Research Article

Decision-Making Competence and Critical Thinking Ability among Triage Nurses in a Selected Hospital in Batangas, Philippines

Rejie Lunar Comia[1], Lualhati Maxima M. Floranda[2], Cherry Ann Garcia Durante[2]*

[1]Graduate School – Nursing, Emilio Aguinaldo College – Manila, Lipa City, Batangas Philippines 4217
[2]Graduate School – Nursing, Emilio Aguinaldo College – Manila, Manila, Philippines, 1000

ABSTRACT

Overcrowding and long waiting times remain perennial issues in many emergency departments globally, resulting in unsafe and inefficient care. To facilitate the treatment of patients that arrive in the Emergency Department a triage process is often implemented. Triage enables the Emergency Department staff to prioritize patient care so that patients requiring more immediate care are seen first. This study described the competence and critical thinking ability of triage nurses in a selected hospital in Lipa City, Batangas, Philippines. The quantitative descriptive correlational research design was used in this study. Data was gathered through a self-administered questionnaire that adopted Yoon Critical Thinking Disposition and Triage Decision Making Inventory by Cone (2000). Results showed that decision-making competency is significantly different among different age groups (F=40.93, p<0.0001). Respondents' critical thinking ability based on objectivity, healthy scepticism, systematicity and intellectual fairness, intellectual curiosity, self-confidence and prudence was at moderate level, with composite means of 3.23, 3.43, 3.22, 3.37, 3.33, 3.28, and 3.27, respectively. Based on the results of the study, participants had a moderate level of critical thinking ability while doing triage. Also, over-all decision-making ability significantly increased with age and years of experience. Furthermore, objectivity, self-confidence, prudence and over-all critical thinking ability are significantly associated with age. Moreover, the triage nurses' decision-making skills can be greatly influenced by their critical thinking ability.

Keywords: *Critical thinking, Decision-making ability, Triage nurse*

Introduction

Triage decision-making is an important skill for nurses who provide direct patient care in both acute care and community settings. Triage nurses need to determine and judge problems, make decisions, and set up

appropriate strategies toward patients in a limited time (Chang et al, 2011, as cited by Huber, 2006). The triage nurse's decision about the acuity of care for each patient's initial prioritization of care and his or her room replacement within the emergency department has multiple consequences (Stone & Foley, 2019), thus formal training in emergency triage is important for nurses and other health care workers performing triage to avoid errors in patient care. Studies have shown that 18.7% of patients who enter the ED are potentially at risk for a missed diagnosis. These high-risk patients are prone to sudden changes in their conditions and delays in treatment (Li Rui, 2014). Mis-triage is a problem among nurses of all experience levels and can lead to dangerous delays in care (Stone & Foley, 2019). Shortage in nursing staff may lead to assigning triage duties to nurses who lack the knowledge, experience, and training in triage. Studies have shown that patients safety errors can be directly attributed to lack of critical thinking ability of the nursing staff (Yang, 2019).

Critical thinking is a method of logical thinking, a thought process in which people generate ideas and judge and evaluate the ideas. The American Philosophical Association (1990) defined critical thinking as "purposeful, self-regulatory judgment that uses cognitive tools such as interpretation, analysis, evaluation, inference, and explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which judgment is based." In nursing, it is the use of self-regulatory judgments to identify patient's problems and provide patient care. It is considered as an essential component of nurses' professional judgment and clinical decision-making (Lee, et al, 2017). It refers to the careful and precise thinking used to resolve a problem (McPeck, 2016). Critical thinking influences nurses' decision-making (Hwang, et al, 2019). Presumably, nurses with higher levels of critical thinking dispositions and skills should be able to make better clinical decisions.

This study determined the relationship between decision-making competence and critical thinking ability as assessed by the triage nurse respondents in the emergency department of a hospital in Lipa City.

Methods
This study utilized the quantitative descriptive correlational research design. Data was gathered in the Divine Love General Hospital Inc. in Lipa City, Batangas, Philippines.

Sample Population
Thirty (30) respondents were enumerated who fit the inclusion criteria: (1) employed as a staff nurse, aged 21-54 with any length of experience in clinical practice in a hospital in Lipa City, (2) currently assigned to work in the emergency department and performing triage, and (3) willing to participate in the research study.

