

Measuring patient safety culture using the hospital survey on patient safety culture pasca pandemic Covid-19

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ARTICLE INFO

Article history:

Received Sep 4, 2023

Revised Sep 13, 2023

Accepted Sep 25, 2023

Keywords:

Covid-19
HSOPSC
Pasient Safety

ABSTRACT

The patient safety system is a top priority that must be implemented by the hospital, this is very closely related to both the image of the hospital and patient safety. The current Covid-19 pandemic situation requires serious attention from the health service, in order to avoid transmission of respiratory diseases and other nosocomial infections, so that patient safety is a priority. The aim of this research is to determine the implementation of patient safety management carried out at Adventist Hospital. This study used a quantitative descriptive design, using a survey questionnaire from the Hospital Survey on the Hospital Survey of Patient Safety Culture (HSOPSC) from Healthcare Research and Quality (AHRQ). Which was carried out from November to December 2021, using the Cluster Random Sampling technique. This study gave positive results on aspects of the dimensions of hospital management support for patient safety in patient safety culture question items such as Hospital management actions showing that patient safety is a top priority, with a percentage of 81.7%, the lowest positive aspect is the patient safety aspect. dimensions of training and organizational learning on the question item: in contact with our colleagues, we improve our safety practices, with 0.8 % of respondents. Patient safety is currently an aspect that is of concern to almost every service provider, especially hospitals, with more and more hospital management conducting patient safety measurement processes using the HSOPSC survey, the patient safety aspect will increase.

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INTRODUCTION

The pandemic situation that occurred in early 2020 was caused by the Corona virus (Covid-19). Kasda et al., (2020). The World Health Organization, (2020), stated that Coronavirus disease 2019 (COVID-19) is a respiratory disease that can be transmitted through the respiratory tract between individuals in close proximity through contact, droplets, or air transmission. Sidabutar & Sumantrie, (2021). Most of the spread of Covid-19 disease occurs through respiratory droplets

(coughing or sneezing) that are produced when communicating between Covid-19 sufferers and other people.

Covid-19 has been declared a global pandemic by the World Health Organization (WHO), with more than 15 million people infected worldwide and more than 630,000 deaths as of 24 July 2020 (WHO, 2020). The Covid-19 pandemic has had an impact on the world economy and public health. Almost all countries in the world are fighting against the Covid-19 pandemic, with various efforts in the health sector. Furthermore, Wu et al., (2020), The COVID-19 crisis has placed enormous pressure on our hospitals and health systems. Many hospitals are struggling to help provide services both in inpatient rooms and Intensive Care Units. To overcome this, Braithwaite et al., (2015). Stated the importance of primary care for a resilient health care system, which ultimately provides safe and timely services in all settings, including outbreaks and emergencies. El-Jardali et al., (2011), stated in their research that the incident initiation system, communication, leadership and management of patient safety, staff, and accreditation status were the main cultural predictors of patient safety. Furthermore, Kangasniemi et al., (2013), stated that currently, patient safety is the main driver in health care. The current implementation of safety management by health organizations is difficult, if not all components are involved in improving patient safety.

Nie1† et al., (2013), patient safety is an important component of quality health services. Likewise, Salawati, (2020), the patient safety system is a top priority that must be implemented by hospitals, this is very closely related to both the hospital's image and patient safety. Since the beginning of 1900, hospital institutions have always improved quality in 3 (three) elements, namely structure, process and outcome with various basic concepts, authorized regulatory programs, for example, including the implementation of Hospital Service Standards, the implementation of Quality Assurance, Total Quality Management. Continuous Quality Improvement, Licensing, Accreditation, Credentialing, Medical Audit.

