

Factors Shaping Patient Safety Management in the Middle East Hospitals from Nursing Perspective: A Focus Group Study

Hanan A. Ezzat Alkorashy

Department of Nursing Administration, Faculty of Nursing, Alexandria University, Egypt
and Nursing Administration and Education Department,
College of Nursing, King Saud University, Saudi Arabia

Abstract: Middle East hospitals make all the efforts to manage patient safety in an effective and efficient manner. When the culture of blame and other factors exist, patient safety management efforts and the adaptability of the system can be affected. This manuscript embraced a qualitative exploration of Factors Shaping Patient Safety Management in the Middle East Hospitals from Nursing Perspective. A semi-structured interview for 3 focus groups followed by a content analysis for the responses was applied. Data was collected in May, 2012. The study was held in a purposefully selected hospital affiliated to Ministry of Health, Saudi Arabia. The participants were purposefully selected nurses (n=23). The inclusion criteria were: have a previous work experience in Middle Eastern countries; working in the current hospital setting for not less than a year; have participation in patient safety management practices and can speak English. The main results were that nurses' perspectives for factors shaping patient safety Management system were nursing leadership, patient expectations of safety, nurses' working hours, nurses' workloads, a culture of blame and a safety culture. The findings concluded that patient safety management efforts in the Middle East hospitals are still in infancy stage. The culture of blame places the responsibility for patient safety upon nursing leaders' inefficiency; imposing heavy workloads along with unreasonable working hours correlated by patients' expectations of safety and it should be replaced with a healthy non-blame culture to support all safety management efforts. Middle East hospitals should consider adapting a patient safety model strategy and a patient safety management protocol insidious of an appropriate patient safety culture relevant to those countries.

Key words: Culture of blame • Content Analysis • Drift into failure model • Middle East • Nurses • Patient safety management

INTRODUCTION

Patient safety is one of the main concerns overwhelm healthcare administrators [1] and system planners [2], since harm to patient often comes from a failing system (not an individual) that lacks the human and/or non-human resources necessary to provide patients with the proper level of care [3, 4]. Patient safety has different meanings under various settings. As it pertains to this study it ensuring a harm free environment when patients are hospitalized or under medical care [4, 5]. To ensure a harm-free environment in

Middle East hospitals, healthcare professionals are still struggling to function above medication errors and other accidents within a non-blaming work environment [5]. In this context, nurses, in relation to other health care workers, tend to be the target of blame within health care professionals since they form the middle boundary between doctor and patient expected and executed care. Nurses then become vulnerable as elements of blame [4, 6].

In the Middle East hospitals, the culture of "Medical Dominance" is still affecting the work environment and the inter-professional relationships between doctors and

Corresponding Author: Hanan A. Ezzat Alkorashy, Department of Nursing Administration, Faculty of Nursing, Alexandria University, Egypt and Nursing Administration and Education Department, College of Nursing, King Saud University,, Riyadh, Saudi Arabia.

nurses [7]. This is true as a significant number of physicians used to deal with nursing professionals as if they are in the lower hierarchy and have no right to discuss a decision related to patient's condition. Instead, they have to obey and implement physician's orders as followers to these physicians. Accordingly, seldom are doctors held accountable for mistakes in ordering care that nurses must execute, since a nurse's role is to carry out doctors' orders [6,7]. Concomitantly and in such culture, doctors are considered as licensed medical practitioners whereas nurses are only licensed care givers within a similar context. Hence, often the professional at the lower level always tends to be the target of blame when there is need for blame to be placed on a professional. A culture of blame then emerges with nurses being the center of its deliberations [8].

Managing patient safety needs to start with assessing the level of harm and ends with strategies to maintain patient safety. In this context, in 2005, World Health Organization (WHO) Patient Safety for the Eastern Mediterranean Region (EMR) met to develop a plan for assessing patient harm. Each EMRO country- Egypt, Jordan, Kuwait, Morocco, Sudan, Tunisia and Yemen- sent a multi-professional team of health care professionals to develop methodologies to (1) measure patient harm in their hospitals; (2) identify the type, incidence and cause of harm; and (3) determine how to prevent patient harm and promote safety [9]. This study revealed that 8% of all hospital patients suffered a permanent disability or died due to unsafe health care and that the majority of harm was preventable. A major causative factor of harm was understaffing and inadequate training of staff [9]. Furthermore, research has been conducted in some countries to determine the magnitude of this problem and training workshops were held among many Middle East nations. Egypt, Jordan, Islamic Republic of Iran, Morocco, Oman, Pakistan, Sudan, Tunisia and Yemen have all adopted the Patient Safety Friendly Hospital Initiative. They are all at different stages in the adoption of WHO patient safety program/process. Commendably, there has been increased patient safety awareness among all Middle East Hospitals, through these programs [9].