Research Instrument
The study used a three-part self-administered questionnaire with a Cronbach alpha score of 0.84 - 0.92. The first part of the survey form was the identification of the socio-demographic data of the respondent. The second part of the survey utilized Yoon Critical Thinking Disposition, developed by Yoon in 2004, to measure the participants' critical thinking competence. The third part of the questionnaire utilized the Triage Decision-Making Inventory (TDMI) which was developed by Kelly J. Cone in 2000, to measure the participants' decision-making ability.

The YCTD is a Likert-type questionnaire that consists of 27 items. The instruments have seven subscales, namely: (1) objectivity, (2) prudence, (3) systematicity, (4) intellectual eagerness/curiosity, (5) Intellectual fairness, (6) healthy skepticism, and (7) critical thinking self-confidence. The YCTD was found to have strong reliability in previous studies and reported a Cronbach alpha of 0.84. The emergency room nurses were asked to answer the 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). Interpretation of the results will be as follows:

3.51 – 4.00	Very Good
2.51 – 3.50	Good
1.51 – 2.50	Poor
1.00 – 1.50	Very Poor

The TDMI is a 27-item Likert-type questionnaire. The items developed in the instrument were based on experience, intuition, assessment skills, critical thinking skills, and communication which Cone identified as characteristic of experienced triage nurses. The TDMI has three factors: (1) cognitive abilities, 14 items, (2) experience, 6 items, (3) intuition, 7 items. Internal consistency for the factors of the Triage Decision-Making Inventory measured a Cronbach alpha with a range of 0.858-0.922. The staff nurses were asked to answer each question on a rating of possible responses from 1 (always) to 4 (never). Interpretation of results is as follows:

3.51 – 4.00	Very Good
2.51 – 3.50	God
1.51 – 2.50	Poor
1.00 – 1.50	Very Poor

Results and Discussion
Demographic Profile of the Respondents

Table 1 presents the frequency distribution of the socio-demographic characteristics of the nurse respondents working in the emergency department of a hospital in Lipa City in terms of age, gender, length of experience in the emergency department, triage training program attended, and work experience in other nursing units.

Table 1. Frequency Distribution of Nurse Respondents' Profile

Profile	Frequency	Percentage
Age		
21-25 years old	4	13.3%
26-30 years old	8	26.7%
31 years old & above	18	60.0%
Total	**30**	**100%**
Gender		
Male	5	16.7%
Female	25	83.3%
Total	**30**	**100%**
Length of Experience in the Emergency Dept.		
1-3 years	18	60.0%
4-6 years	7	23.3%
7-9 years	3	10.0%
10 years & above	2	6.7%
Total	**30**	**100%**
Triage Training Program Attended		
BLS/ACLS	27	90%
BLS/ACLS/CCNAPI	3	10%
Total	**30**	**100%**
Work Experience in Other Nursing Units		
MS Ward	18	60.0%
ICU	3	10.0%
Operating Room	8	26.7%
Other Nursing Units	1	3.3%
Total	**30**	**100%**

Majority of the participants were 31 years old and above, female, and have been assigned in the emergency department. All participants underwent a BLS/ACLS training, while 10% also attended the CCNAPI program.

Decision-Making Competence and Critical Thinking Ability

Based on the results of the study, triage nurse respondents are highly competent in their decision-making in terms of experience,

while moderately competent in terms of cognitive abilities and intuition, as shown in Table 2. This could mean that nurses have been exposed to different situations in the emergency works which somehow help them in making decisions thereby improve their decision-making skills. In 2000, Kelly J. Cone developed an instrument to evaluate the triage decision-making skills of emergency room nurses. Data from interviews with emergency room nurses were analysed to generate items for the instrument. Cone found that triage decision-making is based on critical thinking, cognitive skills, experience, and intuition. Critical thinking involves assessing the ability to get the information needed to make decisions, either through evaluation or communication. Cognitive characteristics relate to prioritization, organization, judgment, and knowledge. The factor of experience evaluates the skill necessary to make decisions and the experience that allows the nurse to ask appropriate questions in a triage setting. The level of triage quality is closely related to the experience, professional knowledge level, and comprehensive ability of the triage nurses. Even with the most advanced triage system, nursing intuition and decision-making are required, which leads to variability in triage processes and outcomes (Domagala & Vets, 2015).

