

Quality of Patient Safety Culture: A Meta-Analysis of Data from Hospitals

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Abstract: Patient safety (PS) is one of the most important and essential elements of quality in the healthcare setting. A meta-analysis was performed to assess the status of patient safety culture using the Hospital Survey on Patient Safety Culture (HSOPSC). In this meta-analysis study, data were collected through searching database scientific index research engine, which provided by Thomson and Reuters, and using keywords like “patient safety”, “patient safety culture”, and “Hospital Survey on Patient Safety Culture”, Out of 300 retrieved articles, 17 articles were entered into the study. To calculate the overall Patient safety culture score and perform the meta-analysis, the computer software Statistical package for the social sciences (SPSS V, 20) was used. The highest result was Teamwork within hospital units 78.1%, and the lowest result was 46% in non-punitive response to the error. Represent the respondent responses for patient safety culture mean in their hospitals, were 50% excellent/very good, 40% acceptable, and 9% poor failing. The present study showed that differences exist between studies when implementing the questionnaire (HSOPSC) in their hospitals. The results reported in all studies showed the dimension Teamwork within units was the best rate with a positive perception of the health staff. However, results report in all studies showed the dimension that the lowest rate was a non-punitive error with a negative perception of the hospital staff, for insecure that their errors reported are kept in their personnel file and held against them.

Keywords: Patient safety (PS), Patient Safety Culture, HSOPSC.

1. INTRODUCTION

Quality in a healthcare provider organization can be defined from many different aspects, and there are various methods and instruments to measure and improve it, Quality in Healthcare has different dimensions and components, Patient Safety (PS) is one of the most important and essential elements of quality in the healthcare setting. Measurement of patient safety culture (PSC) is a top priority and essential subject in improving (Azami Aghdash et al., 2014), and according to the institute of medicine in *Crossing Quality Chasm* in recommendation number two they recommend “All health care organizations, professional groups, and private and public purchasers should pursue six major aims; specifically, health care should be safe, effective, patient-centered, timely, efficient, and equitable” (Committee on Quality of Health Care in America, 2001), safety culture was defined according The Advisory Committee on the Safety of Nuclear Installations as “the safety culture of an organization is the product of individual and group values, attitude, perception, competencies, and pattern of behavior that determine the commitment to, and the style and the proficiency of , an organizations health and safety management” (Antonsen, 2012)

The Hospital Survey on Patient Safety Culture (HSOPSC) of the Agency for Healthcare Research and Quality (AHRQ) is an important and reliable questionnaire for the measurement of PSC in hospitals, and it has been tested in many studies and translated into many languages around the world. (Azmal et al., 2014; I. C. Chen & H. H. Li, 2010; F. El-Jardali, F. Sheikh, N. A. Garcia, D. Jamal, & A. Abdo, 2014; Gehring, Mascherek, Bezzola, & Schwappach, 2015; Sendlhofer, Wölfler, & Pregartner, 2015a; Silva-Batalha & Melleiro, 2015a)

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The present study is a meta-analysis on the patient safety culture score of different studies, which used HSOPSC questionnaire.

STATEMENT OF PROBLEM:

Lack of patient safety is a serious issue affecting the community and the world, developed and developing countries, patient safety defined as " A type of process or structure whose application reduces the probability of adverse events resulting from exposure to the health care system across a range of diseases and procedures"(Shojania, Duncan, McDonald, Wachter, & Markowitz, 2001)

Improving patient safety requires a complex intervention with teamwork, an environment of health care and adverse event reporting, with an increase in the interest in patient safety culture by the leaders and health organizations of different countries to find determinants such as lack of awareness as well as the unification of methods of identification of adverse events.

Patient safety climate in hospitals has recently attained larger attention. HSOPS has been used widely to measure the safety culture in hospitals in the United States since it was introduced in 2004. The HSOPS is translated into 17 languages and used in 30 countries (Haugen et al., 2010), Before applying the questionnaire, each country translated the original English version into its language and checked its validity and reliability through expert professionals who speak the native language (Ona, 2012)

The underlying objective of the present study is to demonstrate the perception of hospital staff about patient safety culture; the difference of the dimensions of the questionnaire implemented in their hospitals; and to promote inter-country study and comparison of results to improve health care quality and more importantly patient safety.

RESEARCH QUESTION:

What is the perception of patient safety culture in different countries that use HSOSPC and have reported the results?

