Impact of Hospital Organizational Culture on Patient Safety Management from the Perspective of Nurses and Physicians in Selected Hospitals

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Abstract: Healthcare organizational culture is a critical factor in the development of its patient safety climate and in the successful implementation of quality improvement initiatives. Hospitals vary in organizational culture, and the type of culture relates to patient safety management within the hospital. This study aims to investigate the impact of hospital organizational culture on patient safety management from the perspective of nurses and physicians in selected hospitals. Descriptive, correlational and comparative design was utilized in this study. Study was conducted in two hospitals affiliated with private sector, and two hospitals affiliated with governmental sector. A convenient sample of both nurses and physicians (140) who were working in the selected hospitals were constitute the study sample. Data were collected through utilizing two tools, the first is the organizational culture questionnaire used to measure the type of organizational culture .The second tool is patient safety management questionnaire; it explores how respondents perceived reality toward the aspect of patient safety measures in the hospitals they are working in. Results of the present study conclude that: overall, developmental culture and group (team work) culture were found to have significant positive correlations with patient safety management and therefore they are better aligned for patient safety management. While both rational and hierarchical cultures were found to have significant negative correlations with patient safety management and they are less favorable to patient safety management. Statistical significant difference between dominant organizational cultures in both private and governmental hospitals. In addition, significant differences between physicians and nurses mean scores regarding their perception of organizational culture as physicians had higher scores on group culture when compared with nurses. Based on study findings the researcher recommends that: in developing and promoting patient safety both developmental culture and group culture should be cultivated to aid the introduction of the patient safety management. Results support the strategies that promote group orientation and reduced hierarchy, including uses of multidisciplinary team training, continuous quality improvement tools, and human resource practices and policies.

1. Introduction

Most of medical errors are preventable **(Institute of Medicine, 1999)**. However, if a medical error occurs, it is considered to be the fault of the individual's healthcare professional. However, it should be blamed on the healthcare system. Punishment is not the solution for medical errors. Now, it is more focused on improving the safety environment at a hospital, creating an open organizational culture, and improving the health care delivery system **(Abbott, 2003).** Thus, in developed countries they are trying to improve the awareness on patient safety so that healthcare professionals, patients, the careers, and the public in turn could be more educated on patient safety. Many researchers thought that medical errors occurred in the incomplete system, and thus focused on preventing medical errors (**Bates and Gawande: 2001 and Institute of Medicine: 2001).**

The introduction of quality improvement and patient safety into healthcare has brought attention to the relevance of organizational culture. A growing body of literature shows that the ability to make improvements depends on organizational context. Through organizational culture, organizations can create the most desirable behavior which includes the requirement for a safe patient environment **(Davies, 2000)**.

Organizational characteristic factors such as organizational culture, leadership style and the degree of leader involvement, communication systems, participation of patients and families, and human resource management methods could all affect the successful implementation of patient safety(**Flin& Yule, 2004; Rockville *et al.,* 2004; Singer & Tucker, 2006,Joint Commission Resources: JCR, 2007**. Among them, organizational culture is the most important factor. This is because the spread of culture byword-of-mouth, role models and other considerations, can communicate the behavior and attitudes that the organization prefers or expects **(Chiu et al, 2008)**.

The importance of organizational culture lies in its omnipresence as it could be the glue that binds the

organization together, or it could set the boundaries for the values and behavior of its member's. It could even play the role of societal control in clarifying or understanding if the conduct and attitude displayed by organizational members is appropriate (**O'Reilly& Chatman, 1996).**In addition , the role of culture in an organization is very important, particularly when it comes to implementing new policies that require culture to drive and shape them **(Kohn *et al.,* 2000)**. Organizational culture here is defined as the hypotheses developed by specific organizations that are learnt from solving problems such as how to adapt to external environments and conform to internal conditions. Besides being imparted to new members of the organization, these hypotheses are used to make adjustments to the way workers think **(Chiu et al , 2008)**.However,**Park et al, (2011)** defined organizational culture as the overall value and behavior shared by all staff members.