Table 2. Summary of the Nurse Respondents' Self-Assessment on their Decision-Making Competence

Decision-Making Competence Indicators	Mean	SD	QD	Int.	Rank
1. Cognitive Abilities	3.50	0.31	A	MC	2
2. Experience	3.57	0.66	SA	HC	1
3. Intuition	3.31	0.28	A	MC	3
Over-all Mean	**3.46**	**0.32**	**A**	**MC**	

Legend: 3.51-4.00 Strongly Agree (SA)/Highly Competent (HC); 2.51-3.50 Agree(A)/Moderately Competent (MC);1.51-2.50 Disagree(D)/Less Competent (LC); 1.00-1.1.50 Strongly Disagree (SD)/Not Competent (NC); QD – Qualitative Description; Int. - Interpretation

Due to the particularity of triage work, there is no basic procedure for clinical care or rescue of patients. Instead, it mainly relies on the triage nurses' subjective interpretation of the patient's presenting problem, which includes language, body movements, behavioural patterns, and clinical manifestations, in order to make the fastest and most accurate judgment (Feng, 2019). It is essential that the triage nurse uses decision-making and critical thinking to determine who has life-threatening conditions and needs immediate attention (Johnson, Punches, & Smith, 2021). Moreover, there was a significant difference in the respondents' decision-making ability based on their age as shown in Table 3.

Table 3. Difference in Decision-Making Competencies Based on Age among the Respondents

Decision-Making Competencies	Age	Mean	SD	Computed F-value	Sig
1. Cognitive Abilities	21-25 y/o	2.82	0.36	40.93	0.00
	26-30 y/o	3.59	0.12		
	31 y/o & above	3.61	0.11		
2. Experience	21-25 y/o	2.67	0.67	34.99	0.00
	26-30 y/o	3.69	0.06		
	31 y/o & above	3.72	0.08		
3. Intuition	21-25 y/o	2.82	0.50	14.30	0.00
	26-30 y/o	3.43	0.15		
	31 y/o & above	3.37	0.10		
Over-all	21-25 y/o	2.77	0.51	35.94	0.00
	26-30 y/o	3.57	0.06		
	31 y/o & above	3.57	0.04		

As shown in Table 4, nurse respondents have shown the highest level of critical thinking skills on healthy skepticism which obtained the highest self-assessment of 3.43. The second highest level is on intellectual fairness, followed by intellectual eagerness/curiosity, self-confidence, prudence, and objectivity with the mean values of 3.37, 3.33, 3.28, 3.27, and 3.23 respectively all interpreted as to moderate level.

Table 4. Summary of the Respondents' Self-Assessment of their Critical Thinking Ability

	Critical Thinking Dimensions	Mean	SD	QD	Int.	Rank
1.	Objectivity	3.23	0.26	A	ML	6
2.	Healthy Skepticism	3.43	0.30	A	ML	1
3.	Systematicity	3.22	0.31	A	ML	7
4.	Intellectual Fairness	3.37	0.30	A	ML	2
5.	Intellectual Eagerness/ Curiosity	3.33	0.30	A	ML	3
6.	Self-Confidence	3.28	0.25	A	ML	4
7.	Prudence	3.27	0.30	A	ML	5
	Over-all Mean	**3.30**	**0.13**	**A**	**ML**	

Legend: 3.51-4.00 Strongly Agree (SA)/Highly Competent (HC); 2.51-3.50 Agree(A)/Moderately Competent (MC);1.51-2.50 Disagree(D)/Less Competent (LC); 1.00-1.1.50 Strongly Disagree (SD)/Not Competent (NC); QD – Qualitative Description; Int. - Interpretation

On the other hand, systematicity gained the lowest assessment of 3.22 though also interpreted as to moderate level. An over-all mean value of 3.30 reveals that triage nurse respondents possess a moderate level of critical thinking ability based on their own assessment. Critical thinking, according to Lin, et al (2021), is a method of logical thinking, a thought process in which people generate ideas and judge and evaluate ideas. Studies have shown that critical thinking can break traditional nursing concepts and cultivate new nursing talents.