RESEARCH OBJECTIVES:

- To describe the perception of patient safety culture in the hospitals in different countries in the world.
- To analyze and compare the results in the various countries which have implemented HSOPSC in their hospitals.

SIGNIFICANT OF THE STUDY:

Patient safety may be understood as the reduction, to an acceptable minimum, of the risk of unnecessary harm associated with healthcare (Silva-Batalha & Melleiro, 2015b), but more than that patient safety should be to not make and prevent harm to the patient, and it should be culture for all hospitals levels.

This study aims to describe the perception of patient safety culture after the implementation of HSOPSC in the hospitals in different countries in the world, and it can be as a reference for another studies and researchers to understand the variation in patient safety culture in the various countries in the world.

This study examines the 12 dimensions of hospital survey of patient safety culture in meta-analysis method.

2. LITERATURE REVIEW

After the publication of Institute of Medicine (IOM) "*To err is human*" (Kohn, Corrigan, & Donaldson, 2000) many healthcare organizations focus and reduce the medical and non-medical patient errors, patient safety is an important global challenge, the importance of a safety culture in patient safety improvement is widely accepted within healthcare organizations. The report of the IOM highlighted the significance of a safety culture as "health care organizations must develop a culture of safety such that an organization's care processes and workforce are focused on improving the reliability and safety of care for patients."

Different researchers conducted a patient safety culture researchers in the various countries in the world, Surveys are frequently used to measure safety culture in hospitals to improve patient safety. This is reflected in an increasing number of publications and studies in this area. Measuring and improving safety culture is supported at organizational levels by

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national health policy makers and accreditation institutions, with hospitals administering surveys on a regular basis for continuous improvement in patient safety culture. A number of safety culture questionnaires have been used within hospitals for internal assessment and planning of patient safety improvements, using HSOPSC which was developed by AHRQ it is one of the several surveys used to measure patient safety culture, researchers widely used it, it consists of 42 items that group into 12 dimensions; two outcome dimensions and 10 safety dimensions. For each item, there were five possible response categories, the labeling of which varies across dimensions. Of the 42 items, 17 are asked from a "negative" viewpoint and are subsequently reverse-scored.

Definitions:

According to AHRQ and the National Forum for Quality, they define patient safety practice as a type of process or structure whose application reduces the probability of adverse events resulting from exposure to the health care system across a range of diseases and procedures, (Shojania et al., 2001). This definition focus on illness and procedures provided to the patients only because it is for the patient safety perspective, some other definitions more comprehensive Safety culture is defined as the collective product of individual and group values, attitudes and patterns of behaviors in safety performance.(Organization, 2008) The characteristics of a vigorous and proactive safety culture include the commitment and dedication of the leadership to discuss and learn from errors, to document and improve patient safety, to encourage and practice teamwork, to spot potential hazards, to use systems for reporting and analyzing adverse events. This definition explains the patient safety culture in a wider range, and it includes the values of all healthcare organizations structure.

Patient safety culture was defined by The Advisory Committee on the Safety of Nuclear Installations as "the safety culture of an organization is the product of individual and group values, attitude, perception, competencies, and pattern of behavior that determine the commitment to, and the style and the proficiency of , an organization's health and safety management" (Antonsen, 2012).

Implementation of a patient safety culture is thought to minimize adverse events and eliminate preventable harm in healthcare organizations.

Patient safety culture a specific aspect of an organization's overall culture, has received growing attention as a focus on patient safety in healthcare organizations, has become an international priority. (J. S. Sorra & Dyer, 2010) The concept of safety culture emerged from research focused on safety and accident prevention in high reliability. Establishing a safety culture has been determined to be a key element of high reliability organizations, this aspects push the researchers to study the patient safety culture in the healthcare organizations around the world, In Lebanon Fadi El-Jardali in 2010 conducted a cross-sectional study using HSOPSC in 68 Hospitals,