Similarly, Care fusion reporters have advanced that with most elaborate state-of-the-art hospitals emerging in Middle East within the last decade, health care must provide safer services for its clients/patients by investing in research that would provide evidence based practices amidst this global development in healthcare [10].

Rasmussen [11] and Cook and Rasmussen [12] assumed that humans functioning in an organization continually struggle to maintain balance between economic efficiency and reduction of workload effort pressures. These factors imitate a drift from efficiency into unacceptable performance, which predisposes to errors and accidents. Consequently, the organization begins to revolve within four boundary masters. These boundary masters are namely: *acceptable performance boundary*, *economic failure boundary*; *unacceptable work load boundary* and *marginal boundary*. In explaining these boundaries the theorists further posited that the *Marginal boundary* is actually an organization's understanding of an acceptable *risk*, which can shift both inwards and outwards. Patient safety is at its highest risk when *Marginal boundary* shifts inwards. Alternatively, when there is stability in patient safety within health care organizations *marginal boundary* shifts outwards. Areas between *risk acceptability*, *marginal boundary* and the *unacceptable performance* boundary infer the system's coping potential [11].

Macchi and his colleagues [13] described two safety and safety management models, the safety models were linear and nonlinear. Non-linear models encompassed Health care systems as organizations drifting into failures from which the theoretical framework forms this study was chosen; Health care systems as High Reliability Organizations; Health care systems as Complex adaptive systems (CAS); Health care organizations as cultures and Health care systems as resilient organizations [13,14].

To structure a patient safety management system in Middle East hospitals, a culture of safety should be initiated and maintained and the factors expected to shape this culture and the safety management system are to be investigated and managed [15]. Accordingly, a group of researchers from World health Organization Alliance for Patient Safety conducted an international literature overview on patient safety. These researchers identified 23 major patient safety topics through a consultative and investigative process which they categorized into a framework. A notable limitation these researchers cited was the unavailability of data from developing or underdeveloped nations regarding patient safety. They concluded that harm from medical care continues to be a problem internationally [16].

However, Alahmadi [17] conducted a study relating an assessment of patient safety culture in Saudi Arabian hospitals and concluded that leadership is a critical factor in patient safety culture along with the fear of blame on nurses.

Another baseline assessment of patient safety culture among nurses at a student university hospital was conducted in Egypt and revealed that job satisfaction; favorable team work climate; stress recognition strategies; appropriate patient safety climate and suitable working conditions are factors affecting patient safety among health care workers in the Middle East [18].

Furthermore, a study was conducted in Iran by Ali and Mohammad [19] and showed a strong relationship between management style and nurse job satisfaction. Strong leadership styles allowed for participative management and increased job satisfaction and improved nurse delivery of health care. Poor perception of management contributed to job dissatisfaction, lowered morale and loss of staff due to lack of motivation [19].

Supportively, in Egypt ZeinEIDin and AbdEIAal [20] investigated the relationship between perceived safety climate, nurses' work environment and barriers to medication administration errors reporting, it was found that the nurses were unable to detect these errors and medication error is not clearly defined for them. This was justified as to lack of nurses' training, especially, about the rules of medication administration, lack of supervision for the early detection of medication administration errors, as well as, the inability of nurses to define the medication errors consistently. Concomitantly, unawareness of nurses about the dramatic outcomes that result from medication administration errors and underreporting these events, as well as the absence of incident reporting systems made nurses fear from being reporting any detected medication error [20].

A similar study in the Sudan found higher job satisfaction and performance when nurses worked in cooperation with their supervisors. Collaborative management styles improve self-esteem and coping skills, as well as confidence of nurses and translate into better patient care [21]. Also, Wilson and a group of researchers [22] conducted a retrospective medical record review of 26 Middle East hospital admissions during 2005 in eight countries. They randomly sampled and reviewed 15,548 patient records to determine adverse event, preventability and consequence. They discovered that 8.2% had evidence of adverse event. There was an average of 2.5 to 18.4% per country. Precisely, 83% were adjudged avoidable, 30% resulted in patient fatality and 34% occurred in non-complex clinical situations.

