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Nurses' Perception of Patient Safety Culture in the Hospital Accreditation Era: A Literature Review

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Abstract

Hospital accreditation is one of main requirements for health services that is used to improve quality assurance and patient safety. Nurses as the largest number of healthcare professionals and front line of hospital services in community have a big role in determining healthcare quality. Health services are always associated with medical action to human. Patient safety is one of the important points in conducting health services in hospital and also a part of Hospital Accreditation. Patient safety culture should be the attention for the nurses because it is the responsibility of the profession. The purpose of this study was to explore the factors that influence the nurse's perception of patient safety in the era of hospital accreditation and to review the impact to the quality of health services in hospitals. Methods: Using a literature review, the authors determined inclusion and exclusion criteria, and then performed searches on electronic databases such as ProQuest, EBSCO Host and SAGE Journal. Full-text articles were assessed for eligibility (n = 32). Inclusion and exclusion criteria were set up based on the aim of the study with the publication years being between 2012 and 2017, and finally there were seven articles meeting all the criteria (n = 7). As a result of this review, in Saudi Arabia, hospital accreditation increased the nurse's perception of patient safety. Moreover, in China and Korea, it was seen that the perception of nurses of patient safety decreases the medication errors rate; in Korea, the highest level of perception is on the dimension of managing safety risks. In addition, in Turkey, the perception of nurses of patient safety is very good. It is concluded that the increased knowledge and perception of nurses about patient safety culture has correlation with the hospital accreditation era and gave some input to improve the quality of hospital services. Training, level education and clinical experiment are essentials factors affecting nurse's perception of patient safety culture.

Keywords: nurse's perception, patient safety culture, hospital accreditation, quality improvement, quality measurement

1. Introduction

Accreditation, defined as a public recognition by a National Healthcare Accreditation Commission of the achievement accreditation standards by a Healthcare Organization,

demonstrated through an independent external peer assessment of that organization's level of performance in relation to the standards [1].

Developing countries frequently use hospital accreditation to guarantee quality and patient safety. However, implementation of accreditation standards is considered too demanding in many organisations. Furthermore, the empirical literature on the benefits of accreditation is sparse and this is the first empirical interrupted time series analysis designed to examine the impact of healthcare accreditation on hospital quality measures [2]. Health care accreditation is a method to review the quality of health care organizations using external surveyors and published standards. It is frequently compared with internal review processes in which members of an organization develop their own methods and standards to assess quality. Little evidence is available to verify which of these two forms of review has an impact on clinical outcomes and patient care. The accreditation process focuses more on risk management and patient safety rather than previous measures to ascertain the degree of compliance to standards [3].

Patient safety is important point to be considered in healthcare. As such, various programs are entered by healthcare institutions to monitor their services including patient safety procedures. Accreditation is one of the programs to monitor healthcare service and an internationally recognized evaluation process used to assess, promote and guarantee efficient and effective quality of patient care and patient safety [4].

Accreditation is increasingly being applied as a tool for government to regulate and guarantee quality of care [5]. The hospital must develop, implement, and maintain an effective, ongoing, hospital-wide, data-driven quality assessment and performance improvement program. The hospital's management must ensure that the program reflects the complexity of the hospital's organization and services, involves all hospital departments and services [6]. Improving market orientation and patient safety have become the key concerns of nursing management. For nurses, establishing a patient safety climate is the key to enhance nursing quality [7].

Healthcare facility is always associated with an increasing risk to patient safety. In the past, the risk management and quality improvement functions often operated separately in healthcare organizations. In addition, each individual also responsible for each function had different lines of reporting. Nurse's patient safety perception is important for the improvement of the patient safety culture in health care organizations. Moreover, some hospitals have recognized that patients will accept treatment with safety insurance. High-quality care is fundamental to protecting the financial assets of the institution and also losing, so that it is very important to have a risk

management plan. In this overview, risk management and patient safety professionals are correlated in a close working relationship [8].

Nurses are responsible to ensuring that cared the patient with safe care, no harm occurs. Nurses have critical role in patient safety and reducing medical errors. In recent decades, patient safety has become a high priority health system issue, due to the high potential of occurring adverse events in health facilities because indicating of the challenge of weak patient safety culture, in educational hospitals. Therefore, the issue should be integrated to all policy makers and managerial initiatives in our health system, as a top priority [9].