n= 66807, show that 82.3% is the highest positive response of the 12 dimensions in teamwork within units dimension, and 24.3% is the lowest positive response of the 12 dimensions in Nonpunitive response to error .73.4% of respondent graded patient safety in their work area/unit as excellent/very good, 24.2% graded as acceptable, and 2.5% as poor/Failing (El-Jardali, Jaafar, Dimassi, Jamal, & Hamdan, 2010), in the same year 2010 I-Chi Chen, used a HSOPSC in Taiwan to measure patient safety culture in 42 hospitals n=788, shows that 94%% is the highest positive response of the 12 dimensions in teamwork within units dimension, and 39% is the lowest positive response of the 12 dimensions in staffing .(I.-C. Chen & H.-H. Li, 2010), in 2011 Shinya Ito used HSOPSC which was translated into Japanese to measure patient safety culture in 13 hospitals, n=6395, shows that 74.5%% is the highest positive response of the 12 dimensions in teamwork within units dimension, and 48% is the lowest positive response of the 12 dimensions in non-punitive response to errors.(Ito et al., 2011), in Kingdome of Saudi Arabia (KSA) Duaa I. Aljabri in 2012 conducted a cross-sectional study in the eastern region of KSA, using HSOPSC in Joined Commission International (JCI) accredited hospitals n=726, show that 80% is the highest positive response of the 12 dimensions in Organizational learning-continuous improvement dimension, and 20% is the lowest positive response of the 12 dimensions in Nonpunitive response to error .68% of respondent graded patient safety in their work area/unit as excellent/very good, 29% graded as acceptable, and 3% as poor/Failing. (Aljabri, 2012), Jalal Arabloo in 2012, used cross-sectional method to study the patient safety culture in all university hospitals in Qazvin, n=231, 65% is the highest positive response of the 12 dimensions in teamwork within units dimension, and 44% is the lowest positive response of the 12 dimensions in Nonpunitive response to error, 56% of

respondent graded patient safety in their work area/unit as acceptable, 32% graded as excellent/very good, and 12% as Poor/Failing. (Arabloo, Rezapour, Azar, Safari, & Mobasheri, 2012), in the same year, 2012 A.M.Aboul-Fotouh used HSOPSC in a cross-sectional study in Egypt, n=510. The highest positive score among 12 dimensions was for organizational learning for continues improvement 78.2% and the lowest score for the 12 dimensions was in non-punitive response to error 19.5%, for the participants perception of patient safety grades in their institution shows 57.3% of respondent graded patient safety in their work area/unit as acceptable, 38.8% graded as excellent/very good, and 3.9% as Poor/Failing (Aboul Fotouh, Ismail, Ez Elarab, & Wassif, 2012), Mamodou barrow in 2012 used cross-sectional study to in Gambian public hospitals to measure patient safety culture by using HSOPSC, n= 217 he found that 77% of the highest positive score among the 12 dimension in teamwork within units dimension, and the lowest score was 29% in the frequency of event reporting dimension, in the perception of hospital staff for patient safety culture in their institutions was 52% reported it was excellent/very good, 37% acceptable, and 12% was poor/failing.(Barrow, 2012),in China 2013 Yanli Nie and others used modified and translated to Chinese HSOPSC in 32 hospitals in 15 cities all across China, n=1160, they find out, teamwork within units is the highest score in the 10 dimensions by 84% score, and non-punitive response was the lowest score of the 10 dimensions used with score of 44%, 73% of the respondent have an excellent/very good perception of patient safety culture in their healthcare facility, 24 % acceptable, and 3% they see poor/failing grade,(Nie et al., 2013), Andej Robida examine the patient safety culture in Slovenia in 2013 in 3 hospitals, after the translation of HSOPSC to the Slovenian language, n=976, the highest score among the 12 dimensions was 78.8% for the frequency of event reported, and the lowest one was 56% for staffing allocation, the overall patient safety grades are 56% Excellent/very good, 38% acceptable, 6% poor/failing (Robida, 2013), C. Wagner in 2013 published a study titled; assessing patient safety culture in hospitals across countries, it is a cross-sectional survey study in 3 countries, 45 hospitals in Netherland n=3779, United States of America USA 622 hospitals participated n=196462, and 74 hospitals in Taiwan n=10146,in all three countries, most of the respondents are positive for teamwork within units among the other dimensions, Netherland 92%, Taiwan 88%, and USA 85%,the lowest score it was in handoffs and transitions, Netherland 20%, Taiwan 46%, and USA 41%, for patients safety grades USA was the highest 73% of respondents score it was excellent/very good, then in Taiwan 43%, Netherland 24%, in Netherland the respondents score for patient safety as acceptable was the highest 63%, Taiwan 51% and USA 23%, and for poor/failing patient safety the highest score was in Netherland 13%, Taiwan 7%, and USA 5%, for this study the variation between the countries is clear which can explain the awareness of patient safety culture between the staff in different hospitals and countries. (Wagner, Smits, Sorra, & Huang, 2013), Fadi El-Jardali in 2014 conduct another cross-sectional study in one large teaching hospital in Riyadh KSA, n=2572, the highest score in the 12 dimensions was 79.6% for organizational learning and quality improvement, and the lowest score is 26.8% for non-punitive response to error, for respondent perception about patient safety 75% was excellent/very good, 22% acceptable, and 3% was poor/failing. (Fadi El-Jardali, Farheen Sheikh, Nereo A Garcia, Diana Jamal, & Ayman Abdo, 2014), in 2014 H.Nabilah conduct a cross sectional study in Malaysia including 140 ministry of health hospitals, n=2480,

