PERCEPTIONS OF NURSES REGARDING PATIENT SAFETY CULTURE

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ABSTRACT

OBJECTIVE: The objective of current literature review was to organize and identify existing knowledge regarding perception of nurses on patient safety culture.

METHODS: Literature was searched from year 2007 to 2017 on various databases. Total 16 full texts, peer reviewed quantitative studies conducted on nurse's perception, attitude, knowledge and practices of safety culture were included in this review.

RESULTS: Overall, low positive attitude was found towards patient safety culture. Results of current review revealed that training on patient safety, proper staffing and management support and non-punitive response to errors might have a positive impact on improving patient safety.

CONCLUSION: Patient safety culture was not satisfactory among nurses.

KEY WORDS: Nurses perception, patient safety culture, safety culture

INTRODUCTION

Patient safety is defined by Institute of Medicine as "the prevention of harm to patients" or in other words freedom from harms which are unintentional but preventable during care or treatment (1). Mistakes in health care grasped attention of public in 1990 and debate was started on this significant issue, yet errors continued in health care and caused mortality greater than combined death rates of traffic accidents, AIDS and breast cancer (2). As reported by WHO millions of patients per year in the world undergo adverse events because of medical errors(3). Patient safety is therefore an important aspect of health care for which understanding of patient safety and its outcomes by healthcare professionals is necessary to ensure provision of safe and quality care(4).

Safety culture is a set of perception, values, attitudes and behaviors that demonstrate commitment to approach, ability of health and safety management of an organization(5). Health care services at this present time are more complex compelling health care workers to make critical clinical decision under pressure which can lead to errors and can result in harm to patients health and

life (6). Patient safety culture is the foundation for preventing medical errors and adverse events and to reduce or eliminate its harmful consequences (7). Attitudes, perception, values and beliefs of professionals are necessary to understand the safety culture in health care organizations (3). Only management is not accountable to make sure patient safety rather it is also the responsibility of all professionals involved in patient care to show positive attitude toward patient safety. Nurses, being the back bone of health care plays main role in providing safe care to the patients by actively integrating many features of quality health care (6). Therefore, the aim of this literature review is to organize and identify existing knowledge regarding perception of nurses on patient safety culture.

METHODS

Literature was searched from year 2007 to year 2017. MEDLINE/PUBMED, Google Scholar, and ERIC were searched for this purpose. Medical Subject Heading used for search were "safety culture OR safety climate OR patient safety culture". Furthermore "nurses perception OR nurses attitudes towards patient safety OR nurse knowledge

regarding patient safety OR nurses awareness of patient safety culture were added. Quantitative studies specifically conducted on nurse's perception attitude, knowledge and practices of safety culture were included. Only Peer reviewed and full text articles were selected for this purpose. Inclusion was not specified to one country and Studies carried out all over the world were included. Studies conducted on student nurses and other health care professionals were excluded. Studies other than English language were also excluded.

Initially, 1022 studies were founded on applying filters and descriptors on databases (MEDLINE/PUBMED(n=539), Google Scholar(n=362) and ERIC (n=121)). After reviewing abstracts 989 studies were excluded because they were not relevant with topic or purpose of the review. 33 studies were left from which 13 studies were excluded because after reviewing abstract of articles studies did not met inclusion criteria as their purpose was to assess perception of either health professionals or students regarding patient safety culture. After that 4 additional studies were excluded because on reviewing full articles it was found that they followed qualitative or mixed methods to study perception of nurses about patient safety culture. Finally, 16 studies were included.

