



Original Research

The Relationship Between Nurses' Job Stress and The Implementation of Patient Safety in The Hospital

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Abstract

Nurses' job stress is considered as a human resource management's issue in the hospital. Study literature reviewed 13.6% of ICU nurses encounter the potential threat related to the patient safety occurrences. This study was designed to investigate the correlation between nurses' job stress and the implementation of patient safety in the hospital in-patient room. This study used a quantitative-analytical method with a cross-sectional approach. A total of 30 respondents were recruited by using proportionate random sampling. A self-reported questionnaire was utilized to collect the data. The normality data was tested by using Kolmogorov Smirnov analysis ($p < 0.05$). Spearman Rank test was applied to analyze the overall data. The study findings revealed there was no significant relationship between nurses' job stress and the patient safety on the target 1 (implementation of patient identification), target 3 (drug safety improvement), target 4 (definitive location and procedure of surgery patient), target 5 (post-health-services infection risk) and target 6 (risk-falls reduction). However, the analysis was found to be statistically significant between nurses' job stress and effective-communication enhancement (target 2 of patient safety). The study findings concluded that stress could positively impact to improve nurses' awareness to maintain the 6 targets of patient safety

INTRODUCTION

Stress is a serious issue faced by nurses working in a hospital setting. A survey conducted in the United States described that 46% of nurses experienced job stress and 34% of them have the intention to leave their job. From the survey, 31.2% of nurses were categorized at the high-stress level and 43.8% moderate stress level. Several factors contribute to moderate stress levels such as fatigue (degrades physical strength and immunity system), workload (the high burden to provide standard care to the

patients) and work characteristics (consistently be prepared for all shifts). Americans' stress levels in 2017 are consistent with those in 2016, with an average stress level of 4.8 (on a scale of 1 to 10) across both years. Of the symptoms reported, around one-third of adults reported experiencing feeling nervous or anxious (36 percent), irritability or anger (35 percent), and fatigue (34 percent) due to their stress (American Psychological Association, 2017).¹

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A previous study described that 13.6% of ICU nurses encountered the potential threat related to patient safety such as fall occurrences (48.8%), and un-documented fall incidents by nurses (88%). Hence, nurses' awareness and knowledge about patient safety are crucial and need to be frequently updated through discussion or training.²

In addition, Mulyani (2016) explained that 61.4% of nurses faced job stress and 77.8% of them implemented unsatisfactory patient safety. The high workload and the commitment to accomplish the 6 targets of patient safety in maintaining the quality of care could be a stressor for the nursing staff. Therefore, the targets of patient safety could stimulate a particular improvement in patient safety.³

METHODS

This study used a quantitative-analytical method with a cross-sectional approach. A self-reported questionnaire consisted of job stress statements and patient safety target indicators (target 1=implementation of patient identification; target 2= effective-communication enhancement; target 3=drug safety improvement; target 4=definitive location and procedure of surgery patient; target 5=post-health-services infection risk; target 6=risk-falls reduction) was utilized to collect the data. The study was conducted in February 2020 at an inpatient ward of Ariyo Wirawan Salatiga hospital. *Proportionate random sampling* was applied to select 60 participants. The normality data was tested by using Kolmogorov Smirnov analysis ($p < 0.05$). Spearman Rank test was applied to analyze the overall data.

RESULTS

Table 1 describes the nurses' job stress level is categorized at moderate level. This study also provides non-normal distribution of

the nurses' job stress data which ranged from 28 to 59.

Table 1
Nurses' job stress at Ario Wirawan Salatiga Hospital, February 2020

Indicator	Means	SD
Nurses' job stress	46.50	6.354

The data of the 6 targets of patients safety shows non normally distributed with the range score for every target such as: target 1 (lower=4; higher=6), target 2 (lower=2; higher=7), target 3 (lower=0; higher=6), target 4 (lower=0; higher=4), target 5 (lower=6; higher=18), and target 6 (lower=2; higher=4).