93.5% is the highest score in the 12 dimensions was for organizational learning and quality improvement, the lowest score in 12 dimensions is 26.7% for non-punitive response to errors.(Nabilah et al., 2014), Mohammad Azmal in 2014 conducted a cross-sectional study in 2 hospitals in Iran n=364, the highest score in the 12 dimensions is 74.7%in teamwork within units, and the lowest score was 20.2% in non-punitive response to errors, for participants perception of patient safety culture 47% they score it as acceptable, 32.6% as excellent/very good, and 20% poor/failing, the author compare the result to AHRQ report as a benchmark to recognize the strengths and weaknesses of patient safety culture in Iranian hospitals, and he find out, the results of Iranian hospitals are 23% higher than the benchmark.(Azmal et al., 2014).

Several researchers still investigating in the patient safety culture in hospitals, the recent studies on patient safety culture in hospitals was conducted by Gerald Sendlhofer in Austria in 2015, this cross-sectional study was done in university hospitals, the author used a translated copy of HSOPSC to German language, n=6317, manager expectations and actions promoting safety was the highest score of positive response 78%, and staffing 56% was the lowest positive response for the 12 dimensions,(Sendlhofer, Wölfler, & Pregartner, 2015b), another study was conducted in Swedish country council for three years period, by Anna Nordin, in this study the author used a Swedish version of HSOPSC, the highest positive score was 80% for teamwork within hospital units, ant the lowest positive score was 64% for hospital management support, (Nordin, 2015).

3. METHODOLOGY

Study design:

The present study is a Meta-analysis review of literature published in scientific journals.

Searching:

Systematic identification of potentially relevant studies in the following electronic database.

Electronic Databases: *Scientific Index* research engine, which provided by Thomson and Reuters.

Inclusion Criteria:

- **Population** - Studies related to the implementation of HSOPSC in hospitals in different countries. Included all levels of hospital staff (for example not limiting: health professional, administrative staff).
- **Comparison** – Research evidence included the results of controlled type studies which evaluated the perception of the patient safety culture of hospital staff to measure a difference of the patient safety in their hospitals.
- **Studies published**- between 2010 and 2015 were included.
- **Study design**- studies performed by use of quantitative methods were included.
- **Study tool**- studies performed using HSOPSC questionnaire.

Exclusion Criteria:

- Studies performed in primary health care.
- Descriptive studies which were only concerned with a specific area of care, unit/ward/department.
- Comparative studies with one or two departments of the hospital only describe different interventions in patient safety culture.
- Studies published before 2010.
- Studies published in languages other than English.
- Articles with non-relevant titles to the subject of this research.
- Articles related to this research and did not use a HSOPSC questionnaire.
- Articles that measured overall safety culture, NOT patient safety culture.

Description Of Instrument For Measuring Patient Safety Culture:

AHRQ has designed several measuring instruments to assess patient safety culture in health care organizations and hospitals, and to provide information for improvement of weak areas, The HSOPSC is a tool (a questionnaire) designed to evaluate the perception of patient safety culture among healthcare staff in hospitals, to assess the values, beliefs, and norms of an organization, event reporting, proper communication, leadership and management, This tool can measure hospital staff perception in each area of a hospital that has direct or indirect contact with patients and who spend most of their work hours in the hospital. Consequently, to identify areas of culture in need of improvement, increase awareness of patient safety culture concepts, evaluate the effectiveness of interventions over time and conduct internal and external benchmarking, organizations must assess its safety culture and position in analysis to allow organization to identify how their culture may differ from that others and to prioritize organization-wide improvement efforts,(Ona, 2012; J. Sorra, Famolaro, Dyer, Khanna, & Nelson, 2011).

