

# Administrative Factors and Organization Climate Affecting the Performance of Health Personnel at the Emergency Department in Community Hospital

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## Abstract

This is a cross-sectional analytical study aimed to identify administrative factors and organizational climate affecting the performance of health personnel at the emergency department in community hospital Roi-Et province, Thailand. The study samples selected randomly from Emergency Department were 137 health personnel. Stratified random sampling technique was applied to recruit the respondents from the total of 229 health personnel. Similarly, 12 key informants were selected for the qualitative study. In-Depth interview guidelines was applied to conduct qualitative study. The content validity of the questionnaire was evaluated by three experts yielding an IOC value more than 0.50 in all questions. The Cronbach's alpha coefficient of the questionnaire was 0.98. Data were collected between 23<sup>rd</sup> December 2020 to 12<sup>th</sup> January 2021. Data analysis was performed by descriptive statistics and inferential statistics at a significant level at 0.05.

The study results showed that the administrative factors such as money, organizational climate such as dimension of warmth, a dimension of responsibility and dimension of identity were affecting the performance of health personnel (49.6 % ( $R^2=0.496$ ,  $p\text{-value}<0.001$ )). In conclusion, four factors are affecting the performance of health personnel. Hence those factors should be addressed, and administration should create the climate which can address the budget, working objective and goal for the development of the organization.

**Keywords:** Administrative factors, Organization Climate, Performance of Health Personnel, Emergency room

## Introduction

The standard nursing service is provided to the accident-related victims and patients in emergency who are injured or suffering from critical illnesses whose physical and mental systems are affected. It is

assessed by the severity of the illness, the decision to provide the first aid, and use medical equipment and pharmaceutical supplies to improve patients' lives as well as monitoring the parameters of changes in patients after providing nursing services. Moreover, it can help patients in urgent situations safely, and reduce illnesses from complications. The standard of ambulance and emergency service consists of 8 standards: 1) Nursing Therapeutic in Emergency Medical Service 2) Nursing Therapeutic in Emergency Department 3) Continuing Care 4) Health Promotion 5) Protection of health conditions and risk prevention 6) Providing information

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and health knowledge<sup>7)</sup> Protection of patient rights and 8) Nursing Documentation<sup>[1]</sup>. In order to perform successfully for Health workers in the emergency room, they need to consider many factors to support the jobs; however, one of the most important factors is a management factor which affects the optimal use of resources and provides smooth work and achieve the objectives. It consists of 6 compositions which are 1) Man 2) Money 3) Material 4) Management 5) Time and 6) Technology<sup>[2]</sup>. Moreover, the atmosphere in the organization is considered to be important to the performance of the health workers in emergency accident organization. It also influences and inspires behavior, and able to perceive the organizational atmosphere both directly and indirectly. It has 9 dimensions which are 1) Structure 2) Responsibility 3) Warmth 4) Support 5) Reward 6) Conflict 7) Standard 8) Identity and 9) Risk<sup>[3]</sup>. Nowadays, there are 19 community hospitals in Roi Et province, Thailand and there are 229 public health professionals are working under the nursing department working in the accident-emergency room at community hospitals in Roi Et. The Emergency Accident Unit is one of the most high-risk units of the hospital as well as having lots of workload. In the past studies, the Nursing Therapeutic in Emergency Medical Service standard found that some personnel with less than three years of working did not attend the Resuscitation Competency Development Program in order to have the skills and confidence in helping patients and injured patients properly. For the Nursing Therapeutic in Emergency

Department still faces some problems with insufficient manpower in some emergency departments and inconsistent with the calculation of workload Full Time Equivalent (FTE)<sup>[4-5]</sup>. From the mentioned problem, the researcher is interested in the management and atmosphere factor in the organization which affect the public health workers in the emergency accident unit at community hospitals in Roi Et in order to ensure safety and reduce risk for the personnel. The result of this research will be used as a guideline for planning the development of service quality to reach the needs of the people in order to create confidence and satisfaction in the service sustainably.

### Research Objective

The aim of the study was to investigate administrative factors and organization climate affecting the performance of health personnel at the emergency department in community hospital Roi-Et province.

### Research Methodology

This study was an analytical Cross-sectional Study.

