


Transformational Leadership Styles and Mentoring Functions Towards a Culture of Patient Safety Moderated by Competence of the Nurse at Metro Hospitals Cikarang

Putu Tara Judica Wahyudyasa¹, Hasyim², Rokiah Kusumapradja³

dr.tarajudica2@gmail.com, hasyim.ahmad@esaunggul.ac.id, rokiah.kusumapradja@esaunggul.ac.id

Universitas Esa Unggul, Jakarta Barat

Article information	Abstract
<p>Article history: Received: July 05th, 2023 Revised: August 09th, 2023 Accepted: August 10th, 2023</p> <p>Corresponding author: Name: Putu Tara Judica Wahyudyasa Address: Jalan Arjuna Utara No.9, Kebon Jeruk, Jakarta 11510 E-mail: dr.tarajudica2@gmail.com</p> <p>International Journal of Nursing and Health Services (IJNHS), Volume 6, Issue 4, August 20th, 2023 DOI: 10.35654/ijnhs.v6i4.748 E-ISSN: 2654-6310</p>	<p>Background: Patient safety culture is fundamental in implementing patient safety at hospitals. Every hospital must guarantee the implementation of patient safety in health services. Objective: The study aimed to examine the effect of transformational leadership style and mentoring function on patient safety culture, which is moderated by the competence of nurses in the hospital. Method: This research used a quantitative survey with a cross-sectional study approach. A total of 57 samples were involved in this study. The data analysis method used in this study is multiple linear regression analysis. Result: The results of the study show that there is a positive and significant influence of transformational leadership on patient safety culture. The mentoring function has no significant effect on patient safety culture. Nurse competence has not been able to moderate the effect of Transformational Leadership on Patient Safety Culture, and nurse competence has not been able to moderate the influence of the Mentoring Function on Patient Safety Culture. Conclusion: The greatest coefficient value in this study is the effect of transformational leadership on patient safety culture moderated by nurse competence by 45.4%.</p> <p>Keywords: transformational leadership style, mentoring function, nurse competency, and patient safety culture</p>
	<p>This is an Open Access article distributed under the terms of the Creative Commons Attribution 4.0 International License CC BY -4.0</p>

Background

Patient safety culture is fundamental in implementing patient safety in hospitals (1). Around 98 000 patients die yearly, and 1.5 million are injured because of medical errors (2). Another study also reports between 200 000 and 440 000 deaths in hospitals are related to patient safety issues worldwide each year (3)

Prevention of errors could reduce costs incurred by patients due to extended hospitalization and reduce financial expenses resulting from patient safety events that may occur (4).

Some factors noticed that leadership style and mentoring functions are associated with the culture of patient safety implementation (5). A study conducted in Semarang, Indonesia, reported 63 near-injury incidents, unexpected events, and sentinel events in which the patient experienced severe harm or death. It was due to insufficient supervision from managers, lack of reporting of nurses' safety concerns, and low staff motivation (6). At the same time, those factors are crucial points.

This study was conducted at Metro Hospital Cikarang Hospital. It is a type C private hospital accredited by the Hospital Accreditation Commission with plenary results in 2019. The hospital patient safety program was formed in 2016, but the patient safety culture has yet to run optimally in its journey.

Based on the results of interviews and data collection of a preliminary study from the Quality Improvement and Patient Safety Committee, there were 187 reports; there were 60% of patient safety incidents, and 15% were reported from patients and patient families through outpatient and inpatient feedback, and only 10% from units that concerned.

It units tend not to report because they are afraid to report patient safety incidents because they are worried that it would affect performance appraisal and will be given sanctions for mistakes made.

Besides that, the patient safety incidents also due to not carrying out the handover properly, causing delays in therapy/actions for patients, and from this, it is concluded that the monitoring and leadership of the head of the unit are also questionable.

In addition, the competence of each individual is essential, and evaluation must be carried out periodically to determine the influencing factors to achieve an optimal patient safety culture. Analyzing adverse patient safety incidents through comprehensive data collection is a crucial first step to improving patient safety (7).

Raising awareness of the value of patient safety measures and encouraging leadership. Good leadership is critical to ensuring the best quality of care (8)

Many studies have investigated strategies for better incident reporting, management support, and leadership. However, the limited study explores the association between transformational leadership style and mentoring function on patient safety culture, which is moderated by the competence of nurses. Therefore, this study would be focused on this issue.

OBJECTIVE

The study aimed to examine the association between transformational leadership style and mentoring function on patient safety culture, which is moderated by the competence of nurses in the hospital.

