

CHAPTER 1

Introduction

1.1 Statement and Significance of the Problem

In 1999, the Institute of Medicine [IOM] in the USA published the book “To Err Is Human: Building a Safer Health System”, which showed that 98,000 people died in hospitals each year as a result of medical errors that could have been prevented. Moreover, the more complex nature of medical practice and the multitude of interventions is the cause of high error rates (Leape, 1994). Subsequently, the World Health Organization [WHO] considered the problem of patient safety and addressed interventions and preventative care (WHO, 2004, 2006, 2007).

Patient safety became a major issue to support quality improvement in healthcare because safety is used to describe activities that hospitals and other healthcare organizations engage into their priorities for the provision of patient care (Kazandjian, Wicker, Matthes, & Ogunbo, 2008). Nurses are important staff members that can help enhance patient safety improvements as nurses comprise the largest group of healthcare providers. In addition, they have more contact with patients than other healthcare providers. As a result, nursing organizations urge all nurses to comply with patient safety practice guidelines in order to save patients from harm. In Thailand, the Bureau of Health, Office of Permanent Secretary, the Ministry of Public Health and the Thailand Nursing and Midwifery Council set nursing and midwifery practice standards for patient safety goals (Jirasinthipok, Jermviwatkul, Nitrayangkul, Wongsuwansiri, & Wongjaroen, 2008; Thailand Nursing and Midwifery Council [TNC], 2006). The Thai Patient Safety Goals consist of safe surgery, infection control, medication safety, patient care process safety, avoiding catheterization and tubing misconnections, and emergency response. The aim of the patient safety goals is to prevent procedures that could potentially cause harm to hospitalized patients (Healthcare Accreditation Institute [HAI], 2008).

The current evidence, based on patient safety literature, recognizes that patient safety refers to using individual nurse' behaviors while caring for the patient in order to save the patient from providers, environmental conditions, or hazardous situations that could potentially cause harm, injury or damage to the patient. In addition, nurses must attempt to save a patient after something goes wrong by preventing complications. Patient safety is improved by promoting a culture of safety and developing nursing standards based on knowledge of nursing science (Fields et al., 2008; Lorenz, 2007; Ludwick & Zeller, 2008; Miller & Bovbjerg, 2002). The aim of nurse's behaviors for patient safety is to accomplish patient safety goals. Ultimately, the hospitalized patients will be free from harm due to the process of nursing care and hazardous situations.

Literature relating to nurse roles for patient safety leads to the conclusion that the roles of nurses to accomplish safety goals are both active and reactive roles. These roles can be summarized into four groups, namely protection, prevention, mitigation and promotion. The active roles include activities that occur before things go wrong by protecting patients from harm before incidents occur. They consist of identifying any risk areas (Kalish, 2009), paying special attention to risks in individual patients and eliminating these risks as soon as possible (Tzeng & Yin, 2008), assessing patients on admission (Fields et al., 2008), using information to support nursing care plans and identifying other factors which could cause an incident. The active roles also cover activities for preventing patients from harm by attempting to stop any harm before reaching patients. These activities consist of adhering to guidelines for patient safety, accurately entering incident reports (Schnall et al., 2008) and engaging in root cause analysis, promoting a culture of incident reporting, using patient safety goals as a professional nursing development guideline (Cronenwett et al., 2007) and continuing training in patient safety procedures (HAI, 2008; WHO, 2007).

Reactive roles include activities conducted after things go wrong by mitigating the severity of problems and promoting patient safety goals through continuous action procedures. They consist of providing immediate care based on the role of nurses (HAI, 2008), communicating hazards and incidents to other team members, patients and their families (Cronenwett et al., 2007), asking for help immediately (HAI, 2008) and openly disclosing incidents and apologizing (WHO, 2009).

Measuring accomplishments of patient safety goals is needed because patient safety measurements can reflect the degree to which nurses adhere to practice guidelines (Akins, 2005). Therefore, an essential step for patient safety improvement includes measuring the degree to which nurses adhere to guidelines for patient safety (Farley & Battles, 2008). Current approaches in patient safety measurement include structure, process and outcomes. Structure measurement is the measurement of the whole organizational context of care. Process measurement is the evaluation of degree of procedures adherence performed by health care providers, and outcome measurement is the evaluation of the complication rates (Simpson, 2006).

