Journal of International Conference Proceedings (JICP) Vol. 6 No. 6, pp. 210-221, December, 2023
P-ISSN: 2622-0989/E-ISSN: 2621-993X
https://www.ejournal.aibpmjournals.com/index.php/JICP

Influencing Factors of Patient Safety Culture: A Quantitative Study

Makiah[1], Noermijati [2], Djumilah Hadiwidjojo[3], Wahdiyat Moko[4]
Brawijaya University[1, 2, 3, 4]
Jl. MT. Haryono No.165, Malang, Indonesia
Correspondence Email: kia.makiah87@gmail.com

ARTICLE INFORMATION

Publication information

Research article

HOW TO CITE

Makiah, M., Noermijati, N., Hadiwidjojo, D., Moko, W. (2023). Influencing Factors of Patient Safety Culture: A Quantitative Study. *Journal of International Conference Proceedings*, *6*(6), 210-221.

DOI:
https://doi.org/10.32535/jicp.v6i6.2731

Received: 07 October 2023
Accepted: 06 November 2023
Published: 04 December 2023

ABSTRACT

Patient safety culture is an important aspect in healthcare organizations. This study aims to determine the factors that influence the implementation of patient safety culture in a regional public hospital on Lombok Island. This study is a quantitative study with an analytic survey using a cross-sectional design. The sample in this study was 127 inpatient room nurses using proportionate random sampling technique. Data collection was carried out by distributing questionnaires, then analyzing the data using multiple linear regression with the research findings of leadership effectiveness, work motivation and knowledge management have a significant effect on the implementation of patient safety culture. That the leadership effectiveness variable is the dominant variable influencing the implementation of patient safety culture in regional public hospitals on Lombok Island.

Keywords: Knowledge Management, Leadership Effectiveness, Patient Safety Culture, Work Motivation

INTRODUCTION

The increasing complexity of hospital services and procedures is the basis for the importance and necessity of a desirable patient safety culture for the management of health care organizations (Imelda & Wibowo, 2018). Patient safety culture is a crucial factor that can support the delivery of quality health services. Every worker in the health care organization should be kept updated with the discussion of patient safety because it has been widely researched in the health care studies (Brasaite, Kaunonen, & Suominen, 2015f; O'Brien, Andrews, & Savage, 2018). The importance of patient safety culture has attracted attention for research in various health care organizations, including hospitals (El-Jardali, Dimassi, Jamal, Jaafar, & Hemadeh, 2011). Safety culture is a changing aspect with a focus on medical errors prevention and patient safety maintenance (Ammouri, Tailakh, Muliira, Geethakrishnan, & Al Kindi, 2015). Ammouri, Tailakh, Muliira, Geethakrishnan, and Al Kindi (2015) emphasized that patient safety culture is a multifactorial framework aiming to promote a system's approach to prevent and reduce patient harm.

The aims of patient safety are dedicated for medical errors reduction and prevention. Medical errors are the leading cause of death worldwide (Ghasemi, Khoshakhlagh, Mahmudi, & Fesharaki, 2015). Adverse events are harmful events to patients as a result of inpatient care (Sammer & James, 2011). As a result of medical errors, the World Health Organization (WHO) estimates that tens of millions of patients are injured and died as a result of unprotected medical care activities worldwide (El-Jardali, Dimassi, Jamal, Jaafar, & Hemadeh, 2011). The seriousness of the government in responding to patient safety is shown by the number of countries in the world forming health care system institutions for handling patient safety (Flin, 2007).

The WHO notes that 1 in 10 patients is at risk of injury, and at least 50% of these adverse events are preventable (Setyowati, 2019). Lumenta (2021) reinforced this statement by stating that 4 (four) out of 10 (ten) patients in primary and outpatient health care globally, have a risk of being exposed to harmful incidents. Every year, around 421 million adverse events occur in health care worldwide and nearly 42.7 million cases found to patients during inpatient care, such as medication errors, infections, patient falls, compressed wounds and death (Setyowati, 2019). Lumenta (2021) reported that 234 million patients in hospitals in developing and underdeveloped countries are at risk of harm due to unsafe care. Adverse events in developing countries are very high. There were 132 incidents were reported in Indonesia alone, then it increased to 668 incidents in 2016, followed by 1647 incidents in 2017 (Dhamanti, Leggat, Barraclough, & Tjahjono, 2019; Setyowati, 2019).