METHOD

Design

A cross-sectional study was applied in this study to examine the correlation between the transformational leadership style and mentoring function on patient safety culture, which is moderated by the competence of nurses. This study carries out at Metro Hospitals Cikarang, Indonesia. The reason for using this setting

is due to the issue of safety culture in this hospital.

Sample, Sample Size, and Sampling Technique

This study's sample is all nurses selected based on the inclusion criteria. Fifty-seven nurses were involved in this study using the total technique sampling. The reason for taking total sampling is that the population is small.

Instrument for data collection

The transformational Leadership Style Questionnaire was used to measure the style of leadership. This questionnaire consisted of 5 dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. This questionnaire also has 11 items questions and uses the Likert scale such as Strongly Agree (5), Agree (4), Undecided (3), Disagree (2), and Strongly Disagree (1).

The mentoring function was measured using the questionnaire focused on mentoring. This questionnaire consisted of 3 dimensions: psychosocial support, Career support, and Role modeling. This questionnaire also has 12 items questions and uses the Likert scale such as Strongly Agree (5), Agree (4), Undecided (3), Disagree (2), and Strongly Disagree (1).

A nurse competency questionnaire was used to measure the competency of nurses to implement the patient safety culture. This questionnaire comprised five dimensions: technical issues, administrative, human processes, systems, and skills. This questionnaire also has 10 items questions and uses the Likert scale such as Strongly Agree (5), Agree (4), Undecided (3), Disagree (2), and Strongly Disagree (1).

The patient's safety culture was measured using the questionnaire, which focused on how the patient culture was implemented. This questionnaire consisted of 4 dimensions: open culture, reporting

culture, justify culture, and learning culture. This questionnaire also has 16 items questions and uses the Likert scale such as Strongly Agree (5), Agree (4), Undecided (3), Disagree (2), and Strongly Disagree (1).

All the instruments were validated by distributing 30 samples for testing. The Cronbach alpha also showed all the instruments were reliable such as 1) the Transformational Leadership Style Questionnaire was 0.928; 2) mentoring function questionnaire was 0.935; 3) nurse competence questionnaire was 0.861; 4) and patient safety questionnaire was 0.875.

Data collection process

Data was collected within one month. All variables were measured using a reliable questionnaire. All respondents willing to participate in this study should sign the informed consent. The completeness of the questionnaire will be analyzed using computer software.

IRB Universitas Esa Unggul, Jakarta, has approved this study.

Data analysis

The descriptive analysis was used to describe the characteristic of respondents and the dimensions of variables. The regression analysis measured the association between the dependent variable and independent variables. The moderated regression analysis (MRA) for measuring the role of nurse competency to moderate the variables of transformational leadership style and mentoring function on the patient's safety culture. We used the R^2 to determine the ability of the model to explain variations in the dependent variable.

RESULT

Characteristic of respondents

Table 1 describes the characteristic of respondents. The result found that 67% of respondents were female. More than half

of respondents (58%) were 20-30 years old. Most of them have the responsibility of inpatient units. They mostly graduated from a Diploma program (70%) and worked as nurses within 1-2 years (54%).

Table 1. Characteristic of Respondents

No	Variables	n	%
1	Gender		
	Male	19	33
	Female	38	67
2	Aged		
	20 - 30 year	33	58
	31 - 40 year	20	35
	> 40 year	4	7
3	Unit		
	Outpatient room	12	21
	Inpatient room	45	79
4	Education background		
	Diploma	40	70
	Bachelor	17	30
5	Working duration		
	< 1 year	10	18
	1 - 2 year	31	54
	> 2 year	16	28

The effect of transformational leadership on patient safety culture.

The regression results on transformational leadership's effect on patient safety culture showed that the p-value <0.05 with a B score is 0.418. Thus, it was indicated that there is a significant influence between transformational leadership on patient safety culture.

Table 2. Regression Analysis Model 1

	B	t	Sig.
(Constant)	2.285	8.932	0.000
X1_leadership	0.418	6.384	0.000
R Square	0.426		
Coefficient Determination	42.56%		

The effect of the mentoring function on patient safety culture

The regression results showed a p-value > 0.05 with a B score of 0.105. This indicates no significant impact of the mentoring process on patient safety culture.

Table 3. Regression Analysis Model 2

	B	t	Sig.
(Constant)	3.488	11.143	0.000
X2_Mentoring	0.105	1.352	0.182
R Square	0.032		
Coefficient Determination	3.22		

The effect of transformational leadership on patient safety culture is moderated by nurse competency.