Nurses as the largest group of health care providers in offering direct patient care. The purpose of this study is to describe of nurse's perception about patient safety culture post the hospital accreditation, the correlation between nurse's perception about the hospital accreditation and improvement quality care.

2. Methods

This study is literature review. The diversification of recently submitted papers, of what currently appears in Advanced Online Publishing (AOP), which represents about a year of publications, and of papers being reviewed, is encouraging [10]. We searched for published articles that assessed with key words to find the aim for this study. The online databases used are ProQuest, SAGE Journals and EBSCO host. The study is being developed to improve policy making and clinical decision-making, answering questions based on the assessment of all relevant empirical studies [11]. Most of the research papers and literature reviews on barriers and facilitators of quality and safety improvement programs and actions in hospitals failed to have a comprehensive approach, in particular regarding the individual factors, which in a daily practice appear to be key. The objective is to list comprehensively these factors and to organize them in relevant categories [12].

Data of the study is collected from ProQuest (347,327 journals), EBSCO Host (243 journals), and SAGE Journals (66,392 journals), which taken as sources without language restriction and found by keyword Nurse's perception, Patient safety culture, Hospital Accreditation, Quality improvement and Quality measurement. The restriction is applied to limit the selected articles based on the topic about nurses perception to patient safety culture in the hospital accreditation era, published at 2012–2017, and also relevant to purpose of this study.

Characteristics of included studies in this review were literature data source that was explain about nurses perception to patient safety culture in hospital accreditation era. And the final articles have same discussion about this point. Selection is done by considering all the variables studied without seeing other variables as bias. Characteristics of excluded studies was not focused on the aim of the research but refers to the process of articles filtering based on predefined keyword. Other variables can be a factor for this study if will be used and necessary. Article that is irrelevant to the study questions or does not related with nurse's perception related patient safety culture and hospital accreditation era will be taken out from this study (as shown in Figure 1). In the filtering process, we get 32 full text articles that are eligible with search key words that match the included of the study, and also in accordance with the purpose of this review, Finally seven (n = 7) articles were chosen from this selection process. The final grouping of this articles obtained four articles using cross sectional research methods, one article using multiple regression analysis, one article using intervention study and one article using descriptive research design methods. During the search of electronic databases, the authors try to find the similarity of purpose to be made more careful screening of variables included in the deepening of the article dissected.