In developed countries such as the United States and most countries in Europe, where nurses represent the largest group of professionals in the health care industry, nurses are active participants in all patient safety

management practices and efforts and their role in the multidisciplinary teams is vital. Nevertheless, it was not until recently that evidences or studies that neither can provide evidence-based knowledge in patient safety applicable to Middle East nations, nor began to focus on the effect of nursing role on the quality of patient safety management efforts. Expectedly, advanced nurse practitioners and researchers must offer support through scientific researches that provide evidence-based knowledge in patient safety management applicable to Middle East nations. Therefore, the researcher felt obligated towards making a contribution in the enhancement of patient safety management efforts within this territory. Thus, this current content analysis handled a qualitative exploration of Factors Shaping Patient Safety Management in the Middle East Hospitals from Nursing Perspective.

The aim of this study was to explore nurses' perspectives regarding factors shaping patient safety management in Middle East hospitals and research questions were:

- What are Middle East Nurses' perceptions of patient safety.
- What factors do nurses believe are shaping patient safety management in Middle East hospitals?.
- What factors do nurses believe are shaping patient safety management in Middle East hospitals within this territory in the twenty- first century?

MATERIALS AND METHODS

Design: This consisted of a qualitative analysis after applying a focus group interview discussion as the data collection instrument. Data was further interpreted using content analysis. Qualitative design allowed to probe deeply into the experience of nurses and obtaining rigorous data from the 'sharp end' of patient care context.

Setting: The focus group interviews sessions were held in a meeting room of a selected general ward located at of a purposefully selected hospital affiliated to Ministry of Health, Saudi Arabia.

Participants: Purposeful sampling was used to identify and recruit 23 nurses working in the selected setting. The inclusion criteria were: bedside nurses who had a previous work experience in hospital(s) at any of the Middle Eastern countries; nurses working in the current hospital setting for not less than a year and those who

can speak English and may (or may not) speak Arabic language. They had to be involved in the patient safety practices, committees and/or attended events pertaining to patient safety, providing direct care for patients in general wards or specialized units. The sampling was based on a maximum variation approach to capture a vast range of perspectives and experiences [23].

Data Collection Procedure: Audio-recorded, face-to-face, semi-structured interviews were held in quiet and private location in the approved setting in May 2012. Each interview lasted on average between 60 and 90 min. The interviews were conducted by the author in English and sometimes in Arabic language and subsequently translated to English. The translation process was conducted by the author and revised by a bilingual translator. Data used for this manuscript were reviewed by a native English-speaking and patient safety expert. Three focus group interview discussions were held, one for males (n of participants = 5) and 2 for females (n=8) and (n=10).

Study Instrument: After reviewing the related literatures, an interview guide was developed by the researcher. The interview questions were reviewed and their clarity and comprehensiveness were validated by 3 professors and 2 clinical experts in the same field. The foci of the questions were as following: What does the idea of 'patient safety' means to you? Did you face problems or evidenced any problem threatened patient safety during the last 12 months of working in (Middle East Hospital)? Would you please share with me your experiences in these problems or evidences? How do you think of the reason from your point of view? From your point of view, what factors shaped patient safety management/ practices most in the (Middle East country) hospitals? Do you feel hospitals in the Middle East countries are managing patient safety issues effectively? How do you think about nurses' active role in patient safety management in hospital? In addition, probing questions were asked to bring clarification to the participants' responses and follow their thoughts during the interviews. Iterative data collection and analysis proceeded concurrently and once the themes were identified and data saturation was achieved, the interviews were discontinued [24].

Ethical Consideration: The study was approved by the Research Center and the Ethics Committee of the study setting. Permission to perform the focus group interviews was obtained from the managers of the hospital

departments involved in the study. Information about the study was given to potential participants. The nurses who volunteered (n = 23) gave their consent to participate in the study and were informed that they could withdraw from the study at any time. Confidentiality of the participants was guaranteed by removing any identifying features from the transcripts.

Data Analysis: Analysis of data was conducted by applying content analysis strategies. Drawing on work by Graneheim and Lundman [25], the following steps were taken to analyze the collected data:

- Transcribing the interviews verbatim and reading through several times to obtain the sense of whole,
- Dividing the text into meaning units that were condensed,
- Abstracting the condensed meaning units and labeling with codes,
- Sorting codes into sub-categories and categories based on comparisons regarding their similarities and differences and
- Grouping and formulating the answers for the research questions as the expression of the latent content of the text.

Trustworthiness: Trustworthy is the term applied in qualitative studies to describe reliability [26]. To ensure trustworthiness, the researcher invited one of her colleagues who have an experience to perform peer check and attended the interviews and analyzed the data ensuring investigator triangulation. In addition, authentic citations have been included to increase trustworthiness [24]. By this, the researcher believed that a high degree of trustworthiness is maintained throughout the study. Furthermore, member checking was carried out by three randomly selected members of the focus groups. They were asked to review and react to the interview data, emerging categories and results. They acknowledged that the report gave a true account of what they perceived.