Table 2
The implementation of 6 targets of patient safety at Ario Wirawan Salatiga Hospital, February 2020 (n = 60)

Indicator(s)	Means	SD
Target 1 implementation of patient identification	6.00	0.399
Target 2 effective-communication enhancement	7.00	0.792
Target 3 drug safety improvement	3.00	1.357
Target 4 definitive location and procedure of surgery patient	4.00	1.110
Target 5 post-health-services infection risk	15.00	2.109
Target 6 risk-falls reduction	4.00	0.646

The results show there was no significant relationship between nurses' job stress and the patient safety on the target 1 (implementation of patient identification), target 3 (drug safety improvement), target 4 (definitive location and procedure of surgery patient), target 5 (post-health-services infection risk) and target 6 (risk-falls reduction). However, the analysis was found to be statistically significant between nurses' job stress and effective-communication enhancement (target 2 of patient safety) (Table 3).

Table 3

The relationship between nurses' job stress and implementation of 6 targets of patient safety at Ario Wirawan Salatiga Hospital, February 2020 (n = 60)

Indicator(s)	Coefficient Correlation	p
Target 1 implementation of patient identification	0,023	0,859
Target 2 effective-communication enhancement	0,329	0,010
Target 3 drug safety improvement	-0,016	0,901
Target 4 definitive location and procedure of surgery patient	0,154	0,239
Target 5 post-health-services infection risk	-0,026	0,842
Target 6 risk-falls reduction	0,164	0,210

Independent variable: nurses' job stress

DISCUSSION

Nurses' job stress at Ario Wirawan Salatiga Hospital

Our study shows that nurses' job stress is classified in the moderate stress level. In line with the previous study conducted by Natsir (2015) most of the study samples were categorized as moderate level (64%).⁴ Amin (2020) also outlined that nurses' job stress was indicated at a moderate level (39%) and mild low level (41%).⁵ Several stressors contribute to job stress such as workload, nurses' care experience with pain and death patients, conflict of interactions, and ambiguity roles. Moreover, job welfare, seniority interaction, staff's personal characteristics and the relationship could also arise the job stress condition.

Job stress is a condition that arises as a result of the interaction between individuals and their jobs, where there are mismatches of characteristics and unclear changes that occur in a company. In certain situations, the condition of the workplace can be another potential source of job stress. Nurse, an important element in a hospital is required to provide satisfactory nursing care to the patient and family. Comparing to the nurses who work outside of the hospital, stress experienced by nurses working in the hospital is relatively higher.⁵ However, there are several conditions which cause work burden among nurses such as perceive responsible for the lives of others, substantial workload situation, the condition need to deal with the dying or dead people, and the image of consequences

if shortcomings were made in the critical ward such as intensive care unit or emergency room.

In addition, in line with a study examined by Anggitasari (2020) explained that stress levels classified based on respondent distribution showed a high-stress level among nurses (86.3%). That study suggested stress is not a reduce nurses' work performance. Nurses can control their stress felling with an exercise, and set a period of time for rest and do relaxation.⁶ The most significant factors affecting nurses' job stress are workload.⁷

The implementation of 6 targets of patient safety in Ario Wirawan Hospital Salatiga

The current study findings of 6 targets of patients safety implementation show that nurses were identified in a good category. Equivalent to a study conducted by Putri (2018) described that 55.9% of nurses implemented patient safety adequately.⁸ In accordance to Indonesian Ministry of Health policy, nurses need to implement nursing care to the patient by applying patient safety principals which includes risk assessment, identification and management related to patient's risk, incidents' analysis and report, follow up of the incidents, implement the solution to minimize risks and injuries caused of work errors. Besides, 6 targets of patient safety are suggested to be implemented which includes target 1 implementation of patient identification, target 2 effective-communication enhancement, target 3 drug safety

improvement, target 4 definitive location and procedure of surgery patient, target 5 post-health-services infection risk, and target 6 risk-falls reduction.⁹

However, the statistical data reported non normally distributed with the range score for every target such as: target 1 (lower=4; higher=6), target 2 (lower=2; higher=7), target 3 (lower=0; higher=6), target 4 (lower=0; higher=4), target 5 (lower=6; higher=18), and target 6 (lower=2; higher=4). Those result defines that nurses in this study implement all of 6 targets of patient safety effectively.

As the results reported, a prior study conducted by Fatimah (2018) mentioned that 71.9% of nurses completely performed patient identification before delivering nursing care. Nurses do a lot of things during the work period and also deal with many patients. The risk of error could happen. Patient identification is crucial to minimize the error¹⁰.