Through organizational culture, organizations can create the most desirable behavior which includes the requirement for a safe patient environment. Patient safety is defined as the avoidance, prevention and amelioration of undesirable events or harm that can occur in the treatment process **(Davies, 2000)**. These undesirable events are made up of terms such as errors, risk, hazard, healthcare associated injuries, near mistakes, adverse events, negligence, deviation and accident **(Gaba, 2000; Battle &Lilford, 2003).** Since patient safety is designed to prevent undesirable events, management should be implemented to ensure the overall success of safety. This study focuses on four dimensions of safety management, that is: leadership (**Kohn *et al.,* 2000**), teamwork **(Scally& Donaldson, 1998),** voluntary incident reporting **(Wachter *et al.,* 2002; Tamuz et al , 2004**), and education and training (**Firth-Cozens, 2001; Pronovost*et al.,* 2003).**

Various scholars have different ways of approaching the concept of organizational culture. For instance, **O'Reilly & Chatman, (1996**) categorized organizational culture into components such as creativity, stability, respect, result-orientation, detail emphasis, team-orientation and activeness. The evaluation framework for organizational culture was developed on the basis of the Competing Values Approach (CVA) by **Quinn &Spreitzer, (1991**). The CVA demonstrates a two-dimensional approach (one is internal focus versus external focus, the other is stability and control versus flexibility and changes) to differentiate the four types of organizational culture which include rational culture (stability and external focus), developmental culture (flexibility and external focus), group culture (flexibility and internal focus), and hierarchical culture (stability and internal focus) **(Chiu,et al , 2008).**

Rational culture is the perception of an environment that places stress on production-orientation, work and goal achievement driven motives, competition and sense of achievement .As rational culture is task-oriented and inclined towards independent action it lacks teamwork and the exchange of knowledge and thus could be difficult to adapt to management system of patient safety **(Cameron& Quinn, 1999**). Developmental culture is defined as the perception of an environment that places stress on changes, the involvement in innovation and development, growth and acquisition of new resources. As the organization with a developmental culture is likely to accept changes, it could easily adapt to a management system of patient safety which might encourage a comprehensive and accurate service **(Speroff et al , 2010).**

The basic assumption of group culture is that management can be carried out through teamwork and staff development, viewing customers as shareholders, developing an environment that is human-centered and empowering workers, so as to encourage their participation and involvement **(Cameron & Quinn, 1999).** The aim of group culture is to care for workers and achieve a harmonious internal environment; they all support the concepts of patient safety (**Chiu et al, 2008).**

The features of a hierarchical culture are those of adhering to regulations and hierarchical levels, as well authority and responsibilities **(Cameron & Quinn, 1999).**Hierarchical culture is defined as the perception of an environment that places stress on formality, an integrated structure, formal regulations and policies, efficiency and stability. The management model of such a culture, which tends toward conformity, coordination, and seeks efficiency and smooth organizational operation, would find it easy to follow through and succeed in safety management (**Chiu et al, 2008).**

Organizational culture is a factor leading to a successful implementation of changes in health care organizations and fostering learning through work processes .It should encourage change implementation and at the same time establish work quality as a value (**Savic and Pagon, 2008).** Although hospitals tend to operates as a professional bureaucracy, organizational culture differ between private and public hospitals .Both hospitals have their unique clinical focus, practice culture and profit versus nonprofit orientation. Traditionally, public hospitals are more procedural and rules oriented, thus it is anticipated that it would provide a more bureaucratic environment than private hospitals **(Zwaan, 2006).**This hierarchal culture are less effective at implementing quality improvement and safety climate **(Speroff et al ,2010)**.On the other hand, a majority of private hospitals operates at a profit in order to survive thus it is anticipated that

private hospitals need to be more collaborative and innovative than public to achieve their objectives. **(Zwaan, 2006).** It is evident in the literature that organization that is teamwork and development oriented are better aligned for quality improvement and safe climate **(Seren&Baykal, 2007, and Speroff et al ,2010)**

