

# Employee Motivation and Retention in the Emergency Medical Service System

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## Abstract

**OBJECTIVES:** This study aimed to evaluate factors associated with employee motivation and retention in the emergency medical service (EMS) system.

**MATERIALS AND METHODS:** All of the participants were enrolled from 6 EMS centers. Participants were healthcare providers aged 20-59 years old working in an emergency department. The reliability of employee motivation and retention in the EMS system questionnaire had a Cronbach's alpha of 0.93.

**RESULTS:** A total of 141 participants were recruited to participate in this study. The average age was  $34.75 \pm 7.67$  years old. 69.5% were male, and 30.5% were female, respectively. 80.1% of participants worked at the emergency department for less than 10 years, and 22.7% had health problems. Age, marital status, educations, occupation, working hours per week, health problems, and medical scheme were associated with employee motivation and retention in the EMS system.

**CONCLUSION:** Age, marital status, educations, occupations, working hours per week, health problems, and medical schemes were related to employee motivation and retention in the EMS system.

**Keywords:** employee motivation, employee retention, emergency medical service system

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Emergency illnesses are a concern in every country around the world. They are recognized as the importance of hazards as a threat to human life and a significant global public health problem.<sup>1</sup> Without proper and timely assistance, these hazards may lead to organ loss, disability or impaired functioning of vital organs leading to premature death. From a wider perspective, these hazards can be seen as having a detrimental effect on the economy, society and the security of the country.

In Thailand, some of the reasons for the rise in mortality rates from emergency ailments is due to the fact that patients are not getting adequate help, professionally, or in a timely manner with EMS not covering all areas.<sup>2</sup> Therefore, an emergency medical unit was established in the Bangkok area. The Medical Service Department (MSD) established the Erawan center to help strengthen EMS in Bangkok. The Erawan center provides a call center for reporting incidents via the telephone number 1646, which then contacts the appropriate emergency service. As well as that, it provides consultation for advice on emergency plan operations. Its purpose is to be the center for coordinating and developing networks to support emergency medical operations both in normal situations and in the event of accidents and disasters.

According to the 2016 Emergency Medical Service Performance Statistics Report, emergency illnesses in Thailand have increased by approximately 100,000 people per year. The most reported cases of emergency illnesses were 388,859 traffic accidents, followed by 299,879 general emergency patients.<sup>3</sup> Although the emergency medical system in Thailand has made significant improvements in recent years, it has not yet achieved all the goals that have been set. The main reason is due to the shortage and unequal distribution of all types of emergency medical personnel. Although there are efforts to employ more personnel, currently we are short of personnel, and Thailand still needs a significant number

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of emergency medical personnel because of the many different positions needed in this area of expertise. In 2012, there were about 247 emergency medicine physicians, but, likely, many have since moved to work in the private sector. One of the reasons for this is the increased workload and lack of support and encouragement from executives and other medical professionals, including compensation inconsistent with the workload. As for professional nurses, there is still a shortage in every department. Although two universities provide medical courses, in 2009, many positions for emergency medical practitioners were unfilled, resulting in an insufficient amount to meet the demand.<sup>2</sup> Today, there is still a significant shortage of medical emergency workers. Some of them have moved to work in public health due to the lack of foreseeable development and advancement that can be reached within their job, the lack of civil servant status, the lack of provision of a professional license, and the lack of sufficient compensation.

Therefore, this paper intends to explore the relationship of personal factors such as job motivation and the persistence of personnel in emergency medical system units in university hospitals in Bangkok to create personnel incentives and to help develop Thailand's emergency medical system for sustainable progress in the future.

**Materials and Methods**

Participants were recruited from 6 EMS centers in August 2020. The human research ethics committee of the Faculty of Medicine Ramathibodi Hospital, Mahidol University, approved this study (Protocol Approval No. MURA2020/1167). The participants needed to meet all the inclusion and exclusion criteria listed below.

*Inclusion criteria:*

- Working at EMS units more than 1 year.
- Age between 20-60 years old.
- Being able to write, read, and understand the Thai language.

*Exclusion criteria:*

- Participants had one or more of the following conditions, as noted in the medical record: cognitive impairment at any degree, psychosis disorder or emotional disorder.

*Variables*

Demographics data

Self-reported socio-demographic data included age, gender, marital status, education, occupations, working experience in EMS, working hours per week, income per month (THB baht), health problems, and medical scheme.

Employee Motivation and Retention in the EMS System

The EMS system's employee motivation and retention was assessed with employee motivation and EMS system in Thai. The reliability of employee motivation and retention in the EMS system questionnaire had a Cronbach's alpha of 0.93.

Statistical analysis

The descriptive statistics were used to describe the frequencies, percentage, means ± SD. Data were analyzed using Pearson's correlation. Values of p < 0.05 were considered to be significant. All analyses were performed using SPSS version <sup>22</sup>.

**Results**

A total of 141 consecutive participants were recruited to participate in the study. The 141 participants had a mean age of 34.75 ± 7.67 years, 69.5% were male, and 30.5% were female. 51.8% held a Bachelor's degree. 53.9% were Emergency Medical Responder (EMR) and Emergency Medical Technician (EMT), and 35.5% were nurses, respectively. More than 80% had working experience in EMS below ten years, and 57.4% had worked more than 40 hours per week. 22.7% had Health problems, and 64.5% were social security schemes (Table 1).

