
PATIENT SAFETY PERCEPTION AMONG MEDICAL AND NURSING STUDENTS: THE REVIEW

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Abstract

Patient safety has been broadly conceptualized as the prevention of unnecessary patient harm or potential harm. In order to meet the goal of harm prevention in a clinical setting, the patient safety is recommended as an important practice being implementing by the healthcare team in the clinical setting. It is because, the patient safety practice may emphasize on the reduction and mitigation of unsafe acts within the healthcare system, and then it is also known as the best practice that lead to the optimal health outcome of the patients. The patient safety issue had been recognized as the global problem where it is needs the global solutions. Safety is emphasized as the main concern in health system performance and quality management in the healthcare services. The improvement in patient safety and quality of the healthcare services had been identified as an important issue in the healthcare services worldwide.

Keywords:

Introduction

In healthcare education such as nursing education, patient safety is always being a priority in the syllabus where it will be emphasized during the teaching and learning process. During the learning and teaching process in the classroom, the importance of early engagement of medical and healthcare sciences students in patient safety and error reduction will be emphasized and stressed in order to develop the competency and confidence level among the students during serve the patients in the real clinical setting (Nabilou, Feizi & Seyedin, 2015). The education institution has a significant role in order to develop the knowledge, skill, attitude, awareness, and practice regarding the patient safety among the healthcare professional students. The patient safety practice is progressively being integrated into the education of healthcare professionals, it is because the patient safety practice had been recognized as the inducer to improve the quality of care provided by the healthcare professionals to the patients in the clinical setting (Okuyama, Martowiriono & Bijnen, 2011). In addition, it is found that the nurses are making up the largest proportion of the healthcare professionals worldwide where 80% of the healthcare professionals worldwide are nurses. Other than that, the nurses also had been identified play a vital role in order to improve the

patient safety by build the close therapeutic relationship with the patients and their families in a manner that shows respect to the clients, checking the procedure carefully, learning from the errors, and communicating effectively with the other healthcare professionals (Vaismoradi, Salsali & Marck, 2011).

Finally, in order to increase the effectiveness of the learning and teaching process regarding the patient safety among the students, it is recommended that for incorporating the patient safety education into the clinical training programs at the real clinical setting in order to enhance and improve the knowledge and skill among students on the patient safety practice, and then able to increase the competency level among the students on the patient safety at the real clinical setting (Almaramhy, Al-Shobaili, El-Hadary & Dandash, 2011).

Overall, the purposes of this study was to determine the perception regarding patient safety practice at the clinical setting among medical and nursing students at East Coast of Malaysia. These perceptions are includes clinical safety, working in teams, communicating effectively, managing safety risk, understanding human and environmental factors, recognize, respond to and disclose adverse events and close call, culture of safety, scope of practice, consistency, sufficient opportunity, reporting adverse event, patient safety well integrated, clinical aspects covered, "system" aspects covered, can approach them, face disciplinary action, and difficult to question the authority, adverse events focuses mainly on system-related issues, rather than individuals.

Literature Review

The safety culture in the healthcare organization has been determined as the product of individual and group values, attitudes, perceptions, competencies, and patterns of behavior that will determine the commitment and the style and proficiency of an organization's health and safety management. The healthcare organizations which have the positive safety culture environment at workplace may be influenced by the communications founded on mutual trust, shared the perceptions of the importance of safety, and by the confidence in the efficacy of the preventive measures (Mack, 2012). The clinical setting that unable to maintain the safety culture during serve the healthcare services to the patients may increase the risk and rate of the prevalence preventable adverse events where it is may lead to the increasing in the costs, loss of confidence in the institutions, and the lead to the increasing in the moral and organizational problems (Luiz, Simões, Barichello & Barbosa, 2015). The patient safety culture known as the key driver of health-care quality, it is because this culture will emphasize on the reporting, analysis, and prevention of the medical errors that often lead to the adverse health events. Creating a safety culture in the healthcare organization, either hospital or non-hospital setting is important and essential in order to improve the quality of care that delivered to the patients. In order to maintain the patient safety culture, the whole staff in the healthcare organizations from the executives to clinicians it is compulsory for them to be engaged with the hospital's mission (Valentini, 2017). It is suggested for the healthcare organizations to adopt a safety culture model in order to ensure the successful in the implementation of the strategies for the patient safety practice in the clinical setting, and

then it also needs the cooperation from the multilevel staff from the executive to the clinicians (Luiz, Simões, Barichello & Barbosa, 2015).