Moderated Regression Analysis (MRA) analysis on the effect of transformational leadership on patient safety culture is moderated by nurse competency.

The results of the MRA analysis showed that the interaction between transformational leadership and nurse competence in patient safety culture showed a p-value of 0.855 (p-value > 0.05). It was indicated that there is no significant effect of the interaction of transformational leadership with nurse competence on patient safety culture, so nurse competence has not been able to moderate the effect of transformational leadership on patient safety culture.

Table 4. Analysis of MRA Model 3

	B	t	Sig.
(Constant)	2.417	2.308	0.025
X1_leadership	0.339	1.263	0.212
M_competency	-0.005	-0.004	0.997
X1_M	0.069	0.184	0.855
R Square	0.454		
Coefficient Determination	45.42%		

The effect of the mentoring function on patient safety culture is moderated by nurse competence.

Moderated Regression Analysis (MRA) analysis on the effect of transformational leadership on patient safety culture is moderated by nurse competency.

The MRA analysis results showed that the interaction between the Mentoring Function and the competence of nurses in Patient Safety Culture showed a p-value of 0.046. The P-value is smaller than the alpha degree of 5% ($0.046 < 0.05$), indicating that there is a significant influence of the interaction of the Mentoring Function with nurse competence on Patient Safety Culture so that it can be concluded that nurse competency can moderate the effect of the Mentoring Function on Patient Safety Culture.

Table 5. Analysis of MRA Model 4

	B	T	Sig.
(Constant)	5.230	4.271	0.000
X2_Mentoring	-0.412	-1.412	0.164
M_Compentency	-2.853	-1.662	0.102
X2_M	0.844	2.045	0.046
R Square	0.253		
Coefficient Determination	25.26		

DISCUSSION

This study's main finding d this study showed a positive correlation between transformational leadership and patient safety culture. Patient safety is a fundamental principle of patient care and essential to improving the quality of health services in hospitals. In this hospital, implementing a patient safety program on an ongoing and sustainable basis.

It was consistent with a previous study that mentioned that the patient safety program is a never-ending process because it requires a culture, including high motivation, to be willing to carry out patient safety programs on an ongoing and sustainable basis (9).

Leadership is essential to patient safety, which can optimize the patient safety movement by forming

cooperation between all policymakers and hospital staff (10). A study also confirmed that to implement a patient safety culture, the leader's commitment to patient safety is needed (11). Another study also described the role of transformational leadership as a positive and significant influence on patient safety culture (12).

Mentoring has an effect of the mentoring function on patient safety culture. Mentoring effectively increases perception, ability, and satisfaction and is an appropriate method for enhancing patient safety culture. A qualitative study mentioned that mentoring has improved knowledge and skills and changed respondents' perceptions (13). Mentoring also reduces hospital costs by 24% due to nurse turnover (14). Mentoring is an informal valuable program for increasing the individual's knowledge in clinical practice (15).

This study also described the effect of nurse competence in moderating transformational leadership on patient safety culture and mentoring function.

Nurses are vital in developing quality through patient safety. high level of competence ensures the achievement and compliance with the safety culture goal. An evaluation study indicates competency and perception improved the safety culture (16). Another study also reported a positive association between patient safety culture, patient safety competency, and adverse events (17). A study also confirmed that the higher competence of nurses would impact on higher the application of patient safety indicators (18)

CONCLUSION

Transformational leadership has a positive and significant influence on patient safety culture. This shows that a better leadership style owned by the hospital can improve the patient safety

culture. The mentoring function has no significant effect on patient safety culture.

Nurse competence has yet to be able to moderate the effect of transformational leadership on patient safety culture. Nurse competence can intervene in the positive influence of the mentoring function on patient safety culture. This shows that nurses' competence can increase the mentoring function's influence on patient safety culture.

IMPLICATION

Transformational leadership could do more to improve patient safety culture than the mentoring function. So that the hospital management needs to pay more attention to the leadership style of each section head, especially the nursing department at the hospital, and apply a transformational leadership style as a leadership priority that the section head must carry out in guiding other employees under him, especially for nursing.

Nurse competence is proven to increase the influence of the mentoring function on patient safety culture. So from these findings, the hospital management needs to pay attention to the competence of nurses by hiring the right and appropriate people, as well as conducting training for each nurse, so that the mentoring function carried out by the head of nursing for each functional nurse in the future can be better and can form a culture improving patient safety in hospitals.