Farokhzadian et al., (2018), patient safety has existed for a long time before modern treatments like today. Patient safety (PS) is a key determinant of healthcare quality in medical facilities and is considered a priority in most countries (Stoyanova et al., 2018). Safety has become a global issue, including for hospitals. There are five important issues related to safety in hospitals, namely patient safety, safety of workers or health workers, safety of buildings and equipment in hospitals which can have an impact on the safety of patients and staff, environmental safety which has an impact on environmental pollution and safety. hospital business related to hospital survival (DepKes.2006). Richter (2016) We found that perceived teamwork across units was the most significant predictor of successful patient safety management.

In connection with the occurrence of pandemics in various countries, research by Alboksmaty et al., (2021), said that the COVID-19 policy has affected all levels of health care in England, using technology during the treatment process. However, over-reliance on the use of technology has the potential to pose a risk of inequality regarding accessibility, particularly to elderly patients, until the UK primary care delivery model may, to some extent, open alternative traditional routes for those who cannot access or use technology.

According to the WHO study report (2017), medical errors are one of the causes of the high incidence of patient deaths in hospitals. This death rate is largest in the United States. In England, it was recently reported that the incidence of injury due to negligence of health workers was reported every 35 seconds. Similar things also happen in several countries, especially low and middle income countries. This is possibly due to a lack of staff in hospitals, less competent human resources, limited medical equipment, poor hygiene. These things have an impact on unsafe forms of patient care. Coupled with a patient safety culture that is still very low, leadership support is relatively lacking for patient safety.

The current Covid-19 pandemic situation needs to be given serious attention by health services, in order to avoid transmission of respiratory tract diseases and other nasocomial infections. The need for patient safety at this time is something that is very important to pay

attention to. Low service and not paying attention to patient safety is a very serious global concern. In several developed countries, the government takes part in monitoring patient safety systems in an integrated manner. This is done to reduce the number of events that injure the patient, even those that cause patient safety during treatment at the hospital. Therefore the issue of patient safety has become an issue that is highly discussed at the international level. Where International calls for joint efforts in implementing patient safety.

Measurement of patient safety culture (KP) in hospitals is very important to be implemented for hospitals, specifically Medan Adventist Hospital, as a private partner in providing health services to the wider community, in assisting government programs in the field of health services. Based on the results of an informal survey conducted, it can be felt that there is still a slight increase in management initiatives in the aspect of patient safety. This can be seen from the small percentage of Adventist Hospital staff who have attended training on KP-RS, even though the organization's understanding of knowledge and skills, especially patient safety is a very important thing, fundamental to safe healthcare practice (Aspden et al., 2004). Therefore, efforts to implement the KP-RS need to be carried out so that it can run well, this requires the support and commitment of the Board of Directors and the Medan Adventist Hospital Foundation, so that the KP-RS culture can become a shared responsibility, and be the first priority in health services to the community.

RESEARCH METHOD

This research is Quantitative Descriptive in nature. According to Sugiyono (2017) the descriptive research method is a research design that aims to determine the value of independent variables, without making comparisons or connecting one variable with other variables. In a descriptive research design the approach taken is quantitative. This study uses primary data analysis from the results of the respondent's questionnaire. The research was conducted from November to December 2021. The sample used in this study consisted of doctors, nurses and non-clinical staff at the Medan Adventist Hospital Institution. A total of 185 health workers at the Medan Adventist Hospital were calculated using the Slovin formula (Nursalam, 2015) as follows: $n = 185 / [1 + 185(0.05)^2] = 126.49$ rounded up to 126 respondents who were sampled.

The inclusion criteria in this study are respondents who are willing to voluntarily participate, while the exclusion criteria are respondents who are not willing to fill out the questionnaire and employees who work outside doctors, nurses and medical support.

In collecting data in this study, using the HSOPSC survey. (Chen & Li, (2010) Hospital Survey of Hospital Survey Of Patient Safety Culture (HSOPSC) from Healthcare Research and Quality (AHRQ) is a tool to assess the safety culture of a hospital as a whole, or for a specific unit within a hospital. HSOPSC has good psychometric testing criteria, including item analysis, exploratory factor analysis, confirmatory factor analysis, and intercorrelation and reliability analysis.