RESULTS AND DISCUSSION

Methodologies used in the included studies were of average quality. Only four studies used random sampling (7-11). While remaining 12 studies used convenient sampling technique. Almost all studies signed informed consent from the participants and there was no visible
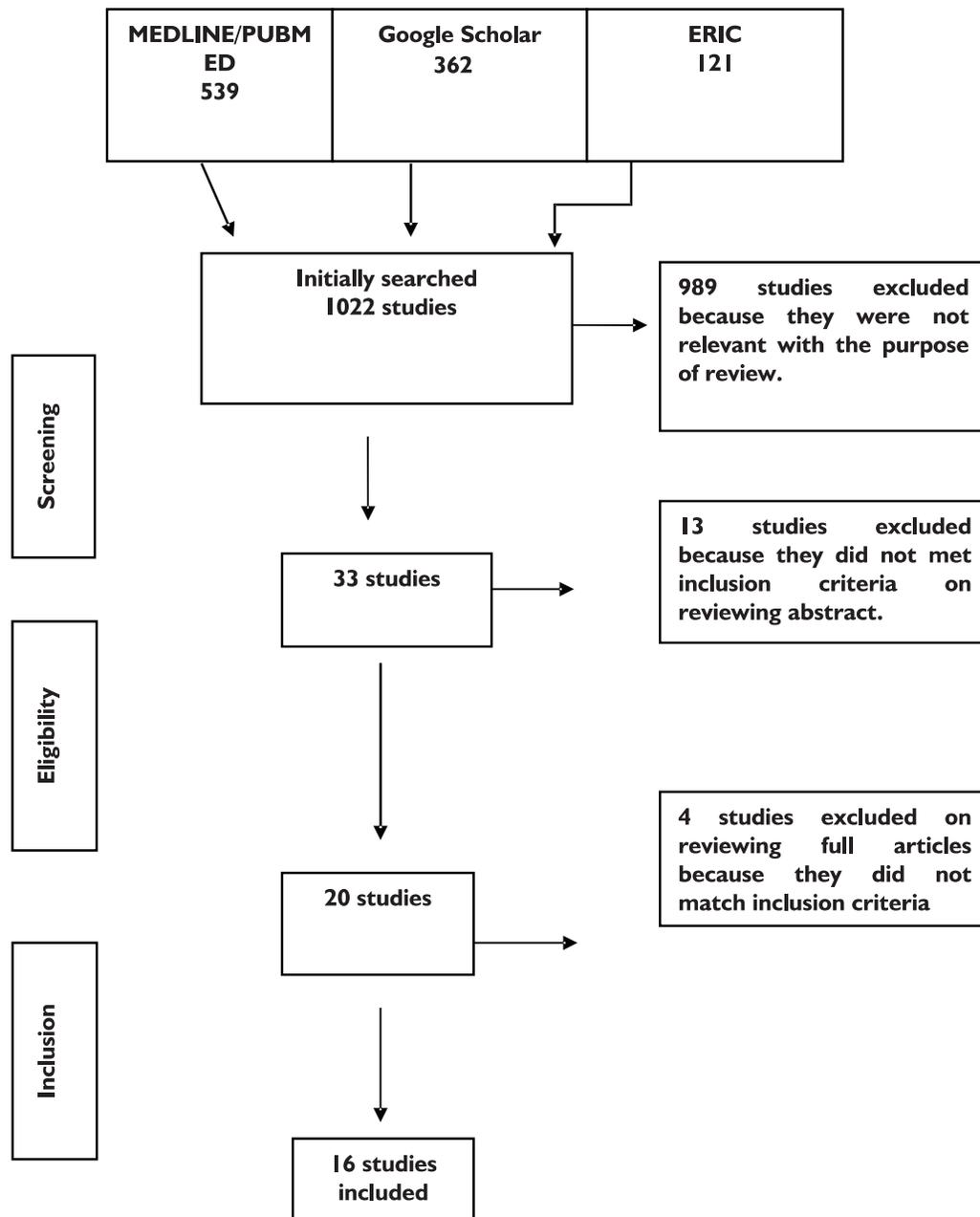
| MEDLINE/PUBM ED 539 | Google Scholar 362 | ERIC 121 |

Screening

Initially searched 1022 studies

989 studies excluded because they were not relevant with the purpose of review.

Eligibility

33 studies

13 studies excluded because they did not met inclusion criteria on reviewing abstract.

Inclusion

20 studies

4 studies excluded on reviewing full articles because they did not match inclusion criteria

16 studies included

Figure 1. PRISMA flow chart for selection of studies.

harm in these studies to the study subjects. Most of the studies reported calculated reliability of the used instruments. Out of 16 included research articles 12 used descriptive and 4 used descriptive correlational design for study (Table 1). Sample size in these studies ranged from 70 to 940 and collective sample of all studies was 5520. 14 studies carried out in various units of hospital in which four studies conducted in different units (Gynecology / Obstetrics, neurology, medical units, pediatrics, surgical units, emergency department, intense care units), two studies in intensive care units, two in medical surgical units and only one research in pediatric emergency. Five studies did not mentioned specified setting in the hospital. Only one study conducted in nursing and residential home. 11 studies used Hospital Survey on Patient Safety Culture (HSOPSC), 3 studies used safety attitude questionnaire while only one study used Practice Environment Scale-Nurse Work Index Revised to assess perception of nurses regarding safety culture.

