HA level (significance at .01 level; rs= .161). The factors affecting HA development results were attitude, organization, and process factors (p< 0.01).*

Conclusions: *The majority of hospital had moderate levels of HA. Knowledge, attitude, organization, and method with health legislation being the key elements. These elements can be used to get HA information during COVID-19 outbrake.*

Keywords: *Hospital accreditation, Quality development, Quality Service, Community Hospitals, Factors, COVID-19 Outbrake*

Background:

The health system is responsible for providing services for everyone to access that are safe and of good quality.[1] Currently, health problems are changeable and complex. Therefore, a good quality of health system is very important.[2] According, Constitution of the kingdom of Thailand (2007) has stipulated the duty of the state to provide public health services to the public. Chapter 5 duties of the state section 55. The State shall ensure that the people receive efficient public health services universally, ensure that the public has the basic knowledge in relation to health promotion and disease prevention. The public health services shall cover health promotion, control and prevention of diseases, medical treatment and rehabilitation. The State shall continuously improve the standard and quality of public health services. The Ministry of Public Health requires hospitals to have quality standards that meet HA quality certification assessment,[3] to enable all citizens to have appropriate access to and receive necessary medical and public health services.[4] From the results of the HA quality certification assessment in 2021, only 56.51% of Thailand's hospitals achieved level 3 certification, with Health region 8 having a score of 88.04 %.[5]

Nakhon Phanom Provincial Public Health Office has required hospitals to achieved HA certification.[6] The HA certification process is external certification to encourage hospitals to improve the quality and safety of patient care. This approach relies on international-based standards as a framework for development by using cooperation of personnel in the organization to determine whether the organizational structure[7,8] and process factors influence service quality improvement.[9,10,11] Personality factors.[12,13,14] and cognitive and attitude factors[15,16] affect the development and accreditation of hospitals.

In addition, the Nakhon Phanom Provincial Public Health Office, HA quality development is a strategic indicator of Nakhon Phanom Province that can support driving the continual development of the hospital through the network to improve the quality of the hospital with nanny system. However, only 83.33% of hospitals are certified for HA level 3.[17,18] The report on the renewal of HA accreditation indicated that most of the issues had to be resolved and revisited .[19,20] Furthermore, it occurred during 2021 and 2022, especially in Thailand, during the COVID-19 pandemic. It has an impact on both the patient's visit and the hospital's services. Patients are unable to access services as a result. This is so that hospitals can respect government-instituted safety rules. The national health security act (2002) Chapter 1 Right to receive public health services every person has the right to receive standard public health services. As a result, it affects the creation of quality management systems for hospital services.[21,22,23,24] Therefore, a study of factors related to the development of community hospital accreditation in Nakhon Phanom Province should provide important information that will be useful in the development and certification of quality hospital in Nakhon Phanom Province.

Methods:

A Cross-sectional survey study was conducted during July 2021 - August 2022 based on 384 samples in 11 community hospitals from a population of 1,732 personnel working in hospitals.[27] Sampling used the simple logistic regression formula of Hsieh Bloch & Larson ,[17] with multistage sampling. Data were collected based on answers to a questionnaire with a reliability of 0.98 and index of item objective congruence of 0.97, The questionnaire had 117 items in 6 parts (Personal data, Knowledge, Attitude, Organizational, Process, and Outcome).

Part 1: Personal data: Data collected consisted of: age, status, time of work, education, and job position.

Part 2: Knowledge : There were two choice responses (1 for correct answer, 0 for wrong answer, 24 full scores, and 3 interpretation criteria according to Bloom,[14] defined as low level knowledge (score 0.42 – 0.61), moderate knowledge (score 0.62 – 0.81), and high-level knowledge (score 0.82 - 1).

Part 3: Attitude: There were 24 questions with replies based on 5 options (strongly agree, agree, indifferent, disagree, strongly disagree, having a 5, 4, 3, 2, 1 score, respectively, for the positive questions and 1, 2, 3, 4, 5 score into 3 levels were based on Bloom's criteria,[14] defined as high-level (score 4.11 – 4.83), moderate (score 3.37 – 4.10), and low-level (score 2.36 – 3.36).