Perceptions of organizational culture and patient safety culture vary across disciplines, healthcare settings, and professional ranks and positions. **Savic and Pagon (2008)** describe different health care subcultures, such as physicians – managers, physicians – nurses, employees – leaders, unit cultures, team cultures, and professional group cultures. Notably, leaders are often associated with having more positive perceptions of the hospital culture and safety culture than frontline workers, and managers and physicians generally reported higher levels of positive perceptions of organizational culture and patient safety culture as compared to staff nurses **Wilson *et al*, (2012)** .This study aims to investigate the impact of hospital organizational culture on patient safety management from the perspective of nurses and physicians in selected hospitals .

2. Methodology

Study Methods
Design:
Descriptive correlational and comparative design was utilized in this study.

Research objectives:
1-To investigate the impact of hospital organizational culture on patient safety management.
2-To determine the most dominant culture in both private and governmental hospitals with its relation to patient safety management.
3-To examine which culture is more suited to ensure patient safety management.

Study setting:
Study was conducted in two hospitals affiliated with private sector, namely (El Salam hospital and El Nil Badrawy hospital) and two hospitals affiliated with governmental sector namely (Al Agouza hospital and El kasar Al Ainy hospital .Among the units that included were : medical ,surgical and intensive care units .

Sample:
A convenient sample of both nurses and physicians who were working in the previous selected hospitals were constituted the study sample. The total sample size was (140) as follows: 65 in private hospitals (22 doctors and 43 staff nurses) and 75 in governmental hospitals (28 doctors and 47 staff nurses).

Tools:
Data for the present study was collected through utilizing the following two tools:
1-The organizational culture questionnaire is developed by **Quinn and Spreitzer's(1991)** and guided by competing value framework (CVA),it contains two parts : the first part is related to demographic data such as age, years of experiences ,units and occupational type .The second part contained 14 items to measure the type of organizational culture and divided into four subscales as follows: developmental culture (4 items);hierarchical culture (4 items), team/group culture (3 items) and rational culture (3 items). Every question uses the Likert-likefive-point scale to tabulate the scores. The response options are "Strongly Agree"(5), "Agree" (4), "Neutral" (3), "Disagree" (2) and "Strongly Disagree" (1).The internal reliability of the scale was established with a Cronbach's alpha of .94 .The reliability for each construct is as follows: rational culture 0.82; developmental culture 0.88;group culture 0.92, and hierarchical culture 0.86.

2- Patient safety management questionnaire: developed by **Nieva, and Sorra (2003),** it explores how respondents perceived reality toward the aspect of patient safety measures in the hospitals they are working in. The patient safety management scale has a total of 19 questions. It covers the four constructs of leadership (5 items), teamwork (6 items), voluntary incident reporting, (5 items) and education and training (3 items) and every question uses the Likert-like five-point scale to tabulate the scores. The response options are "Strongly Agree" (5), "Agree" (4), "Neutral" (3), "Disagree" (2) and"Strongly Disagree" (1).Cronbach's Alpha values for the four constructs are as follows: leadership 0.87; teamwork 0.85; voluntary incident reporting 0.77; and education and training on patient safety 0.88.Both tools were translated into Arabic to match nurse's level of education. Jury members of six faculty members: two professors and four assistant professors were chosen to establish content validity.

Pilot study:
Pilot study on the data collection tools was carried out on 10% of studied sample to assess the clarity and applicability of the tools; they were excluded from the study sample. The necessary modifications which include clarification; rewording and omission of questions were done.

Administrative and ethical consideration:
The aim of the study was explained to the administrative personnel. Official permissions were obtained from hospital's director and nursing director

of the previous selected hospitals to conduct the study at the selected units. They were assured that the data is confidential and used only for research purposes.

Procedure:

Aim of the study was explained to all staff nurses and physicians assigned to the previous selected hospitals in private and governmental sectors. The tools were distributed to the study sample on their work places, with explanation of how to answer it. Questionnaires were filled out at range of 20 minutes. Data was collected during 2011 on duration of two months (July to August). It was collected in morning and afternoon shifts.