Important of Patient Safety in Clinical Setting

The patient safety practice compulsory being implementing by the healthcare practitioners worldwide because this practice is able to reduce and mitigate the unsafe acts that maybe occur within the healthcare services and treatments, as well as promote the healthcare practitioners to use and implement the best healthcare practices in the clinical area where they are able to lead an optimal patient outcome (Valentini, 2017). All the hospitals worldwide recognize the patient safety as the top priority where they had built the strong healthcare teams where functioning to provide high quality of the healthcare services with the reduce infection rate, prevent any medication errors, and practice the strong lines of communication between the healthcare teams and clients that involve both patient and family members. It is important for the healthcare practitioner to promote the patient safety practice and culture in the clinical area in order to prevent the patients from experience any dangerous complications from the healthcare services and treatment services to them, slow recovery period, increase the length of hospitalization, and then to prevent any patients from dying unnecessarily especially during receiving the healthcare services and treatment (Wegner et al., 2017).

Furthermore, the patient safety practice known as an important element to ensure the healthcare practitioners able to provide effective and efficient healthcare services where all the healthcare services will serve on the right time and focusing on practice that avoids any bad events from occurring during serving the patients. The patient safety culture also had been identified as the cornerstone of high-quality healthcare where it may focus on preventing any negative outcome of care that may include the mortality and morbidity (Hamdan and Saleem, 2018). In addition, the patient safety able to promote better health outcome of the patients where in the hospital setting it is able to reduce the length of hospitalization, and then able to increase the satisfaction level among patients and family members regarding the quality of healthcare services received and served by the healthcare practitioners.

Patient safety practice needs the cooperation from the whole healthcare practitioners of a healthcare organization, such as a hospital. Then, it may promote the positive working environment where the healthcare practitioners will be working together and well-communicate with each other in order to meet the aim of the patient safety. This positive working environment is able to promote high level of job satisfaction among the healthcare practitioners, and then able to reduce rate of turnover among healthcare practitioners, especially novice practitioners (Mack, 2012).

Finally, patient safety practice may promote the establishing and implementing of the safety culture for the both inpatient and outpatient setting where all the healthcare professionals in the healthcare team will actively participate in order to ensure all the healthcare services and treatments will be served in the proper manner based on the guideline provided and reduce and prevent any medication errors during that process (Phiri, Dietsch and Bonner, 2010).

2.5 Perception regarding the Patient Safety among the Healthcare Professional Students

It is essential to evaluate the perception of healthcare professional students on their own patient safety competence, especially in the clinical setting during clinical attachment or placement period. A cross-sectional and self-reported survey had been conducted by Colet & Cruz (2015) in order to determine the self-reported patient safety competence in both classroom and clinical setting among 191 of nursing students at a government university in Saudi Arabia. The well-developed questionnaire had been used known as Health Professional Education in Patient Safety Survey (H-PEPSS). The result of this finding had been shown that the female nursing students having higher patient safety competence in both classroom and clinical setting along with the dimensions ‘working in teams’ and ‘communicating effectively’. The male nursing students having higher patient safety competence in both classroom and clinical setting in the dimensions of ‘managing safety risks’ and ‘understanding human and environmental factors’. The patient safety competence of the students in the clinical setting is affected by the academic level of the students. In the clinical setting, the students having high patient safety competence for the dimensions of ‘culture of safety’, ‘working in team’, and ‘recognize and respond to remove immediate risks of harm’ compared in the classroom. The researchers of this study had concluded that, there is significant gap between the perceived patient safety competence was observed between both learning settings. Hence, the educational and training interventions should be implemented in order to close this gap.