A reference list of selected articles will be identified and to ensure that potentially relevant articles are reviewed. To sharpen the selection process and find the expected objectives in this literature review, we limit articles in various electronic databases coming from different countries that have a diversity of nurse characters and various hospital policies with respect to patient safety culture. It aims to obtain the latest information from the topic of nurse perception about patient safety culture in the era of hospital accreditation, because in this era, it cannot be denied that in all regions of the world, hospital accreditation is one of requirement in hospital services quality assessment. In all of these studies, the research samples is nurse, according to the purpose of this article, and see whether have a significant change in nurse's perception of the patient's safety culture in the accreditation era, because patient safety is the target of an assessment to obtain an accredited hospital status (as shown in Table 1).
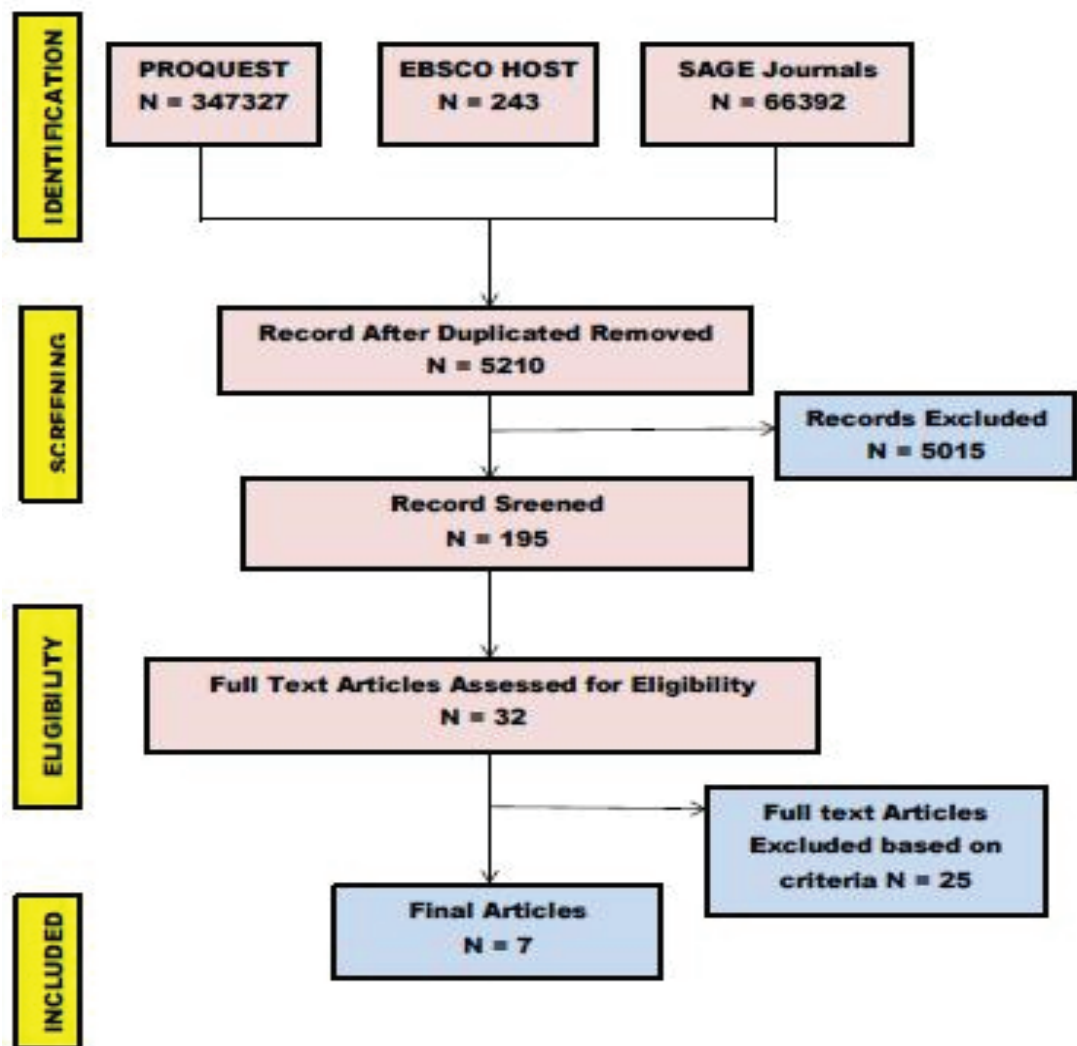
Figure 1: Flow chart of study selection.

TABLE 1: Final articles included in the literature review.

TITLE	METHODS	THE OBJECT OF STUDY	MEASUREMENT TOOLS
What are hospital nurses' strengths and weaknesses in patient safety competence? [13]	Multiple regression analyses	To examine relationship between patient safety competencies and safety climate.	Patient safety competency was measured using the Health Professional Education in Patient Safety Survey (H-PEPSS) and Safety climate was measured using the safety climate subscale of the Safety Attitudes Questionnaire (SAQ