Statistical analysis:

The collected data were organized, tabulated and statistically analyzed using SPSS software statistical computer package version 15.Frequency; percentage, mean, standard deviation, and Chi-square were calculated. For comparison between two independent means, the T-test was calculated. Correlation between variables was evaluated using Pearson's correlation coefficient. Regression analysis was also used. Significance was adopted at $p<0.05$ for interpretation of results of tests of significance **(Crawley, 2007; Field, 2009).**

3. Results:

As shown in table (1) more than half of the sample (55.2%) in the private hospitals their ages were below 30 years ,while (66.7%) of them in the governmental hospitals were in age group ranged between 46-55 years .In relation to the distribution of occupational category among study sample ,data in the same table revealed that the highest percentage of study sample (64.28%) were nurses while only (35.71%) were doctors .As well as it is clear that (56%) of doctors were working in governmental hospitals while (44.4%) of them were working in private hospitals . As for nurses, data in the same table shows that (50.2%) of nurses were working in governmental hospitals compared to (47.7%) in private hospitals .According to work place in which the study sample were worked in, table (1) illustrates that there was no significant differences in the distribution of study sample in different work places in both private and governmental hospitals. As regarding to years of experiences, it is clear from table (1) that (43.57%)of study sample had less than 5 years of experiences while only 1.43% had over 15 years of experiences with no significant differences in years of experiences of study sample in both private and governmental hospitals .

A correlational matrix (Table 2) was calculated to examine the relationship between organizational culture and patient safety management. Developmental culture(r=.822**, $p<0.01$), and group

culture (r=.840**, p =0. 01) have positive and significant correlation with leadership , at the same time ,developmental culture(r=.797**, $p<0.01$), and group culture (r=.786**, $p<0.01$) have positive and significant correlation with teamwork .The same table also shows that developmental culture(r=.010**, $p<0.01$), and group culture (r=.700**, $p<0.01$) have positive and significant correlation with voluntary incident report. As well as developmental culture(r=.771**, $p<0.01$), and group culture (r=.779**, $p<0.01$) display significant positive correlation with education and training. This result indicates that group and developmental culture were more suited to patient safety management .While data in the same table illustrates that both rational and hierarchal culture have statistical negative correlation with leadership, teamwork ,incident report and education and training .

Table (3) shows the tabulated regression results. Investigating the influence that each type of organizational culture has on patient safety management. Rational culture has a negative and significant correlation with only leadership (β= -.187**, $p<0.01$),and incident reporting (β=-.218**, $p<0.01$) . Developmental culture have a positive and significant correlation with leadership (β=.264**, $p<0.01$), teamwork (β=.428**, $p<0.01$), incident report (β=.574**, $p<0.01$), and with education and training (β=.313**, $p<0.01$).Data in the same table illustrates that group culture displays positive and significant correlation with leadership (β= .492**, p =0.01), teamwork (β= .367**, $p<0.01$)and with education and training (β= .423**, $p<0.01$). As regarding to hierarchal culture ,it is clear from table (3) that it has a negative correlation with leadership, teamwork, incident reporting and education and training but the correlations were non-significant. This is reflected in total patient safety management respectively (β=-.063,) .Data in the same table also indicates that both developmental and group culture have positive and significant correlation with total patient safety management (β=.432**, $p<0.01$),(β= .396**, $p<0.01$), while rational culture has negative significant correlation with total patient safety management(β= -.142**, $p<0.01$)

Data in table (4) illustrates that there was statistical significant difference between the dominant organizational cultures in both private and governmental hospitals ,as it is clear that both group and developmental cultures were the dominant cultures in private hospitals as indicating by high mean scores compared to governmental hospitals(12.938 ±1.83 ,6.066 ±1.679),(17.061± 2.185, 7.44 ± 2.467). While data in the same table shows that rational culture and hierarchal culture were the dominant cultures in governmental hospitals as indicating by high mean scores compared to private

hospitals (10.426 ± 2. 422, 8.323 ± 1.99), (16.66± 2.772 , 9.353± 3.193).