Previous studies performed by Ulva (2017) also supported the current study findings of the second target of patient safety implementation which described that communication in the hospitals was effectively implemented by using verbal and telephone. It is rational because those two hospitals integrated patient safety training to the nurses. Another concern when applying effective communication is a record. Record is required when implementing verbal and telephone communication between nurses and other professionals or nurses and patients. It can be beneficial to minimize the occurrence of miscommunication which arises error.¹¹

Furthermore, nurses in this study were also administering drug safety improvement through *double-checking and high-alert* drug recognizing as the third target of patient safety indicator. In line with a study conducted by Aprisila (2018), the majority of nurses (58.5%) in Rasyidin and Bayangkara Hospital Padang implemented

high awareness about drug safety preserved to the patients¹².

Moreover, the fourth target of patient safety implementation in this study is also categorized as a good result. It is because the study setting was administering hospital policies and standard operating procedures related to the definitive location and procedure of surgery patients. Consistent with the prior study reported by Alfiyah (2016), 83.8% of nurses were obeyed and applied procedures affiliated with the correct location, procedure and patient.

Besides, the fifth and sixth target of patient safety in this study is reported as a good classification. It is consistent with the study result that mentioned majority nurses in Ario Wirawan Hospital practicing handwashing by applying 6 steps of WHO standard to minimize infection risk and assessing the risk of falls for all of the patients to reduce fall incidents. Similar to a study reported by Alfiyah (2016), 89.7% of nurses performed 6 steps method of handwashing based on WHO recommendation which the easiest and most important method to decrease micro-organisms transmission and prevent infection. While Catur (2018) and Oktaviana (2019) supported the current study result that 95% of nurses at Panti Waluya hospital carried out fall-risk prevention properly based on the standard operating procedures.^{13,14}

The relationship between nurses' job stress and implementation of patient safety in Ario Wirawan Salatiga hospital

The study findings decline a previous study examined by Mulyati,et.al (2016) which reported data among 61.4% of nurses who experienced job stress were comprising poor patient safety culture (77.8%). Meanwhile, 38.8% of nurses whom unexperienced job stress were encountering a good job safety culture (52.9%). Nurses are a large number of

health workers in the hospital who are required to always implement the six targets of patient safety in the nursing care process.³ The nurses' conviction in supporting the 6 targets of patient safety implementation is essential to ensure patient safety outcomes. Nursing care plays an important role in preventing adverse events that occur in patients and the nursing environment. Compared to the other health workers, nurses' assistance is needed for 24 hours since nurses have the most interaction time with patients. Unsurprisingly, it also contributes to the pressure on nurses is averagely higher.

Stress condition experienced by an individual is determined by the balance between the demands (e.g. workload) and the individual resources to overcome these demands (e.g. experience, skills). When the received demands exceed the individual capabilities, it will cause unpleasant conditions such as anxiety or unwell feeling, lack of concentration or high temper. Several factors are defined as stressors such as workload, seniority conflict, and patient's characteristics. Stressor reactions related to the job situation depend on the nurse's personality, health status, and coping mechanisms. Job stress related to patient safety, job stress or emotional exhaustion affect patient safety. Emotional exhaustion negatively affects patient safety, Job stress resulted in nurse turnover intention.¹⁵⁻¹⁷ When nurses carry out patient safety can minimize missed nursing care.¹⁸

The study findings declare a significant relationship between nurses' job stress and the target 2 of patient safety (effective-communication enhancement). The result strongly reported that heavier nurses' job stress increased the implementation of effective communication. Stress can generate positive and negative impacts, the positive impact will motivate and develop new discoveries and awareness. Conversely, negative stress fosters feelings of distress, rejection, depression and generates physical and mental problems.

Effective communication enhancement by using SBAR method has been implemented in Ario Wirawan Hospital to maintain patient safety.

CONCLUSION

This study indicates a correlation result between nurses' job stress and the implementation of patient safety in the hospital setting. From the 6 targets of patient safety, the effective communication enhancement of patient safety targets presents a significant correlation with job stress status. It is concluded that heavier nurses' job stress increases the implementation of effective communication. Several stressors contribute to nurses' stress which positively impacted to enhance nurses' awareness and maintain 6 targets of patient safety.

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CONFLICTS OF INTEREST

Neither of the authors has any conflicts of interest that would bias the findings presented here.