During the 1970s and 1980s, the authority caused resistance to the change of hospital management (Kumar & Khiljee, 2016). On the other hand, changes in organizations are the main roles of a leader. Leadership theory in the health sector has limited empirical support, namely in the effective leadership model approach (Daly, Jackson, Mannix, Davidson, & Hutchinson, 2014). In the nursing literature, leadership theory focuses on individual leadership behaviors in formal leadership (Cummings et al., 2008). Creating a culture of patient safety is very important, and cannot be separated from the support role of the organization. The implementation of patient safety culture is complicated and is also impacted by various aspects. Among the many factors that influence patient safety culture is leadership (Setyowati, 2019; Rockville et al., 2016; Jarrett, 2017). The role of leaders is very important in hospitals, but research on leadership in the context of hospitals is still rare. Currently there is a notable lack of consensus within the safety leadership literature regarding the dominant leadership approach to safety. In addition, some studies also mentioned the overlap of safety leadership approaches, despite the

incidence of deaths and medical errors of employees in the organization due to insufficient safety and health management practices and substandard safety behaviors, this outcome occurs (Addo & Dartey-Baah, 2020). The importance of leadership roles is due to the strong hierarchical culture in an organization created by leaders. Limited information and differences in understanding the impact of leadership effectiveness, work motivation and knowledge management in improving the quality and implementation of patient safety culture in regional public hospitals in Lombok Island have shown the importance of this work. Therefore, it is important to examine the influence of leadership effectiveness, work motivation and knowledge management on the implementation of patient safety culture.

LITERATURE REVIEW

Patient safety is a basic principle and an indicator of quality management in health service delivery (Salawati, 2020). The influence of leaders is paramount to support the implementation of a patient safety culture. Leadership is a critical role in creating a culture to support and to promote health and safety. Schein (2004) emphasizes that leadership and organizational culture are interrelated and continuous variables. The role of leaders is a key component in the effectiveness of safety management (Yam, Wong, Hoong, & Ebrahimi, 2017). It was also stated that effective leadership in health care professionals is seen as critical in modern health care settings (Kumar & Khiljee, 2016). Empirically, leadership is a proven explanatory variable for improved organizational improvement through improved patient safety (Ginsburg et al., 2010). This is supported by recent theories from experts in the field of patient safety, that leadership support in health care organizations is needed as an effort to improve patient safety and to reduce the occurrence of adverse events (Mohr, Abelson, & Barach, 2002). However, Richardson and Storr (2010) found that there is limited evidence to support nursing's contribution to patient safety through leadership. Leadership is one of the most important variables to realize the successful implementation of patient safety. In the Total Safety Culture Model, leadership is identified as one of the behavioral factors to successfully build a patient safety culture (Padauleng, Sidin, & Ansariadi, 2020).

Leaders are central to the process of creating cultures, systems and structures that encourage knowledge creation, knowledge sharing and cultivation (Bryant, 2003). Leadership provides influence in achieving organizational goals. It is also a factor that can build work motivation which is based on the Path-Goal Theory which states that leaders influence employee motivation in organizations (House in Yukl, 2007). Leadership is then stated to be a factor that can provide direction to employees so that they are motivated to carry out their work (Abadiyah, Eliyana, & Sridadi, 2020)f. Motivation is a series of efforts that arise from within the individual, so that the desire can to do something is generated. In the realm of health care, nurse work motivation is an individual psychological process that can encourage a person to do something to achieve organizational goals.

Work motivation is a essential to improve the achievement of organizational goals, for improving work performance. Motivation as a combination of all organizational pressures that employees to make the right decisions and exhibit certain behaviors (Artha, Suardhika, & Landra, 2023). Motivation is further stated to be a factor that requires the desire and the ability to act with inidicated goals (Ramlall, 2004). Kudo et al. (2009) found that motivation was shown to have a significant influence on patient safety and nurse motivation plays an important role in preventing medical errors. Patient safety culture is related to adverse events or medical errors. However, work motivation is also needed to support the achievement of a patient safety culture. In addition to the active involvement of organizational members, work motivation is one of the personal factors related to safety culture. Work motivation arising from within and extrinsic to nurses also creates health service motivation which plays a crucial role in fostering a reporting culture and a learning culture, leading to positive outcomes (Padauleng, Sidin, & Ansariadi, 2020).