In Thailand, patient safety measurement is based on nursing and midwifery standards. The structure measurement involves management in the nursing organization, human resources management (TNC, 2006), specifying the nursing organizations' vision, making strategies and transferring strategies into practice (Jirasinthipok et al., 2008). Process measurement consists of the rate of incident reports, the application of nursing process into practice, and nursing documentation indicating the quality of nursing care (TNC, 2006). Outcome measurement for incidents and complications is based on indicators of quality of nursing care (Kunaviktikul et al., 2001). The Bureau of Health, Office of Permanent Secretary, the Ministry of Public Health developed patient safety indicators. These indicators are comprised of 10 indicators, namely the number of incidents of patient misidentification, wrong patient procedures, drug administration errors, blood or blood component transfusion errors, incidents of patient falls, hospital acquired infection rate, rate of pressure sores for the hospitalized patient, catheter-associated urinary tract infection rate, the number of incidents of injury from restraint or using medical devices, and the efficient precaution for hospital acquired infection (Jirasinthipok et al., 2008).

Patient safety measurement needs to ensure accurate results. Measurement relies on the number of incidents reported by nurses, however the under reporting of incidents is a common problem of patient safety. Mayo and Duncan (2004) indicate that less than half of the nurses will report an incident. Staff nurses have a tendency to correct the errors without reporting them to a higher authority (Kagan & Barnoy, 2008). In Thailand, incident data has not yet been reported even though the number of

adverse incidents is higher than standard criteria (Padungsak, 2009). Therefore, using the number of incident reports as an indicator for measurement cannot guarantee accurate results.

Outcome measurements are needed to enable data collection from incidents and complication rates throughout the year. However, using the obtained information cannot solve the problem immediately because it takes a long time to measure. Similarly, Simpson (2006) asserted that six months to one year of outcome measurements collection is required to see evidence of decreasing rate of errors. In comparison, the process measurement may take one month. Thus, the process measurement for patient safety can provide accurate and timely information for feedback to nurses to improve patient safety. Effective process measurement for patient safety is the best strategy to achieve patient safety improvements. The aim of patient safety is targeted through the process of care (Farley & Battles, 2008). This means that, nurses perform processes that have been demonstrated to achieve the desired aims and avoid processes that tend to cause harm (Hughes, 2008). Therefore, process measurements for patient safety need evaluating from nurse behaviors. While Griffin and Neal (2000); Motowildo, Borman, and Schmit (1997); Webster's New World College Dictionary (2000) asserted that the behaviour an individual performs, needs to be evaluated degree of effectiveness as it is synonymous with performance.

Performance is an action or behaviour that is relevant to the organization's goal and can be measured in terms of each individual's proficiency (Campbell, McCloy, Oppler, & Sager, 1993). Moreover, Sonnentag and Frese (2002) confirmed that not every behavior could be included under the performance concept, but only behaviour that is relevant to the organizational goals. Currently, the individual performance is a key variable in work because organizations need high performing individuals in order to meet their goals. Healthcare organizations need high performing individual nurses in order to accomplish patient safety goal since worthy accomplishments are produced from high level performances. According to Campbell, McCloy, Oppler, and Sager (1993) stated that outcome is the result of an individual's performance.

To assess the nursing performance in patient safety for nurses become one of the foundations of current efforts to improve patient safety. Werner (2007) assured that performance measurement is better suited to improving measured care than improving the care of individual patients. Therefore, a valid and reliable scale of the nursing performance in patient safety is needed. The current evidence based on patient safety literature recognizes that there are several existing scales used to measure patient safety. Firstly, the Patient Safety Friendly Hospital Certification (PSFHC) and secondly, Patient Safety Performance Measurement (PSPM), established by the World Health Organization Eastern Mediterranean Regional Office (WHOEMRO, 2007). These are used to assess hospitals to determine whether or not they comply with WHO patient safety indicators at the hospital level. Thirdly, the Patient Safety Applicator Tool is used to assess critical processes and performance patient safety systems in healthcare institutions. Fourthly, the Patient Safety Indicators (PSI) as a module in the AHRQ quality indicators developed by the Agency for Healthcare Research and Quality (Farquhar, 2008). The PSI identified problems that patients experience through contact with the healthcare system, by complete reporting and identifying patient safety problems. These instruments are used to evaluate at neither the hospital level, the nursing organization nor individual nurses level.