TITLE	METHODS	THE OBJECT OF STUDY	MEASUREMENT TOOLS
Benchmarking the post-accreditation safety culture at King Abdul Aziz University Hospital [3]	Cross-sectional retrospective and prospective study post- accreditation	To perform an unbiased assessment of the impact of accreditation on patient safety culture.	Electronic access to the survey, A 5-point Likert scale was used, The survey results were matched with the international benchmarks from the Hospital Survey on Patient Safety Culture, 2005.
Quality improvements in decreasing medication administration errors made by nursing staff in academic medical centre hospital: a trend analysis during the journey to joint Commission International Accreditation Era[14]	An Intervention study	Reducing Medication Administration Erros (MAEs) in hospitalized patients.	Data mining was performed on MAEs derived from a compulsory electronic reporting system. Results:
Safety Climate and attitude towards medication error reporting after hospital accreditation in South Korea[15]	This study employed a longitudinal, descriptive design. Data were collected using questionnaires.	Compared registered nurses' perceptions of safety climate and attitude towards medication error reporting before and after completing a hospital accreditation program.	Perceived safety climate and attitude towards medication error reporting
Patient Safety Culture as perceived by Nurses in a Joint Commission International Accredited Hospital in Turkey and its comparison with Agency for Health Care Research and quality Data[16]	A cross-sectional study	to evaluate patient safety culture as perceived by nurses in a Joint Commission International (JCI) accredited hospital in Turkey	Hospital Survey on Patient Safety Culture was used. Data were analysed using SPSS Version 15. The rates of positive responses were calculated and compared with AHRQ data
Patient Safety Culture in Turkey Public Hospital: A study of Nurses Perception about Patient safety [18]	a cross-sectional research design and utilized the hospital survey of patient safety culture	to investigate nurses' perceptions about the culture of patient safety in	The survey instrument utilized in this study, the HSOPSC (Hospital Survey on Patient Safety Culture)
Quality of care in accredited and non-accredited hospitals: perceptions of nurses in the Eastern Province, Saudi Arabia[17]	A cross-sectional study	Contribute towards the existing knowledge of the impact of the status of accreditation on a hospital and nurses' perception of the quality of healthcare services.	The data were collected using a questionnaire that was originally developed in previous studies, a Likert scale ranging from 1 = strongly disagree to 5 = strongly agree

TABLE 2: Summary of final articles identification.

TITLE	SETTING AND METHODS	SAMPLE	RESULT	KEY FINDINGS
What are hospital nurses' strengths and weaknesses in patient safety competence?[13]	Three teaching hospitals in Seoul, Korea/Multiple regression analyses	In total, 459 nurses From general adult nursing care units, intensive care units or operating rooms	The mean patient safety competency score was 3.3 (SD = 0.4) out of 5.0; 396 nurses (86.3%) Rated their competency as above average. Among subscales, 'managing safety risks' scores were the highest, and 'teamwork' scores were the lowest	Patient safety competency differed Significantly by participants' age, educational level, clinical experience and position. Patient safety competency was higher in older nurses with master's or higher degrees and clinical experience of longer duration. Nurse managers' scores were higher than those of staff nurses.
Benchmarking the post-accreditation safety culture at King Abdul Aziz University Hospital [3]	King Abdulaziz University Hospital in Jeddah, Saudi Arabia/Cross-sectional retrospective and prospective study post-accreditation	A total of 870 registered nurses from eight different cultural Backgrounds working at 22 hospital	A total of 605 nurses answered the survey questionnaire. The comparison between the percentages of nurses at King Abdulaziz University Hospital (KAUH) and those at international hospitals who answered 'Agree' and 'Strongly agree' showed a post-accreditation improved perception of the culture of patient safety.	Accreditation has an overall statistically significant improvement in the perception of the culture of patient safety. The present study included a total of 870registered nurses, holding at least bachelor of science degree in nursing and who had been a part of the accreditation Survey at KAUH, where in exists a unique multicultural, multi-language competitive environment.
Quality improvements in decreasing medication administration errors made by nursing staff in academic medical centre hospital: a trend analysis during the journey to joint Commission International Accreditation Era[14]	The Second Affiliated Hospital of Zhejia University, Hangzhou; An Intervention study	A3-and-half-year intervention program focusing on MAEs In inpatient nursing care was performed in SAHZU	More experienced registered nurses made fewer medication errors. The number of MAEs in surgical wards was twice that in medicinal wards. Compared With non-intensive care units, the intensive care units exhibited higher occurrence rates of MAEs (1.81% versus 0.24%, P? 0.001).	A 3-and-a-half-year intervention program On MAEs was confirmed to be effective. MAEs made by nursing staff can be reduced, but cannot be eliminated JCI accreditation may help health systems enhance the awareness and ability to prevent MAEs and achieve successful Quality improvements.