Next, a cross-sectional was conducted by Liu et al. (2018) at medical universities in Heilongjiang which involved first till five years of medical students to complete the questionnaire. The aim of this study is to evaluate the perception of patient safety culture among the medical students. A majority of the students are having positive perception regarding the patient safety culture. The highest positive response of the medical students was ‘I have a good understanding of patient safety issues as a result of my undergraduate medical training’ (range: 58.4%–99.8%) while the lowest positive response was ‘medical errors are a sign of incompetence’ (14.7%-47.9%). This study had suggested that the policymakers should be focusing on how the educational needs vary across schools and cohorts in order to establish the more appropriate and effective curricula especially related to the patient safety.

Furthermore, a cross-sectional study had been conducted by Lee, Hahm & Lee (2018) to evaluate the perception and intentions of the undergraduate medical students on the patient safety during the clerkship. The findings reported that 78% of the medical students agreed that the quality of care received by the patients closely related with the teamwork during the clinical rotations. The students also agreed that any errors occurred at the clinical setting are being reported (74%). Approximately 41.2% of the medical students mentioned that they have intention to disclose the errors when they saw the medical error committed by other team members. This study also found that, a majority of the medical students having difficulty to speak up regarding the medical errors during clerkship at clinical setting. The findings of this study had given the clerkship directors and clinical service officer the information that may enhanced the positive educational environment and promotes patient safety at clinical setting.

A cross-sectional study had been conducted by Liao, Etchegaray, Williams, Berger, Bell & Thomas (2014) to develop and test the psychometric properties to measure two hundred twenty-eight student's perception about patient safety. Analyses identified five cultural factors; teamwork, safety, error disclosure, experiences with professionalism and comfort expressing professional with good reliability (Cronbach alphas > 0.70). Less than one-third of students had positive perceptions of the error disclosure or professional behaviors and witnessed disrespectful among their team members. The positive perceptions scores for comfort expressing professional concerns were also low and they had difficulty speaking up about unprofessional behaviors.

A qualitative and in-depth interview conducted by Samsiah (2016) had been recruited 31 of healthcare staffs from the nine publicly funded and primary clinics in the three states located in peninsular Malaysia. The aim of this study is to explore the perceptions and attitude among the healthcare staffs regarding the reporting of medication errors. The findings of this study found that, the perceptions and attitude of the healthcare staffs regarding the reporting of medication errors is significantly associated with the nature of errors, reporting system, organizational factors, provider factors, reporter's burden, and benefit of reporting. In order to improve the perception and attitude of the healthcare practitioners regarding the reporting of medication errors, it is essential to improve their understanding regarding the importance of reporting medication errors in order to improve patient safety. Then, a cross-sectional study had been conducted in order to determine the proportion of doctors intending to disclose medical errors and their attitudes and perceptions pertaining to medical errors. This study had involved 276 of doctors in a referral hospital in North Malaysia. This study found that, only 10% (28) of the doctors are intended to disclose the medical errors. It was found that statistically significant difference ($p < 0.001$) when comparing the intention of disclosure with perceived disclosures. Other than that, most of the respondents aware that disclosing an error would make them less likely to get sued, each errors occurred in clinical area should be reported even though it is only the minor error, and the participants experienced relief from disclosing errors. This study found that fear of litigations and improper mechanism or procedure available for disclosure had caused the poor disclosing errors among the doctors (HS & Rashid, 2017).

In Malaysia setting, the Ministry of Health had identified and implemented the four strategies in order to optimize the quality and sustain the quality of life among patients in the clinical area. The 10th Malaysia Plan had promoted the theme '1 Care 1 Malaysia' in order to sustain the quality of care. However, the Medico-Legal Section of Ministry of Health Malaysia still received high total number of complaints regarding the quality of healthcare services provided by the healthcare staff in the clinical area. Then, it is found that the current global initiatives in order to improve the quality performance of the healthcare staffs and services significantly associated with the patient, staffing, and working environment in the clinical area. Hence, it may conclude that there is no single intervention able to optimize the quality of care in order to maintain the patient safety. The multidimensional efforts and interventions are required in order to optimize the quality of care and patient safety in the hospital setting (Jarrar, Abdul Rahman & Sobri Don, 2015).