A commonly used item to assess patient safety is patient safety culture. Patient safety culture refer to management and staff values, beliefs, and norms about what is important in a healthcare organization, how organization members are expected to behave, what attitudes and action are appropriated and inappropriate, and what processes and procedures are rewarded and punished with regard to patient safety (Sorra & Dyer, 2010). The instrument for patient safety culture measurement consists of the following. Firstly, the Safety Attitude Questionnaires (SAQ), which focuses on the attitudes and perception of staff consisting of teamwork climate, safety climate, perceptions of management, job satisfaction, working conditions, and stress recognition (Sexton et al., 2006). Secondly, the Hospital Survey on Patient Safety Culture (HSOPSC), that was developed for the Agency for Healthcare Research and Quality (AHRQ) (Sorra & Nieva, 2004; Blegen, Gearhart, O'Brien, Sehgal, & Alldredge, 2009). Thirdly, the Patient Safety Attitudes, Skills and Knowledge Scale (PS-ASK) (Schnall et al., 2008). Existing instruments focus on the attitudes and

perception of staff on the patient safety culture for hospitals. The SAQ has been adapted for use in specific settings and it is verified in the appropriate context of the organization. Moreover, the SAQ, HSOPSC and PS-ASK have not been developed specifically for patient safety performance of nurses. However, the performance measurement can show the degree of patient safety procedures adherence and provide information to determine the level of actually practice for patient safety. Ultimately, the hospitalized patients will be free from harm due to the process of nursing care

In Thailand, the HAI encourages hospitals to use the HSOPSC survey on patient safety culture; this has been translated into Thai for assessing safety culture within organizations. However, some hospitals survey patient safety culture by using the SAQ. Kaeotawee and Wongkittithaworn (2010) modified the SAQ to determine safety culture attitudes of operating room personnel in Songklanagarind Hospital. This safety attitude questionnaire focused on six dimensions: teamwork climate, safety climate, stress recognition, perception of management, working climate, and job satisfaction. Recently, most instruments for patient safety measurements have not included performance measurement and are rarely applied to performance concept as a conceptual framework in the healthcare sector.

Borman and Motowildo (1993) identified two classes of behaviors: task performance and contextual performance. The term task performance refers to an individual's proficiency that he or she performs to contribute to the organization's technical core either directly by implementing a part of its technological process, or indirectly by providing it with needed materials or services. Contextual performance contributes to organizational effectiveness in a way that shapes the organizational, social, and psychological context. Van Scotter and Motowildo (1996) divided contextual performance into two groups: interpersonal facilitation and job dedication. Interpersonal facilitation refers to acts that help maintain the interpersonal and social context needed to support effective task performance in an organization. Job dedication refers to the motivational foundation for job performance that drives people to act with the intention of promoting the organization's best interests.

The patient safety performance concept derived from the analysis of the concept and performance concept of Borman and Motowildo (1993). The researcher applied these in developing a scale to assess nursing performance in patient safety for

nurses. The new scale is important for patient safety because nursing organizations need individuals to perform at a level which will lead to accomplishing patient safety goals and will reflect nursing outcomes. Moreover, nurses have to work as a team, communicate with team members and coordinate their action in order to accomplish the patient safety goal. Therefore, this study applied the patient safety concept and performance concept as a conceptual framework for developing items of a new scale to assess nursing performance in patient safety for nurses in Thailand.

The term nursing task performance in patient safety is delineated, by the researcher, according to concept analysis. This consists of protection, prevention, mitigation, and promotion. Contextual performance is across the role that supports patient safety which includes interpersonal facilitation for patient safety and dedication to patient safety.

The development of the instrument to measure nursing performance in patient safety for nurses in Thailand provides information that can show actual standard compliance levels of individual nurses. The obtained information could be useful for nursing management to assist in the design of interventions for specific groups. Information will encourage nurses to adhere strictly to the guidelines and build safe practices within the nursing organizations. Therefore, nurses will be able to provide safe nursing care and the new instrument will enable data on patient safety to be collected faster and more efficiently. Nursing managers can use the data obtained to solve problems immediately following the incident. Resolving the patient safety problem immediately will reduce the impact on patients, nursing personnel and the nursing organization.