Work motivation is very important in the concept of safety culture. The concept of safety culture requires nurses to work together to recognize and report medical errors that occur, and to be trained to prevent errors (Moody & Pesut, 2006). The importance of work motivation of health workers in health care organizations is in line with the statement revealed by Reason in Feng, Bobay, and Weiss (2008) which states that nurses' personal commitment and motivation have an influence on safety practices. Feng, Bobay, and Weiss (2008) further state that personal commitment and motivation are one part or component of patient safety culture. The influence of motivation on patient safety is also emphasized by World Health Organization (WHO, 2017), that motivation and productivity of health workers are very important aspects of safe and quality health services. Efforts to improve patient safety can be done by maintaining nurses' work motivation (intrinsic and extrinsic motivation), developing workplace empowerment, supportive working conditions, collaboration and communication between and within units (Toode, Routasalo, Helminen, & Suominen, 2015).

The role of leadership, quality management and knowledge management can be utilized by health care organizations in achieving organizational goals and performance improvement. The concept of knowledge-based view states that organizational performance results from knowledge management can be obtained through leadership. There is an exclusive process in the practice of knowledge management, where knowledge management transforms organizational resources into a value for customers and becomes the linkage of patient relationships with health care management (Gowen, Henagan, & McFadden, 2009). The implementation of knowledge management in hospitals is expected to be a step to improve health literacy for health workers. The application of health literacy is very useful for health workers in hospitals and the benefits of implementing health literacy is that it can help health workers to obtain, understand and be able to use health information to improve health services (Batterham, Hawkins, Collins, Buchbinder, & Osborne, 2016).

The sustainability of an organization is supported by the activities of the resources in it. Knowledge management activities in an organization are a challenge in itself. Knowledge is considered the most important and valuable resource in an organization and leaders are people who have the power to influence the knowledge management process in an organization (Hayat, Hasanvand, Nikakhlag, & Dehghani, 2015). The role of knowledge management should be taken into account to achieve patient safety, as knowledge management is a key factor in hospital needs assessment.

In addition, knowledge management also assists in hospital service planning, integrated care planning, disease management and also in the delivery of safety care. The successful implementation of knowledge management in hospitals with the use of knowledge management applications in healthcare is believed to be able to reduce the occurrence of medical errors and to achieve safe care outcomes (Altindis & Kurt, 2010).

RESEARCH METHOD

This is a quantitative study, with an analytic survey conducted using a cross-sectional design, where the independent variables and dependent variables in this study are identified at the same time. This study aims to determine the factors that influence the implementation of patient safety culture. The population in this study were 200 inpatient nurses working in one of the regional public hospitals in Lombok Island, Indonesia. Based on the calculation of the Isaac and Michael formula, a sample of 127 was obtained using proportionate random sampling technique.

The independent variables in this study are leadership effectiveness, work motivation and knowledge management. While the dependent variable is the implementation of patient safety culture in the work unit. Data were collected by distributing questionnaires to nurses and Likert scale with a range of 1 to 5 indicates strongly disagree, disagree, neutral, agree and strongly agree, respectively. The questionnaire in this study is in the form of sentence statements adapted from various sources, which include demographic data, namely gender, age, education level and length of service. The patient safety culture questionnaire consisted of 16 statement items adapted from Sexton et al. (2006), the leadership effectiveness questionnaire consists of 10 statement items adapted from Shipton, Armstrong, West, & Dawson (2008) and Clay-Williams et al. (2020), the work motivation questionnaire consists of 6 statement items from Robbins & Judge (2018) and Mas'ud (2004) and the knowledge management questionnaire consists of 7 statement items from Darroch (2003).

The patient safety culture questionnaire consists of 16 statement items, the leadership effectiveness questionnaire consists of 10 statement items, the work motivation questionnaire consists of 6 statement items and the knowledge management questionnaire consists of 7 statement items.

The independent variables were analyzed using univariate, bivariate, and multivariate analysis. Pearson correlation test was used to see the effect of leadership effectiveness, work motivation, and knowledge management on the implementation of patient safety culture, while multiple linear regression tests were used to see which independent variable is more dominant in multivariate analysis. The significance level used in this study was $p < 0.05$.

RESULTS

The characteristics of respondents, including gender, age, education level and tenure at the hospital are presented in table 1.

Table 1. Characteristics of Respondents (n = 127)

Characteristics		N	Percentages (%)
Gender	Male	38	29.9
	Female	89	70.1
Age (years old)	≤ 25	15	11.8
	26 - 30	56	44.1
	31 - 40	42	33.1
	41 - 50	12	9.4
	> 50	2	1.6
Education level	Diploma of Nursing	37	29.1
	Bachelor of Nursing	87	68.5
	Master of Nursing	3	2.4
Duration of work experience (years)	1 - 5	88	69.3
	6 - 10	13	10.2
	11 - 15	10	7.9
	16 - 20	8	6.3
	> 20	8	6.3

Source: Processed Primary Data, 2023.