Part 4: Organizational: There were 23 questions, with replies based on 5 options (most, very, moderate, less, least, having scores of 5, 4, 3, 2, 1 respectively). Criteria for interpreting organizational scores into 3 levels, levels were based on Bloom's criteria.[14] defined as high-level (score 4.07 - 5), moderate (score 3.12 – 4.06), low- level (score 2.17 – 3.11)

Part 5: Process: There were 24 questions, with replies based on 5 options options (most, very, moderate, less, least, having scores of 5, 4, 3, 2, 1 respectively). Criteria for interpreting process scores into 3 levels, were based on Bloom's criteria.[14] defined as high-level (score 4.02 - 5), moderate (score 3.04 – 4.01), low-level (score 2.04 – 3.03).

Part 6: Outcome: There were 17 questions, with replies based on 5 options options (most, very, moderate, less, least, having scores of 5, 4, 3, 2, 1 respectively). Criteria for interpreting outcome scores into 3 levels, were based on Bloom's criteria .[14] defined as high-level (score 4.05 - 5), moderate (score 3.09 – 4.04), low-level (score 2.12 – 3.08).

All data were analyzed by descriptive statistics percentages, means, standard deviation (S.D.), and inferential statistics (Spearman's rank correlation coefficient).

The researchers collected data collection based on questionnaires. The process involved distributing the questionnaires to the sample group personally and having the sample group completed the questionnaire, checking for completeness and reliability of information, with quality control of data recording by duplicating the recordings, reviewing, and then storing data in 2 files.

Ethical Issues/Statement

The study was conducted with the approval of the Research Ethics Committee, Nakhon Phanom Province (COE No. 014/65, Date 7 August 2022).

Results:

Demographic characteristics of the sample

The results showed that samples had average age of 39 years (S.D.=10.15), most of the samples were aged 30-34 years 19.27%, the majority were married (50.52%), with an average time of work 13 years (S.D.=10.19), a bachelor's degree (73.18%), and the most common profession was nurse (38.80%). as shown in Figure 1.

Level of knowledge, attitude, organization, process and results of quality development of community hospitals in Nakhon Phanom Province.

The results showed that the samples had knowledge, and attitude on the HA at high level at 68.49% % ($\overline{X}$ =.85 S.D.=.11) and 47.92 ($\overline{X}$ = 4.05, S.D.= .40), respectively.

However, organization, process, and outcome were at the moderate level at 54.17% ($\overline{X}$=3.93 S.D.=.55), 55.47% ($\overline{X}$ 3.96 S.D. =.54), and 58.85% ($\overline{X}$=3.85 S.D.=.57), respectively, as show in Figure 2.

Spearman's rank correlation coefficient analysis results between variables and results

The factors related to level HA were knowledge (significance at .01 level; r_s=.161). In addition, factors related to HA development result were attitude, organizational,process, and health legislation (significance at .01 level; r_s = .434, r_s = .804, r_s = .814, and r_s =680**respectively), as shown in Table 1.

Spearman's rank correlation coefficient analysis with HA accreditation level outcomes of community hospitals in Nakhon Phanom province.

The result of the Spearman's rank correlation coefficient analysis with level HA. showed that the knowledge factor had a very low positive correlation with the level of hospital accreditation (significance at .01 level; r_s=161), as show in Table 2.

Correlation coefficient for HA outcomes

The results showed that attitude factors at the low level were positively associated with hospital accreditation development outcomes (significance at .01 level; r_s = 434). Organizational and process factors at the high level had a positive relationship with the hospital accreditation development outcomes (significance at .01 level; r_s = .804, and r_s = .814, respectively), as shown in Table 3.

Factors Affecting Hospital Accreditation of Community Hospitals During COVID-19 Outbrake

The factors affecting the variables and the outcomes of community hospital quality development. Initially, the distribution was tested using the Kolmogorov–Smirnov test and found that the distribution was not normal. Logistic Regression Analysis was used to analyze the data by establishing the initial and dependent variables. It was found that the factors affecting the quality

development of community hospitals were organizational, the process, and health legislation factor (P< 0.001). In addition, the percentage of correct prediction (Hite rate) was 93.23% as shown in Table 4. Moreover, health legislation had been controlled the public health services which were l cover health promotion, control and prevention of diseases, medical treatment and rehabilitation.

