



# Establishing Patient-Oriented Medical Services: A Comparison of Patient Safety Culture between Medical Center and Regional Teaching Hospital



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## Abstract

Recently hospitals are facing intense challenges in a competitive medical industry, how to improve patient safety culture becomes a critical concern for hospitals to better enhance medical services and patient loyalty. However, the attitudes toward patient safety from the viewpoints of registered nurses from different categories of hospitals are still ambiguous in healthcare field. The purpose of this study aims to examine the patient safety culture by using Sexton et al. [1] Safety Attitude Questionnaire between medical center and regional teaching hospital. For both hospitals, the findings reveal that job satisfaction is the lowest dimensions of patient safety culture. Additionally, our study suggests that healthcare management should pay more attention to working conditions, perceptions of management, safety climate, and teamwork climate, in order to develop better patient-oriented implications in medical service industries.

**Keywords:** Patient safety culture; Safety attitude questionnaire; Medical center; Regional teaching hospital

## Introduction

Patient safety has become one of the priorities of development strategies for healthcare organizations to improve medical quality. Evidence reveals that hospital staffs with higher perceptions of patient safety are more likely to create a variety of positive outcomes, such as high job satisfaction, quality medical services, higher patient loyalty [2-4]. In fact, nurses are core hospital staffs who directly contact with patients and further influence the establishment of patient safety culture in healthcare organizations [5], [6]. However, most studies have emphasized the importance of patient safety culture for enhancing services of healthcare organizations [7,8] little knowledge has particularly identified

the attitudes toward patient safety culture from the viewpoints of registered nurses between medical center and regional teaching hospital. General speaking, nurses attitudes about patient safety might vary because of the differing levels of working environment, resources, training programs, and top management support in medical center and regional teaching hospital. As hospitals seek to build up a long-term and close relationship with patients to in turn improve performance in a competitive medical industry, it is therefore important to recognize the appropriate implications for promoting patient safety culture in two different categories of hospitals. Following this introduction, the second section of this paper presents a review of patient safety culture. The third section

then illustrates details of the methodology used in the empirical study. The research results are shown in fourth section. Finally, the discussion is highlighted.

### Relevant Literature

How to create a good atmosphere of patient safety has become one of essential issues for healthcare organizations to enhance medical services [7,9] Patient safety culture is identified by the European Network for Patient Safety (EUNetPaS) in 2006 as “An integrated pattern of individual and organizational behavior, based upon shared beliefs and values that continuously seeks to minimize patient harm, which may result from the processes of care delivery” [10]. Given that current evidence shows that a better patient safety culture contributes to improve physician-patient relationship [2,7,9]. Huang et al. [3] emphasize that if hospital staffs are satisfied with atmosphere of working environments, coworkers, supervision, and organization, they are more likely to care about patient safety and cooperate with colleagues. Similarly, several studies point out that positive patient safety culture can reduce job dissatisfaction [7] and medical errors [9]. Nie et al. [11] also suggest that fewer

hospital complications, patient falls, urinary tract infections and lower mortality are significantly correlated to the positive attitudes toward patient safety culture from the viewpoints of medical staffs. In fact, both medical errors and adverse events could result in either the cost of harm or threats to healthcare organizations and patients [5,12,13]. It is critically important for health organizations to identify the factors that influence patient safety in a regular period to continuously improve medical quality.

Safety Attitude Questionnaire (SAQ) initially developed by Sexton et al. [1] is broadly used for determining attitudes toward patient safety culture in healthcare organizations in many countries. As presented in Table 1, the questionnaire has 30 items, grounded into six dimensions: teamwork climate describes relationships and cooperation among staff; safety climate is healthcare organization’s commitment to patient safety; job satisfaction explains positive about work experience; stress recognition is stress factors that link to work performance; perceptions of management describes administrator approval; and working conditions concerns perceived work-environment quality.