TITLE	SETTING AND METHODS	SAMPLE	RESULT	KEY FINDINGS
Safety Climate and attitude towards medication error reporting after hospital accreditation in South Korea[15]	A tertiary acute hospital in South Korea undergoing a Hospital accreditation/This study employed a longitudinal, descriptive design. Data were collected using questionnaires.	Nurses, pre- and post-accreditation (217 and 373).	The level of safety climate and attitude towards medication error reporting increased significantly following accreditation, Participants' perception of safety climate was positively correlated with their attitude towards medication error reporting; this correlation strengthened following completion of the program	Interventions that help hospital administration and managers to provide more supportive leadership may facilitate safety climate improvement Hospitals and their units should develop more friendly and intimate working environments that remove nurses' fear of penalties. Administration and managers should support nurses who report their own errors.
Patient Safety Culture as perceived by Nurses in a Joint Commission International Accredited Hospital in Turkey and its comparison with Agency for Health Care Research and quality Data[16]	A Private Hospital with JCI accreditation certificate in Ankara, Turkey/A cross-sectional study	70 nurses	Teamwork within units and staffing were found to be the dimensions with the highest and lowest positive response rates, respectively. Furthermore, 78% of the nurses graded patient safety as excellent or very good and 53% of them did not report any events within the last 12 months.	staffing, non-punitive response to errors supervisor/manager expectations & actions promoting patient safety communication openness teamwork across units are the areas that need to be improved in terms of patient safety culture

TITLE	SETTING AND METHODS	SAMPLE	RESULT	KEY FINDINGS
Patient Safety Culture in Turkey Public Hospital: A study of Nurses Perception about patient safety[18]	a Turkish Public hospital/a cross-sectional research design and utilized the hospital survey of patient safety culture	The population studied consisted of Approximately 300 nurses from which 200 nurses were surveyed	The response rate was 66.6% of the population. Nurses responded most positively to two dimensions, hospital Management support for patient safety (80%) and supervisor/manager expectations and actions promoting patient safety (79%). Four dimensions with a positive response rate of\50% ('Frequency of events reported' 'Nonpunitive response to error', 'Communication openness' and 'Hospital handoffs and transitions') were considered as potential targets for improvement in our study	This study revealed six significant predictors of Overall Perceptions of Safety: Organizational Learning- Continuous Improvement; Communication Openness; Teamwork within Units; Staffing; Frequency of Event Reporting; and the Patient Safety Grade (of the Hospital Unit) Interventions designed to improve the safety culture in Turkish hospitals should be focused on the concerns of staff nurses and the improvement of communication between these nurses and their managers

TITLE	SETTING AND METHODS	SAMPLE	RESULT	KEY FINDINGS
Quality of care in accredited and non-accredited hospitals: perceptions of nurses in the Eastern Province, Saudi Arabia[17]	One accredited and another Non-accredited hospital at Al-Khobar city, Saudi Arabia/A cross-sectional study	A total of 164 nurses Were surveyed.	The most highly rated scales by nurses were 'education & training' (mean = 4.09), followed by 'quality management' (mean = 3.96) at the accredited hospital compared with 'use of data' (mean = 3.56) and strategic quality planning' (mean = 3.56) at the non-accredited hospital. For both hospitals, the lowest scores were assigned to the 'reward' (mean = 2.78 and 3.06 by nurses at accredited and non-accredited Hospitals, respectively).	Accredited hospitals perform favourably compared with non-accredited hospitals in almost all quality scales. Accreditation can be considered a tool for improving hospital quality. The most important determinants of quality in healthcare were leadership, commitment and support, and strategic Quality planning.

3. Results

The results of literature review is shown in Table 2. Based on data analysis, the results were obtained regarding the concept of nurse's perception to patient safety culture, average journals which reviewed to explain if nurse's perception to patient safety culture can change or improved by many factors (as shown in Table 2). According to Jee-In Hwang articles, it is mentioned that in research at three educational hospitals in Korea, the level of nurse's perception of safety culture concerns to three (3) things, there are competence, safety risk management and team work. Beside that affect the competence are age, educational level, clinical experience and position in the community. Survey results conducted in KAUH Jeddah Saudi Arabia showed 0.695% of the sample responded to the survey through answers in the questionnaire, and the results indicates a significant increase in nurse perception of patient safety after the accreditation process [3, 13].