Furthermore, (Chen & Li, 2010), explained that HSOPSC had been tested and revised again by the Association of Healthcare Research and Quality (AHRQ), and then released again in November 2004. It was designed to determine 12 cultural factors (dimensions) patient safety in hospitals. The HSOPSC questionnaire contains 42 items. The descriptive variable measurement method is to use an interval scale with a measuring tool based on the HSOPSC questionnaire which contains 42 items, most of which use a 4-point Likert response agreement scale ("Never" to "Always"). According to Riduwan (2006), if the highest and lowest scores can be determined, continue by determining the range, then the results are grouped into Never, Sometimes, Often and Always. Survey steps:

The seven aspects of unit-level safety culture

- a. Supervisor/manager expectations and actions that promote safety (4 items)

- b. Continuous improvement-learning organization (3 items)
- c. Teamwork in units (4 items)
- d. Open communication (3 items)
- e. Feedback and communication about errors (3 items)
- f. Nonpunitive responses to wrongdoing (3 items)
- g. Personnel (4 items)

Three aspects of hospital-level safety culture

- a. Hospital management support for patient safety (3 items)
- b. Teamwork across hospital units (4 items)
- c. Hospital handover and transition (4 items)

Two outcome variables

- a. Overall perception of safety (4 items)
- b. Frequency of reporting events (3 items)

HSOPSC questions were translated into Indonesian by expert translators with a background in patient safety research. Before the research is carried out, first obtain approval from the Medan Adventist Hospital Ethics Committee with No. 123/PERS/RSAM/XI/2021, dated 02 November 2021.

RESULTS AND DISCUSSIONS

The total sample used in this study was 126 respondents, 4 of whom worked as doctors with a percentage (3.2%), nursing staff were 99 people with a percentage (78.6%), medical support were 23 people with a percentage (18.3%). Then in Table 1 we can see the average length of work in the hospital for 0-5 years of service as many as 86 people with a percentage (68.3%), then 6-10 years as many as 13 people with a percentage (10.3%), 11-15 years of service as many as 14 people with a percentage (11.1%), over 20 years of service there are 13 people with a percentage (10.7%).

Tabel 1 Demographic Data

No	Characteristics	Total (n=126)
1	Profession	
	Doctor	4 (3,2 %)
	Nurse	99 (78,6 %)
	Medical support	23 (18,3%)
	Total	126 (100%)
2	Length of time working at the hospital	
	0 - 5 Years	86 (68,3%)
	6 - 10 Years	13 (10,3%)
	11 - 15 Years	14 (11,1)
	Over 20 Years	13 (10,7%)
	Total	126 (100%)

Based on the results of the Hospital Survey on Patient Safety Culture (HSOPSC) questionnaire, during the Covid-19 pandemic which was collected by researchers from respondents who worked at the Medan Adventist Hospital, the results were obtained as in Table 2 below:

Tabel 2. HSOPSC measurement results

Item	Never		Sometimes		Often		Always	
1. Overall perceptions of safety								
Patient safety is never sacrificed to get more work done.	45	35,7%	4	3,3%	11	8,7%	66	52,4 %

