



**PATIENT SAFETY CULTURE ASSESSMENT AMONG THE STAFF
OF THE ORAL DENTAL HOSPITAL**

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ABSTRACT

Background: Patient safety is a vital and important component in hospital services as well as steps to improve the quality of services. Events that can be detrimental to patients not only originate from health workers who are competent in their field as implementers of health services but also from the management system of a health service agency. It is critical to assess a healthcare organization's current safety culture to build an effective safety culture. Method: This research was conducted at the Muhammadiyah University Semarang Oral Dental Hospital using a cross-sectional approach. A total of 65 respondents took part in the research. The instrument used was a questionnaire about patient safety and the data was analyzed univariately in the form of a frequency distribution. Results: R average of total positive responses of twelve patient safety dimensions was 78.2%, ranging from 51.5% to 98.5%. No dimension has an average percent positive score of less than 50%. 33.3% of the average positive responses were in areas with the potential for improvement, while 66.7% were in areas of strength. Conclusion: This study displays a good patient safety culture in most dimensions of patient safety.

Keywords: culture, safety, patients

ABSTRAK

Latar Belakang: Keselamatan pasien merupakan komponen vital dan penting dalam pelayanan rumah sakit serta langkah untuk memperbaiki mutu layanan yang berkualitas. Insiden yang dapat merugikan pasien tidak hanya bersumber dari tenaga kesehatan yang kompeten dalam bidangnya sebagai pelaksana dalam pelayanan kesehatan melainkan juga sistem manajemen dari suatu instansi pelayanan kesehatan. Sangat penting untuk menilai budaya keselamatan organisasi perawatan kesehatan saat ini untuk membangun budaya keselamatan yang efektif. Metode: Penelitian ini dilakukan di Rumah Sakit Gigi Mulut Universitas Muhammadiyah Semarang dengan pendekatan cross-sectional. Sebanyak 65 responden ikut serta dalam penelitian. Instrumen yang digunakan berupa kuesioner tentang keselamatan pasien dan data yang diperoleh dianalisis secara univariat berupa distribusi frekuensi. Hasil: Rata-rata total respon positif dari dua belas dimensi keselamatan pasien adalah 78,2%, mulai dari 51,5% hingga 98,5%. Tidak ada dimensi yang memiliki rata-rata skor persen positif kurang dari 50%. 33,3% dari rata-rata respon positif berada di areas with the potential for improvement, sementara 66,7% berada di areas of strengths. Kesimpulan: Penelitian ini menampilkan budaya keselamatan pasien yang baik di sebagian besar dimensi keselamatan pasien.

Kata kunci: budaya, keselamatan, pasien

INTRODUCTION

Medical mistakes keep on being a recent concern for conversation (Amalia & Basabih, 2023; Carver et al., 2023). As indicated by the 2019 World Wellbeing Association (WHO) Patient Security Factsheet, unfavorable occasions coming about because of perilous patient consideration are among the main ten reasons for death and handicap around the world (America, 2000). Medical mistakes are the third driving reason for death in the US (Makary & Daniel, 2016). Medical mistakes in the US (US) cause roughly 44,000 to 98,000 clinic passings every year. This number surpasses the quantity of passings from engine vehicle crashes and is assessed to cost society somewhere in the range of 37.6 and 50 billion bucks in extra medical care expenses, handicap, and lost efficiency (America, 2000).

52 incidents involving patient safety were found in 11 hospitals across five nations, with Hong Kong accounting for 31%, Australia for 25%, India for 23%, the United States for 12%, and Canada for 10% (Pham, 2016). In the mean time, in Brazil, unfriendly occasions in medical clinics are assessed at 7.6% (Duarte, T., Euzébia, V., & Santos, 2017). From the results of this research, patient safety incidents are still often found in various countries in the world. Meanwhile, a study conducted at outpatient government hospitals in Yogyakarta, Indonesia regarding medication errors included

inappropriate use of antibiotics (10.48%), formulating medication without instructions (5.47%) and doctor's orders were the most common errors (99.12%) (Perwitasari et al., 2010).

Patient safety culture is one of the precaution endeavors to lessen gambles and keep away from undesirable occasions that are impeding to patients (Kinanti Arti et al., 2022; Wijaya et al., 2022). When health services aim to improve patient safety, important factors include error prevention, learning from mistakes, and developing a safety culture that engages both patients and health professionals (Aspden et al., 2004; Clancy et al., 2005). Patient safety culture is an important factor to consider when evaluating the quality of health services (Nie et al., 2013).