The Hospital Survey on Patient Safety Culture, released in November 2004, was designed to assess hospital staff opinions about patient safety issues, medical errors, and event reporting. The survey includes 42 items that measure 12 areas, or composites, of patient safety culture. Each of the 12 patient safety culture composites, the survey also consists of two questions that ask respondents to provide an overall grade on patient safety for their work area/unit and to indicate the number of events they reported over the past 12 months. In addition, respondents are asked to provide limited background

demographic information about themselves (their work area/unit, staff position, whether they have direct interaction with patients, tenure in their work area/unit).(Westat et al., 2014).

Data Extraction:

Data were extracted from included articles by using standardized criteria, hospital characteristics and reported data measures of HSOPSC. Detailed results of data extraction from all the included studies were tabulated.

Results of the studies were summarized in a narrative synthesis. This information is both transparent and well-documented. Included studies must use as much rigor in conducting their studies as is expected of primary research. Out of the 300 retrieved articles, 283 articles were excluded due to the previously defined exclusion criteria, and 17 articles were entered in the study. After accurately studying and extracting the required data, they were summarized in the table and mathematically analyzed.

Analyzing the data:

The analysis of all principal survey dimensions was done by describing in percentages the perception of hospital staff to allow for comparison of results between studies that had implemented the HSOPSC. The principal survey dimensions, as well as background information about the opinions, were analyzed. Studies were grouped by author, the number of responders, number, and level of hospitals.

The all of these data was entered into Excel 2013 software was used to draw graphs. Endnote X5 software was used for organizing, title and abstract reviewing and also identification of duplication study. To calculate the overall PSC score and perform the meta-analysis, a Statistical package for the social sciences (SPSS V, 20) was used.

LIMITATION:

No limitations were founded.

4. RESULTS

The sum total of responders of hospital staff in the 19 studies was 238,109. The study with the smallest number of responders was 212, and the study with the greatest number of responders was 196,462. In the 19 studies a total of 1,064 hospitals were included, ranging from a study with one hospital which implemented the questionnaire to a study of 622 hospitals which implemented the survey. Hospitals that implemented the HSOPSC were private or public.

The studies mention that this questionnaire was adapted for every professional in the hospital who works with patients directly and indirectly. With regard to the characteristics of hospital staff participation, information is heterogeneous because not only health professionals (physicians, nurses, technicians, therapists physical, laboratory, pharmacist, and administrative staff).

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Table 1: characters of studies measurements patient's safety culture using hospital survey on patient safety culture (HSOPSC)

Study	Year	Country	Sample Size.	D1*	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12
Fadi El-Jardali	2010	Lebanon	6807	82.3	78.4	78 .5	72.5	68.2	68.1	66. 4	57.3	56	49.7	36.8	24.3
I-Chi Chen	2010	Taiwan	788	94	62	84	65	57	59	83	58	72	48	39	45

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Shinya Ito	2011	Japan	6395	74.5	52.5	52	69	65.5	53.5	73.5	52	65.5	63.5	60.5	48
Duaa I. Aljabri	2012	KSA	726	76.5	72.5	79	57	57	70.5	66.5	50.5	59.5	51	31	22
Jalal Arabloo	2012	Iran	231	65	54	62	60	58	56	61	53	53	60	47	44
A.M.Aboul-Fotouh	2012	Egypt	510	58.1	27.2	78.2	34	33.4	39.7	46.4	34.6	38	24.6	49.3	19.5
Mamodu barrow	2012	Gambia	217	77	56	72	52	29	45	75	45	63	49	33	38
Yanli Nie	2013	China	1160	84	69	88	55	60	50	63	65	66	55	45	60
Andej Robida	2013	Slovenia	976	70	62.2	72	69	79	72	73	74.4	62.2	68	56	62.6
C. Wagner	2013	USA	196462	79	70	71	64	60	63	75	62	57	44	55	44
C. Wagner	2013	Netherlands	3779	85	31	47	49	36	52	63	68	28	42	59	66
C. Wagner	2013	Taiwan	10146	81	60	80	52	31	44	65	40	56	43	40	31
Fadi El-Jardali	2014	KSA	2572	78.5	70.4	79.6	65.3	59.4	63.3	60.6	42.9	61.6	51.5	35.1	26.8
H.Nabila h	2014	Malaysia	2840	91	76.3	93.5	72.3	44.3	60.8	82.2	44.2	77.2	69.5	54.2	26.7
Mohammad Azmal	2014	Iran	364	74.7	50.2	75.1	58.7	47.6	64.4	56.5	47.2	44.3	59.2	67.1	20.2
Gerald Sendlhof er	2015	Austria	415	71.6	72.8	75.6	73.6	69	73.2	78	73.8	67	66.4	57.7	76.2
Anna Nordin	2015	Swedish	1023	81.2	63.2	72	74.4	67.6	78.8	77.4	78.8	70.2	72.4	69	75.6
Anna Nordin	2015	Swedish	1228	79.8	61	71	71.2	67.6	77.8	73.4	78.8	68.4	70.6	65.4	74
Anna Nordin	2015	Swedish	1470	79.4	61.4	69.4	69.4	64.4	67.2	75.2	63	69	70.4	64.2	75
			Mean	78.0316	60.5316	73.6789	62.2842	55.4737	60.9632	69.1632	57.2895	59.6789	55.6737	50.7526	46.2579
			SD	8.33507	13.64490	11.09673	10.55753	14.51680	11.43781	9.39836	13.45296	12.17892	12.68914	12.27547	20.73833