Our procedures and systems are good at preventing errors from happening	2	1,6 %	7	5,6%	24	19%	93	73,8%
It is just by chance that more serious mistakes do not happen around here.	24	19 %	34	27 %	36	28,6%	32	25,4%
We have patient safety problems in this unit	60	47,6%	44	34,9%	6	4,8%	16	12,7%
2. Frequency of event reporting								
When a mistake is made, but is caught and corrected before affecting the patient, how often is this reported?	4	3,2%	15	11,9%	27	21,4%	80	63,5%
When a mistake is made, but has no potential to harm the patient, how often is this reported?	6	4,8%	21	16,7%	47	37,3%	52	41,3%
When a mistake is made that could harm the patient, but does not, how often is this reported?	5	4%	15	11,9%	27	21,4%	79	62,7%
3. Supervisor/manager expectations & actions promoting safety								
My supervisor/manager says a good word when he/she sees a job done according to established patient safety procedures.	3	2,4%	12	9,5%	32	25,4%	79	62,7%
My supervisor/manager seriously considers staff suggestions for improving patient safety.	2	1,6%	13	10,3%	28	22,2%	83	65,9%
Whenever pressure builds up, my supervisor/manager wants us to work faster, even if it means taking shortcuts.	23	18,3%	25	19,8%	28	22,2%	50	39,7%
My supervisor/manager overlooks patient safety problems that happen over and over	96	76,2%	8	6,3%	8	6,3%	14	11,1%
4. Organizational learning – continuous improvement								
After we make changes to improve patient safety, we evaluate their effectiveness.	2	1,6%	3	2,4%	34	17%	87	69%
We are actively doing things to improve patient safety.	2	1,6%	5	11%	19	15,1%	10	7,9%
Mistakes have led to positive changes here	9	7,1%	11	8,7%	33	26,6%	73	57,9%
Increased services and rooms in care services.	2	1,6%	6	4,8%	27	21,4%	91	72,2%
5. Teamwork within hospital units								
People support one another in this unit	2	1,6%	6	4,8%	31	24,6%	87	69%
When one area in this unit gets really busy, others help out	6	4,8%	8	6,3%	31	24,6%	81	64,2%
When a lot of work needs to be done quickly, we work together as a team to get the work done.	2	1,6%	2	1,6%	28	20,6%	96	76,2%
In this unit, people treat each other with respect.	4	3,2%	3	2,4%	24	19%	95	75,4%
6. Communication openness								
Staff will freely speak up if they see something that may negatively affect patient care	8	6,3%	14	11,1%	39	31%	65	51,6%
Staff feel free to question the decisions or actions of those with more authority	14	11,1%	19	15,1%	39	31%	54	42,9%
Staff are afraid to ask questions when something does not seem right.	55	43,7%	38	30,2%	20	15,9%	17	10,3%
7. Feedback and communication about error								
We are given feedback about changes put into place based on event reports	5	4%	15	11,9%	46	36,5%	60	47,6%
We are informed about errors that happen in this unit.	3	2,4%	9	7,1%	30	23,8%	84	66,7%
In this unit, we discuss ways to prevent errors from happening again.	2	1,6%	5	4%	28	22,2%	91	72,2%
8. Non-punitive response to error								
When an event is reported, it feels like the person is being written up, not the problem	35	27,8%	45	35,7%	26	19,8%	21	16,7%
Staff worry that mistakes they make are kept in their personnel file.	19	15,1%	35	27,8%	38	30,2%	34	27%
Staff feel like their mistakes are held against them	9	7,1%	26	20,6%	47	37,3%	44	34,9%
9. Staffing								
We have enough staff to handle the workload.	4	3,2%	16	12,7%	40	31,7%	66	52,4%
We work in 'crisis mode', trying to do too much, too	23	18,3%	36	28,6%	32	25,4%	35	27,8%