**Table 1:** The Chinese version of safety attitudes questionnaire.

Teamwork Climate	(1) Nurse input is well received in this clinical area
	(2) In this clinical area, it is difficult to speak up if I perceive a problem with patient care(r)
	(3) Disagreements in this clinical area are resolved appropriately (i.e. not who is right, but what is best for the patient)
	(4) I have the support I need from other personnel to care for patients
	(5) It is easy for personnel here to ask questions when there is something that they do not understand
	(6) The physicians and nurses here work together as a well-coordinated team
Safety Climate	(7) I would feel safe being treated here as a patient
	(8) Medical errors are handled appropriately in this clinical area
	(9) I know the proper channels to direct questions regarding patient safety in this clinical area
	(10) I receive appropriate feedback about my performance
	(11) In this clinical area, it is difficult to discuss errors(r)
	(12) I am encouraged by my colleagues to report any patient safety concerns I may have
	(13) The culture in this clinical area makes it easy to learn from the errors of others
Job Satisfaction	(14) I like my job
	(15) Working here is like being part of a large family
	(16) This is a good place to work
	(17) I am proud to work in this clinical area
	(18) Morale in this clinical area is high
Stress Recognition	(19) When my workload becomes excessive, my performance is impaired(r)
	(20) I am less effective at work when fatigued(r)
	(21) I am more likely to make errors in tense or hostile situations (e.g. emergency resuscitation, seizure) (r)
	(22) Fatigue impairs my performance during emergency situations(r)
Perceptions of Management	(23) Managers supports my daily efforts
	(24) Managers do not knowingly compromise patient safety
	(25) I get adequate, timely information about events that might affect my work
	(26) The levels of staffing in this clinical area are sufficient to handle the number of patients

<b>Working Conditions</b>	(27) Problem personnel are dealt with constructively
	(28) This hospital does a good job of training new personnel
	(29) All the necessary information for diagnostic and therapeutic decisions is routinely available to me
	(30) Trainees in my discipline are adequately supervised

**Note:** r: reversed question.

## Methodology

A medical center and regional teaching hospital in Taichung city, Taiwan were selected to assess the patient safety culture from the perceptions of registered nurses, respectively. The Chinese version of SAQ was sent to nurses via an intra-organizational survey in these two different categories of hospitals in 2016. The hospitals are selected as a representative example since they are one of the best medical center and teaching hospital in Taiwan [14]. As shown in Table 1, the Chinese version of Sexton et al. [1]'s SAQ was used to assess patient safety culture. Thirty question items were grounded into six safety culture dimensions. Five-point Likert scales anchored by 1 (strongly disagree) and 5 (strongly agree) were used throughout the questionnaire. A total of 743 valid questionnaires were issued from the medical center, and 384 valid questionnaires were collected from the regional teaching hospital for the analysis.

## Empirical results

**Table 2:** The results of mean SD, Cronbach's Alpha.

Research constructs	Mean		SD		Cronbach's $\alpha$	
	MC	RTH	MC	RTH	MC	RTH
Teamwork climate	4.03	3.88	0.717	0.72	0.886	0.863
Safety climate	3.97	3.73	0.704	0.701	0.912	0.891
Job satisfaction	3.74	3.52	0.888	0.854	0.943	0.939
Stress recognition	3.75	3.69	0.809	0.81	0.883	0.882
Perceptions of management	3.74	3.59	0.824	0.706	0.839	0.82
Working conditions	3.85	3.59	0.782	0.726	0.89	0.899

**Note:** MC: Medical Center; RTH: Regional Teaching Hospital; SD: Standard Deviation

As shown in Table 2, for nurses in medical center, the highest mean score was teamwork climate (4.03), while the lowest mean score were job satisfaction (3.74) and perceptions of management (3.74). On the other hand, teamwork climate (3.88) and job satisfaction (3.52) were the highest and lowest mean scores for nurses in regional teaching hospital, respectively. Additionally, for both hospitals the Cronbach's  $\alpha$  values for all the constructs exceed 0.8, which indicated that the scales had great reliability and internal consistency.