When organizational cultures were correlated with patient safety management in both private and governmental hospitals (Table 5), it is clear that there were statistical significant positive correlation between both group culture, developmental culture and patient safety management in the private hospitals (r= .306**, p =.008) ,(r= .401**, p =.001) . While data in the same table shows statistical significant negative correlation between rational culture and patient safety management in the private hospitals (r=- .347*, p =.005).

Regarding to comparisons between physicians and nurses mean scores in relation to their perception of organizational culture and patient safety

management, data in table (6) illustrates that there was statistical significant differences between physicians and nurses mean scores only in relation to group culture (t=-1.992, p=.048) as it is clear that physicians had higher mean scores compared to nurses. Data in the same table shows that physicians had higher mean scores regarding their perception of developmental culture compared to nurses (12.96±5.333, 11.322± 5.299) but not proved to be statistically significant differences. As well as it clear from table (6), that physicians had higher mean scores regarding their perception of patient safety management compared to nurses (56.28±18.96, 54.85±19.899) but not proved to be statistically significant differences.

Table (1): Demographic Data of Study Sample in Private and Governmental Hospitals (total no 140)

Demographic data	Private hospitals (no :65)		Governmental hospitals (no:75)		Total no		X2 p
	No	%	No	%	No	%	
Age :							
1- Below 30 years	32	55.2%	26	44.8%	58	41.42%	4.104
2- 30- 45 years	22	44.9%	27	55.1%	49	35%	.128
3- 46- 55 years	11	33.3%	22	66.7%	33	23.57%	
4- Over 55 years	-	-	-	-	-	-	
Occupational type :							.399
1- Nurses	43	47.7%	47	50.2%	90	64.28%	.528
2-Doctors	22	44%	28	56%	50	35.71%	
Units :							
1- Medical	23	46%	27	54%	50	35.71%	.057
2-Surgical	22	47.8%	24	52.2	46	32.58%	.972
3- ICU	20	45.5%	24	54.5%	44	31.42%	
Years of experiences :							
1- less than 5 years	28	45.9%	33	54.1%	61	43.57%	
2-5- 10years	26	52%	24	48%	50	35.71%	4.80
3- 10-15 years	9	33.3%	18	66.7%	27	19.28%	.187
4- over 15 years	2	100%		-	2	1.43%	

Table (2): Mean Scores, Standard Deviation, and Correlation Matrix between Organization Culture and Patient Safety Management

Variable Name	Mean	(S.D.)	1	2	3	4	5	6	7	8
1- Rational Culture	9.45	2.46								
2- Developmental Culture	11.90	5.35	-.418**							
3- Group Culture	9.25	3.86	.329**	.852**						
4- Hierarchical Culture	13.27	4.71	.324**	-.745**	-.754**					
5- Leadership	14.49	5.93	-.486**	.822**	.840**	-.711**				
6- Teamwork	17.73	6.47	-.349**	.797**	.786**	-.665**	.822**			
7- Voluntary incident reporting	14.27	5.06	-.515**.	010**	.700**	-.602**	.801**	.740**		
8- Education and Training	8.85	3.83	-.388**	.771**	.779**	-.661**	.802**	.763**	.746**	-

 *p< 0.05; ** p< 0.01.

Table (3) Patient Safety Management Regression Analysis

Culture type	Leadership	Teamwork	Voluntary Incident report	Education & training	Total patient safety management
Rational culture	-.187**	-030	-.218**	-.092	-.142**
Developmental culture	.264**	.428**	.574**	.313**	.432**
Group culture	.492**	.367**	.160	.423**	.396**
Hierarchal culture	-082	-.059	-.013	-.078	-.063
R 2	.780	.680	.702	.659	.832
Adjusted R2	.773	.670	.693	.649	.827
F statistics	119.512**	71.613**	79.421**	65.137**	167.053**

* p< 0.05; ** p< 0.01. Regression coefficients are indicated in standardized regression coefficients.