Table 1 shows that of the total of 127 respondents, the majority of respondents were female nurses (70.1%) and the majority were in the age range of 26-30 years old (44.1%) or can be stated as nurses in the productive age category. Productive age range provides potential, energy, enthusiasm and motivation in doing work. When viewed from the level of education, the majority of nurses are those with a bachelor's degeree in nursing (68.5%), followed by those with a dipoloma of nursing degree. The duration of work experience shows the ability, proficiency and skills of nurses in carrying out nursing care. Judging from the category this category, the majority of nurses are in the working period of 1-5 years (69.3%), and there are also senior nurses who have decades of service. The presence of senior nurses in each work unit will assist junior nurses in making decisions and other nursing actions.

Table 2. Relationship of Leadership Effectiveness, Work Motivation and Knowledge Management to Patient Safety Culture Implementation (n = 127)

Variables	P Value	Pearson Correlation
Leadership Effectiveness (X1)	0.000	0.797
Work Motivation (X2)	0.000	0.755
Knowledge Management (X3)	0.000	0.782

The results of the correlation test between the variables of leadership effectiveness, work motivation and knowledge management on the implementation of patient safety culture are shown in table 3. It was found that there is a positive relationship between leadership effectiveness and the implementation of patient safety culture, indicated by a significance value of 0.000 ($p < 0.05$) with a degree of relationship Pearson correlation value of 0.797 (strong correlation with the range of Pearson Correlation values 0.61 - 0.80). Furthermore, the results of the correlation test of work motivation variables on the implementation of patient safety culture show a significance value of 0.000 ($p < 0.05$),

with a degree of relationship Pearson correlation value of 0.755, meaning that there is a strong significant positive relationship between work motivation and the implementation of patient safety culture. The knowledge management variable shows a significance value of 0.000 ($p < 0.05$), with a degree of relationship Pearson correlation value of 0.782. Thus, it can be concluded that there is a strong significant positive relationship between knowledge management and the implementation of patient safety culture.

Table 3. Results of Multiple Linear Regression Analysis of Leadership Effectiveness, Work Motivation and Knowledge Management Variables to Patient Safety Culture Implementation (n = 127)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics			
		B	Std. Error	Beta			Tolerance	VIF	R	R^2
1	(Constant)	16.537	2.461		6.718	.000			.891	.794
	Leadership Effectiveness (X1)	.421	.071	.372	5.969	.000	.431	2.318		
	Work Motivation (X2)	.749	.114	.355	6.598	.000	.580	1.725		
	Knowledge Management (X3)	.504	.109	.293	4.612	.000	.416	2.403		
a. Dependent Variable: Patient Safety Culture (Y)										

The results of multiple linear regression analysis obtained the equation formula of Y = 16.537 + 0.421X1 + 0.749X2 + 0.504X3. The value of 0.421 is the regression coefficient value of the leadership effectiveness variable (X1) on the implementation of patient safety culture (Y), which means that if the X1 variable increases by one unit, the Y variable will also increase by 0.421 or 42.1%. The value of 0.749 is the regression coefficient value of the work motivation variable (X2) on the implementation of patient safety culture (Y), which means that if the X2 variable increases by one unit, the Y variable will also increase by 0.749 or 74.9%. The value of 0.504 is the regression coefficient value of the knowledge management variable (X3) on the implementation of a patient safety culture (Y), which means that if the X3 variable enhanced by one unit, the Y variable will also be raised by 0.504 or 50.4%.

The dominant variable in this study is the leadership effectiveness variable, because it has a larger β coefficient value than the other independent variables. The R2 value is 0.794, so it can be concluded that the effect of leadership effectiveness variables, work motivation, and knowledge management simultaneously is 79.4% on the implementation of patient safety culture. This means that there are 20.6% other factors or variables that influence the implementation of patient safety culture that are not explained in the research model.