Factors associated with the Perception regarding the Patient Safety among Healthcare Professional Students

Safety culture had been determined as the set of individual and group values, attitude, perceptions that determine the commitment and style, and also involve the concerning questions related to the patient safety in a healthcare organization. The safety culture in healthcare setting may promote the patient safety practice among the healthcare professional especially in the clinical setting (Hwang, 2015). There are several factors that may be associated with the patient safety practice among the healthcare professionals, especially in the clinical setting. It is shown that the positive perceptions of the safety climate and patient safety practice in the clinical setting associated with the adoption of safe behavior, effective communication skills, attending the training programs related to the patient safety practice, and team work among the healthcare professionals. The positive perceptions on the safety climate and patient safety practice may lead to the reduction in the rate, risk, and prevalence of the preventable adverse events at the clinical setting, and then significantly contributing to the safe practice in the patient care (Bifftu, Dachew, Tadesse Tirunch, Mekonnen Kelkay & Bayu, 2016).

Next, the institutional and environmental sphere significantly related to the adoption of the safety climate where it involves the level of stress among the healthcare professionals, teamwork, level of job satisfaction, the structure of management of the healthcare institutions, and the workload in the clinical setting affected the perception on patient safety among healthcare professionals (Hwang, 2015). A quantitative descriptive and cross-sectional study was conducted among 458 of baccalaureate nursing students from two nursing programs in Ontario, Canada. This study is aimed to evaluate level of confidence on patient safety in the classroom and clinical setting among the nursing students. It is found that, the nurses are more confident in the classroom than in the clinical setting. This study also found that the year of study significantly associated with the confidence level on the patient safety where the fourth year nursing students more confident to practice the patient safety in the clinical setting compared to the second and third year of the nursing students (Raymond, Medves & Godfrey, 2017).

An observational, sectional, and quantitative study was conducted at a large public teaching hospitals located at Brazil. The objective of this study is to determine the association between the score of the patient safety climate and socio-demographic characteristics and professional variables. This study found that the professional performance is the factor that associates with the safety environment for the domain perception of service and hospital management. This study concluded that, it is important to identify the factors associated with the safety environment in the clinical setting because it will provide the ideas to develop the effective strategies for patient safety practice in the clinical setting, especially hospital setting (Luiz, Simões, Barichello & Barbosa, 2015). The other factors that may associated with the competence, confidence, and perception of the medical and health sciences students on the patient safety practice in the clinical setting may include the social support, type of current education institutions, year of the study, attending of the effective theoretical class, and the

clinical environment during the clinical attachment or placement period (Biffu, Dachew, Tadesse Tiruneh, Mekonnen Kelkay & Bayu, 2016).

A qualitative study conducted by Dyab et al (2018) found that the nurses are having a positive attitude regarding the medication error reporting. This study also found that, a majority of the nurses were knowledgeable about medication error reporting, but there was uncertainty towards reporting harmless medication errors. There are also several barriers that had been identified for medication error reporting include impacts of time and workload, fear of investigations, impacts on the jobs, and the negative reactions from the person in charge. A cross-sectional study conducted by Roslaini and Chan (2015) found that almost all from the 284 of respondents choose to not report the medication errors. It is due to the several factors include they unable to identify the cause of dispensing errors, fear that the action of the medication errors reporting will be exposed by the management where the management does not make it private and confidential, to avoid the publicity from the media especially social media, and the nurses found that there is no difference in reporting or not reporting the medication errors.

Finally, it is found that, the major problems causing the medication errors prevalence is related to the ineffective communication that commonly occur between the patients and healthcare staffs. The poor communication in the clinical area may lead to the most frequent cause's adverse effects, delay in the treatment, medications errors, and wrong-site surgery. It is found that the patient safety significantly associated with the effective communication being implemented in the clinical area. Effective communication may increase and improve the therapeutic relationship between the patients and healthcare professional and may enhance proper communication among the healthcare professional in the clinical area. Other than that, in order to promote safe and effective healthcare services in the clinical area especially hospital setting, the healthcare professional should be able to adhere to teamwork and effective communication with the patients. For example, an effective communication between the pharmacist and patient is very important in order to achieve the patient's desired satisfaction, and then improving the medication and treatment outcome (Shitu, Hassan, Thwe Aung, Tuan Kamaruzaman & Musa, 2018).