RESULTS AND DISCUSSION

The evidence for this study came from the opinions of nurses who are active participants in patient safety management activities and/or practices and had previous work experience(s) in hospitals at any of the Middle East countries. Participants included 18 females and 5 male nurses who had been working in hospitals in Jordan (n=7), Egypt (n=3), Oman (n=2), Syria (n=5), AUE (1) and

Table 1: Interview Focus Group Responses(n=23)

Question	Abstracted condensed Responses	Frequency	Remarks
1. What does the idea of “patient safety” mean to you?	(a) right nurse for the right patient at the right time	12	Jordan (n=3), Egypt (n=2), Oman (n=2), Syria (n=3), AUE (0) and Saudi Arabia (n=2).
	(b) Protecting patients from harm during hospitalizations and procedures	10	Jordan (n=2), Egypt (n=2), Oman (n=1), Syria (n=2), AUE (1) and Saudi Arabia (n=2).
	(c) Not sure	3	Jordan (n=0), Egypt (n=0), Oman (n=0), Syria (n=2), AUE (1) and Saudi Arabia (n=0).
2. Did you face problems or evidenced any problem threatening patient safety within the last 12 months of working in (Middle East Hospital)?	(a) yes	20	Jordan (n=7), Egypt (n=3), Oman (n= 2), Syria (n=5), Saudi Arabia (n=3)
	(b) No	3	AUE (1) and Saudi Arabia (n=2)
3. Would you please share with me your experiences in theseproblems?	(a) Heavy work load issues	18	Jordan (n=7), Egypt (n=3), Oman (n= 2), Syria (n=5), AUE (1),
	(b) Patients expectations of safety	4	Saudi Arabia (n=4).
4. From your point of view, what factors shaped patient safety management/ practices most in the (Middle East country) hospitals ?	(a) Heavy work load issues	20	(n=23)
	(b) Patients expectations of safety	20	(n=23)
	(c) Nursing leadership	20	(n=23)
	(d) Nurses’ working hours,	22	(n=23)
	(e) A safety culture.	23	(n=23)
Sample listed a number of factors			
5. Do you feel hospitals in the Middle East countries are managing patient safety issues effectively?	(a) Yes	17	Jordan (n=7), Egypt (n=2), Oman (n= 2),Syria (n=5) and Saudi Arabia (n=1)
	(b) No	6	Egypt (n=1), AUE (1) and Saudi Arabia (n=4)
6. How do you think about nurses’ active role in patient safety management in hospital?	There is a dominant culture of blame	23	(n=23) Sample was unanimous on this point

Table 2: Summary of key concepts/terms responses (n=23)

Key concepts/terms	Frequency	Percentage
Culture of blame	23	100%
Safety culture	23	100%
Right patient, right nurse right time	12	52.1%
Heavy Workload	19 in response to question3 and 20 in response to question 4	87%
Nurses’ working hours	22	95.6%
Patients expectations of safety	4 in response to question 3 and 20 in response to question 4	52.1%
Nursing leadership	20	87%
Protecting patients from harm	10	43.5%

Saudi Arabia (n=5). Moreover, participants were working either in general medical surgical wards (n=16) or in critical care units (n=7). The primary focus of this study was to describe nurses’ opinions, directly or indirectly linked to factors shaping hospital patient safety management aspects in the Middle East countries.

Table 1 presents the participants’ abstracted and condensed responses to each of the interview questions. While Table 2 illustrates a summary of content analysis in relation to research questions and Table 3 and Figure 1 shows a summary of key concepts/terms responses from the focus group participants.

The focus group interview discussion contained in this qualitative content analysis aimed to explore the factors shaping patient safety management in the

Middle East hospitals. It was worth noting that patient safety in the Middle East operates at the marginal boundary [27]. A culture of blame was a significant factor shaping the patient safety management system towards maintaining this marginal boundary. The results of the focus groups answered three important research questions from a nurses’ perspective related to:

- What are Middle East Nurses’ perceptions of patient safety?
- What factors do nurses believe are shaping patient safety management in Middle East hospitals?
- What factors do nurses believe are shaping patient safety management in hospitals within this territory in the twenty- first century?