DISCUSSION

Leadership is the driving force in organizations. It is the most important element in creating culture, supporting and helping to promote health and safety (Yam, Wong, Hoong, & Ebrahimi, 2017). Leadership and organizational culture are interrelated and continuous factors (Schein, 2004). Previous studies have cited leadership as the most

important element for improving patient safety and reducing adverse events (Mohr, Abelson, & Barach, 2002). Leadership effectiveness plays an important role in maintaining successful quality healthcare services. Effective leadership is crucial for health care organizations to encourage and maintain quality services for patients (Rahman, 2017). In addition, the role of leaders is critical in hospitals and can also assist in fostering and maintaining the elements necessary to support the implementation of patient safety (Kim & Newby-Bennett, 2012; Ginsburg et al., 2010). The results of this study support previous studies that leadership effectiveness can improve and impact patient safety (Kim & Newby-Bennett, 2012; Künzle, Kolbe, & Grote, 2010). The results of this study are also in line with the results of research by Hartanto & Warsito (2017) and Keats (2019) state that leadership affects patient safety. Leadership is also one of the main foundations of patient safety and effective leadership is able to improve safety by creating a vision and setting the direction of the organization in a patient-centered culture (Keats, 2019).

Leadership is also declared to be a factor that can encourage, direct employees to be motivated in realizing organizational goals. Limited studies in the healthcare industry have examined the impact of motivation on patient safety (Kudo et al., 2009). However, Kudo et al. (2009) in their study found that nurses' work motivation can prevent medical errors and has a noticeable impact on patient safety reporting. The results of Kudo et al. (2009) are in line with the results of our study. Padauleng, Sidin, and Ansariadi (2020) also supported the results of this study that work motivation created in public service motivation has a significant impact on patient safety reporting culture. One of the personal factors in the form of work motivation is an element that is related to safety culture (Padauleng, Sidin, & Ansariadi, 2020). WHO (2017) and Feng, Bobay, & Weiss (2008) also emphasized that motivation is an important aspect of healthcare quality management, has an influence on safety practices, and motivation is a component of patient safety culture.

Patient safety as a basic principle of health care is the quality of hospital management. The quality of health care delivery is largely determined by the application of appropriate knowledge management strategies for rapid and appropriate clinical decision making (Shahmoradi, Safadari, & Jimma, 2017). Knowledge has become a major asset in organizations including healthcare organizations. The use of knowledge is needed and required in planning, decision-making, nursing actions, control and evaluation of health services in order to access better health safety (Altindis & Kurt, 2010). The importance of managing knowledge is because in healthcare organizations, decision-making is a critical point of knowledge application. Knowledge management is one approach that can make nurses' performance more optimal and to achieve organizational goals (Ayatulloh, Nursalam, & Kurniawati, 2021). The results of this study are in line with the results of Astuti, Painringi, and Kadir (2018) that knowledge management affects patient safety culture. Other supporting research findings revealed by Ocak, Köseoglu, & Bertsch (2015) and Stock, McFadden, & Gowen (2010) that knowledge management has a noticeable positive correlation with patient safety and knowledge management is the most important factor to improve patient safety.

CONCLUSION

The findings in the study support Schein's (2004) organizational culture theory and Path-Goal Theory. Implementing a patient safety culture is not easy. Many challenges are faced to change the existing culture into a patient safety culture. The findings in this study can be a learning suggestion in implementing a patient safety culture. This can be done by making patient safety one of the main parts of the health service organization which can be done by routinely making patient safety incident reports, providing rewards and punishments to nurses for the occurrence of patient safety incidents and increasing the knowledge and skills of nurses.

LIMITATIONS

The limitations of this study include that this study was conducted in a regional general hospital in Lombok Island due to the lack of transparency of the hospital in reporting patient safety incidents both locally and nationally. The use of a cross-sectional design makes it quite difficult to prove and identify causal relationship factors. As for future research, adding other factors/variables that may be related to patient safety culture by expanding the range of research and targeting other health professions is suggested.

ACKNOWLEDGEMENTS

We thank for this work was supported by the Endowment Fund for Education (LPDP) of the Ministry of Finance, Indonesia.

DECLARATION OF CONFLICTING INTERESTS

The authors and team hereby declare that the data published in this manuscript has no conflict of interest to any party. If in the future it is found that there is such a thing, then the full responsibility regarding this matter lies with the authors and the team.

REFERENCES

Abadiyah, R., Eliyana, A., & Sridadi, A. R. (2020). Motivation, leadership, supply chain management toward employee green behavior with organizational culture as a mediator variable. *International Journal of Supply Chain Management*, *9*(3), 981–989.