To establish an efficient safety culture, a healthcare organization must conduct an evaluation of its current safety culture. Data on the wellbeing related convictions and ways of behaving of staff distinguishes weak spots and solidarity to plan and carry out mediations pointed toward further developing safety culture (Kinanti Arti et al., 2022; Reis CT, Laguardia J, Vasconcelos AGG, 2016). A study conducted at the Special Hospital for Mothers and Children stated that six patient safety objectives had been implemented, but management support was needed to improve patient safety, especially in terms of optimizing service quality, regulatory policies, outreach and staff training (Adiningsih & Permana, 2023). Management support in studying into weaknesses and strengths to improve patient safety culture.

Previous studies conducted at the Karya Bhakti Pratiwi Hospital in Bogor explained that the patient safety culture there was still lacking (Yasmi & Thabrany, 2018). The patient safety culture at Sultan Agung Hospital Semarang is implemented well (82%) (Setyawati, 2023). Apart from that, at the Dharma Yadnya Bali General Hospital, 50% of them have implemented a good patient safety culture (Darmawan & Darmika, 2019), while at the Special Capital Region Hospital of Jakarta it is 53.2% (Kusumapradja, 2017). Ja'far Medika Karanganyar Hospital meets a passing grade above 70% in implementing patient safety objectives (Suryawinata et al., 2022). The description of previous studies regarding the implementation of infection prevention and control at the Muhammadiyah University Semarang Oral Dental Hospital was included in the good category with a score above 60% (Windu et al., 2023).

A few investigations have been directed to evaluate patient safety culture. Notwithstanding, information on quiet safety culture in wellbeing offices that offer types of assistance in the field of dental and oral wellbeing is as yet deficient. Recognizable proof of negative and uplifting perspectives of wellbeing laborers towards patient safety culture is potential for development and arranging activity to reinforce and keep up with obligation to more secure consideration.

This study expected to survey the patient safety culture at the Muhammadiyah University Semarang Oral Dental Hospital.

METHOD

Research Design

Research is a type of *cross-sectional* descriptive research conducted at the Muhammadiyah University Semarang Oral Dental Hospital (RSGM Unimus). RSGM Unimus provides inpatient, outpatient, and emergency services. Apart from serving independent costs, RSGM Unimus also serves treatment costs covered by social health insurance, both government and private. The hospital has a quality committee in which it is also responsible for the implementation of a patient safety culture.

Settings and Samples

The population in this study was 77 consisting of department heads and staff under the medical services and support division of RSGM Unimus. The results of sample calculations using the Lemeshow formula showed that 65 respondents would be involved in this research.

Measurements and Results

The questionnaire used to measure patient safety culture is a form adapted from *the Hospital Survey on Patient Safety Culture (HSOPSC)* questionnaire. (Sorra et al., 2016)The questionnaire presented in Indonesian consists of two parts: the first part covers demographic characteristics, work position, and work experience (years). The second part is *the Patient Safety Culture (PSC)* component which consists of 12 safety culture components. The twelve dimensions of patient safety culture include; teamwork within the unit, supervisors' expectations and actions to promote patient safety, feedback and communication about error, organizational learning, communication openness, overall perception of patient safety, hands-of and transitions, teamwork across units, frequency of events reported, management support for patient safety, staffing and management support for patient safety. The score for each dimension is calculated by averaging the percentage of positive responses to the items. Of the twelve dimensions, nine dimensions ask respondents to answer using 5-point answer categories in terms of agree (strongly agree, agree, neutral, disagree, and strongly disagree). Survey items from the remaining three dimensions (feedback and communication about errors, openness of communication, and frequency of event reports) used 5-point response categories in terms of frequency (always, often, sometimes, rarely, and never). Agreeing with items with a positive tone is given a score of 1 and disagreeing with a score of 0 and vice versa for items with a negative tone. Higher scores indicate more favorable attitudes toward patient safety culture.

A comparative data report from users of *the Hospital Survey on Patient Safety Culture (HSOPSC)*, the results are classified based on the percent of positive responses divided into three categories:

1. Strong area: when the percentage of positive responses is more than 75%.
2. Areas for potential improvement: The percentage of positive responses is 50–75%.
3. Weak areas: positive response percentage lower than 50%.

Data analysis

The data that has been collected is then processed, such as *editing, scoring, coding, entry, and processing*. Data were analyzed univariately using SPSS 25.0.