Table 3: Summary of content analysis in relation to research questions (n=23)

Research Question	Relationship to interview content key words-patient safety, culture of blame, safety culture, nursing perspective, Middle East	Relationship to literature review	Theoretical Frame work Analysis
1.What are Middle East Nurses' perceptions of <i>patient safety</i>	(a) Right nurse for the right patient at the right time. (b) Protectingpatients from harm during hospitalizations and procedures	Development of a patient safety management model[15].	Arriving at the Acceptable performance boundary in drift to failure theory [32, 15]
2. What factors do nurses believe are shaping patient safety management in <i>Middle East</i> hospitals?	(a) Heavy work load issues (b) Patients expectations of safety (c) Nursing leadership (d) Nurses' working hours. (e) A safety culture.	Collaborative management styles improve self-esteem and coping skills, as well as confidence of nurses and translate into better patient care [21]. There is a strong relationship between management style and nurse job satisfaction [19]. There are very few studies are variable with evidence based data pertaining to <i>Middle East</i>	Economic failure boundary andunacceptable workload boundary
3. What factors do nurses believe are shaping patient safety management in hospitals within this territory in the twenty- first century?	(a) Heavy work load issues (b) Patients' expectations of safety. (c) Nursing leadership (d) Nurses' working hours, nurses' (e) A safety culture. (f) Dominantculture of blame	A notable limitation these researchers cited was the unavailability of data from developing or underdeveloped nations regarding patient safety. They concluded that harm from medical care continues to be a problem internationally [16]	Marginal boundary

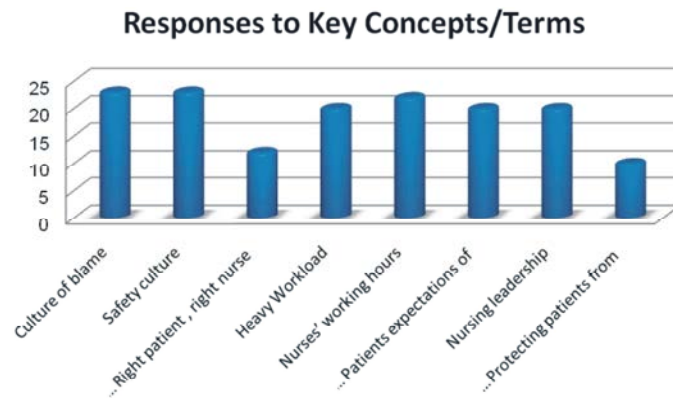


Fig. 1: Graph showing summary of key concepts/terms responses

The data from the three discussion groups was extensive and gave a solid basis for the analysis. The research questions presented in the results were essentially the same as those that emerged in all the interviews. This indicates that these questions were thoroughly discussed within the groups. The groups had participants from different hospital departments and had previous work opportunity in one of the hospitals located in a Middle East country, however, they could not be considered to be representative of these notions.

In terms of activity and participation in the discussions, these three focus groups were quite similar. In addition, the group discussion process was described as a positive experience and this was expressed by a number of participants. In light of this, it was possible for the participants to express opposing viewpoints.

Research Question (1): What Are Middle East Nurses' Perceptions of Patient Safety?: When associating this research question with those asked in the interview focus

group discussion it directly relates to *what does the idea of 'patient safety mean to you and how do you think about nurses' active role in patient safety management in hospital? How do you think about nurses' play an active role in patient safety management/ practices during hospitalization?*. There was balanced participation on this question among male with the female focus groups. However, females expressed various degrees of emotion in responding to this question of patient safety. Responses retrieved related to assigning the right nurse for the right patient at the right time as well as protecting patients from harm during hospitalizations and procedures. According to Macchi and his group of researchers [13], four patient safety management strategies are necessary. They encompass defining patient safety; adapting a safety model; aligning safety management model with the definition developed and integrating safety management system into organization management structure.

Warburton [28] advanced that progression of patient safety as a health policy issue emerged following a number of reports, mainly the "To Err is Human" report published in 2000 by Kohn *et al.* [29] at the Institute of Medicine and the Quality in Australian Healthcare Study released in 2000 [28]. These studies estimated that every year more than 45,000 hospital deaths in developed countries and double that number in developing countries, may be directly attributed to preventable medical errors [30].

This confirms the need for adapting a safety model and aligning safety management with the safety definition adapted by the organization. At the same time when nurses mingle in a *culture of blame* (Tables 1 & 2) structures must emerge to ensure safety leadership; hazard management; strategic management; proactive safety development; work process management; work condition management; competence management; supervisory activity; management of contractors and change management emerging from a safety culture management strategy [31]. From a theoretical perspective when hospital patient safety is at its best then the *acceptable performance boundary* after which a drift into failure may occur [32].

