# How is Patient Safety Culture, Perceived Organizational Support, and Contextual Performance Impacts Adverse Events?

by Dyah Yuniati

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#### **Original Article**

### How is Patient Safety Culture, Perceived Organizational Support, and Contextual Performance Impacts Adverse Events?

Dyah Yuniati<sup>1</sup>, Annis Dwi Trisnawati<sup>1</sup>, Thinni Nurul Rochmah<sup>1</sup>

<sup>1</sup>Department of Health Policy and Administration, Faculty of Public Health, Universitas Airlangga, Surabaya, Indonesia 5 Introduction: Every health-care facility, including hospitals, has an obligation to prevent harm, misdiagnose, and adverse events for the patient's receiving healthcare. According to the data, a private hospital in east java has shown a significant increase (24%) in patient adverse events from 2017 to 2019. This study aims to analyze the relationship between patient safety culture and perceived organizational support for adverse events by using contextual performance. Methods: An observational analysis with a cross-sectional approach was applied in this study. To determine the sample, we used a random sampling technique and recruited 24 work units from the medical service and support department. Analyzing the relationship between variables has been done using linear regression analysis. The significant data were measured by the P = 0.05. All statistical performance was done utilizing the Statistical Package for the Social Science (SPSS). **Results:** The findings showed that the patient safety culture (b = 0.943) and perceived organizational support (b = 0.951) had an influence on contextual performance (P = 0.000). Whereas patient safety culture has a negative influence on patient safety incidents (P = 0.0002, b = -0.588). While perceived organizational support (P = 0.0012, b = -0.588) and contextual performance (P = 0.004,b = -0.561) have a negative influence on patient safety incidents. Conclusions: This study finds that the higher contextual performance, patient safety culture, and perceived organizational support are, the lower the incidence of patient safety will be. Therefore, every hospital should be aware of these three fields to increase the quality of health-care service and prevents adverse events in the patients.

**KEYWORDS:** Contextual performance, health services, patient safety, perceived organizational support

learning, juts, and patient centered.4

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#### Introduction

The patient safety culture aims to increase the safety of patients¹ because this can encourage safety and ensure that health services will prevent accidents or injuries.² The implementation of the concepts and principles of patient safety in health-care facilities does not need formal qualifications in quality and safety. Instead, health-care providers are required to apply a variety of skills and are aware of patient safety considerations in each situation, acknowledging that certain medical procedures can be wrong.³ The cultural dimension of patient safety by Sammer et al. explained that the dimension of patient safety culture consists of

that members of the organization form and develop a general perception of the extent to which the organization values their contributions.<sup>5</sup> The perception

leadership, teamwork, evidence-based, communication,

Meanwhile, the theory of organizational support states

Address for correspondence: Dr. Dyah Yuniati,
Department of Health Policy and Administration, Faculty
of Public Health, Universitas Airlangga, Jl. Mayjen Prof.
Dr. Moestopo No. 47, Pacar Kembang, Kec. Tambaksari, Surabaya,
Jawa Timur 60132, Indonesia.
E-mail: dyah.yuniati-2021@fkm.unair.ac.id

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of the extent to which an organization cares about the contributions and well-being of its members is called perceived organizational support.<sup>6</sup>

Contextual performance is a type of performance that emphasizes the performance of a unit or team.<sup>7</sup> In providing services carried out as a team by the hospital, the management must see contextual performance as a collective domain.<sup>7</sup> Unlike task performance, contextual performance is performed by an employee voluntarily without paying more. However, the results of his work have added value to organizational goals.<sup>7</sup>

A previous study conducted at Islam Surabaya A. Yani Hospital in 2016 in Surabaya showed that there is a relationship between patient safety culture and patient safety incidents.2 Based on the interview on prestudy, the factor that is likely to be the cause of the increase in the number of incidents in a private Hospital in Surabaya is that the focus of management is still on the stage of open reporting. The decrease in the number of patient safety incidents has not been the main goal of the organization. Thus, the suggestion that needs to be made to improve patient safety is to encourage practitioners to report events that occur during services in the hospital. According to the informant, until this study was carried out, no policy from the hospital management regulated rewards for a team member who actively participates in quality improvement activities and patient safety. This triggered the perception that management did not support

the team in achieving zero accidents. However, this strategy has been done by management in consideration of preventing fear of incident reporting.

This study aims to analyze the relationship between patient safety culture and organizational support for adverse events by using contextual performance.

#### **Methods**

An observational analytical study with a cross-sectional approach was applied in this study. This study is team based or works unit based, where a questionnaire per unit is filled out based on the most frequently appearing answers (modus) for each question. Ethical clearance was approved by the ethical commission of the Faculty of Public Health, Universitas Airlangga (No. 1924-KEPK) on February 26, 2020. The workflow of reporting incidents in this hospital is shown in Figure 1. The period of taking this data is from February 2020 to August 2020 at the Surabaya A. Yani Islamic Hospital, one of the private hospitals (Accredited as B Hospital).