Addo, S. A., & Dartey-Baah, K. (2020). Leadership in The Safety Sense: Where Does Perceived Organisational Support Fit? *Journal of Management Development*, *39*(1), 50–67. doi:10.1108/JMD-04-2019-0136

Altindis, S., & Kurt, M. (2010). Altındiş, S., & Kurt, M. (2010). Bilgi yönetim uygulamalarının hasta güvenliğine etkisine ilişkin bir araştırma: Afyonkarahisar ilinde bir uygulama. *Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 24*, 45-61.

Ammouri, A. A., Tailakh, A. K., Muliira, J. K., Geethakrishnan, R., & Al Kindi, S. N. (2015). Patient safety culture among nurses. *International Nursing Review*, *62*(1), 102–110. doi:10.1111/inr.12159

Artha, D. R., Suardhika, I. N., & Landra, N. (2023). The servant leadership analysis and work motivation in determining organizational commitment and work performance. *International Journal of Applied Business and International Management*, *8*(2), 1–13. doi:10.32535/ijabim.v8i2.1815

Astuti, A., Painringi, S. A., & Kadir, A. R. (2018). Influence element people of knowledge management to patient saffety culture at A.M Parikesit Tenggarong Hospital. *Jurnal Kesehatan Masyarakat Maritim*, *1*(2), 178–185. doi:10.30597/jkmm.v1i2.8712

Ayatulloh, D., Nursalam, N., & Kurniawati, N. D. (2021). The effect of knowledge management in healthcare services: A systematic review. *Jurnal Pendidikan Keperawatan Indonesia*, *7*(1), 84–96. doi:10.17509/jpki.v7i1.35132

Batterham, R. W., Hawkins, M., Collins, P. A., Buchbinder, R., & Osborne, R. H. (2016). Health literacy: Applying current concepts to improve health services and reduce health inequalities. *Public Health*, *132*(2016), 3–12. doi:10.1016/j.puhe.2016.01.001

Bea, I. F., Pasinringi, S. A., & Noor, N. B. (2013). *Gambaran Budaya Keselamatan Pasien di Rumah Sakit Universitas Hasanuddin Tahun 2013* (Undergraduate thesis). Hasanuddin University, Makassar.

Brasaite, I., Kaunonen, M., & Suominen, T. (2015). Healthcare professionals' knowledge, attitudes and skills regarding patient safety: A systematic literature review. *Scandinavian Journal of Caring Sciences*, *29*(1), 30–50. https://doi.org/10.1111/scs.12136

Bryant, S. E. (2003). The role of transformational and transactional leadership in creating, sharing and exploiting organizational knowledge. *Journal of Leadership & Organizational Studies*, *9*(4), 32–44. doi:10.1177/107179190300900403

Clay-Williams, R., Taylor, N., Ting, H. P., Winata, T., Arnolda, G., & Braithwaite, J. (2020). The clinician safety culture and leadership questionnaire: refinement and validation in Australian Public Hospitals. *International Journal for Quality in Health Care*, *32*, 1–8. doi:10.1093/intqhc/mzz106

Cummings, G., Lee, H., MacGregor, T., Davey, M., Wong, C., Paul, L., & Stafford, E. (2008). Factors contributing to nursing leadership: A systematic review. *Journal of Health Services Research and Policy*, *13*(4), 240–248. doi:10.1258/jhsrp.2008.007154

Daly, J., Jackson, D., Mannix, J., Davidson, P. M., & Hutchinson, M. (2014). The Importance of Clinical Leadership in the Hospital Setting. *Journal of Healthcare Leadership*, *6*, 75–83. doi:10.2147/JHL.S46161

Darroch, J. (2003). Developing a measure of knowledge management behaviors and practices. *Journal of Knowledge Management*, *7*(5), 41–54. doi:10.1108/13673270310505377

Dhamanti, I., Leggat, S., Barraclough, S., & Tjahjono, B. (2019). Patient safety incident reporting in Indonesia: An analysis using World Health Organization characteristics for successful reporting. *Risk Management and Healthcare Policy*, *12*, 331–338. doi:10.2147/RMHP.S222262

El-Jardali, F., Dimassi, H., Jamal, D., Jaafar, M., & Hemadeh, N. (2011). Predictors and outcomes of patient safety culture in hospitals. *BMC Health Services Research*, *11*(45), 1–12. doi:10.1186/1472-6963-11-45

Feng, X., Bobay, K., & Weiss, M. (2008). Patient safety culture in nursing: A dimensional concept analysis. *JAN Theoretical Paper*, (May), 310–319. doi:10.1111/j.1365-2648.2008.04728.x