*1- Teamwork within hospital units, 2- Hospital management support for patient safety, 3- Organizational learning/continuous improvement, 4- Overall perception of safety, 5- Adverse event reporting & recording, 6- Feedback & communication about error, 7- Supervisor/Manager expectations & actions promoting safety, 8- Communication openness, 9- Teamwork across hospital units, 10- Hospital handoffs & transitions, 11- Staffing, 12- Nonpunitive response to error.

Table 1 show the 19 studies measurements for patient safety in different hospitals and countries, the highest result was Teamwork within hospital units 78.1%, and the lowest result was 46% in non-punitive response to the error.

Figure 2 represent the respondent responses for patient safety culture mean in their hospitals, were 50% excellent/very good, 40% acceptable, and 9% poor failing.

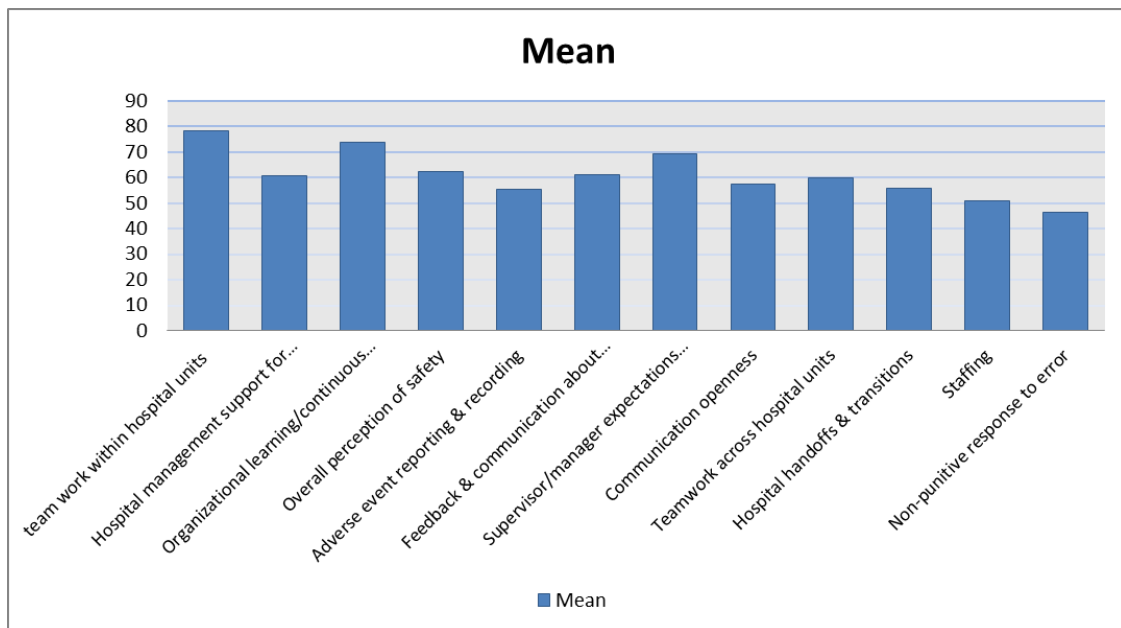


Figure 1 Mean of 12 dimensions of HSOPSC

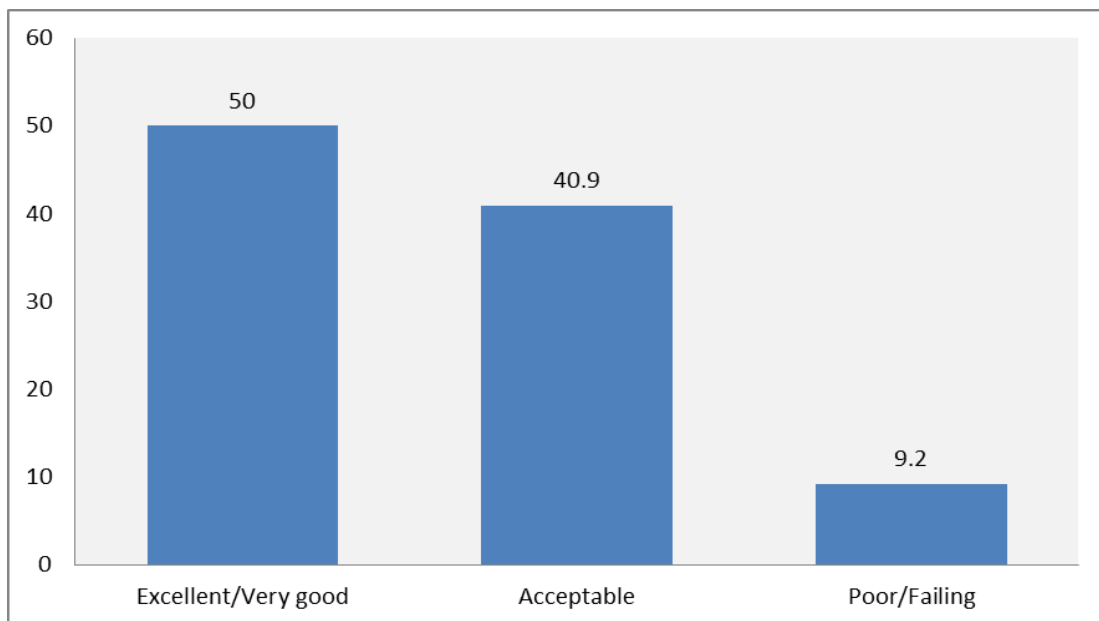


Figure 2 Average percentage of respondent giving their PSC grade

5. DISCUSSION

Strong safety culture is essential to promote the patient's safety and providing high-quality services to the patients in the organizations, which provide healthcare services. The top priority of promoting the safety culture situation among the healthcare services is measuring the present safety culture.

According to the results of this study, non-punitive response to error is the weakest dimension among the HOSPSC dimensions, showing that the staff avoids reporting their faults since they know about being charged otherwise. Since involving the staff in recognition and prevention is crucial, and also it is important to handle the healthcare services with possibly no mistakes or faults, environments with fear of punishment and penalties after mismanagement or delaying the promotion cannot increase the quality of patient's care. The results showed that 45% of staff did not report any faults in the past 12 months, which is due to the followings: First, no error has occurred in this time exactly. Second, there was no

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report due to the presence of punishment atmosphere in the hospital and low safety culture (Aghdash et al., 2014). 46% of the staff feels that their errors and event reports are not held against them and that the errors are not retained in their personal file, this could be the cause for the low percentage of incident reporting because 54% of the staff feels that if they report the errors they will be punished, or it will be kept in their files, thus hospital administrators should pay more attention to patient's safety, giving the staff awards for reporting their faults, no punishment in case of errors, participation in patient's safety, and giving responsibility to the staff could be useful to improve "non-punished response to errors" and "patient's safety culture in hospital.

Staff affairs are not in a good condition. According to the results of this study 50% of the respondents was able to handle the workload in their units and departments, small number of staff led to increasing their workload while decreasing the staff attention to patient safety. In some cases, the absence of accurate management of the personnel leads to these kinds of problems. Ignoring staff's needs, interests and abilities may lead to create some problems in patients' safety. Ignoring social and emotional needs of staff at the workspaces can add to the present problems. The present problems in this field can be decreased and the safety culture can be promoted by managing human forces in the hospital properly, detecting and caring about staff needs and wishes, creating proper work and salary conditions, sharing the staff in decisions and managing procedures, and developing and supporting unofficial groups at the hospital.