Table (4): Comparison between the Dominant Culture in Private and Governmental Hospitals

Organizational culture	Private hospitals (no: 65)		Governmental hospitals (no: 75)		T	*P*
	Mean	SD	Mean	SD		
Group culture	12.938	1.853	6.066	1.679	23.014	.000**
Developmental culture	17.061	2.185	7.44	2.467	24.254	.000**
Rational culture	8.323	1.992	10.43	2.422	5.557	.000**
Hierarchical culture	9.353	3.193	16.66	2.772	-14.504	.000**

*p< 0.05; ** p< 0.01.*

Table (5): Correlation between Organizational Culture and Patient Safety Management in Private and Governmental Hospitals

Organizational Cultures	Patient Safety Management			
	Private Hospitals		Governmental Hospitals	
	R	Sig	R	Sig
Group culture	.306**	.008	.032	.803
Developmental culture	.401**	.001	.089	.447
Rational culture	-.347*	.005	-.139	.234
Hierarchical culture	-.108	.390	.074	.526

*p< 0.05; ** p< 0.01.*

Table (6) Comparison between Physicians and Nurses Mean Scores in relation to their Perception of Organizational Culture and Patient Safety Management

Culture &patient safety scales	Physicians (no: 50)		Nurses (no: 90)		T	*p*
	Mean	SD	Mean	SD		
Group culture	10.12	4.048	8.77	3.689	-1.992	.048*
Developmental culture	12.96	5.333	11.32	5.299	-1.748	.083
Rational culture	9.18	1.945	9.60	2.705	1.060	.291
Hierarchal culture	12.42	4.882	13.74	4.570	1.603	.111
Total Patient safety Management	56.28	18.96	54.85	19.899	-.413	.681

*p< 0.05; ** p< 0.01.*

4. Discussion:

Culture is the single most important factor for success or failure and has the greatest potential to affect organizational improvements or hold it back . Research suggests that organizational culture, its assessment and management is increasingly viewed as a necessary part of health care improvements. In the health care environment, organizational culture has been associated with several elements of organizational experience and initiatives that contribute to quality, such as nursing care, job satisfaction and patient safety (**Zwaan 2006)**

Results of the present study revealed that developmental culture and group culture were found to have statistically significant positive correlations with patient safety management. While both rational and hierarchical cultures were found to have statistically significant negative correlations with patient safety management. This result is consistent with **Chiu et al , (2008)** who report that organizational cultures that emphasis teamwork and innovation have been found in alignment with quality improvement, whereas bureaucratic, hierarchical cultures, which inherently promote stability and resist change, are less suited for quality improvement. More over they added that, overall, group culture and developmental culture had a strong influence on safety management, while rational culture has a negative impact on safety management. As well as **Speroff et al, (2010)** reported that there was a significant positive association

between group-oriented organizational culture and the attitudes and climate for patient safety, and a significant negative association between hierarchical culture and these same factors. **Also Singer et al. (2009)** found that a higher level of group culture and developmental culture were correlated with higher level of patient safety climate ,but more hierarchal culture was associated with lower safety climate .In the same issues **Pronovost et al. (2003)** indicated that, group culture which focuses on maintaining good mentor relationships, might drive employees to fulfill the requirements of patient safety and can indeed help to drive the implementation of the patient safety system. The building and promotion of a group culture can be carried out from several aspects, such as adopting a participatory management as delegating authority, team building, strengthening worker participation and developing human resources, as well as having open communications can be adopted .