**Table 3:** The results of Pearson's correlation analysis in medical center (n=743).

Construct	1	2	3	4	5	6
1. Teamwork climate						
2. Safety climate	0.848**					

After data screening, Pearson correlation analysis was sequentially employed using SPSS 20.0 to recognize the relationships among the constructs.

## Research Results

### Sample characteristics

For nurses in medical center, examination of the sample profile showed that majority of respondents were female (95.1 percent), age ranged from 21 to 40 years (80.4 percent), and education of the bachelor (91.6 percent) or graduate degree (8.1 percent), and more than 5 years working experiences were around 56.5 percent. For nurses in regional teaching hospital, most respondents were female (96.4 percent), age ranged from 21 to 40 years (78.4 percent), education of the bachelor's level (95.6 percent) or graduate degree (3.6 percent). Around one-half of respondents with relevant working experiences were more than five years in the hospital.

As shown in Table 3, we consequently conducted a Pearson's Correlation Analysis to realize the relationships among six constructs. On the basis of perspectives from nurses in medical center, the results demonstrated that perceptions of management were highly significant to working conditions. Safety climate was highly related to teamwork climate, working conditions, and perceptions of management, respectively. However, most constructs had low relations with stress recognition.

3. Job satisfaction	0.786**	0.806**				
4. Stress recognition	0.161**	0.228**	0.127**			
5. Perceptions of management	0.760**	0.802**	0.791**	0.194**		
6. Working conditions	0.785**	0.820**	0.788**	0.180**	0.867**	

Note: \*:  $p < 0.05$ ; \*\*:  $p < 0.01$

**Table 4:** The results of Pearson's correlation analysis in regional teaching hospital (n=384)

Construct	1	2	3	4	5	6
1. Teamwork climate						
2. Safety climate	0.814**					
3. Job satisfaction	0.700**	0.773**				
4. Stress recognition	-0.03	0.42	0.023			
5. Perceptions of management	0.660**	0.764**	0.719**	0.043		
6. Working conditions	0.674**	0.780**	0.702**	0.056	0.824**	

Note: \*:  $p < 0.05$ ; \*\*:  $p < 0.01$

As shown in Table 4, on the basis of perspectives from nurses in regional teaching hospital, the results illustrated that perceptions of management was highly positive to working conditions. In line with the investigation conducted for the nurses in medical center, the results stated that safety climate was highly related to teamwork climate, working conditions, and perceptions of management, respectively. However, stress recognition had no relations with all constructs.

## Discussion

Establishing a better atmosphere of patient safety is the goal of every healthcare organization to improve medical services and quality in a highly competitive healthcare industry. This study aims to examine the attitudes toward patient safety from reregistered nurses between medical center and regional teaching hospital. For medical center, hospital managers should pay more attention to job satisfaction and perceptions of management to increase the development of patient safety culture. Similarly, job satisfaction should be further focused on for improving patient safety culture in regional teaching hospital.

For both hospitals, consistent with those of Huang et al. [15] and Lee et al. [16], our study confirmed that administrator's authorization and support was greatly associated with the quality of working environment perceived by nurses. Additionally, whether or not hospital has commitment to safety climate was highly related to the levels of cooperation among nurses, support from management, and the quality of working environment, respectively. Consequently, we suggest that either medical center or regional teaching hospital should put more efforts on working conditions, perceptions of management, safety climate, and teamwork climate, in order to create patient-oriented medical services. The current study has its limitations. The respondents are nurses in Taiwan and the results may not generalize to other countries. It would be useful and interesting to investigate and compare patient safety culture

in other categories of healthcare organizations. More insightful comparison could then be drawn.

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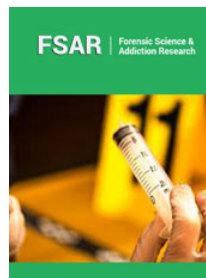
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