According to a research conducted by Wang et al. at The Second Affiliated Hospital of Zhejiang Hangzhou University, it is stated that based on the records obtained from the

MAEs, nurses made little medical errors but the incidence rate of medical errors in the ICU room was higher. Climate and attitudes towards nurse's perception to patient safety increased significantly to follow accreditation process. Nurse's perception has positive correlation associated with nurse's attitude and so towards medical error action. This correlation is reinforced and improved until accreditation activity was completed. It is explained in the research conducted at a tertiary acute hospital in South Korea and at a private hospital in Ankara Turkey that teamwork of units and staff dimensions have the higher positive response and the 78% of the assessed nurses think that patient safety procedures is well implemented and very good [14–16].

In a study conducted by Al-Qahtani et al. at two hospitals in Saudi Arabia with study at two hospitals in Saudi Arabia with accredited status and the other without, factors that often influence the nurse's perception of patient safety in an accredited hospital are education, training and quality management, while for in non-accredited hospitals, factors that take effect are the use of data and the quality of strategic planning, and the lowest influence in the two hospitals is reward [17].

According to research by Top and Tekingu in Turkish Public Hospital which 200 nurses were surveyed and the response rate was 66.6% of the population, showed most positively to dimensions hospital management support for patient safety (80%) and supervisor/manager expectations and actions promoting patient safety (79%). The four dimensions related to the nurse's perception of patient safety culture are management support, promotion, communication openness and hospital hands off and transition. This research done in one of the government hospitals in Turkey. This study revealed six significant variables that influence perceptions of patient safety culture, there are organizational learning continuous improvement, communication openness, teamwork within units, staffing, frequency of event reporting and the patient safety grade (of the Hospital Unit). Additionally, four significant variables of the patient safety grade (of the Hospital Unit) that are emerged feedback and communication about error, organizational learning continuous improvement, hospital management support for patient safety and supervisor/manager expectations and actions promoting safety. Nurses' perceptions of the existing culture of patient safety provide a description of the current status of patient safety and the nurses' approach to a safety-focused health care culture. In Turkey, some hospitals (mostly private) attempt to improve patient safety to be accredited by an international accreditation organization [18, 19].

Hospital accreditation is an official recognition from the government to hospitals that have met health standards and must be performed by all hospitals in Indonesia. Each hospital has an accredited liability at least every 3 years. Hospital accreditation is

needed as an effective way to overcome hospital quality by standard. The assessment of accreditation in Indonesia is conducted by an independent institution organized by the government, namely the Hospital Accreditation Commission (*Komisi Akreditas Rumah Sakit/*KARS) and the Joint Commission International (JCI). In the United States accreditation has a substantial impact on a hospital's accountability for quality of care, because participation in accreditation allows the hospital to participate in Medicare, which may act as a major source of funding [20].

4. Discussion

Accreditation has an overall advantage over certification in clinical leadership and review but few of these results are statistically significant. Where both systems, on their own, show a positive association with quality management, their effect in combination appears to be greater and more significant [20].

Based on the results of the data analysis can be concluded that the perception of nurses on the patient's safety culture influenced by many factors including internal factors of nurses and external factors or environment. Internal factors are competence and position in organization and also competency consists of age, educational level, and clinical experience. And those classified as external factors that influence the nurse's perception on patient safety culture are leadership, hospital policy, team work, management support, communication openness, promotion and reward (as shown in Figure 2). While previous research emphasises patient-to-nurse ratios can be strengthening patient safety practices, this study complements by emphasising Registered Nurses' (RNs') own perception of having enough staff and resources to provide quality nursing care, as well as having good collegial nurse–physician relations and the presence of visible and competent nursing leadership all factors highly related to RNs' assessment of the safety of patient care at their workplace. The perception of having enough staff and resources may not be consistent with actual patient: staff ratio, but it appears to be an important factor related to how RNs view patient safety at their ward or unit [21].