Results of the present study revealed that group culture and developmental culture were found to be the most dominant cultures in private hospitals .But in governmental hospitals the most dominant cultures were rational culture and hierarchal culture. As well as findings revealed that hospitals with rational and hierarchical cultures are less favorable to patient safety management whereas hospitals with group (teamwork) and developmental culture are better aligned for patient safety management .This results goes with previous researches done by **Seren and Baykal (2007)** who report that group or team culture was the most evident culture in private hospitals but in the public hospitals the most dominant culture was a power culture .In the same respect, **Zwaan(2006)** added that employees in private hospitals perceived customer focus, team orientation and vision most positively than those in governmental hospitals . As well as **Speroff et al , (2010)** reported that organizations characterized as having group culture are more effective, and hospitals with hierarchical culture are less effective at implementing quality improvement, team functioning , staff morale, patient satisfaction and overall safety climate management.

Results of the present study revealed that physicians had higher scores on group and developmental culture and lower scores on hierarchical culture when compared with nurses .Nurses also had lower scores on patient safety management when compared with physicians. This results goes with **Speroff et al , (2010)** as they found that physicians and administrators provide higher safety climate ratings than do nurses and ancillary staff. Furthermore, nursing staff viewed culture as more bureaucratic and rated their organizations lower in safety climate. In the same issue **Johnson et al. (2012)** reported that physicians tended to rate

dimensions of organizational culture and patient safety management more positive than did nurses.

Conclusions: findings of the present study conclude the following:
  -Developmental culture and group culture were found to have significant positive correlations with patient safety management. While both rational and hierarchical cultures were found to have significant negative correlations with patient safety management.
  - Group culture and developmental culture were found to be the most dominant cultures in private hospitals .But in governmental hospitals the most dominant cultures were rational culture and hierarchal culture.
  - Statistical significant positive correlation between both group culture and developmental culture and patient safety management in the private hospitals as well as statistical significant negative correlation was found between rational culture and patient safety management in the private hospitals. While no significant correlations were found between organizational cultures types and patient safety management in the governmental hospitals.
  - Statistical significant differences between physicians and nurses mean scores regarding their perception of organizational culture. As physicians had higher scores on group culture when compared with nurses .

Recommendations:
 -In developing and promoting patient safety both developmental culture and group culture should be cultivated to aid the introduction of the patient safety management.
 -Results support the strategies that promote group orientation and reduced hierarchy, including uses of multidisciplinary team training, continuous quality improvement tools, and human resource practices and polices .
 -Patient safety should be a top strategic priority for policy makers, managers, leaders and frontline staff. In order to promote patient safety practices, countries should invest in assessing patient safety culture in their healthcare organizations.
 -When safety systems have been established, the balances between the different types of cultures might be addressed in order to improve teamwork, regulation, development and productivity. Therefore, further in-depth exploration in this issue is recommended.

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References:

-**Abbott A.P (2003):** Research in Patient Safety, Error Reduction: A Nursing Perspective. Session presented at the Post-conference for 8th International Congress in Nursing Informatics, Rio De Janeiro, Brazil.

-**Bates G, Gawande A (2001):** Error in medicine: What have we learned? Minn Med, 83, 18-23.

-Battle, J. B., and Lilford, R. J. (2003): Organizing patient safety research to identify risks and hazards. Quality and Safety in Health Care, 12: 2-7.

-**Cameron, K. S. and Quinn, R. E. (1999).** Diagnosing and changing organizational culture. New York, USA: Addison-Wesley.

-**Crawley, M.(2007):** The R Book, John Wiley&SonLtd., TheAtrium,Southern Gate, Chichester, UK.

-**Chiu,C.H., Pan,W.H., and Wei ,C.J, (2008):** Dose organizational culture impact patient safety management . Asian Journal of Heath and Information Sciences, vol 3 n(1):, pp 88-100.

-**Davies, H. T. (2000):** Organizational culture and quality of health care. Quality for Health Care, 9:111-9.

-**Firth-Cozens, J. (2001):** Cultures for improving patient safety through of learning: the role of teamwork. Quality for Health Care, 10:26-31.

-**Field,A.(2009):** Discovering Statistics Using SPSS,3rd ed., Sage Publications Ltd., USA.

-**Flin, R., and Yule, S. (2004):** Leadership for safety: industrial experience. Quality and Safety in Health Care, 13: 45-51.

