Perception of Safety Attitude and Priority and Progress of Safe Practices of Nurses in Emergency Services Hospitals

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Purpose: The purpose of this study was to examine the relationship between safety attitude and practices of nurses at emergency departments, in hospitals. Study samples: A total of 251 nurses working in the emergency department at 18 hospitals, which have over 300-beds in K-do and C-do (province) from May to July, 2014. Methods: A descriptive research study using a survey questionnaire on safety attitude scale safe practices was used. Results: There were significant differences in the level of perception of safety attitude and priority and progress of safe practices according to the nurses' age and number of safety education sessions. There were positive correlations between priority and progress of safe practices. However, there were no correlations between priority and safety attitude. Conclusion: The nurses’ perception of attitude toward safety practice was positively impacted on the progress of safe practices in the emergency department.

Key words: Emergency Service, Hospital, Safety, Nurse

1 Introduction

In the emergency department (ER), patients’ lives depend on the medical personnel’s quick identification of issues and appropriate interventions using critical thinking skills [1]. Therefore, in the ER, qualified and experienced medical personnel are required to provide immediate and appropriate interventions to the patients in need of emergency care [2]. In a study focusing on medical errors in hospitalized patients revealed that an average of 9.2 % of 5,744,566 in-patients had experienced an Incidence of medical error and an estimated death rate among those who had an incident of medical error was 7.4% in 2010. Majority of those errors were preventable medical errors and more than 80% of these errors occurred in the emergency department [3]. Increasing number of critically ill patients requiring immediate attention in the ER, despite the lack of available beds for these patients, resulted in increased patients’ length of stay in the ER while decreasing nurses or...
healthcare professionals’ time spent for direct patient care.

Increased patient’s length of stay in the ER due to limited inpatient units, without increasing number of care providers, has resulted in overcrowding the emergency department with patients and placed ERs to face challenges in managing and using resources efficiently [4]. Despite the demands for increased time and effort to care for critically ill patients who require immediate medical attention in the emergency department, nurses’ direct care time for individuals were decreased significantly. These changes in the medical environment have impacted on medical personnel’s progress in emergency departments thus increasing vulnerability in providing safe and quality patient care. As risk of malpractice or medical error increases, threats to the patient safety also increased [5].

According to a study [5], on average, 18 cases of medical errors occur in every 100 patients visiting the emergency department [5]. For example, in one local emergency medical center, 177 cases of medical error occurred in 160 patients visited [6]. Study findings revealed that Research shows 75.1% of all medical errors were caused by doctors, 13% by nurses, and 8% from the other disciplines. Based on these results, the issues of medical malpractice and medical errors in the emergency department can never be overlooked by nursing as issues related to the discipline of nursing cannot be separated nor an exception from the issues related in the medical workforce.

Nurses take an important role in hospital safety. Nurses have close relationships with their patients and interact with them 24 hours a day seven days a week. Needless to say, nurses’ workloads and patient safety are closely related. Therefore, it is imperative for the ER nurses to identify various risk factors threatening patients’ safety in emergency departments to reduce, eliminate, or prevent medical errors by creating a systematic safety culture, thus providing efficient and safe nursing care to the patients. However, despite the heightened awareness of culture of patient safety due to increased certification to the healthcare organizations that practice culture of safety, assessments of safety management are still in the early stages and have not yet established a firm and solid foundation. One of the reasons for this problem is that many healthcare organizations perform safe nursing practice superficially for short time frames until they obtain the safety certification for the healthcare organization. To resolve this issue, well-planned research is needed to investigate healthcare professionals’ awareness, perception and attitudes of the hospital and unit’s environment, communication methods during and after the medical error to establish a culture of safety by building a safe hospital environment that allows healthcare professionals to discuss openly about the medical errors. [7]. Above all, organizational members’ heightened awareness and positive attitude towards culture of safety are needed to achieve this safety goal.

Despite implementation of various safety care activities, errors related to patient safety are still high in the emergency department [5-6]. Since the emergency department is especially vulnerable for patient safety, it is important for the ER nurses to seek ways to improve the safety of patients in their care. Until recently, many researches focusing on the safety of the ER patients have been done identifying the risk factors threatening patients’ safety in the emergency department [5, 8], ER nurses’ safety awareness and management activities to promote the culture of patient safety [9-10], and proposal of safety measures to promote patient safety [11]. Although many previous studies focusing on the intensifying patient safety management...
activities exist, research studies focusing on the extent of safety of nursing care activities or analysis of nurses’ perception of the importance of safe nursing care practices are hard to find.