There is significant improvement to the nurse's perception to patient safety culture in the process and after hospital accreditation, both are positively correlated and some journals explained that it can improve patient handling to be very good and lower the level of medication errors. In this study we focus on the nurse professionals. It is a fact that the nurse is the largest community in a hospital that has been accredited or not, and the main point that the nurses are the spearhead of hospital services who
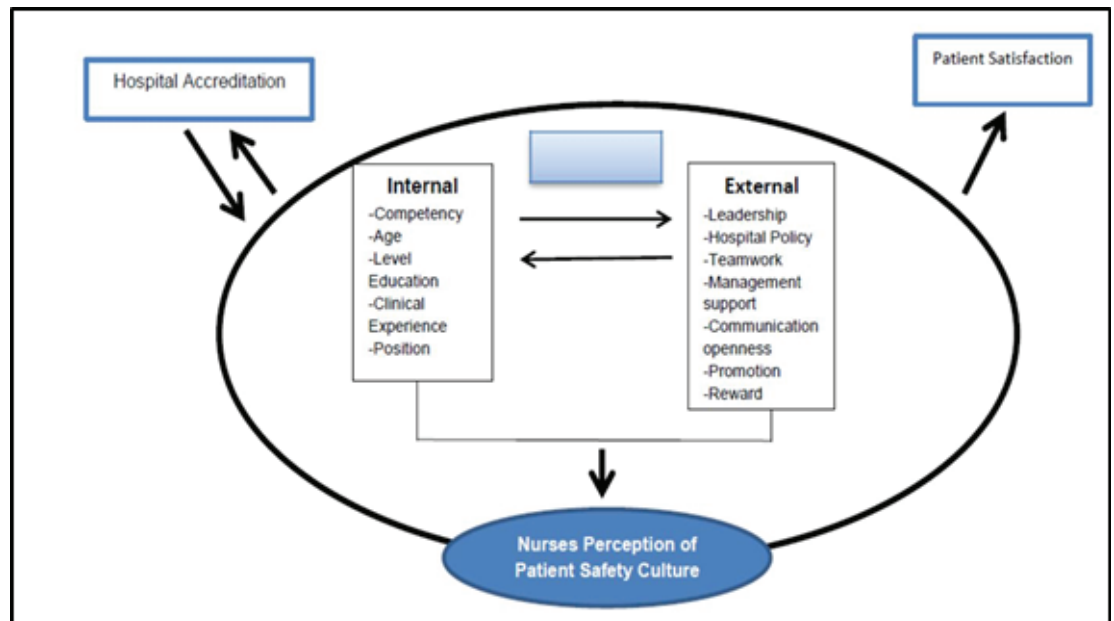
Figure 2: Factors affecting nurses perception to patient safety culture in the hospital accreditation era.

are more often interact with patient. Thus, the safety culture of the patient should be a commitment of the nurses. In accreditation, patient safety is one of the goals that is assessed, and is the main prerequisite that the hospital must meet to terms of various dimensions. The summary of final articles identification is shown in Table 2.

5. Conclusion

Nurses at the accredited hospital perceived a higher level to quality of healthcare. Nurse's perception to patient safety culture influenced by leadership, commitment, and support strategic quality planning, education and training. Another influencing factors are quality management and the use of data compared with their counterparts at non-accredited hospitals. The study finds the demonstrated evidence of a positive association between patient safety competencies and safety climate perception. Strengthening safety climate in the workplace is an essential step towards improving patient safety. At the dimensional level of patient safety competencies, teamwork and communication were significantly associated with perceived safety climate. Therefore, improving nurses' safety competency, with an emphasis on teamwork and effective communication, could contribute to building strong safety cultures.

Improving the culture of patient safety requires a vision and a systematic long-term plan and programs that are well communicated throughout hospitals and other health care organizations. More importantly, this vision must be mutually shared among

all the healthcare professionals, especially hospital managers, physicians and nurses. Accreditation, both during and after the assessment results, can show a very significant influence on the perception of nurses about patient safety culture. Accreditation is also influenced by internal and external factors of the nurse itself. If this patient safety culture has rooted into their awareness, it will be a point more on the process of improving the quality of hospital services surely. Nurses as the frontline of the hospital and the front line in dealing with patients are expected to continue to raise awareness in applying the patient safety culture to reduce the level of unexpected accidents and the occurrence of deaths caused by negligence.

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