Results further showed that there was a significant relationship between the nurse respondents' decision-making competence in terms of cognitive abilities with their critical thinking ability in terms of objectivity, systematicity, self-confidence, and prudence with computed r values of 0.69, 0.37, 0.75 and 0.74 and significance values of 0.00, 0.04, 0.00 and 0.00 respectively as depicted in Table 5. The result shows that cognitive abilities of the nurses are positively correlated to a moderate degree with critical thinking ability in terms of systematicity, and to a high degree with objectivity, self-confidence, and prudence. This could mean that the critical thinking skills of triage nurses in terms of objectivity, systematicity, self-confidence and prudence give impact to their decision-making ability particularly on their cognitive abilities.

The result further shows that there was a significant relationship between the decision-making competence of nurses in terms of experience, and their critical thinking ability in terms of objectivity, self-confidence, and prudence to a high degree with computed r values of 0.71, 0.70, and 0.87 with significance values of 0.00 respectively. However, no significant relationship was found in terms of healthy skepticism, systematicity, intellectual fairness, and intellectual eagerness/curiosity. The result indicates that the decision-making ability of triage nurses in terms experience can be greatly affected by their critical thinking ability particularly their objectivity, self-confidence and prudence.

Table 5. Decision-Making Competence and Critical Thinking Ability of the Nurse Respondents

Decision-Making Competence Indicators	Critical Thinking Dimensions	Computed r	Sig
1. Cognitive Abilities	Objectivity	0.69	0.00
	Healthy Skepticism	0.32	0.09
	Systematicity	0.37	0.04
	Intellectual Fairness	0.04	0.83
	Intellectual Eagerness	-0.23	0.24
	Self-Confidence	0.75	0.00
	Prudence	0.74	0.00
	Average	**0.81**	**0.00**
2. Experience	Objectivity	0.71	0.00
	Healthy Skepticism	0.19	0.32
	Systematicity	0.25	0.18
	Intellectual Fairness	0.16	0.41
	Intellectual Eagerness	-0.33	0.07
	Self-Confidence	0.70	0.00
	Prudence	0.87	0.00
	Average	**0.79**	**0.00**
3. Intuition	Objectivity	0.64	0.00
	Healthy Skepticism	0.20	0.29
	Systematicity	0.19	0.32
	Intellectual Fairness	0.04	0.83
	Intellectual Eagerness	-0.26	0.16
	Self-Confidence	0.66	0.00
	Prudence	0.77	0.00
	Average	**0.69**	**0.00**
Over-all Decision-Making Competency	**Over-all Critical Thinking Ability**	**0.80**	**0.00**

Likewise, there was a significant relationship between the decision-making competence of nurses in terms of their intuition and their critical thinking ability in terms of their objectivity, self-confidence, and prudence to a high degree with computed r values of 0.64, 0.66, and 0.77 with significance values of 0.00 respectively. This goes to show that triage nurses' decision-making competence can be greatly affected by their critical thinking ability particularly their objectivity, self-confidence, and prudence.

Generally, the result reveals that the overall decision-making competence of the triage nurses can be greatly influenced by their overall critical thinking ability. In Malaysia, Ludin (2017) conducted a cross-sectional survey that aimed to determine whether critical care nurses' critical thinking is related to their decision-making skills. This study utilized the self-administered questionnaires: Short Form – Critical Thinking Disposition Inventory – Chinese Version and the Clinical Decision-Making Nursing Scale. The result of this study showed a strong and positive overall relationship between the respondents' critical thinking and clinical decision-making. The study also showed that older critical care nurses and those with more clinical experience scored higher in critical thinking than younger nurses. In contrast to this study, a Turkish study conducted by Yurdaner (2016) among critical care nurses found that the nurses had a lower level of disposition toward critical thinking and a low level of decision-making. A reason for this result may be because nursing caring for critical and intensive care patients regardless of the specific area or unit, they were in must expect

unpredictable and rapid changes in the patient's condition (Kvandea, 2015, as cited by Ludin, 2017).

Conclusion

Based on the findings, the following have been concluded triage nurses strongly believed that they have acquired skills and knowledge through their experiences in the emergency department which helped them become highly competent decision makers considering experience as a dimension of decision-making competence. But generally, triage nurses have seen themselves to be moderately competent in their decision-making.