1.2 Research Objectives

- 1) To develop an instrument to measure the nursing performance in patient safety of professional nurses.
- 2) To conduct a psychometric properties evaluation of the newly developed nursing performance in patient safety instrument.

1.3 Research Question and/or Hypothesis

- 1) What are the safety performances of professional nurses that can be structured into the nursing performance in patient safety instrument?
- 2) What are the psychometric properties of the instrument developed to assess nursing performance in patient safety of professional nurses?

1.4 Definition of Terms

Patient safety refers to the safeness of hospitalized patients from danger arising from healthcare providers, surrounding environments, and hazardous situations. According to Thai Patient Safety Goals, patient safety consists of safe surgery, safe from health care-associated infection, medication and blood safety, safe from patient care process, safe from catheterization and tubing misconnections, and safe from complications of emergency situations.

Performance refers to actual behavior that individuals' perform, this needs to be evaluated for degree of effectiveness. There are two dimensions of performance consisting of task performance and contextual performance.

Task performance refers to an individual's behavior which contributes to the organization's technical core.

Contextual performance refers to an individual's behavior which supports the team and enhances the psychological climate.

Nursing performance in patient safety refers to an individual nurse's behavior while caring for patients, so that these patients are spared the dangers arising from healthcare providers, surrounding environments, and hazardous situations. These behaviors need to be evaluated for degrees of effectiveness. In this study, based on a concept analysis and review of literature, there are two dimensions of nursing performance in patient safety; namely nursing task performance in patient safety and nursing contextual performance in patient safety. Each dimension is defined as follows.

Nursing task performance in patient safety refers to an individual nurse's behavior that contributes to patient safety and accomplishes patient safety goals. These behaviors include both active and reactive behaviors. Active behaviors are activities that occur before things go wrong. Reactive behaviors are activities conducted after things go wrong. In this study the behaviors were classified into four dimensions: protection, prevention, mitigation and promotion.

Protection refers to an individual nurse's behavior in preventing harm before reaching the patients, by finding and preventing incidents that might occur. These behaviors consist of identifying any risk areas, patient assessment, and identifying other factors which could cause incident.

Prevention refers to an individual nurse's behaviors that attempts to stop harm before reaching patients. These behaviors consist of adhering to guidelines for patient safety and accurately entering incident reports.

Mitigation refers to an individual nurse's behaviors in reducing the severity of complications after something goes wrong. These behaviors consist of immediately solving the problem, communicating hazards and incidents to other team members, patients and their families, asking for help immediately, providing immediate care based on the role of nurses, openly disclosing incidents and apologizing.

Promotion refers to an individual nurse's behaviors to perform the nurse function and continually enhance patient safety. These behaviors consist of promoting a culture of incident reporting, using patient safety goals as a professional nursing development goal, and continual training in patient safety procedures.

Nursing contextual performance in patient safety refers to an individual nurses' behaviors while working with other healthcare providers to care for patients and enhance patient safety. In this study, these behaviors were classified into two dimensions: interpersonal facilitation for patient safety and dedication to patient safety. Each dimension is defined as follows.

Interpersonal facilitation for patient safety refers to an individual nurse's behavior to cooperate and immediately respond to requests from other team members in emergency situations, and ask for help when in an emergency

situation, offer assistance without being asked, support team members dealing with patient safety problems and participate in safety meetings.

Dedication to patient safety refers to an individual nurse's behaviors whereby they strive for patient safety; these activities demonstrate effort, show initiative to solve the patient safety problem, persistence and self discipline. These behaviors consist of putting in extra hours to receive training in patient safety, finding time for safety meetings and participating in quality improvement activities, creating methods to solve problems suited to individual patients, creating new innovations to support patient safety, tackling difficult work assignments enthusiastically, paying attention to important details, setting patient safety goal target behavior that they want to achieve for the day. Schedule a patient safety task that focusses on patient safety task priorities, and immediately start working on the most important one.

Nurse refers to a person who is registered by Thailand Nursing and Midwifery Council as a licensed class 1 professional nurse and with at least two years of experience in providing care for patients.



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