RESULTS AND DISCUSSION

Table 1. Characteristics of Respondents

Respondent Characteristics	f	%
Type of work		
Doctor	11	16.9
Nurse	15	23.1
Young dentist	24	36.9
Medical support staff	15	23.1
Gender		
Woman	46	70.8
Man	19	29.2
Length of work per day (hours)		
<7	25	38.5
7	28	43.1
8	12	18.5
Shifts		
1	44	67.7
2	21	32.3
Working period at RSGM (years)		
< 1	8	12.3
1+	18	27.1
2+	18	27.1
3+	11	16.9
4+	7	10.8
5+	3	4.6

Table 1 shows that the majority of respondents in this study were young dentists (36.9%), while more than a quarter were nurses (23.1%), medical support staff (23.1 %), and doctors (16.9%). More than half of the respondents were female (70.8 %). The percentage of work time per day for most respondents was 7 hours (43.1%). Less than a third (18.5%) work 8 hours per day. The majority of them work in 1 shift (67.7%), but some work in 2 shifts (32.2%). 12.3% of respondents work <1 year, while those involved in work for more than 1 year or more than 2 years was 27.1%. Almost one-sixth (10.8%) of respondents worked for more than 4 years and those who spent more than 5 years are 4.6%.

Table 2. Respondents' Responses to Patient Safety Culture

Criteria	Items	Average positive response (%)	Positive response (%)	Frequency of positive responses (n=65)
1. Collaboration within the unit	a. Support each other with others	98.5	98.5	64
	b. When a lot of work needs to be done quickly, we work together to get the job done		98.5	64
	c. People treat each other with respect		98.5	64
2. Expectations and actions of unit leaders to support patient safety	a. My supervisor said kind words when he saw work being done according to established patient safety procedures	80.5	100	65
	b. My supervisor seriously considers staff suggestions to improve patient safety		98.5	64
	c. Whenever the pressure increases, leaders want us to work faster even if we take shortcuts		43.1	28
3. Feedback and communication about errors	a. We were given feedback on changes made based on the report	95.4	95.4	62
	b. We were notified of an error occurring in this unit		96.9	63
	c. In this unit, we discuss ways to prevent errors from happening again		93.8	61
4. Increasing continuous learning in organizations	a. We are actively doing things to improve patient safety	74.9	47.7	31
	b. Mistakes that have occurred have led to positive changes here		98.5	64
	c. Once we make changes to improve patient safety, we evaluate their effectiveness		78.5	51
5. Communication readiness	a. Staff will be free to speak up if they see something that could negatively impact patient care	92.3	92.3	60
6. The overall perception of patient safety	a. It's just a coincidence that more serious errors don't happen around here	76.5	73.8	48
	b. Patient safety is never overlooked in favor of getting more work done		66.2	43
	c. We have patient safety concerns in this unit		93.8	61
	d. Our procedures and systems are good at preventing errors		72.3	47
7. Handoffs and transitions	a. Important patient care information is often forgotten during shift changes	79.2	90.8	59
	b. Problems often occur in exchanging information between hospital units		67.7	44
8. Teamwork between units	a. There is good cooperation between synergistic hospital units	56.2	52.3	34
	b. It is often unpleasant to work with staff from other hospital units		60	39

Criteria	Items	Average positive response (%)	Positive response (%)	Frequency of positive responses (n=65)
9. Frequency of reported events	a. When an error occurs, but is discovered and corrected before it affects the patient, how often is this reported?	83.1	92.3	60
	b. When an error occurs, but does not have the potential to harm the patient, how often is this reported?		86.2	56
	c. When an error is made that could harm the patient, but does not occur, how often is this reported?		70.8	46
10. Management support for patient safety	a. Hospital management maintains a work climate that prioritizes patient safety	76.9	75.4	49
	b. Hospital management appears to be interested in patient safety only after an adverse event occurs		78.5	51
11. Staff	a. We have sufficient staff to handle the workload	73.1	69.2	45
	b. We work in "crisis mode" trying to do too much, too fast		76.9	50
12. The response is not punitive to mistakes	a. The staff felt their mistakes were kept to themselves	51.5	56.9	37
	b. Staff worry that the mistakes they make are stored in their personnel		46.2	30
Average total positive response		78.2		

Table 2 depicts the mean percent positive score of patient safety culture. R is the average of total positive responses of twelve dimensions is 78.2%, ranging from 51.5% to 98.5%. No dimension has an average percent positive score of less than 50%.