"Over all perception of safety" culture was rated consistently by two studies (8-12) (Table 2). The highest percent positive responses were rated towards "team work within units" among theses six studies in which three studies scored above the acceptable level of positive perception (6,7,11) and three were at potentially positive level perception (8,12,13). Furthermore one study revealed that nurses who received training on patient safety scored positively than those who did not and

concluded that training can improve patient safety culture in nurses(7). Other studies reported based on their findings that safety culture can be enhanced by manager and supervisors' reinforcement and team work concerning patients' safety (11,13).

The least positive percent scores were towards "non punitive response to errors", "staffing" and "management support for patient safety", however one study found potentialy positive attitude towards "staffing" and non punitive response "errors" which is justfied as it is because emphasis on quality care in the recent years(8). Some studies revealed that most of nurses did not prefer to report errors or adverse event because of the fear of reputation and blame free, less accountable working environment can hinder patient safety culture. "Staffing" is another issue leads to failure of patient safety culture as inadequate number and quality of staff with heavy work load and low level of satisfaction leads to adverse events and errors (6,7,10). Other dimensions were having average positive responses from participants in these studies and none of the studies reached the acceptable level of positive perception towards safety culture, yet there are some areas that can be improved like "Organizational learning and continuous improvement", "feedback and communication openness" which can have positive effect on patient safety culture.

Remaining six studies did not explicitly mentioned percent positive scores of participant which may be because their primary purpose was not only to

measure perception of nurses in term of percent positive score or either they used other tools to asses patients safety culture. One study reported that if nurses undergo stressful situation and they cope it meaningfully it can lead to positive safety culture (14). Another study reported that low level of positive attitude towards patient safety culture is challenge for health care system and managers and policy maker should take initiatives on immediate basis (10). One study revealed that quality improvement models should be developed specifically for each unit and analysis of the situation should be performed to ensure safe and quality practices (15). Some studies reported that education is one of the important strategies to improve patient safety culture and in service training for patient safety should be given to nurses on regular basis, moreover patient safety committee should be established in hospital which can also have positive impact on patient safety (7,9). Some studies reported that nursing authorities should focus individual and organizational factors because it can improve patient safety culture. Furthermore, there should be involvement of nurses in policy making and governance for development of the profession and protection of whistle blowers to encourage environment of error reporting (16,17). One study concluded that evidence-based practice and patient centered care decrease the chances medical errors and hospital acquired infections (18). In addition, positive work environment and job satisfaction were positively associated with patient safety culture (16,19,20).

Table 1: Summary of samples, settings, designs, tools and findings of included studies

Study	Country	Setting	Sample size	Study design	Tool	Findings
Yilmaz Z et al. (7)	Turkey	Hospital (intensive care unit)	316	Descriptive	HSOPSC	88% subjects did not document report of adverse event when they experience. 43% found safety culture in their hospital satisfactory.
Macedo TR et al. (13)	Brazil	Hospital (pediatric emergency units)	75	Descriptive cross sectional	HSOPSC	Overall on the scale strong evidence was not found of patient safety.
Balamurugan E et al. (11)	India	Hospital	141	Descriptive	HSOPSC	Most of the participants 80% respond positively to teamwork with in units. 12 % stated patient safety excellent while 31.9% rated it satisfactory.
Gözlü K et al. (6)	Turkey	Private hospital clinics	70	Descriptive cross-sectional	HSOPSC	Highest positive response was towards teamwork within units. 78% reported safety culture as excellent.
Vifladt A et al. (14)	Norway	Hospital ICU	143	Cross sectional	HSOPSC	Statistically significant association was found between positive safety culture, low burnout scores and powerful sense of coherence.