#### Population and sample

The population is the entire Service and Support Unit at the Surabaya A. Yani Islamic Hospital. Work units are randomly selected and have met the inclusion criteria, namely work units in the Medical Services Section and Medical Support Section and permit researchers. The sample of work units involved was 24 units, and the total sample was 197 participants. The criteria for

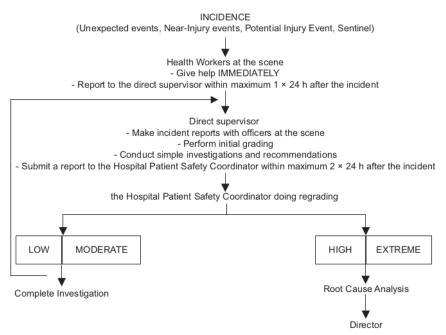


Figure 1: Patient safety incident reporting flowchart

respondents were health workers who were in the age range of 25–45 years, had the status of permanent or organic workers, and had a service period of more than 2 years as of July 2020. We excluded work units with <2 staff (excluding unit heads or coordinators or room heads).

#### Instrument and data

We used primary data and secondary data where the primary data are collected using questionnaires that have been validated on 30 work units in other hospitals with the results of Cronbach's Alpha on average >0.6. The questions included in the questionnaire are task complexity, performance feedback, team-perceived quality of care, job involvement, patient safety culture, organization support for patient safety, contextual performance, and patient safety incident. The low category is defined by the range indicator score which is 31 - ≤108.5, while the high category is ≥108.5–186. The secondary data in this study were documents related to patient safety and the number of human resources at the Surabaya A. Yani Hospital.

#### Analysis data

Tabulated data were analyzed using SPSS software version 26 (SPSS. Inc., Chicago, IL, USA) by implementing simple linear regression. The used data scale for influence test analysis is an interval scale obtained from the number of scores of each variable. Before analyzing to test the influence between independent variables and dependent variables, a normality test is carried out. The signification rate used is  $\alpha=0.05$ . Independent variables are expressed to have a significant effect on dependent variables if the value of  $P<\alpha$  (0.05). The regression coefficient or "b" can be read when the independent variable is significant to the dependent variable.

#### RESULTS

According to patient safety culture, the dimensions of the hospital-level aspect have the highest score (75%) compared to the unit-level aspect and outcome dimensions. While the dimensions of the aspect level unit have the highest percentage value of 50% for the low category. This showing that the dimension of the unit level aspect is the dimension in which assessment of perceived organizational support can be assessed based on two dimensions, namely the dimension of concern of the work unit about the welfare of members/staff and the dimension of unit appreciation for staff contributions. In perceived organizational support, the dimension of the unit's award for staff contribution has the largest percentage (54.2%). The assessment of contextual performance can be assessed based on two dimensions,

namely prosocial behavior and organizational citizenship behavior toward organization (OCB-O). In contextual performance, the low category showed the dimension of prosocial behavior having a high score (45.8%) compared to the OCB-O [Table 1].

Patient safety incidents can be divided into four types, namely unexpected events, near-injury events, potential injury events, and sentinel. Table 2 shows the probability of patient safety incidents in each work unit based on the weighting of each type of incident. The highest total score consists of 13 work units out of a total of 24 work units with a chord of 500 with a probability of an incident of 7.47%. Meanwhile, based on the probability value of an incident, the work unit with a low probability of patient safety incident consists of 11 work units with a patient safety incident probability of 0.44% [Table 2].

#### Data analysis using linear logistic

Perceived organizational support significantly influences contextual performance (P value  $[0.000] < \alpha [0.05]$ ). The value of b in perceived organizational support for contextual performance is positive (0.943), which means that the higher the perceived organizational support in the work unit, the higher the contextual performance in the work unit. In addition, the culture of patient safety significantly influences contextual performance (P value  $[0.000] < \alpha$  [0.05]). The value of b on patient safety culture for contextual performance has a positive score (0.951), which means that the higher the patient safety culture in the work unit, the higher the contextual performance in the work unit. Based on beta values, it can be said that in organizational factors, patient safety culture has a stronger influence on contextual performance than perceived organizational support.