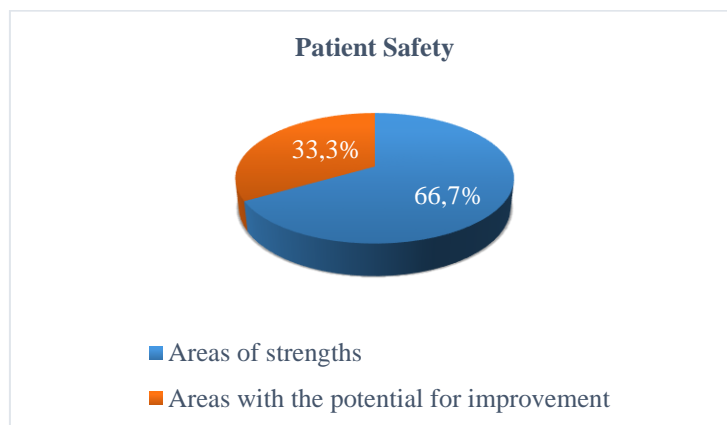


Figure 1. Pie diagram of positive response

33.3% of the average positive response was in *areas with the potential for improvement*, while 66.7% was in *areas of strength*. Patient safety culture dimensions with an average score of positive percent 50% - 75% (*areas with the potential for improvement*) are “ organizational learning and improvement sustainable” (74.9%), “staff” (73.1%) "teamwork between units" (56.2%), followed by a non-punitive response to mistakes (51.5%). Eight of the twelve dimensions represent *areas of strengths* (average percent positive score of more than 75%) including; "cooperation within the unit" (8.5%), "unit leadership expectations and actions to support patient safety" (80.5%), "feedback and communication about errors" (95.4%), "communication readiness" (92,3), "overall perception of patient safety" (76.5%), "handoff and transition" (79.2%) "frequency of reported events” (83.1%), management support for patient safety (76, 9%).

Patient safety is a vital and important component of hospital services as well as a step to improve the quality of services (Findriyartini, 2015). Hospital quality assessments are obtained through an accreditation system, one of which is the target of patient safety because it has become a priority for health services throughout the world (Cosway, B., Stevens, A.C., & Panesar, 2012; Internationa, 2015). One step to improve the quality of service is to implement a patient safety culture in both government and private hospitals.

The average total positive response from this study was 78.2%. This study had a higher average positive response compared to the patient safety culture in previous research hospitals. Patient safety culture in Iranian teaching hospitals had a total positive response of 36.4% (Kakemam et al., 2022), lower than the average percent positive response in Katsina Public Hospitals, Northwest Nigeria of 66.9% (Kaware et al., 2022). Apart from that, in a study conducted in Europe from four countries where each country was represented by two hospitals, the average total positive response results in Sweden were 52.4%, Spain 40.1, Hungary 55.3%, and Croatia 45. 1% (Granel-Giménez et al., 2022). A possible explanation for the difference in results is that patient safety culture has not been implemented optimally. Additionally, the literature indicates that safety culture varies across hospital organizations depending on the organization's experience, size, and function (El-Jardali et al., 2014). Additionally, the presence or absence of elements that encourage positive PSC, such as a culture of blame and shaming in the face of adverse events, open communication, and management support, may explain differences in the overall mean percent score for patient perception of safety culture (PSC) in different settings (Shahril Abu Hanifah & Ismail, 2020). In addition, differences in results between different settings may be attributed to different participant and setting characteristics.

The results of this study show that the average percentage of positive responses among all dimensions is not less than 50%. The highest positive percent average was teamwork within units (98.5%) because participants worked together as a team when a lot of work had to be done. Teamwork reflects the level of collaboration, cooperation, and mutual respect among personnel working in the same environment. Teamwork within units is an area of strength for most hospitals (WHO, 2009). These results are in line with the results of research conducted in Northwest Nigeria which revealed that the highest positive response was teamwork within Units (91.1%) (Kaware et al., 2022).

Non-punitive response to error had the lowest positive response in this study (51.5%). This reflects a culture of “blame and shame” where failure is punished or hidden and people refuse to admit that a problem exists. In line with research conducted at the University Hospital for Gynecology and Obstetrics in Alexandria the lowest response was (18.9%) (Ali Ali et al., 2022).

According to this research, the five dimensions of safety culture that have the potential to be improved (average percent positive score of more than 50-75%) are “organizational learning and improvement sustainable” (74.9%), “staff” (73.1%) “inter-unit teamwork” (56.2%), followed by non-punitive responses to mistakes (51.5%). This means that these dimensions need to be considered for further improvement by the hospital and as corrective action.

CONCLUSION AND SUGGESTION

This study displays a good patient safety culture in most dimensions. No dimension has an average percent positive of less than 50%. 33.3% of the average positive responses were in *areas with the potential for improvement*, dimensions in this area should be considered as priority focus areas. Ongoing training programs for staff on patient safety to improve their perception of safety culture are needed. Continuous training of healthcare workers in skills that support PSC is strongly recommended along with the implementation of proactive risk management that focuses on errors in systems or processes, rather than individual errors. An error-free environment must be created to detect threats to patient safety, share information, and learn from incidents.

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ETHICAL CONSIDERATIONS

Research ethical permission has been obtained from the Health Research Ethics Commission Faculty of Nursing and Health Sciences, Muhammadiyah University of Semarang number 163/KE/08/2023. Before carrying out the research, the researcher indicated and provided *informed consent* as proof of agreement to become a research respondent. If the respondent agrees then proceed with filling out the questionnaire.

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