Research Question (2): What Factors Do Nurses Believe Are Shaping Patient Safety Management in Middle East Hospitals?: This research question is related to the focus group interview discussion questions: *from your point of view, what factors shape patient safety management/*

practices most in the (Middle East country) hospitals and do you feel hospitals in the Middle East countries are managing patient safety issues effectively? Responses were: heavy workload issues approximately 87%; patients expected safety 87%; nursing leadership approximately 87%; nurses' working hours, 95.2% and safety culture 100% were reported as the shaping factors. Seventeen, 73.9% participants felt that hospitals in the Middle East countries are managing patient safety issues effectively and six, 26.1% believed they were not (i.e., Managing efficiently) (Tables 1&2).

Goek and Kocaman [33] conducted a study to investigate reasons for Turkish nurses abandoning their professions. They discovered that unsatisfactory working conditions and a negative perception of nursing were the major reasons. An inverse relationship between workload and job satisfaction was correlated. A similar study attributed nursing workload to the shortage of nurses in Jordan [2]. Similarly, further studies confirmed that collaborative management styles improve self-esteem and coping skills [19], as well as confidence of nurses [20] and this translates into better patient care [20, 21].

There are very few studies available with evidence-based data pertaining to Middle East patient safety hospital management. However, hospital administrators all over the world recognize the value of a culture of safety to the delivery of safe care [34]. However, most hospital administrators do not know the basic steps towards implementation of a safety culture [35]. To address this issue the Center for Health Policy and Center for Primary Care and Outcomes Research (CHP/PCOR) at Stanford University and the Patient Safety Center of Inquiry (PSCI) at the VA Palo Alto Health Care System designed a safety culture survey to measure attitudes towards patient safety and organizational culture and to use the data from these surveys to support hospitals in their own development of a culture of safety [36].

Theoretically, the "drift to failure" curve inevitably moves inwards when factors shaping patient safety management become overwhelming, thus, patient safety is at its highest risk when Marginal boundary shifts inwards [8]. This occurs when unacceptable workload boundary become dominant as depicted in the foregoing results.

What Factors Do Nurses Believe Are Shaping Patient Safety in Hospitals Within this Territory in the Twenty- First Century?: This research question was

related to two focus group interview questions: *did you face problems or evidenced any problem threatening patient safety within the last 12 months working in the (Middle East Hospital) and would you please share with me your experiences in these problems?*.

Responses were similar to those given from the previous set of questions (Fig. 1). Jha and his team of researchers [16] confirmed that in the absence of data from developing or underdeveloped nations regarding patient safety, it would appear that harm from medical care continues to be a problem internationally. However, it would appear with additional data that the problem of managing hospital patient safety remains a cause for concern globally.

Theoretically, hospitals in the Middle East function within the marginal boundary as it relates to patient safety management practices. A culture of blame was a significant factor towards maintaining this marginal boundary. Besides, 20 (87%) of the participants reported facing problems or evidenced a problem threatening patient safety within the last 12 months of working in the Middle East hospital; three (13.04%) did not. This development is worth noting that patient safety management efforts in the Middle East hospitals operate at the marginal boundary [27].

Theory Development

Theory of Factors Shaping Patient Safety Management in the Middle East Hospitals from Nursing Perspective:

The theory pertaining to factors shaping patient safety management in the Middle East hospitals from the nursing perspective has its assumptions based on the elements that patients' safety from the nurses' perspective is related to the present safety culture pervading within the hospital environment [37]. This pivots on a culture of blame which places the responsibility for patient safety upon nursing leaders' inefficiency; imposing heavy workloads along with unreasonable working hours correlated by patients' expectations of safety [37, 38].

Study Limitations: The present qualitative study provided the perspectives of only one group of healthcare providers, bed-side nurses (n=23), who had previous work experience in one setting within which a different culture and context were found. Thus, the researcher did not claim to make generalizations from the findings in this study. Moreover, the transferability of findings should be considered with caution and critiqued and compared with those of similar studies conducted in other contexts.

Furthermore, the nurses may have been excessively negative in their perceptions, as they seemed to need to express their concerns about the systems in the Middle East hospitals: they reported that no one else had asked them what they thought about patient safety or the factors shaping its management systems and/or practices.

Based on the content analysis results and theory design evolved from them, nurses showed that patient safety management efforts in the Middle East hospitals are still in infancy stage. The culture of blame which places the responsibility for patient safety upon nursing leaders' inefficiency; imposing heavy workloads along with unreasonable working hours correlated by patients' expectations of safety, should be replaced with a healthy non-blame culture to support all safety management efforts. Importantly, Middle East hospitals should consider adapting a patient safety model strategy as well as a patient safety management protocol insidious of an appropriate patient safety culture relevant to those countries. Further in-depth studies into hospital patient safety management issues among Middle East nations are recommended, especially, studies conducted in different cultures and contexts and with different groups of healthcare providers. Such studies will help researchers recognize various aspects of patient safety management issues and improve their comprehension of factors influencing patient safety practices in hospitals from different perspectives.