This study was aimed to identify the emergency nurses’ attitudes and perception toward culture of safety, priority of safe nursing practices, and progression of the safety practices in the emergency department. By identifying these factors related to nurses’ attitude toward and nursing priority of safe nursing care activities, will present the basis for future program development and enhance safety management activities.

2 Purpose of the Study

The purpose of this study is to:

1. Identify the ER nurses attitudes toward patient safety.
2. Identify ER nurses’ perception in the priority and importance of safe nursing activities.
3. Identify the degree of progression of the ER nurses’ safe nursing practice (in their daily activities).
4. Identify the relationship between ER nurses’ attitude, the priority of importance, and degree of progression of the safe nursing activities.

3 Methods

Study Design This study is a descriptive research focusing on identifying the effects of the ER nurses attitude toward patient safety on the priority and degree of progression of safe nursing practice.

Study Sample Samples of this study were 262 nurses working in the emergency department in 18 general hospitals in K-do and C-do province in S. Korea. Each hospital had more than 300-beds. All of the study participants were explained the purpose of the study and agreed to participate in the study. To estimate proper sample size, statistical power analysis program G * Power version 3.1.2 was used. The level of significance was calculated (∝= 0.05, 0.95 power of the test). The minimum sample size 184 was calculated (the effect size of 0.15). The actual sample size of 251 for this study met the appropriate sample size. Data was collected from 300 samples. However, 49 responses containing insufficient data were excluded. 251 samples were selected for the final analysis.

4 Study Tool

Attitudes Towards Patient Safety
Attitude towards patient safety is a measurement tool developed by [12] using the Safety Attitude Questionnaire Short Form. This tool was translated and used by [13] and permission to use the tool was obtained from the researcher [13]. In this study, six-sub category: (a) the culture of teamwork, (b) culture of safety, (c) job satisfaction, (d) awareness of stress awareness, (e) awareness of management, and (g) work environment will be measured using a total of 31 questions. Each question a five-point Likert scale 1 being strongly disagree (not very true) and 5 being strongly agree (very true). The higher score means the positive attitude to patient safety. Cronbach $\alpha = .81$ in the study of [13], Cronbach $\alpha = .84$ for this study.

**Degree of Importance and Progress of Patient Safety Activities**

To measure the level of priority and progression of patient safety activities, 34 safety practices, which was updated in 2006 from the 30-safety practice data practices developed by the American quality forums (NQF) in 2003 was used. The approval for translate and use was obtained by two S. Korean professors from the NQF. The tool was translated by two nursing professors individually and re-translated five times until they agreed the translation was accurate and reached consensus for the accuracy of the tools. The translated tool was sent along with the original tool to a Korean professor who has been living in the United States longer than 20 years and an American professor who has been residing in S. Korea more than 15 years for verification of accuracy of the translation. Both professors affirmed that there was no significant difference between original and translated tools.

In this study, to measure the degree of importance, the same order of items was used as it was on the original tool as it was in the research [14]. On measuring the degree of progress of patient safety activities, the list of priority level was placed in the opposite order of items on the original tool. The degree of importance was measured using the 5-point Likert scale scores ranging from “not important” (1 point) to “very important” (5 points), which higher the score indicates the higher level of importance. The degree of progress was also measured using the 5-point Likert scale scores ranging from the “Strongly disagree” (1 point) to “Strongly agree” (5-point), which a higher score indicates the higher level of progress.

5 Data Collection Procedures

Upon approval from the S-University’s institutional review board (IRB No: SMU-2014-04-001-01), where this researcher is affiliated with, this researcher visited the nursing department of the study settings (18 general hospitals) to obtain permission to collect data from their nurses working in the emergency department. Permission was obtained for the study from the nursing department after submitting the letter of requests for access to study samples and data collection, data collection strategies, and data collection tools. Once permission was granted, the survey questionnaires and the envelopes with return address and postage were distributed to the personnel at nursing departments. In consideration of ethical principles, the study samples were explained about the objectives and methods of the study, approximate time to complete the survey; 30 minutes, assurance of the confidentiality and anonymity of the study participants, and if participants decide to cancel participating in the study or decide
not to answer to any specific questions, the decision will be respected without any prejudice. Data collection was initiated after obtaining written informed consent using the survey questionnaires. The data was collected between May and July 2014. Total of 300 surveys were collected by mail and among them, 49 surveys were discarded due to insufficient answers to the questionnaires. Total of 251 surveys were chosen for final analysis.