Teamwork work within units 78%, it measuring the staff supports for each other, treat each other with respect and work together as a team was the higher grade in this research and this culture will increase the patient safety culture in the hospital level.

50% of the respondent sees the level of patient safety is excellent/ very good, and 41% of them see it within acceptable range this will lead to make the administrator of these hospitals to think about it in more focused way and to link it with the number of incident reporting of errors, since there are low numbers of reporting errors and the staff can see the patient safety within acceptable range, would be indication of unreported errors or poor error reporting system.

In comparing this study with the AHRQ report of patient safety culture in 2014, (Westat et al., 2014), in table 2, it show almost safety culture. Relatively close results in the majority of dimensions, yet there is a big window for improvement in all hospitals for the patient.

Table 2: Comparing results of this result and AHRQ report of patient safety culture in 2014

Dimension	This Study	AHRQ 2014
Teamwork within hospital units	78	81
Hospital management support for patient safety	61	72
Organizational learning/continuous improvement	74	73
Overall perception of safety	62	66
Adverse event reporting & recording	55	66
Feedback & communication about error	61	67
Supervisor/manager expectations & actions promoting safety	69	76
Communication openness	57	62
Teamwork across hospital units	60	61
Hospital handoffs & transitions	56	47
Staffing	51	55
Nonpunitive response to error	46	44

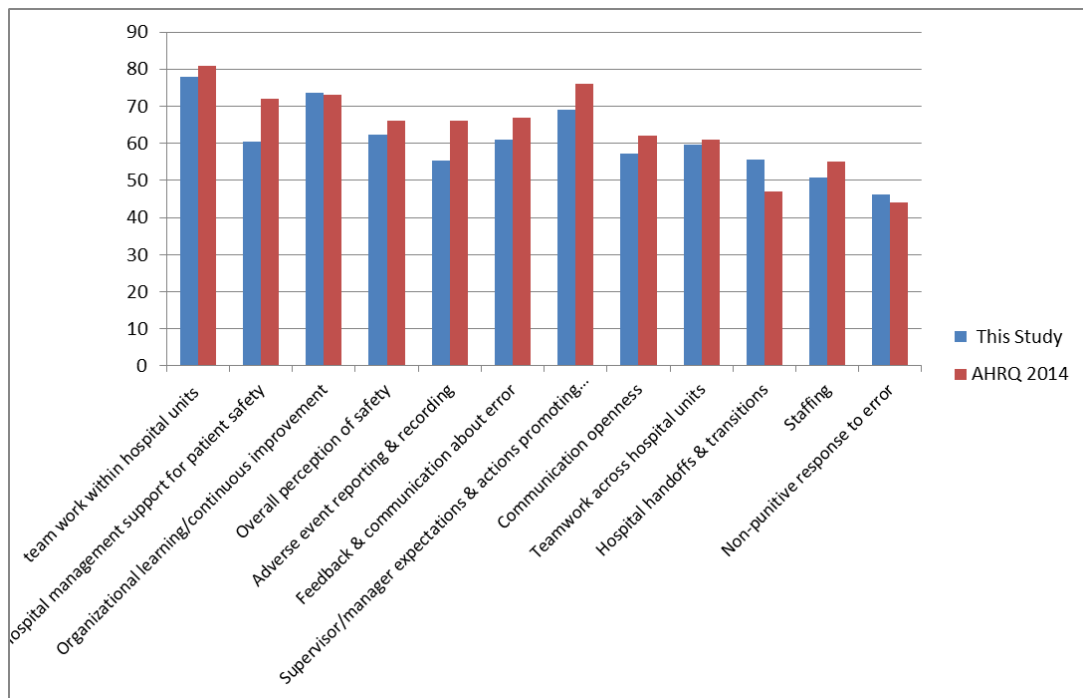


Figure 3: Comparing results of this result and AHRQ report of patient safety culture in 2014

6. CONCLUSION

The present study showed that differences exist between studies when implementing the questionnaire (HSOPSC) in their hospitals. The results reported in all studies showed the dimension Teamwork within units was the best rate with a positive perception of the health staff. However, results report in all studies showed the dimension that the lowest rate was a nonpunitive error with a negative perception of the hospital staff, for insecure that their errors reported are kept in their personnel file and held against them.

7. RECOMMENDATION

Non-punitive response to errors, staffing, must be placed on the priority of patient safety improvement plans.

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