Environment, Self-Situation Awareness and Performance in Emergency Department

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Abstract

The aim of this research was to analyzing correlation among physical environment and human environment to self-situation awareness and performance both directly and indirectly for medical staff in Emergency Department. The research method used was a multi-stage analysis. Descriptive data analyzed by using SPSS program version 16, then correlation data among variables analyzed by using Covariance Based Structural Equation Modelling (VBSEM) AMOS technique to get fit model with actual research data. This research was a quantitative with total sampling method. The population or sampling were all medical staff in emergency department, who keen to be involved in research from two academic hospitals, one district General Hospital and two private hospitals with total sampling 219 people. The results of research indicated that there was a directly correlation between physical environment to self situation awareness and an indirectly correlation between physical environment and performance through self-situation awareness. Moreover, there was a directly correlation among human environment to self-situation awareness and a directly correlation between human environment and performance through self-situation awareness of medical staff in Emergency Department. Therefore, of course, there was a directly correlation between self-situation awareness and performance.

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It was recommended that self-situation awareness indicators used as ongoing clinical performance evaluation for medical staff in recruitment and placement process. This was one of risk management efforts for emergency patient safety program at human resource department in hospital.

**Keywords:** physical environment; human environment; self-situation awareness; performance.

**1. Introduction**

Paradigm shifting in quality of health care was just the beginning of patient safety issue, such as paradigm of equity focused on access of care (physically, economically and socially access), then changed to partnership paradigm which focused on mutualism relationship between doctor and patient. Then, in 1990s quality of care focused on patient satisfaction through reliability, assurance, tangible, empathy and responsiveness (RATER) indicators [1].

This paradigm then changed in 2000s which was focused on patient-centered care, that patient safety values need and want of patient became a priority in integrated care with blaming-free culture [2,3]. Then, in 2005, the issues started with patient and family centered care which focused on dignity or respect, information sharing, participation and collaboration [4].

Patient safety issue was booming in 2000s since Institute of Medicine (IOM) reported in White house Congress reported medical error incidents in USA hospitals was about 44,000-98,000/year or the eighth rank determinant for patient death in hospital in USA, which was over than AIDS cases, breast cancer and traffic accidents [5]. Based on WHO research in Europe, USA, Asia and Australia hospitals, it was found that impact of medical error would resulted to permanent disability (13.7%), death (4.9%), increase of length of stay (3.7%) and increase of claims in court which was about $17-29 billion/year. The medical error was like iceberg phenomenon, as medical error was more likely unreported. Even, the real rate of incident was ten times higher than reported [3]. It was suprised that more than 50% of medical error cases could be able to be prevented [6,7].

Moreover, learning of medical error incidents were more likely ineffective as blaming culture in hospital which resulted to reluctant of medical staff to talk about. Even, Indonesian Government has a policy on patient safety through accreditation standards, the medical errors were not significantly decreased, as solution of the root cause of cases was not followed effectively.

Based on previous research, the causes of medical errors were organization culture, human resource, ergonomics, unprioritized patient safety program and unintegrated incident reporting [8]. It was found that human resource was the dominant cause of the incidents [8,9], especially it was related with complexity of decision professionally [8,10,11,12,13,14]. Decision making mistakes were more likely resulted from poor non technical skills such as capability in situation awareness. Poor non technical skill was not considered as a necessity training for human resource in hospital. Therefore, the root cause of medical error which poor human behavior in non technical skills was never resolved [15,16].

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