Perceived organizational support significantly influences patient safety incidents (P value [0.012] <  $\alpha$  [0.05]). The value of b in perceived organizational support for

Table 1: Dimension of patient safety culture, perceived organizational support and contextual performance

organizational support and contextual performance			
	Low, n (%)	High, n (%)	
Dimensions of patient safety cultural			
Unit level aspect	12 (50)	12 (50)	
Hospital level aspect	6 (25)	18 (75)	
Outcome	8 (33.3)	16 (66.7)	
Dimension of perceived organizational support			
Concern for the welfare of members/staff work units	10 (41.7)	14 (58.3)	
Unit award for staff contributions	13 (54.2)	11 (45.8)	
Dimension of contextual performance			
Prosocial behavior	11 (45.8)	13 (54.2)	
OCB-O	10 (41.7)	14 (58.3)	

OCB-O: Organizational citizenship behavior toward organization

safety incidents is negatively valued (-0.492), which means that the higher the perceived organizational support in the work unit, the lower the safety incident in the work unit. This can happen due to the level of maturity of an organization. Awarding not balanced with maturity will greatly affect the high number of incidents. This is because reporting patient safety incidents highly depends on the honesty of the service team members in a hospital.

Patient safety culture significantly influences patient safety incidents (P value [0.002] <  $\alpha$  [0.05]). The value of b in patient safety culture against safety incidents has a negative value (-0.588) which means that the higher the culture of patient safety in the work unit, the lower the safety incident in the work unit. Contextual performance significantly influences patient safety incidents (P value [0.004] <  $\alpha$  [0.05]). The value of b in contextual performance of safety incidents is negatively valued (-0.561), which means that the higher the contextual performance in the work unit, the lower the safety incident in the work unit. Based on beta values, patient safety culture has a stronger influence on patient safety incidents than perceived organizational support and contextual performance [Figure 2].

#### DISCUSSION

In this study, patient safety culture is the product of the values, attitudes, perceptions, competencies, and behavior patterns of individuals and groups in an organization that determines commitment, style, and proficiency in patient safety management. The dimension of patient safety culture refers to the dimension of the Agency for Health Care Research and Quality which consists of three dimensions. The three dimensions are the unit-level aspect, hospital-level aspect, and outcomes. Implementing a patient safety culture is a key

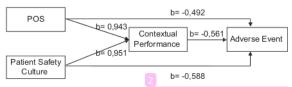


Figure 2: Correlation between patient safety culture, perceived organisational support, and contextual performance

recommendation proposed by the Institute of Medicine to ensure that hospitals have developed a superior environment in applying patient safety. Based on the assessment of patient safety culture at the Surabaya A. Yani Islamic Hospital, this hospital has a high value (70.8%). However, based on the highest value in the low category, it shows that the dimensions of the aspect level unit have the highest value in the low category (50%).

Perceived organizational support is the overall trust of employees with respect to how much hospitals assess their contribution to improving patient safety. In general, the results of this study showed a low value (54.2%). According to previous research, low perceived organizational support can be influenced by supervisor behavior, the quality of relationships in the team, as well as human resources practices.5 Dimension of the unit's award for staff contributions had the highest value (54.2%). This is possible because, at this time, the hospital does not have yet a policy related to awards for units that have successfully achieved zero accidents every month or every year. Previous studies revealed that one way to increase perceived organizational support is to increase psychological capital. In addition, involvement in decision-making can raise the level of perceived organizational support.9

Contextual performance was first distinguished from task performance by Motowidlo and Van Scotter. 10 Some experts refer to contextual performance as extra-role performance, 11-15 since the employee's performance is not only directly related to his work duties but also provides added value to the organization.16-19 Contextual Performance is the voluntary behavior of employees in integrating the main work task with psychosocial to fully support the organization's goals. 16,19-21 Contextual performance defines as strengthening the relationship between teams and thus improving the effectiveness of the organizational performance.14 In this study, contextual performance is the voluntary behavior of a work unit in integrating the main work task with psychosocial to fully support the organizational goal of achieving zero accidents. For measurement, contextual performance is based on the total value of OCB-O and prosocial behavior. The higher the OCB-O value

Table 2: Probability of patient safety incidents of each work unit based on the weighting of each type of incident									
Serial	Work		Type of in	cidence		Score	Total	Probability of patient	Description
number	unit	Near-injury	Potential	Unexpected	Sentinel			safety incidents	
		events	injury event	events				occurring (%)	
1	13	356	8	24	0	500	66	7.47	High
2	11	97	11	9	0	175	393	0.44	Low
Total	24	453	19	33	0	675	460		

and prosocial behavior are, the higher the value of contextual performance will be produced. Based on the measurement, it shows that prosocial behavior has the largest value (45.8%). In general, most work units in the hospital have voluntary behaviors that are beneficial both for the group and the organization. However, when reviewed based on the highest score in the high category, it shows that OCB-O is in the high category (58.3%), which means that a patient safety incident is any accidental event due to various conditions that can result in or potentially of preventable injury to the patient.<sup>2</sup>

Patient safety incidents in the hospital can occur due to several factors related to the Swiss cheese model theory; two factors that are important as the source of the occurrence of patient safety incidents are latent factors and error-producing factors. These two factors are considered "sleep factors" because generally, organizations only focus on active failure, namely health workers who are directly involved in services. These health workers include doctors, nurses, and physiotherapists.<sup>2</sup> Hence, through the performance theory approach, the concepts of latent factor and error-producing factor can be translated more easily.