It can be said that as the nurses get older, they are becoming more competent in making decisions. On the other hand, nurses have relatively the same perceptions of their decision-making ability regardless of their gender, the triage training program they have attended, how long they have been working in the emergency department, and their work experience in other nursing units.

Furthermore, triage nurses have seen themselves to have the highest level of critical thinking skills on healthy skepticism which could mean that they think critically as they engage with new ideas and perspectives, while systematicity tend to be the least perceived critical thinking ability of the nurses.

As nurses get older, the higher level of critical thinking skills they could have in general. On the contrary, younger nurses tend to have higher level of critical thinking skills on intellectual eagerness/curiosity than the older ones.

Moreover, the triage nurses' decision-making skills can be greatly influenced by their critical thinking ability.

Acknowledgement

References

Al Hasani, A., & AL-Rawajfah, O. (2019). Effectiveness of implementing emergency severity index triage system in a selected primary health care center in Oman: a quasi-experimental study. Journal of Emergency Nursing.

Aloyce, R. Leshabari, S., & Brysiewicz, P. (2014). Assessment of knowledge and skills of triage among nurses working in emergency centres in Dar es Salaam Tanzania. African Journal of Emergency Medicine, 14-18.

Ausserhofer, D., Zaboli, A., Pfeifer, N., Solazzo, P., Magnarelli, G., Marsoner, T., . . . Turcato, G. (2021). Errors in nurse-led triage: an observational study. International Journal of Nursing Studies.

Chen Qiuju, Fang, Huang Ping, et al. (2015). The design and application of emergency triage information system. Chinese Journal of Nursing. 963-966

Cone, K. J., & Murray, R. (2002). Characteristics, insights decision making, and preparation of ED triage nurses. Journal of Emergency Nursing, 28: 401-6. Creswell, J. Educational Research. 2nd Edition. Pearson Prentice Hall. New Jersey. p. 237

Deng Meirong, (2006). Development of critical thinking ability of clinical nurses, Journal of Jinggangshan Medical College, 2016, Volume 13, Issue 6.

Domagala, S. E., & Vets, J. (2015). Emergency nursing triage: keeping it safe. Journal of Emergency Nursing, 313-316.

Duan Yanping, Hu Li, Ding Yinhua, (2018), Research on the Formation and Application Effect of Critical Thinking in Emergency Nursing, World Latest Medicine Information (Electronic Version), 2018, Volume 18, Issue 82.

Durand, A.-C., Gentile, S., Devictor, B., Palazzolo, S., Vignally, P., Gerbaux, P., & Sambuc, R. (2011). ED patients: how nonurgent are they? Systematic review of the emergency medicine literature. American Journal of Emergency Medicine, 333-345.

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. American Journal of Theoretical and Applied Statistics, 5(1): 1-4.

Fan Ying, Yuan Xiuqun. (2015). Application and effect evaluation of emergency pre-

examination and triage system. Chinese Nursing Management, 2015, Issue 01.

Fong, R., Glen, W., Jamil, A., Tam, W., & Kowitlawakul, Y. (2018). Comparison of the emergency severity index versus the patient acuity category scale in an emergency setting. International Emergency Nursing, 13-18.

French, S., Gordon-Strachan, G., Kerr, K., Bisasor-McKenzie, J., Innis, L., & Tanabe, P. (2021). Assessment of interrater reliability of emergency severity index after implementation in emergency departments in Jamaica using a learning collaborative approach. Journal of Emergency Nursing, 58-65.

Ghazali, S. A., Abdullah, K. L., Foong, M. M., Ahmad, R., & Hussin, E. D. (2020). The impact of adult trauma triage training on decision-making skills and accuracy of triage decision at emergency departments in Malaysia: a randomized control trial. International Emergency Nursing, 51.

Göransson, k. E., Ehrenberg, A., Marklund, B., & Ehnfors, M. (2006). Emergency department triage: is there a link between nurses' personal characteristics and accuracy in triage decisions? Accident and Emergency Nursing, 51.

Guo, Z., Jin, J., Chen, S., Yang, M., Wang, Y., & Sa, W. (2020). Reliability and validity of the four-level Chinese emergency triage scale in mainland China: a multicenter assessment. International Journal of Nursing Studies.

Hammad, K., Peng, L., Anikeeva, O., Arbon P., Du, H., & Li, Y. (2017). Emergency nurses' knowledge and experience with the triage process in Hunan Province, China. International Emergency Nursing, 25-29.