quickly.									
Staff in this unit work longer hours than is best for patient care.	11	8,7%	21	16,7%	41	32,5%	53	42,1%	
We use more agency/temporary staff than is best for patient care.	35	27,8%	51	40,5%	22	17,5%	18	14,3%	
10. Hospital management support for patient safety									
Hospital management provides a work climate that promotes patient safety	4	3,2%	3	2,4%	28	22,2%	91	72,2%	
The actions of hospital management show that patient safety is a top priority.	2	1,6%	3	2,4%	18	14,3%	10	81,7%	3
Hospital management seems interested in patient safety only after an adverse event happens	49	38,9%	37	29,4%	11	8,7%	29	23%	
11. Teamwork across hospital units									
Hospital units work well together to provide the best care for patients	2	1,6%	4	3,2%	23	18,3%	97	77%	
There is good cooperation among hospital units that need to work together. .	2	1,6%	6	4,8%	24	19%	94	74,6%	
It is often unpleasant to work with staff from other hospital units.	61	48,4%	40	31,7%	15	11,9%	10	7,9%	
Hospital units do not coordinate well with each other .	82	65,1%	23	18,3%	6	4,8%	15	11,9%	
12. Hospital handoffs and transitions									
Shift changes are problematic for patients in this hospital	75	59,5%	29	23%	13	10,3%	9	7,1%	
Things 'fall between the cracks' when transferring patients from one unit to another	49	38,9%	48	38,1%	17	13,5%	12	9,5%	
Important patient care information is often lost during shift changes.	70	55,6%	35	27,8%	11	8,7%	10	7,9%	
Problems often occur in the exchange of information across hospital units.	64	50,8%	42	33,3%	11	8,7%	9	7,1%	
13. Training and organizational learning									
Patient safety issues were addressed during my education	10	7,9%	9	7,1%	34	27%	73	57,9%	
In contact with our co-workers, we improve our practices in term of safety	1	0,8%	2	1,6%	36	28,6%	87	69%	
When someone does not respect patient safety because of a difficult or complex situation, the ward staff does not react.	67	53,2%	30	23,8%	14	11,1%	15	11,9%	

Based on the results of measuring Patient Safety culture at the Medan Adventist Hospital using the Hospital Survey on Patient Safety Culture (HSOPSC) during the Covid-19 Pandemic, the results of the HSOPC Aspect at the Hospital Unit level, Hospital Level, and overall HSOPC variable results were found to be seen in the table as follows:

Tabel 3. The seven aspects of unit-level safety culture

No	Unit-level aspects of Safety Culture	Respondent's perception category			
		Negatif		Positif	
		n	%	n	%
1	Supervisor/manager expectations and actions that promote safety (4 items)				
	My supervisor/manager ignores recurring patient safety concerns.	96	76,2%		
	My supervisor/manager seriously considers staff suggestions for improving patient safety			83	65,9%
2	Continuous improvement-learning organization (3 items)				
	The mistakes that occurred have led to positive changes in this Hospital.	9	7,1%		
	We are actively doing things to improve patient safety			100	79,4%
3	Teamwork within the unit (4 items)				
	When one area of the unit becomes very busy, others help	6	4,8%		

	When a lot of work needs to be done quickly, we work together as a team to get the job done.			96	76,2%
4	Openness of communication (3 items) Staff are afraid to ask if something is wrong. Staff will be free to speak up if they see something that could negatively impact patient care	55	43,7%	65	57,6%
5	Feedback and communication about errors (3 Items) We are provided with feedback on changes made based on incident reports In the units where we work, we discuss ways to prevent the error from happening again.	5	4%	91	72,2%
6	Non-punitive responses to mistakes (3 items) When an event is reported, it feels like the person is being discussed, not the problem Staff felt the mistakes they made were held against them	35	27,8%	44	34,9%
7	Staffing (4 items) We use more casual staff than is needed for patient care. We have enough staff to handle the workload.	35	27,8%	66	52,4%

Table 3 shows the organizational aspect of continuous learning-improvement. 79.4% of respondents stated that we actively do various things to improve patient safety. Meanwhile, in the aspect of expectations and actions of supervisors/managers that promote safety, 76.3% stated that superiors/managers I overlooked recurring patient safety issues.

Tabel 4. Three aspects of hospital-level safety culture

No	Aspects of Hospital Safety Culture	Respondent's perception category			
		Negatif		Positif	
		n	%	n	%
1	Hospital management support for patient safety (3 items) Hospital management seems to be interested in patient safety only after an adverse event has occurred. Hospital management's actions show that patient safety is a top priority.	49	38,9%	103	81,7%
2	Teamwork across hospital units (4 items) Hospital units do not coordinate well with each other Hospital units work well together to provide the best care for patients.	82	65,1%	97	77%
3	Hospital handover and transition (4 items) Shift changes are a problem for patients in this hospital. Unexpected things can happen when moving patients from one unit to another.	75	59,5%	12	9,5%

Table 4 shows the Aspects of TIM work 81.7% of respondents stated that hospital management actions indicated that patient safety was a top priority, while in the event reporting aspect 65.1% stated that hospital units did not coordinate well with each other.