**Table 1:** Demographic data of participants (n = 141).

Demographic data	n (%)
<b>Gender</b>	
Male	98 (69.5)
Female	43 (30.5)
Age (years), mean ± SD, Range	34.75 ± 7.67 , 20-59
<b>Marital status</b>	
Single	72 (51.1)
Couple	61 (43.3)
Divorce	8 (5.6)
<b>Educations</b>	
Below bachelor's degree	59 (41.8)
Bachelor's degree	73 (51.8)
Higher than bachelor's degree	9 (6.4)
<b>Occupations</b>	
EMR and EMT	76 (53.9)
Nurse	50 (35.3)
Paramedic	15 (10.6)
<b>Working experience in EMS (Years)</b>	
≤10	113 (80.1)
11-20	18 (12.8)
>20	10 (7.1)
<b>Working hours per week (Hours)</b>	
≤ 40	60 (42.6)
>40	81 (57.4)
<b>Income per month (Baht)</b>	
≤ 15,000	29 (20.6)
15,001-25,000	69 (48.9)
>25,000	43 (30.5)
<b>Health problems</b>	
Yes	32 (22.7)
No	109 (77.3)
<b>Medical scheme</b>	
Civil servant medical benefit scheme	33 (23.4)
Social security scheme	91 (64.5)
Universal coverage scheme	17 (12.1)

Employee motivation and retention were used in the EMS system in the Thai questionnaire. The questionnaire had a Cronbach's alpha of 0.93. Age, marital status, educations, occupations, working hours per week, health problems, and medical scheme were associated with employee motivation and retention in the EMS system (Table 2).

## Discussion

From the study of factors related to the retention of personnel in EMS units at university level hospitals in Bangkok, it was

found that personal factors in terms of age, working experience in EMS, and employee motivation were related to the persistence of personnel in EMS units at university hospitals in Bangkok. The age of registered nurses was positively correlated with their persistence, with the increase of professional nurses' age per year having a 1.08-fold increase in their persistence level. Age is a reflection of a person's experience both in terms of personal life and work life. Younger individuals will have the opportunity to seek new jobs. They are less tolerant of various pressures, so they are more likely to quit than older people.<sup>4,5</sup>

**Table 2:** Factors associated with employee motivation and retention in the EMS system.

Factors	Age	Marital status	Educations	Income per month (Baht)	Occupations	Employee motivation and retention	Working hours	Health problems	Medical scheme
Employee motivation and retention	0.687**	0.328**	-0.301**	-0.0119	-0.178*	1	0.889**	-0.171*	-0.261**
Age	1	0.461**	-0.287**	0.018	-0.194*	0.687**	0.695**	-0.027	-0.324**
Marital status	0.461**	1	-0.131	0.026	-0.0254**	0.328**	0.309**	0.043	-0.172*
Educations	-0.287**	-0.131	1	0.515**	0.549**	-0.301**	-0.332**	0.052	0.061
Income per month (Baht)	0.018	0.026	0.515**	1	0.567**	-0.0119	-0.054	0.037	-0.147
Occupations	-0.194*	-0.254**	0.549**	0.567**	1	-0.178*	-0.151	0.082	-0.128
Working Hours	0.695**	0.309**	-0.332**	-0.054	-0.151	0.889**	1	-0.105	-0.321**
Health problems	-0.027	0.043	0.052	0.037	0.082	-0.171*	-0.105	1	-0.087
Medical scheme	-0.324**	-0.172*	0.061	-0.147	-0.128	-0.261**	-0.321**	-0.087	1

\*Pearson correlation is significant at the 0.05 level (2-tailed).

\*\*Pearson correlation is significant at the 0.01 level (2-tailed).

The duration of EMS employment relating to the persistence of personnel in the EMS unit at university-level hospitals in Bangkok is statistically significant. The study found that the personal factor of the length of stay in the organization was the only factor that correlated with persistence in the job. It is also consistent with Mowday<sup>6</sup> stating that the longer the duration of work correlates to the higher the commitment to the organization because personnel that have accumulated experience, work skills and proficiency in the job over time, tend to be rewarded with benefits or a promotion which, therefore, reduce the desire to quit. However, this differs from the study of Phaengkratok W and Klandueng S.<sup>7</sup> They found that the personal characteristics factor and the persistence factor in the support personnel at Khon Kaen Hospital in terms of age and length of work were not significantly correlated with the persistence of hospital support personnel.

Employee motivation, success at work, job advancement, job security, working environment, salary, and compensation in EMS work are all related to job retention of personnel in EMS departments at university level hospitals in Bangkok. These factors are statistically significant, as described in a study by Herberg<sup>8</sup> whereby work motivation in terms of motivating and sustaining factors is associated with persistence and organizational commitment. When personnel is motivated to work, they feel that they are involved in working with their

organization. Personnel will use their knowledge, abilities, and potential to achieve organizational goals and desire to maintain their membership in the organization. This is consistent with Wongrksat and Sutherasan<sup>9</sup> which studies the factors causing the persistence of registered nurses in Thammasat University Hospital. The results of the research revealed that motivating factors, supporting factors, and commitment to the organization correlated with persistence in the job and were consistent with the research study of Chupan et al.<sup>10</sup>, whereby the factors related to job retention of university hospital personnel found that the motivation in the work of personnel in terms of organizational characteristics, opportunities for career, advancement, nature of work, relationship with personnel in the organization, monthly income, and received compensation correlated with persistence in the job.

## Conclusion

Employee motivation and retention were associated with age, marital status, educations, occupation, working hours per week, health problems, and medical scheme were related to employee motivation and retention in the EMS system.

## Conflict of Interest

The authors declare on conflict of interest.

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