6 Data Analysis

For data analysis, SPSS Window 19.0 program was used. (a) The general characteristics of the subjects, attitudes toward patient safety, the priority and progress of the safety were analyzed and frequency, percentage, mean, and standard deviation were calculated. (b) General characteristics related to the attitude toward patient safety, the level of priority and progression about safety practice was analyzed using t-test and one-way ANOVA. (c) The attitude toward patient safety and priority and progression about safety practice was analyzed using Pearson \( r \) (Correlation Coefficient).

7 Results

Attitude to patient safety, the importance of safety activities, progress evaluation

Table 1. Priority, Progress and Safety Attitude

<table>
<thead>
<tr>
<th>Items</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety Attitude</td>
<td></td>
</tr>
<tr>
<td>Teamwork climate</td>
<td>3.29 (.44)</td>
</tr>
<tr>
<td>Safety climate</td>
<td>3.19 (.41)</td>
</tr>
<tr>
<td>Job satisfaction</td>
<td>3.27 (.31)</td>
</tr>
<tr>
<td>Stress recognition</td>
<td>3.93 (.54)</td>
</tr>
<tr>
<td>Perception of management</td>
<td>2.93 (.51)</td>
</tr>
<tr>
<td>Working condition</td>
<td>3.24 (.79)</td>
</tr>
<tr>
<td>Overall</td>
<td>3.27 (.31)</td>
</tr>
<tr>
<td>Priority</td>
<td></td>
</tr>
<tr>
<td>Creating and Sustaining a Culture of Safety</td>
<td>4.50 (.70)</td>
</tr>
</tbody>
</table>
Informed Consent, Life-Sustaining Treatment, Disclosure, and Care of the Care-giver 4.47 (.65)

Matching Healthcare Needs with Service Delivery Capability 4.39 (.62)

Facilitating Information Transfer and Clear Communication 4.41 (.59)

Medication Management 4.40 (.66)

Prevention of Healthcare-Associated Infections 4.53 (.61)

Condition- and Site-Specific Practices 4.27 (.48)

Overall 4.42 (.62)

Creating and Sustaining a Culture of Safety 3.40 (.71)

Informed Consent, Life-Sustaining Treatment, Disclosure, and Care of the Caregiver 3.15 (.57)

Matching Healthcare Needs with Service Delivery Capability 3.35 (.43)

Facilitating Information Transfer and Clear Communication 3.55 (.49)

Medication Management 3.64 (.58)

Prevention of Healthcare-Associated Infections 3.79 (.58)

Condition- and Site-Specific Practices 3.46 (.54)

Overall 3.48 (.56)

The degree of correlation between importance and progress safety attitudes and safety of patient care activities on subjects

Table 2. Correlation between Priority, Progress and Safety Attitude

<table>
<thead>
<tr>
<th></th>
<th>Priority</th>
<th>Progress</th>
<th>TC</th>
<th>SC</th>
<th>JB</th>
<th>SR</th>
<th>PM</th>
<th>WC</th>
<th>SA</th>
<th>(overall)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priority</td>
<td>.290**</td>
<td>1</td>
<td>.05</td>
<td>102</td>
<td>-.007</td>
<td>-.007</td>
<td>.039</td>
<td>.090</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Progress</td>
<td>.290**</td>
<td>.05</td>
<td>.476</td>
<td>.469</td>
<td>.423</td>
<td>.270</td>
<td>.231</td>
<td>.498**</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TC: Teamwork climate, SC: Safety climate, JB: Job satisfaction,
8 Conclusions and Recommendations

The purpose of this descriptive research study was to identify the ER nurses’ attitudes toward patient safety, the level of priority and progression of safe nursing activities, and the relationship between ER nurses’ attitude, the level of priority, and degree of progression of the safe nursing activities. The results of this study revealed that the ER nurses’ attitude toward patient safety was averaged at 3.27 point, the priority of safety activities was averaged at 4.42 point. An average of 3.48 points. General characteristics of the study participants, work environment, characteristics related to attitude toward patient safety, and level of priority and progression is associated with participants’ age and number of safety education. In addition, there was a positive relationship between the attitude toward patient safety and safety activities. Based on this result, this researcher concluded that nurses’ attitude toward patient safety significantly impacts on nurses’ safety activities in the emergency department. Therefore, for effective patient safety practices in hospitals, healthcare organizations need to develop an effective program that can reinforce the nurses’ attitude toward patient safety. However, internal and external hospital environment can influence the factors related to ER nurses’ safety practice in the hospital. Therefore, further research is needed to analyze internal and external environmental factors related to patient safety from different angles. Development of an ER specific safety management and practice is needed for the healthcare professionals to safely care for their patients in emergency situation. Therefore, this researcher suggest (recommends) to develop additional tools that reflects the particular circumstances of the emergency department to identify factors related to the importance and progression of the safety practice in the emergency department.

References