Tabel 5. Two outcome variables

No	Aspects of Two Variable Results of Patient Safety Culture in Hospitals	Respondent's perception category			
		Negatif		Positif	
		n	%	n	%
1	Overall perception of safety (4 items) We have a patient safety issue in the hospital unit where we work We have good procedures and systems in place to prevent mistakes from happening.	60	47,6%	93	73,8%
2	Event reporting frequency (3 items)				

When an error is made, but does not pose a potential harm to the patient, how often is this reported?	6	4,8%	
When an error occurs, is processed and corrected before it affects the patient, how often is this reported?	80	63,5%	

Table 5 shows the overall perception aspect regarding safety, 73.8% of respondents stated that they have good procedures and systems in preventing errors, while in the event reporting aspect, 63% stated that when an error occurs and is processed it has an impact on the services provided.

This research was carried out during the Covid-19 pandemic, so that the application of health protocols is a must to implement, where every hospital employee, as well as hospital visitors are required to wear a mask, and always wash their hands when visiting, as well as perform health service actions at the hospital, thus the service culture that prioritizes patient safety is maintained Pujilestari et al., (2016). The results of this study gave positive results on the dimensions of hospital management support for patient safety on patient safety culture question items such as hospital management actions showing that patient safety is a top priority, with a percentage of 81.7% of respondents, while the lowest positive aspect was on the patient safety dimension. training and organizational learning on the question item: in contact with our colleagues, we improve our safety practices, with 0.8 % of respondents.

In this research study, the measurement aspect used was HSOPSC involving 126 respondents consisting of doctors, nurses and medical support. The results of the research measuring the culture of PS-Hospital Advent Medan are strongly supported by the research results of Hellings et al, (2007), which emphasizes the importance of support from the Directors and the Hospital Foundation in improving patient safety culture, so that this becomes a habit, which continues to be paid attention to. in health services in hospitals. This is in accordance with research by Schwendimann et al., (2013), that almost all hospital unit management tries to provide positive support for the welfare of health workers and patient safety.

This is a serious concern by the government, as well as the hospital as a health service provider. Based on research conducted by Wahyuda et al (2024), there are still several hospitals that have not optimized patient safety management. Occupational safety and health must be paid attention to (Styaningsih et al, 2023). Based on the research results of Siagian, (2020) and Anggraini, et al (2021). The role of health workers in implementing HSOPC in hospitals is very important. Purwanza et al., (2022), in a literature study conducted, found that the implementation of patient safety culture is very necessary for health workers who work in hospitals.

CONCLUSION

Currently, patient safety is an aspect that is of concern to almost every service provider, especially hospitals. The more often hospital management carries out the process of measuring patient safety using the HSOPSC survey, the more patient safety aspects will improve. Based on the results of measuring aspects of patient safety culture at Medan Adventist Hospital, with 128 respondents, it was found that in general it had a positive value in the dimensions of hospital management support for patient safety in patient safety culture question items such as hospital management actions showing that patient safety is the top priority, with a percentage of 81.7% of respondents, while the lowest positive aspect in the training and organizational learning dimension is in the question item: in contact with our colleagues, we improve our practices in terms of safety, with a percentage of 0.8% of respondents. With the results of this survey measurement, it is hoped that in the future there will be improvements to all aspects of patient safety. It is hoped that in the future research will be carried out on a larger number of samples, both hospital workers and the number of hospitals studied, in order to have a wider impact.

ACKNOWLEDGEMENTS

The author would like to thank all respondents for their valuable contributions to this research, especially the Adventist Hospital Management, who have provided support in conducting this research.

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