-**Gaba, D. M. (2000):** Structural and organizational issues in patient safety: a comparison of health care to other high-hazard industries. California Management Review, 43(1): 83-102

-**Joint Commission Resources (2007):** Front Line of Defense: The Role of Nurses in Preventing Sentinel Events 2nd, ATNARR agency services.

- **Johnson A .ListyowardojoT.A and Nap R. E. (2012):** Variations in hospital workers perception of safety culture. International Journal of Quality Health Care (2) 1:9-15

-**Kohn, L. T., Corrigan, J. M., and Donaldson, M. S. (2000)**: Committee on Quality of Health Care in America, Institute of Medicine. In To Err is Human: Building a Safer Health Care System. Washington, DC, USA: National Academy Press.

-**Nieva, V. F., and Sorra, J. (2003):** Safety culture assessment: a tool for improving patient safety in healthcare organizations. Quality and Safety in Health Care, 12:17-23.

-**O'Reilly, C. A., and Chatman, J. A. (1996):** Culture as social control: Corporations, cults, and commitment. Research in Organizational Behaviour, 18: 157-200.

-**Institute Of Medicine (2001).** Crossing the quality chasm: A new health system for the 21st century, Washington: National Academy Press.

-**Park, S.A., Lee, S.J., and Choi G.U. (2011):** Survey of factors associated with nurse perception of patient safety. Asian Journal of Cancer Prevention, vol: 12 ,page 12-18.

-**Pronovst, P. J., Weast, B., and Holzmueller, C. G. (2003)**: Evaluation of the culture of safety: survey of clinicians and managers in an academic medical center.Quality and Safety in Health Care, 12: 405-410.

-**Quinn, R. E. and Spreitzer, G. M. (1991):** The psychometrics of the competing values culture instrument and an analysis of the impact of organizational culture on quality of life. Research in Organizational Change and Development, 5:115-42.

-**Rockville, W., Sorra, J., and Nieva, V. (2004):** Hospital survey on patient safety culture. Agency for Health Care Research and Quality (AHRQ) Publication, No.04-0041.

- **Savon, B.S and Pagon ,M. (2008)** : Relationship between nurses and physicians in terms of organizational culture : who is responsible for subordination of nurses .Croat Med. J .49(3): 334-343.

-**Scally, G., & Donaldson, L. J. (1998):** Clinical governance and the drive for quality improvement in the new NHS in England. BMJ, 317: 61-5.

- **Seren ,S and Baykal,U.(2007)**: Relationship between change and organizational culture in hospitals. Journal of Nursing Scholarship, vol 39, issue(2): 191-197.

-**Singer, S. J., and Tucker, A. L. (2006):** Creating a culture of safety in hospitals. Palo Alto, CA, USA: Center for Health Policy, Stanford University.

- **Singer ,S J, Falwell, A. Gaba D. and Meterko M. (2009)**: Identifying organizational culture that promote patient safety. Health care management and policy , vol.34.(4): page no : 300-311

-**Speroff,T. Nwosu S. and Greevy R.(2010)**:Organizational culture : variation across hospitals and connection to patient safety climate . QualSaf Healthcare. 19: 592-596

-**Tamuz, M., Thomas, E. J., and Franchois, K. E. (2004):** Defining and classifying medical error: lessons for patient safety reporting systems. QSHC, 13: 13-20.

-**Wachter, R. M., Shojania, K. G., Saint, S., Markowitz, A. J., and Smith, M. (2002):** Learning from our mistakes: Quality grand rounds, a new case-based series on medical errors and patient safety. Ann Intern Med., 136:850-852

-**Wong, J., and Beglaryan, H. (2004):** Strategies for hospitals to improve patient safety: A review of the research. Toronto, ON, Canada: The Change Foundation.

-**Zwaan.L.(2006):** Assessing organizational culture in a private hospital in the western cape. Mini-thesis submitted in partial fulfillment of the requirements for the degree of Magister Artium in the Department of Industrial Psychology, Faculty of Economic and Management Science,University of the Western Cape

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