Discussion

The results of a study on factors related to the development of community hospital accreditation in Nakhon Phanom Province revealed that knowledge factors were significantly associated with HA accreditation results at the .01level (r_s = 161). This corresponds with the study results of Tippawan Ketsaeng,[7] regarding the factors related to the participation of professional nurses in hospital quality development work. There was a moderate positive correlation with participation in hospital quality improvement (significant at .01 level; r = 0.44) that corresponds with the results of the study by Nuttakit Thammakawinwong and Civilize Wanaratwijit,[4] in community hospitals were the factors influencing continuous quality improvement were significant at the 0.05 level was a cognitive factor.

The results found that the attitude related to hospital quality improvement outcomes (significance at .01 level; r_s= .434), which corresponds with the study results of Tippawan Ketsaeng,[7] who report that attitudes in hospital quality development had a moderate positive correlation with participation in hospital quality development (significant at .01 level; r_s = 0.39), as well as with the result of the study Oramanee Pattapakorn and Siriphan Hongsappinyo,[13] on the success of factors in hospital quality development, where they found that the factors affecting the success of quality development including the attitude factor of personnel towards quality development (significant at 0.01 level; R=23. 50). This also corresponded with the results of the study by Nuttakit Thammakawinwong and Civilize Wanaratwiit,[4] on the factors influencing the continuous quality improvement of community hospitals. They report that attitude factors influenced continuous quality improvement (significance at .05 level).

The result showed that organizational factors related to hospital quality improvement outcomes (significant at 0.01 level; rs = .804), corresponded with the results of Kannikar Kewheung.[1] Regarding administration affecting the development of hospital quality according to hospital standards, the organizational structure was a factor affecting the operation at a high level. This corresponded with the result of the study by Nuttakit Thammakawinwong and Civilize Wanaratwijit,[4] who investigated the factors influencing the continuous quality improvement of community hospitals and found that structural factors of quality improvement were relevant (significance at the 0.05 level).

In addition, the results showed that the process factors were significantly related to the hospital quality improvement outcomes at the 0.01 level (rs = .814), which was consistent with Thaksin Chaodon.[6] Factors affecting service quality Improvement of community hospitals were process factors that had the greatest effect and influence on the improvement of service quality. This was consistent with the results of the study by Yosapat Sri-Ngam,[9] on the factors influencing the quality of community hospitals, which indicated process factors influencing the quality of community hospitals. Furthermore, the study of Correa et al,[15] found that process focus is linked to the development of health organizations and has a direct influence on the quality assurance process.

Hospitals that have quality developed and received hospital quality certification. It will help patients and service users receive standardized services. And safety. Therefore, the leader and the organization should support the development of hospital quality to continuously improve the quality[25 26 27 28]. In this study, it was found that knowledge, attitude, organization and process were related to the development of the quality hospitals. Therefore, leaders should establish policies for hospitals to be accredited. as well as supporting necessities such as training,

knowledge, support, materials, budget, stimulation, monitoring, as well as solving important problems[29 30 31]. However, health legislation must also be taken into account[32 33].

Conclusions

The hospital's quality development is still at a moderate level despite the COVID-19 pandemic. There were important factors involved, namely the knowledge, attitude, organizational process and health legislation factors. These factors may be used as Key information to improve the quality of hospital to ensure they receive certification.