Appendix 1: Focus Group Interview Schedule

Country of origin: Sex:

Middle East Country last work:

1. What does the idea of 'patient safety' mean to you?
2. Did you face problems or evidenced any problem threatening patient safety during the last 12 months of working in (Middle East Hospital)?
3. Would you please share with me your experiences in these problems or evidences?
4. How do you think of the reason from your point of view?
5. From your point of view, what factors shaped patient safety management/ practices most in the (Middle East country) hospitals?
6. Do you feel hospitals in the Middle East countries are managing patient safety issues effectively?
7. How do you think about nurses' active role in patient safety management in hospital?

ACKNOWLEDGEMENT

The author offers sincere thanks to the nurses who kindly shared their experiences and made this study possible. The researcher is also grateful to those who helped to arrange time and place for the interviews and to the hospital managers who allowed conducting the study.

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

REFERENCES

1. Imad, B., U.A. Zafar, H.P. Valentin and M. Suzanne, 2008. Patient satisfaction with healthcare delivery systems. *International Journal of Pharmaceutical and Healthcare Marketing*, 2(1): 47-62.
2. Abualrub, R.F., 2007. Nursing shortage in Jordan: what is the solution? *Journal of Professional Nursing*, 23(2): 117-20.
3. Chiovitti, F.R., 2011. Theory of protective empowering for balancing patient safety and choices. *Nursing Ethics.*, 18(1): 88-111.
4. Betancourt, J.R., M.R. Renfrew, A.R. Green, L. Lopez and M. Wasserman, 2012. Improving patient safety systems for patients with limited English proficiency: a guide for hospitals. (Prepared by the Disparities Solutions Center, Mongan Institute for Health Policy at Massachusetts General Hospital and Abt Associates, Cambridge, MA, under Contract No. HHS A290200600011I). Rockville, MD: Agency for Healthcare Research and Quality; July 2012. AHRQ Publication No. 12-0041. September 2012. Available at: <http://www.ahrq.gov/professionals/systems/hospital/lepguide/lepguide.pdf>.
5. Kamal, S., 2013. In the Proceedings of the Patient Safety & Quality Congress, Middle East 2013. Retrieved, June 25th, 2013 from <http://www.patientsafetymiddleeast.com/people/dr-sherif-kamal/>.
6. Teamwork and Communication Working Group, 2011. Improving patient safety with effective teamwork and communication: Literature review needs assessment, evaluation of training tools and expert consultations. Edmonton (AB): Canadian Patient Safety Institute. From: <http://www.patientsafetyinstitute.ca/English/toolsResources/teamworkCommunication/Documents/Canadian%20Framework%20for%20Teamwork%20and%20Communications%20Lit%20Review.pdf>.
7. Adamson, B., D. Kenny and J. Wilson-Barnett, 1995. The impact of perceived medical dominance on the workplace satisfaction of Australian and British nurses. *Journal of Advanced Nursing*, 21: 172-183.
8. Zohar, D., Y. Livne, O. Tenne-Gazit, H. Admi and Y. Donchin, 2007. Healthcare climate: a framework for measuring and improving patient safety. *Critical Care Medicine*, 35: 1312-17.
9. World Health Organization Regional Office for the Eastern Mediterranean, 2005. Regional WHO patient safety programme. Retrieved on June 27th, 2013 <http://www.emro.who.int/patient-safety/countries>,
10. Schild-Meerfeld, D., 2013. CareFusion showcases Patient safety Technologies at Arab Health 2013. CareFusion International.
11. Rasmussen, J., 1997. Risk management in a dynamic society, a modeling problem. *Safety Sci.*, 27: 183-214.
12. Cook, R.I. and J. Rasmussen, 2005. Going Solid: A model of system dynamics and consequences for patient safety, *Quality and Safety in Health Care*, 14: 130-134.
13. Macchi, L., E. Pietikäinen, T. Reiman, J. Heikkilä and K. Ruuhilehto, 2011. Patient safety management. Available models and systems. Julkaisija-Utgivare Publisher.
14. Vincent, C., 2010. Patient Safety. Wiley-Blackwell, pp: 61.
15. Bohmer, R., 2010. Fixing healthcare on the front lines. *Harvard Business Review*. Retrieved on June 27th, 2013. <http://biosci.poole.ncsu.edu/wp-content/uploads/Fixing-Healthcare-Frontlines.pdf>.
16. Jha, K., N. Prasopa-Plaizier, I. Larizgoitia and D. Bates, 2010. Patient safety research: an overview of the global evidence. *Quality and Safety in Health Care*, 19(1): 42-7.
17. Alahmadi, A., 2010. Assessment of patient safety culture in Saudi Arabian hospitals. *Quality and Safety in Health Care*, 19(5): e17.
18. Abdou, H. and K. Saber, 2011. A Baseline Assessment of Patient Safety Culture among Nurses at Student University Hospital. *World Journal of Medical Sciences*, 6(1): 17-26.
19. Ali, M.M.R. and H.Y. Mohammad, 2006. A study of relationship between managers' leadership style and employees' job satisfaction. *Leadership in Health Services*, 19(2): 11-28.
20. Zein El-Din, K.Y. and N.H. Abd El-Aal, 2013. The relationship between perceived safety climate, nurses' work environment and barriers to medication administration errors reporting. *Life Science Journal*, 10(1): 950-961.