Currently, studies measuring the effect of contextual performance and perceived organizational support on patient safety incidents, are quite limited. We only found that patient safety culture influences patient safety incidents. This study also revealed a relationship between the culture of patient safety and the incident of patient safety in the hospital. Some experts refer to contextual performance as an extra-role performance. It is called extra-role performance because the employee's performance is not only directly related to their work duties but also provides added value to the organization. In Inc. 16-19

Based on statistical tests, patient safety culture influences patient safety incidents. The direction of influence is negative, meaning that the higher the patient safety culture of a work unit, the lower the total number of incident scores of the unit. Culture in an organization can encourage effectiveness or weaken the effectiveness of the organization. Patient safety culture is important to building an overall patient safety program. An organization with a positive culture will have the right to promote patient safety.<sup>22</sup>

#### **CONCLUSIONS**

This study shows that the patient safety culture and perceived organizational support, which are in the low category, indicate that the work unit feels that it does not get support from management to implement patient safety programs. Organizational factors consist of patient safety culture and perceived organizational support influence contextual performance in the hospital. Contextual performance, perceived 10 organizational support, and patient safety culture have a negative influence on patient safety incidents at the hospital.

#### Author contributions statement

Authors have made substantial contributions to the conception; design of the work; the acquisition, analysis, and interpretation of data; the creation of new software used in the work and have drafted or substantively revised it.

#### Consent to participate

The authors certify that they have obtained all appropriate patient consent forms. The participants understand that names and initials will not be published, and due efforts will be made to conceal the identity, but anonymity cannot be guaranteed.

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Nil.

#### Conflicts of interest

There are no conflicts of interest.

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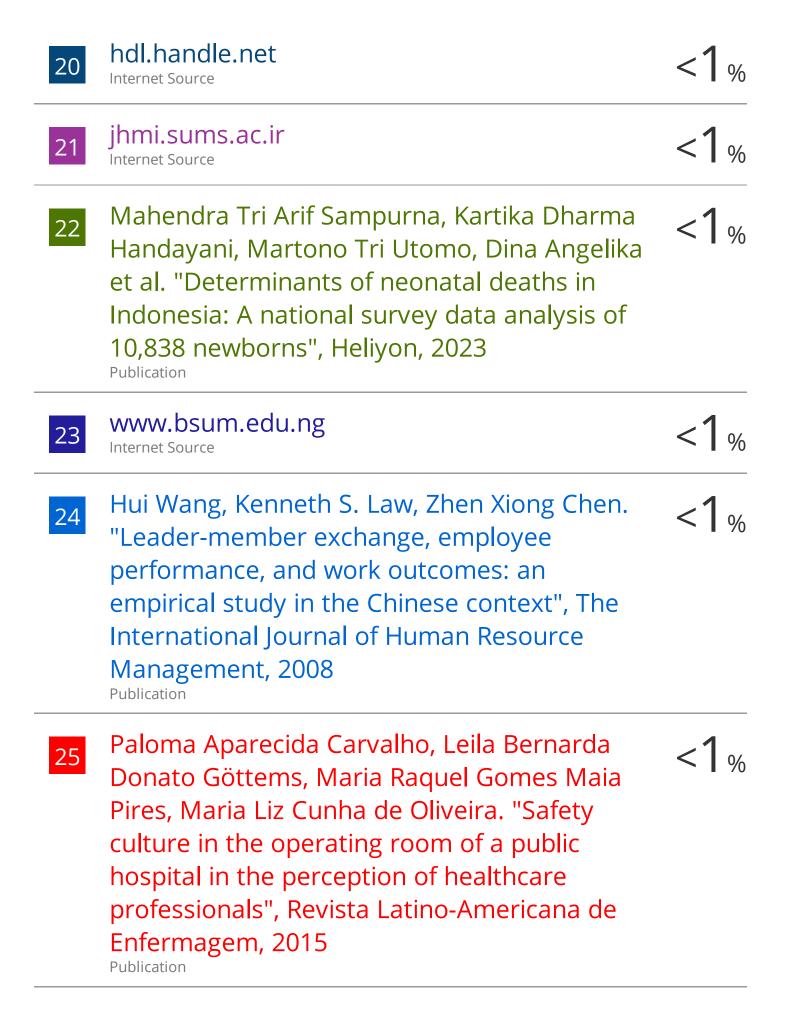
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