### Population and sample size

The study population was 229 health personnel at the emergency department in community hospital Roi-Et Province<sup>[4-5]</sup>. Calculating the population size for multiple linear regression analysis to test the hypothesis by using the formula of Cohen<sup>[6]</sup> as follow

#### Formula

$$N = \frac{\lambda(1-R_{Y.A.B}^2)}{R_{Y.A.B}^2 - R_{Y.A}^2} + W \quad \dots\dots\dots(1)$$

when  $\lambda = \lambda_L - \frac{1/v_L - 1/v}{1/v_L - 1/v_U} (\lambda_L - \lambda_U) \quad \dots\dots\dots(2)$

A total of 137 study respondents were identified.

### Sampling method

Stratified random sampling method was used by dividing the population into groups of 19 community

hospitals and comparing the sample sizes to the population of registered nurses and Advanced Emergency Medical Technician who were providing the service at

the emergency department in community hospital Roi-Et Province. Finally, a total of 137 respondents were recruited.

### In-depth Interview random sampling

A group of people who provided information in an in-depth interview to verify quantitative data were chosen from health personnel at the emergency department in community hospital Roi-Et Province. 12 Key Informants were selected.

### The research tools

Two types of data collection tools were used:

**Set one** was a questionnaire that consists of 5 parts:

**Part one** was the question of personal characteristics consisting seven questions. **Part two** was the question of administrative factors which consists of 30 questions. **Part three** was the question of organization climate with 45 questions. **Part four** was the question of performance of health personnel at the emergency department that consists of 41 questions. Use of rating scale five levels in part two, three and four<sup>[7]</sup>.

The scoring criteria for comments are as follows: The highest level, high level, intermediate level, low level, and lowest level are five point, four point, three point, two point, and one point, respectively. Part five is a question about problems, and suggestions about performance of health personnel at the emergency department in community hospital.

**Set two** was an In-Depth Interview Guideline based on the information from the quantitative research. The least average questions are used for in-depth interviews to confirm, support and explain the quantitative data. The researcher defined the issue in three parts: **Part one** was an in-depth interview guide about administrative factors. **Part two** was an in-depth interview guide about Organization climate. **Part three** was an in-depth interview guide about performance of health personnel at the emergency department in community hospital in Roi Et province.

### Quality of research tools

Both sets of tools were approved by three experts in terms of content validity then Item Objective Congruence: IOC was analyzed<sup>[8]</sup>. It was found that all of items had IOC at the level of 0.67-1.00<sup>[9]</sup>. The questionnaires were pretested in 30 health personnel at the emergency department in community hospital in Khon Kean Province, Thailand. The Cronbach's Alpha Coefficient was 0.95 for administrative factors, 0.97 for the organizational climate, 0.97 for the performance at the emergency department and the overall questionnaire reliability was 0.98 respectively.

### Data Analysis

The researcher analyzed the data by using descriptive statistics; frequency, percentage, mean, standard deviation, median, minimum and maximum value, and inferential statistic; Pearson's correlation coefficient, and stepwise multiple regression analysis.

### Research Results

1. Personal characteristics and the performance of health personnel at the emergency department in community hospital

Personal Characteristics and the performance of health personnel at the emergency department in community hospital Roi-Et province Thailand were as follows: Most of the sample were female, 120 people(87.6%), aged between 21-30 years, 65 people(47.4%) with an average age of 34.36 years (SD = 9.94 years, Min = 22 years old, Max = 58 years old). Most of them graduated with a bachelor's degree or equivalent, 84 people(61.3%), married 68 people (49.6%), and most of them were registered nurses, 106people (77.4%). There were 92 respondents working for 10 years or less (67.1%) with a median of 7 years (Min = 1 year, Max = 35 years), and 105 (76.6%) emergency accident workers had received on-the-job training.

2. Administrative factors and organizational climate affecting the performance of health personnel at the emergency department in community hospital

The analysis results showed that independent variable that affects the performance of health personnel at the emergency department in community hospital Roi-Et Province Thailand. That is selected into the equation is the variables that were statistically significant at level 0.05 and independent variables that were not selected into the equation were variables that were statistically significant greater than 0.05 with variables selected into the sequencing equation as follows: organization climate: warmth (p-value <0.001), organization

climate: responsibility (p-value = 0.002), organization climate: identity (p-value = 0.005) and administrative factors: money (p-value = 0.048). Therefore, four independent variables can predict the performance of health personnel at the emergency department in community hospital at 49.6% (Table1).