Flin, R. (2007). Measuring safety culture in healthcare: A case for accurate diagnosis. *Safety Science*, *45*(6), 653–667. doi:10.1016/j.ssci.2007.04.003

Ghasemi, M., Khoshakhlagh, A. H., Mahmudi, S., & Fesharaki, M. G. (2015). Identification and assessment of medical errors in the triage area of an educational hospital using the SHERPA technique in Iran. *International Journal of Occupational Safety and Ergonomics*, *21*(3), 382–390. doi:10.1080/10803548.2015.1073431

Ginsburg, L. R., Chuang, Y. T., Blair Berta, W., Norton, P. G., Ng, P., Tregunno, D., & Richardson, J. (2010). The relationship between organizational leadership for safety and learning from patient safety events. *Health Services Research*, *45*(3), 607–632. doi:10.1111/j.1475-6773.2010.01102.x

Gowen, C. R. I., Henagan, S. C., & McFadden, K. L. (2009). Knowledge management as a mediator for the efficacy of transformational leadership and quality management initiatives in U.S. health care. *Health Care Management Review*, *34*(2), 129–140. doi:10.1097/HMR.0b013e31819e9169

Hartanto, Y. D., & Warsito, B. E. (2017). Kepemimpinan Kepala Ruang Dalam Penerapan Budaya Keselamatan Pasien Di Rumah Sakit: Literature Review. *Seminar Nasional dan Call for Paper Universitas Diponegoro*, 88–103.

Hayat, A., Hasanvand, M. M., Nikakhlag, S., & Dehghani, M. R. (2015). The role of transformational leadership and its knowledge management processes. *Journal of Health Management & Informatics*, *2*(2), 41–46.

Imelda, I., & Wibowo, A. (2018). Analysis of the patient safety culture in Awal Bros Batam Hospital, Year 2016. *The 2nd International Conference on Hospital Administration, KnE Life Sciences*, *2018*, 183–190. doi:10.18502/kls.v4i9.3570

Jarrett, M. P. (2017). Patient safety and leadership: Do you walk the walk? *Safety*, *62*(2), 88–92. doi:10.1097/JHM-D-17-00005

Keats, J. P. (2019). Leadership and teamwork: Essential roles in patient safety. *Obstetrics and Gynecology Clinics of North America*, *46*(2), 293–303. doi:10.1016/j.ogc.2019.01.008

Kim, Y., & Newby-Bennett, D. (2012). The role of leadership in learning culture and patient safety. *International Journal of Organization Theory and Behavior*, *15*(2), 151–175. doi:10.1108/IJOTB-15-02-2012-B001

Kudo, Y., Kido, S., Taruzuka Shahzad, M., Saegusa, Y., Satoh, T., & Aizawa, Y. (2009). Safety climate and motivation toward patient safety among Japanese nurses in hospitals of fewer than 250 beds. *Industrial Health*, *47*(1), 70–79. doi:10.2486/indhealth.47.70

Kumar, R. D., & Khiljee, N. (2016). Leadership in healthcare. *Anaesthesia & Intensive Care Medicine, 17*(1), 63-65. doi:10.1016/j.mpaic.2015.10.012

Künzle, B., Kolbe, M., & Grote, G. (2010). Ensuring patient safety through effective leadership behaviour: A literature review. *Safety Science*, *48*(1), 1–17. doi:10.1016/j.ssci.2009.06.004

Lumenta, N. A. (2021). *Patient Safety : Harga Mati! Kajian, Sejarah, dan Panduan bagi Manajemen Rumah Sakit dan Tenaga Kesehatan*. Jakarta: PT Rayyana Komunikasindo.

Mas'ud, F. (2004). *Survai Diagnosis Organisasional Konsep & Aplikasi*. Semarang: Badan Penerbit Universitas Diponegoro.

Mohr, J. J., Abelson, H. T., & Barach, P. (2002). Creating effective leadership for improving patient safety. *Quality Management in Health Care*, *11*(1), 69–78.