Bahrami MA et al.(10)	Iran	2 Hospitals (different units)	302	Descriptive cross sectional	HSOPSC	Both hospital have low level of scores in all aspects of patient safety culture. Lowest positive scores reported were of non punitive response to error, staffing and reporting frequency of events
Santos da Silva-Batalha EM et al. (15)	Brazil	Hospital (different units)	301	Descriptive	HSOPSC	Majority of participants founds patient safety acceptable in their units.
Mohammadreza A et ak. (12)	Iran	Hospital	239	Descriptive cross sectional	HSOPSC	Subjects scored higher on teamwork within units and supervisor expectation and actions promoting patient safety.
Buljac-Samardzic M et al. (20)	Netherland	Nursing and residential home	521	Descriptive cross sectional	Safety attitude questionnaire	Study found that stress recognition is not amongdimensions of safety attitude. Furthermore there was strong correlation in job satisfaction teamwork climate, , safety climate perceptions of management and working conditions
Wilson D et al. (21)	US	Hospital (medical surgical units)	375	Descriptive, correlational	HSOPSC	Those participants (nurses) who have no charge respond with more positive attitude than those who have some charge.
Olsson C et al. (18)	Sweden	Hospital (surgical in patients units)	727	Cross sectional, exploratory	Safety attitude questionnaire	Safety culture is positively related to person centered care and evidence based practice.
Jafree SR et al. (17)	Pakistan	Two Hospitals	309	Descriptive correlation	Practice Environment Scale-Nurse Work Index Revised	Error reporting, nurse foundation for quality care and staffing and resource adequacy were negatively rated, however nurse participation in hospital affairs Nurse participation in decisions and healthteam inter relations were positively rated by participants.
Hashemi Dehaghi Z (9)	Iran	Hospital	200	Descriptive correlational	HSOPSC	Participant responses were highly positive in "teamwork attitudes among units" and "organizational learning and permanent improvement" however low on "non punitive response to errors" and "employee problems".
Abdolahzadeh F et al. (16)	Iran	Hospitals (different units)	940	Descriptive correlational	HSOPSC	Married nurses scored significantly positive on the scale than singles. Working times and work place is also significantly related with safety culture.
Alonazi NA et al. (8)	Saudi Arabia	Hospital (different units)	224	Descriptive	HSOPSC	Majority of subjects rated the existing system as good for preventing errors, however several areas needs improvement in terms of improving safety culture.
Tosoa GL et al. (22)	Brazil	Hospital	637	Descriptive	Safety attitude questionnaire	Positive attitude was towards "job satisfaction, work conditions and areas teamwork atmosphere"

Table 2: Comparison of percent positive responses towards different dimensions of patient safety culture of among six included studies

Dimensions	Yilmaz Z et al.(7)	Macedo TR et al. (13)	Balamurugan E et al. (11)	Gözlü K et al.(6)	Mohammadreza A et al.(12)	Alonazi NA et al.(8)
Overall perceptions of patient safety	64.9	NR	NR	75	59.5	59.9
Teamwork across hospital units	49.4	NR	68.3	57	43.8	NR
Hospital handoffs and transitions	59.4	NR	NR	70	54	NR
Manager expectations and actions promoting safety	40.8	67	74.7	54	70	43.5
Organizational learning and continuous improvement	59.4	58	72.1	63	66.9	NR
Teamwork within units	80.3	62	80.2	78	71.4	73
Communication openness	44.9	NR	71.2	55	60	NR
Feedback and communication about error	55.1	NR	68.2	69	64.8	45.7
Non-punitive response to error	25.1	Least positive	42.7	33	22.8	68
Staffing	33.8		52.1	22	38.1	72.7
Management support for patient safety	38.7	Least positive	53.1	69	32.2	NR
Frequency of events reported	25.9	NR	NR	69	50.1	62
NR stands for "not reported"						

CONCLUSION

In this literature review, overall, low positive attitude was found towards patient safety culture or in other words patient safety culture was not satisfactory among nurses. However, some areas were also identified that may have a positive impact on improving patient safety culture. As nurses are in the key role in provision of direct care to the patients, their attitudes and perception needs to be more positive towards safety culture to ensure quality care. Perception of safety culture can be enhanced among nurses by integrating training of patient safety culture with in nursing curriculum, which will embed patient safety in basic nursing practices. Furthermore managers and organizations can play their part by setting strict policies regarding accountability and responsibility for safe and quality care. Limited responsibilities on nurses and proper staffing will consequently decrease number of mistakes and negligence. In addition open communication and teamwork among healthcare professionals can encourage the climate of errors reporting which may lead to learning from errors and eventually would result in improved patient safety culture.

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