REFERENCES

1. American Psychological Association. *Stress In America™: The State of Our Nation.*; 2017.
2. Yilmaz Z, Goris S. Determination of the patient safety culture among nurses working at intensive care units. *Pakistan J Med Sci.* 2015;31(3):597-601. doi:10.12669/pjms.313.7059
3. Mulyati, L DR. Faktor Determinan yang Memengaruhi Budaya Keselamatan Pasien di RS Pemerintah Kabupaten Kuningan. *J keperawatan.* Published online 2016.
4. Natsir M, Hartiti T, Sulisno M. Hubungan Antara Self Efficacy Dan Stres Kerja Dengan Burnout Pada Perawat Dalam Melakukan Asuhan. *J Manaj Keperawatan.* 2015;3(1).

5. Amin M, Ekwinaldo Y, Novrianti Y, Muhammadiyah Bengkulu U. Stress Kerja Dan Konflik Kerja Mempengaruhi Kinerja Perawat. *J Telenursing*. 2020;2(1):31-40. doi:10.31539/joting.v2i1.521
6. Anggitasari N, Budiman B, Rosnawati R. Hubungan Stres Kerja Dan Motivasi Kerja Dengan Kinerja Perawat Di Rumah. Vol 1.; 2019. doi:10.31934/JOM.V1I1.783
7. Kokoroko E, Sanda MA. Effect of Workload on Job Stress of Ghanaian OPD Nurses: The Role of Coworker Support. *Saf Health Work*. 2019;10(3):341-346. doi:10.1016/j.shaw.2019.04.002
8. Putri ME. Dampak Penerapan Keselamatan Pasien Terhadap Kepuasan Kerja Perawat Pelaksana. *J Psikol Jambi*. 2018;3(1):1-1. Accessed September 13, 2020. <https://online-journal.unja.ac.id/jpj/article/view/6363>
9. Kementerian Kesehatan RI. Profile Kesehatan Indonesia Tahun 2017. *Minist Heal Indones*. Published online 2018:107-108. doi:10.1002/qj
10. Siti Fatimah F, Sulistiarini L, Rumah Sakit A, et al. *Gambaran Pelaksanaan Identifikasi Pasien Sebelum Melakukan Tindakan Keperawatan Di RSUD Wates Description of The Implementation Of Patient Identification Before Taking Nursing Action In RSUD Wates*. Vol 1.; 2018.
11. Ulva F. Gambaran Komunikasi Efektif Dalam Penerapan Keselamatan Pasien. *J Pembang Nagari*. 2017;2(1):95. doi:10.30559/jpn.v2i1.17
12. Aprisila AS. Gambaran penerapan independent double-check dalam pemberian obat high-alert di intensive care unit rumah sakit siloam sriwijaya Palembang. Published online January 2018. <http://repository.uph.edu/4048/>
13. Catur K, Candrawati E, Adi W RC. Hubungan Pengetahuan Perawat Tentang Keselamatan Pasien pada Pencegahan Risiko Jatuh Dengan Pelaksanaan SOP Pencegahan Risiko Jatuh di Ruang Rawat Inap Dewasa RS. Panti Waluya Malang. *Nurs News J Ilm Keperawatan*. 2018;3(3). <https://publikasi.unitri.ac.id/index.php/fikes/article/view/1389>
14. Oktaviana C, Aryoko A, Fakultas L, et al. The Correlation Between Nurse Caring With Patient Fall Prevention In Patient Ward. *eprints.ukmc.ac.id*. Published online 2019. <http://eprints.ukmc.ac.id/3733/>
15. Huang CH, Wu HH, Lee YC, Van Nieuwenhuyse I, Lin MC, Wu CF. Patient safety in work environments: Perceptions of pediatric healthcare providers in Taiwan. *J Pediatr Nurs*. 2020;53:6-13. doi:10.1016/j.pedn.2020.03.005
16. Choi JS, Kim KM. Effects of nursing organizational culture and job stress on Korean infection control nurses' turnover intention. *Am J Infect Control*. Published online April 2020. doi:10.1016/j.ajic.2020.04.002
17. Park Y-M, Kim SY. Impacts of Job Stress and Cognitive Failure on Patient Safety Incidents among Hospital Nurses. *Saf Health Work*. 2013;4(4):210-215. doi:10.1016/j.shaw.2013.10.003
18. Kim KJ, Yoo MS, Seo EJ. Exploring the Influence of Nursing Work Environment and Patient Safety Culture on Missed Nursing Care in Korea. *Asian Nurs Res (Korean Soc Nurs Sci)*. 2018;12(2):121-126. doi:10.1016/j.anr.2018.04.003