Moody, R. C., & Pesut, D. J. (2006). The motivation to care to professional nursing work. *Journal of Health Organization and Managgement*, *20*(1), 15–48. doi:10.1108/14777260610656543

O'Brien, B., Andrews, T., & Savage., E (2017). Anticipatory vigilance: A grounded theoryy study of minimising risk within the perioperative setting. *Journal of Clininical Nursing*, *27*(1–2), 1–26. doi:10.1111/jocn.13881

Ocak, S., Köseoglu, M. A., & Bertsch, A. (2015). Linkages among organisational culture, knowledge management, and patient safety performance: Evidence from a state hospital in a developing country. *International Journal of Management and Enterprise Development*, *14*(1), 11–35. doi:10.1504/IJMED.2015.069307

Padauleng, A. W., Sidin, A. I., & Ansariadi. (2020). The relationship between leadership style and nurse's work motivation with the implementation of patient safety culture in hospital, Bone Regency. *Hasanuddin International Journal of Health Research*, *1*(02), 64–72. doi:10.1016/j.enfcli.2020.06.037

Rahman, W. A. W. A. (2017). The Impact of leadership effectiveness on the quality of health care service at Universiti Sains Malaysia Hospital (HUSM), Kubang Kerian, Kelantan, Malaysia. *International Review of Social Sciences*, *5*(October), 407–415.

Ramlall, S. (2004). A review of employee motivation theories and their implications for employee retention within organizations. *Journal of American Academy of Business*, *5*(1/2), 52–63.

Richardson, A., & Storr, J. (2010). Patient safety: A literative review on the impact of nursing empowerment, leadership and collaboration. *International nursing review, 57*(1), 12-21. doi:10.1111/j.1466-7657.2009.00757.x

Robbins, S. P., & Judge, T. A. (2018). *Essentials of Organizational Behavior* (14th ed.). London: Pearson Education Limited.

Rockville, W., Sorra, J., Gray, L., Streagle, S., Famolaro, T., Yount, N., & Behm, J. (2016). *Agency Healthcare Research and Quality Hospital Survey on Patient Safety Culture: User's Guide*. Rockville: AHRQ Publication.

Salawati, L. (2020). Penerapan keselamatan pasien rumah sakit. *Jurnal Averrous*, *6*(1), 98–107. doi:10.29103/averrous.v6i1.2665

Sammer, C. E., & James, B. R. (2011). Patient safety culture: The nursing unit leadera's role. *Online Journal of Issues in Nursing*, *16*(3), 1–9. doi:10.3912/OJIN.Vol16No03Man03

Schein, E. H. (2004). *Organizational Culture and Leadership* (3th ed.). Hoboken: John Wiley & Sons Ltd.

Setyowati, I. F. (2019). Factors that influence the implementation of patient's safety culture by ward nurses in district general hospital. *Enfermeria Clinica*, *29*(2), 300–303. doi:10.1016/j.enfcli.2019.04.038

Sexton, J. B., Helmreich, R. L., Neilands, T. B., Rowan, K., Vella, K., Boyden, J., Roberts, P. R., & Thomas, E. J. (2006). The safety attitudes questionnaire: Psychometric properties, benchmarking data, and emerging research. *BMC Health Services Research*, *6*(44), 1–10. doi:10.1186/1472-6963-6-44

Shahmoradi, L., Safadari, R., & Jimma, W. (2017). Knowledge management implementation and the tools utilized in healthcare for evidence-based decision making: A systematic review. *Ethiopian Journal of Health Sciencesciences*, *27*(5), 541–558. doi:10.4314/ejhs.v27i5.13

Shipton, H., Armstrong, C., West, M., & Dawson, J. (2008). The impact of leadership and quality climate on hospital performance. *International Journal for Quality in Health Care*, *20*(6), 439–445. doi:10.1093/intqhc/mzn037

Stock, G. N., McFadden, K. L., & Gowen, C. R. (2010). Organizational culture, knowledge management, and patient safety in U.S. Hospitals. *Quality Management Journal*, *17*(2), 7–26. doi:10.1080/10686967.2010.11918267

Toode, K., Routasalo, P., Helminen, M., & Suominen, T. (2015). Hospital nurses' working conditions in relation to motivation and patient safety. *Nursing management, 21*(10).

World Health Organization (WHO). (2017). *Twinning Partnerships for Improvement.* Retrieved from https://www.who.int/initiatives/twinning-partnerships-for-improvement

Yam, F., Wong, C. S., Hoong, C. Y., & Ebrahimi, M. (2017). Shaping the culture of safety through effective leadership in Malaysia. *Asian Culture and History*, *9*(2), 1. doi:10.5539/ach.v9n2p1

Yukl, G. (2007). *Kepemimpinan dalam Organisasi* (5th ed.). Jakarta: Indeks.