Study results: Multiple Linear Regression equation which is a prediction equation of the performance of health personnel at the emergency department in community hospital as follows:

$$Y = 1.559 + (0.286) (\text{Organization climate: warmth}) + (0.257) (\text{Organization climate: responsibility}) + (0.229) (\text{Organization climate: identity}) - (0.123) (\text{Administrative factors: money})$$

**Table 1. Statistics about Stepwise Multiple Regression Analysis the performance of health personnel at the emergency department in community**

Variable	B	Beta	T	P -value	R	R <sup>2</sup>	R <sup>2</sup> adj	R <sup>2</sup> change
1.Organizational climate: Warmth	0.286	0.316	3.343	<0.001	0.633	0.401	0.397	0.401
2.Organizational climate: Responsibility	0.257	0.309	3.124	0.002	0.677	0.458	0.450	0.057
3.Organizational climate: Identity	0.229	0.252	2.881	0.005	0.694	0.481	0.469	0.023
4.Administrative factors: Money	-0.123	-0.150	-1.999	0.048	0.705	0.496	0.481	0.015
Constant1.559, F = 32.531, p – value < 0.001, R = 0.705, R <sup>2</sup> = 0.496, R <sup>2</sup> <sub>adj</sub> = 0.481								

## Conclusion and Discussion

The Stepwise Multiple Regression Analysis found that independent variable affecting the performance of health personnel at the emergency department in community hospital were organization climate;

Warmth, Responsibility, Identity, and administrative factors; Money can predict 49.6% for the performance of health personnel at the emergency department in community hospital.

The organization climate in **warm** dimension of emergency department of community hospital can reduce stress and anxiety which are definitely important to the workers. The warmth needs to be able to support the energy and the relationship to build the great rapport, and it will affect the better organization climate. This result of the study is related to the previous study of the performance of health personnel at the emergency department<sup>[10-11]</sup>. The organization climate in **responsibility** dimension is the performance of health personnel at the emergency department in community hospital. It can be responsible with working freely, responsible to themselves, and make a strong decision to solve problems which can create learning on their own working. This result of the study is related to the previous study of the performance of health personnel at the emergency department<sup>[10-14]</sup>. The organization climate in **identity** dimension of health personnel at the emergency department is important to the part of supporting energy and relationship in the workers and it importantly emphasizes being a part of the organization. Therefore, it will lead to the rapport and influence on efficiency perform. This result of the study is consistent with the previous study of the performance of health personnel at the emergency department<sup>[10,13,15-17]</sup>. However, the situation of emergency department and individual of Health Personnel which is different in each hospital, the result of this study inconsistent with the results of the study found that the organization climate; warmth, and identity can't predict the performance of health personnel<sup>[12]</sup>.

The administrative factors in terms of **money** play an important role to manage manpower, materials and necessary equipments which are the prerequisite for the creative environment of the management. The budget is the crucial of factor for the performance to reach the objectives<sup>[2]</sup>. However, the result of the study found that the coefficient regresses in this factor has a negative value, and it can explain that the money budget affects the performance at the emergency accident unit inversely. It may be, because of the administrative factor's money is under the control of hospital accounting which have

to pass many checking processes. This result is related to the previous study of the performance of health personnel at the emergency department<sup>[17]</sup>. However, the budgeting support depends on the needs and policies of organization, the result of this study inconsistent with the results of the study found that the administrative factors in money can't predict the performance of health personnel at the emergency department in community hospital<sup>[18-19]</sup>.

**The in-depth interviews found that** the performance of health personnel at the emergency department, it found that the emergency accident unit performance is one of the standards which assess the public health workers' performance. Besides competencies in each profession to assess the standard of the emergency accident unit, moreover the studied hospital has been set the individual criteria for assessing which is able to assess the individual performance. Therefore, the patient will reach the standard and safety service due to the fact that the performance of the staff is more effective.

In conclusion, the organization climate; warmth, responsibility, identity, and administrative factors; money affect the performance of health personnel at the emergency department in community hospital, so they should be supported and developed the organization climate with mostly considering the budget, work objective and goal, moreover should encouraging by giving rewards and certifying the performance's ability including having the criteria for clear judgement to encourage the motivation and confidence for working.

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