REFERENCES

- (1) Fleming, M. (2005a). Patient safety culture measurement and improvement: a "how to" guide. *Healthcare Quarterly (Toronto, Ont.)*. <https://doi.org/10.12927/hcq.2005.17656>
- (2) Forrest MH. Why reporting is insufficient: improving the Patient Safety and Quality Improvement Act of 2005. *Univ Toledo Law Rev.* 2016;47(109):1-21
- (3) James JT. A new, evidence-based estimate of patient harms associated with hospital care. *J Patient Safety.* 2013;9(3):122-128. <https://doi.org/10.1097/PTS.0b013e3182948a69>
- (4) Kaufman, G., & McCaughan, D. (2013). The effect of organizational culture on patient safety. *Nursing Standard (Royal College of Nursing (Great Britain) : 1987)*, 27(43), 50-56. <https://doi.org/10.7748/ns2013.06.27.43.50.e7280>
- (5) Yusuf Y, Irwan AM. The influence of nurse leadership style on the culture of patients safety incident reporting: a systematic review. *British Journal of Healthcare Management.* 2021. <https://doi.org/12968/bjhc.2020.0083>
- (6) Ningsih NA, Sudiro, Fatmasari EY. Analisis Kepemimpinan Kepala Ruang dalam Penerapan Budaya Keselamatan Pasien di Rumah Sakit Jiwa Daerah Dr. Amino Gondohutomo Semarang. *Jurnal Kesehatan Masyarakat.* 2017;5(1):111-117
- (7) Elkin PL, Johnson HC, Callahan MR, Classen DC. Improving patient safety reporting with the common formats: common data representation for patient safety organizations. *J Biomed Inf.* 2016;64(12):116121. <https://doi.org/10.1016/j.jbi.2016.09.020>
- (8) Huber DL. Leadership and nursing care management. USA: Saunders Elsevier; 2010:937
- (9) Utarini A, HaneviD. Keselamatan Pasien dan Mutu Pelayanan Kesehatan : Menuju Ke mana ?.

- Jurnal Manajemen Pelayanan Kesehatan. 2014; 15(04): 159-160
- (10) Farokhzadian, J., Dehghan Nayeri, N. & Borhani, F. The long way ahead to achieve an effective patient safety culture: challenges perceived by nurses. *BMC Health Serv Res* **18**, 654 (2018).
<https://doi.org/10.1186/s12913-018-3467-1>
- (11) Institute of Medicine (US) Committee on the Work Environment for Nurses and Patient Safety; Page A, editor. Keeping Patients Safe: Transforming the Work Environment of Nurses. Washington (DC): National Academies Press (US); 2004. 7, Creating and Sustaining a Culture of Safety. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK216181/>
- (12) Hasan XLT, Sidin AI, Arsunan A. Hubungan kepemimpinan transformational dengan penerapan budaya keselamatan pasien di RSUD Labuang Baji. *JST Kesehatan*. 2017; 7(2): 191-196
- (13) Norwood AW. 2010. —The Lived Experience of Nurse Mentors: Mentoring Nurses in the Profession. University of Missouri-Columbia
- (14) Cottingham S, DiBartolo MC, Battistoni S, Brown T. Partners in nursing: a mentoring initiative to enhance nurse retention. *Nurs Educ Perspect*. 2011 Jul-Aug;32(4):250-5. doi: 10.5480/1536-5026-32.4.250
- (15) Dadge J, Casey D. Supporting mentors in clinical practice. *Paediatr Nurs*. 2009 Dec;21(10):35-7. doi 10.7748/paed.21.10.35.s32. PMID: 20050448.
- (16) Zaitoun RA, Said NB, de Tantillo, L. Clinical nurse competence and its effect on patient safety culture: a systematic review. *BMC Nurs* **22**, 173 (2023).
<https://doi.org/10.1186/s12912-023-01305-w>
- (17) Han Y, Kim J-S, Seo Y. Cross-Sectional Study on Patient Safety Culture, Competency, and Adverse Events. *Western Journal of Nursing Research*. 2020;42(1):32-40. doi:[10.1177/0193945919838990](https://doi.org/10.1177/0193945919838990)
- (18) Taqwim A, Ahri RA, Baharuddin A. (2020). Beban Kerja Dan Motivasi Melalui Kompetensi Terhadap Penerapan Indikator Keselamatan Pasien Pada Perawat Ugd, Icu Rsi Faisal Makassar 2020. *Journal Of Muslim Community Health*, 1(1), 48-59.