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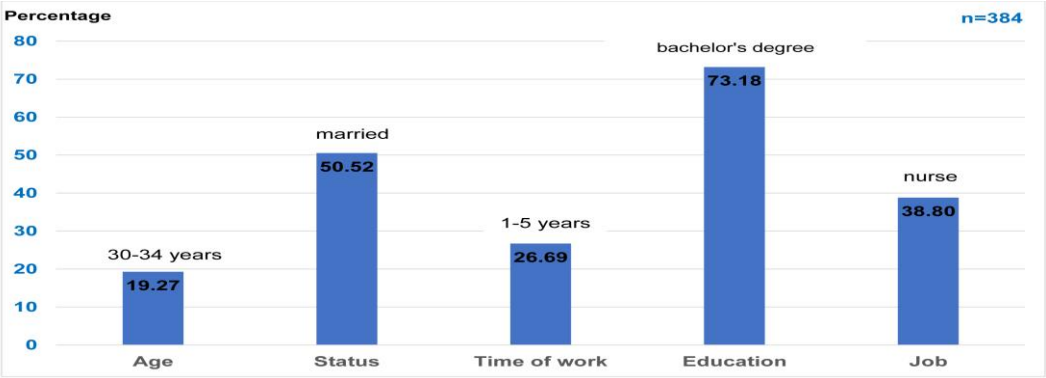
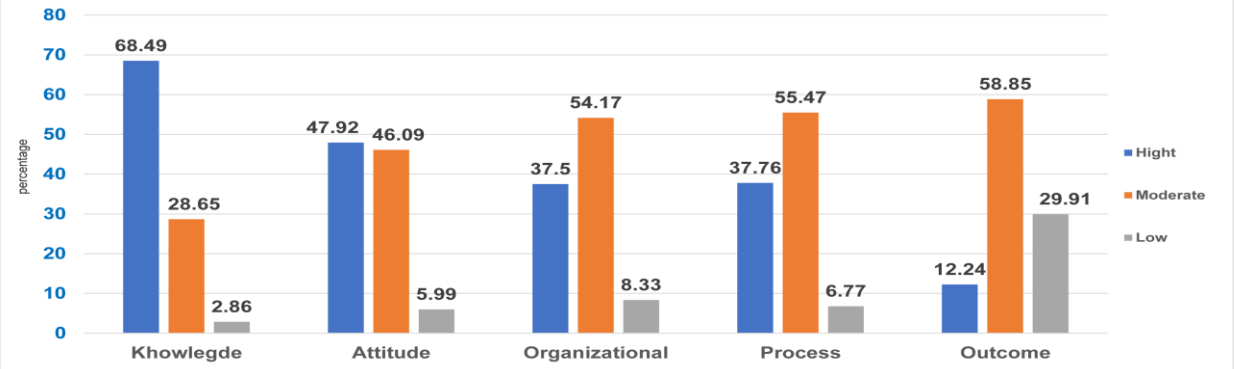
Figures



Figures1. The hospital's quality development is still at a good level despite the COVID-19 pandemic.



Figures2. Level of knowledge, attitude, organization, process and results of quality development of community hospitals in Nakhon Phanom Province.

Tables

Table 1 Spearman's rank correlation coefficient results between variables regarding quality development of community hospitals in Nakhon Phanom Province.

Variables	Age	Time of work	Knowledge	Attitude	Organizational	Process	health legislation	Outcome
Age	1							
Time of work	.813**	1						
Knowledge	.123*	.115*	1					
Attitude	.031	.044	.190**	1				
Organizational	-.017	.004	.037	.399**	1			
Process	.003	.034	.088	.404**	.814**	1		
health legislation	-.052	-0.49	1.61**	.049	-.002	.011	1	
Outcome	-.017	.028	.029	.434**	.804**	.814**	.680**	1

* Significant at .05 level
** Significant at .01 level

Table 2. Spearman's rank correlation coefficient analysis with HA accreditation level of community hospitals in Nakhon Phanom province.

Variables	Results of HA accreditation level of community hospitals in Nakhon Phanom Province		
	Correlation coefficient (r_s)	p-Value	Relationship level
Age	-.052	.306	No correlation
Time of work	-.049	.337	No correlation
Knowledge	.161**	.002	Very low
Attitude	.049	.335	No correlation
Organizational	-.002	.971	No correlation
Process	.011	.829	No correlation
health legislation	.351**	.001	low

* Significant at .05 level
** Significant at .01 level

Table 3. Spearman's rank correlation coefficient analysis for HA outcomes of community hospitals in Nakhon Phanom Province

Variables	HA outcome		
	Correlation coefficient (r_s)	p-Value	Relationship level
Age	-.017	.737	No correlation
Time of work	.028	.588	No correlation
Knowledge	.029	.573	No correlation
Attitude	.434**	<.001	low
Organizational	.804**	<.001	high
Process	.814**	<.001	high
health legislation	.842**	<.001	high

* Significant at .05 level
** Significant at .01 level

Table 4. Factors Affecting Hospital Accreditation of Community Hospitals During COVID-19 Outbrake

Variables	b	S.E	Wald	P
Constant	-13.13	3.90	11.37	.001
Age	-.39	.58	.46	.50
Status	-1.9	.51	.14	.71
Operational period	.78	.65	1.43	.23
education level	-.05	.72	.00	.95
job position	.13	.59	.05	.83
knowledge	1.00	1.18	.71	.40
attitude	.35	.56	.40	.53
organization	2.31	.62	14.04	.001
process	4.33	.83	27.48	.001
health legislation	4.64	.72	28.82	.001