Discussion

Our first concern, with all the empowerment of theory about patient safety from the faculties, and the focus from health-care institutions on hospital accreditation highlighted about patient safety, the delivery of healthcare to patients is still far from perfect. There are serious concerns about current healthcare education approaches to quality and patient safety and the practice gaps in the clinical setting. Our concerns are; if the faculties are providing enough knowledge to the students and they effectively maintaining patient safety or is it the health-care institutions providing enough practices to the students regarding patient safety.

The second concern is to discuss of any gaps between theory and practices. The health care students are the fortune teams and they need to be educate regarding patient safety. They need to be alert and have sense of empowerment when comes into patient safety. The students need to recognize, interrupt and correct errors that are often life threatening. They

need to learn these aspects from their academic and clinical setting so there is no gap between theory and practice.

Third concern is there is currently little empirical data to address what type of patient safety curriculum is required to produce safer practitioners. Raising the requirements and standards for patient safety education in the curriculum can assist in improving health outcomes by preparing them to be safer practitioners. By having the patient safety curriculum, healthcare students will be capable to work hand in hand with the healthcare teams and gain enough confidence to detect any factors that will jeopardize patient safety with appropriate actions.

In addition, it is reported that there is an increase in the medical errors issue among medical and healthcare students in Malaysia setting. In 2004, a retrospective study had been conducted by Dellemin et al. at Hospital University Sains Malaysia in order to determine the rate of medication error in the hospital setting. It is found that 403 from 10,429 medical errors were found in the geriatric prescription for one month period which is March 2001. Other than that, it is also found that the prevalence of medication errors reported were 20 cases per day. In addition, Khoo et al. (2012) found that 41.1% of the medication errors and 14.5% of decision making errors occurred in the twelve government primary care clinic from west and east Malaysia where 39.9% of these errors had potential to cause serious harm to the patients significantly. From 1 January 2009 to 31 December 2012, it is found that 86.3% of the medication errors occurred at the public-funded hospitals in the Malaysia setting (Samsiah, Othman, Janshed, Hassali & Wan-Mohaina, 2017). However, Roslaini and Chan (2015) reported that, it is found that 29 out of 255 U29 nurses working in the Hospital Sains Malaysia were not reported the medication errors.

Next, Malaysian Patient Safety Goals Annual Report (2016) reported that there were 5 incidents that resulted harm and reduced patient safety include patient falls (191 incidents); medication error (86 incidents); adverse outcome of clinical procedure (62 incidents); dislodgement of catheter (46 incidents); and injury to neonates (39 incidents). From 2014 to 2015, the Patient Safety Unit of the Health Ministry had received 3526 of reports regarding the medication errors with 248,307 near misses in the same period. A study conducted by Selim et al. (2017) had involved 16 public and private hospitals in peninsular Malaysia, and then it is found that the healthcare staffs working in the private hospital perceive their hospital's quality management and patient satisfaction has been improved compared to the public hospitals.

Conclusion

Globally, patient safety culture and practice is varied in different healthcare organizations and clinical units, and then it had caused the medical and health sciences students having the challenges in order to learn and implementing the patient safety practice in clinical setting during the clinical attachment or placement period. Other than that, the patient safety practice also had been growing as the international concern that had challenged both the students and professionals worldwide, and it is requiring the comprehensive review from the healthcare organization and healthcare education institution worldwide (Tella et al., 2015).

Over the past decade, many of related interventions have been implemented in order to reduce the rate and risk of the medication errors, and then may improve the patient safety practice, especially in the clinical setting. However, it is found that the organizational culture in healthcare environment, especially hospital setting has been identified as the main obstacle for the medical and health sciences students to implement and practice the theory of the patient safety that they had learnt in the classroom into the practice during clinical placement or attachment (Nabilou, Feizi & Seyedin, 2015).

Next, the perception of the students regarding the patient safety practice at the clinical setting during clinical attachment period is very important. It is because, they are able to assess the effectiveness of the learning and teaching process during clinical attachment period. However, lack of study being published in Malaysia setting in order to determine the perception of students on the patient safety practice in the clinical setting.

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