21. Abdullah, A., J. Thomas and M. Ian, 2011. Health data standards and adoption process: Preliminary findings of a qualitative study in Saudi Arabia. *Campus-Wide Information Systems*, 28(5): 345-359.
22. Wilson, M., P. Michel, S. Olsen, R. Gibberd, C. Vincent, R. El-Assady, O. Rasslan, S. Qsous, W. Macharia, A. Sahel, S. Whittaker, M. Abdo-Ali, M. Letaief, N. Ahmed, A. Abdellatif and I. Larizgoitia, 2012. Patient safety in developing countries: retrospective estimation of scale and nature of harm to patients in hospital. *British Medical Journal*, 344: e832.
23. Coyne, I.T., 1997. Sampling in qualitative research: purposeful and theoretical sampling; merging or clear boundaries? *Journal of Advanced Nursing*, 26(3): 623-630.
24. Elo, S. and H. Kyngäs, 2008. The qualitative content analysis process. *Journal of Advanced Nursing*, 62(1): 107-115.
25. Graneheim, U.H. and B. Lundman, 2004. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Education Today*, 24: 105-112.
26. Polit D.F. and C.T. Beck, 2008. *Nursing Research: Generating and Assessing Evidence for Nursing Practice*. Lippincott Williams & Wilkins, pp: 187-91.
27. Wiig, S. and P.H. Lindøe, 2009. Patient safety in the interface between hospital and risk regulator, *Journal of Risk Research*, 12(3): 411-426.
28. Warburton, R., 2009. Improving Patient Safety: An Economic perspective on the role of nurses. *Journal of Nursing Management*, 17: 223-229.
29. Kohn, L.T., J.M. Corrigan and M.S. Donaldson (Institute of Medicine), 2000. *To err is human: building a safer health system*. Washington, DC: National Academy Press.
30. McMullan, M., R. Jones and S. Lea, 2010. Patient Safety: Numerical Skills and drug calculation abilities of nursing students and Registered Nurses. *Journal of Advanced Nursing*, 66(4): 891-899.
31. Frankel, A., T. Gandhi and D. Bates, 2003. Improving patient safety across a large integrated health care delivery system. *International Journal for Quality in Health Care*, 15(supplement 1): i31-i40.
32. Rouse, W., 2008. *Health care as a complex adaptive system: implications for design and management*. National Academy of Engineering: The Bridge, 38(1): 17-25.
33. Goek, A. and G. Kocaman, 2011. Reasons for leaving nursing: a study among Turkish nurses. *Contemporary Nurse*, 39(1): 64-75.
34. Lee, C., H. Wung, H. Liao, C. Lo and F. Chang, 2010. Hospital safety culture in Taiwan: a nationwide survey using Chinese version Safety Attitude Questionnaire. *BMC Health Services Research*, 10: 234.
35. Robb, G. and M. Seddon, 2010. Measuring the safety culture in a hospital setting: a concept whose time has come? *New Zealand Medical J.*, 123(1314): 68-78.
36. Singer, S., M. Gaba, J. Geppert, A. Sinaiko, S. Howard and K. Park, 2003. The culture of safety: results of an organization-wide survey in 15 California hospitals. *Quality and Safety in Health Care*, 12(2): 112-8.
37. Weick, K.E. and K. Sutcliffe, 2001. *Managing the Unexpected: Assuring High Performance in an Age of Complexity*, Jossey-Bass, John Wiley & Sons Publisher, pp: 86-117.
38. Dekker, S., 2011. *Drift into Failure: From Hunting Broken Components to Understanding Complex Systems*. Ashgate Publications, pp: 35-8 and 113-14.