Johnson, K. D., Punches, B. E., & Smith, C. R., (2021). Perceptions of the essential components of triage: a qualitative analysis. Journal of Emergency Nursing, 192-197.

Liu Wei, Huang Qingbo, Ding Suyun (2016). Construction of Quality Evaluation Standards for Pre-examination and Triage System in Emergency Department. Journal of Nursing, 2016, Volume 31, Issue 13.

Martínez-Segura, E., Lleixà-Fortuño, M., Salcadó-Uscah, T., Solà-Miravete, E., Adell-Lleixà, M., Chanovas-Borrás, M. R., . . . Mora-López, G. (2017). Competence of triage nurses in hospital emergency departments. Emergencias, 29:173-177.

Mistry, B., De Ramirez, S. S., Kelen, G., Schmitz, P. S., Balhara, K. S., Levin, S., . . . Hinson, J. S. (2018). Accuracy and reliability of emergency department triage using the emergency severity index: an international multicenter assessment. Annals of Emergency Medicine, 581-587.

Ng, C. J., Hsu, K. H., Kuan, J. T., Chiu, T. F., Chen, W. K., Lin, H., Chen, J. C. (2010). Comparison between Canadian triage and acuity scale and Taiwan triage system in emergency departments. Journal of the Formosan Medical Association, 828-837.

Parenti, N., Reggiani, M. L., Iannone, P., Percudani, D., & Dowding, D. (2014). A systematic review on the validity and reliability of an emergency department triage scale, the Manchester Triage System. International Journal of Nursing Studies, 1062-1069.

Patel, V. L., Gutnik, L. A., Karlin D. R., & Pusic, M. (2008). Calibrating urgency: triage decision-making in a pediatric emergency department. Advances in Health Sciences Education, 503-520.

Rahmati, H., Azmoon, M., Meibodi, M. K., & Zare, N. (2013). Effects of triage education on knowledge, practice, and qualitative index of emergency room staff: a quasi-interventional study. Bulletin of Emergency and Trauma, 69-75.

Reay, G., Smith-MacDonald, L., Then, K. L., Hall, M., & Rankin, J. A. (2020). Triage emergency nurse decision-making: Incidental findings from a focus group study. International Emergency Nursing.

Reblora, J., Lopez, V., & Goh, Y.-S. (2020). Experiences of nurses working in a triage area: an integrative review. Australian Critical Care, 567-575.

Rehman, S. A., & Ali, P. A. (2016). A review of factors affecting patient satisfaction with nurse-led triage in emergency departments. International Emergency Nursing, 38-44.

Ren Huicai, Wang Zhixian, Wang Li. (2018). The status quo of the triage emergency department and the research progress of its improvement measures. Nursing Practice and Research, 2018, Volume 15, Issue 11.

Smith, A. (2013). Using a theory to understand triage decision-making. International Emergency Nursing, 113-117.

Smith, A., & Cone, K. J. (2010). Triage decision-making skills, a necessity for all nurses. Journal for Nurses in Staff Development, E14-E19.

Stone, E. L., & Foley, A. L. (2019). Clinical decision support systems in the emergency department: opportunities to improve triage accuracy. Journal of Emergency Medicine, 220-222.

Tian Bing. (2019). The urgency of cultivating nurses' critical thinking in nursing education in my country. Course Education Research, Issue 11, 2019.

Wang Mingping. (2019). Investigation and Research on the Diagnosis Ability of Emergency Nurses. Electronic Journal of Clinical Medicine Literature, Issues 46, 2019

Wolf, L. A., Delao, A. M., Perhats, C., Moon, M. D., & Zavotsky, K. E. (2017). Triaging the department, not the patien: United States emergency nurses' experience of the triage process. Journal of Emergency Nursing.

Xi Shuhua, Li Rui. (2016). Establishment and current situation of domestic emergency pre-examination and triage standards. Shanghai Nursing, 2016, Issues 02.

Zhao Yuanyuan, Wang Yuqing, Wang Junyan, Chen Jing, Higher Education. (2017). Study on the status quo and related factors of pre-inspection and triage decision-making ability of emergency triage nurses in tertiary first-class hospitals, Journal of Nursing Administration, 2017, Issues 11