

## RESEARCH ARTICLE

## The effect of the roles of clinical educators on patient safety competencies in nursing profession students

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### Abstract

**Objective:** To assess the correlation between clinical educator roles and patient safety competence in nursing students.

**Method:** The cross-sectional study was conducted from December 21, 2021, to June 7, 2022, at the Sultan Agung Teaching Hospital, Semarang City, Central Java, Indonesia, and comprised nursing students in the clinical stage of their training. Data was collected using an observation sheet, while the role of clinical educator was explored using a structured questionnaire. Data was analysed using SPSS 21.

**Result:** There were 232 nursing students. Of these, 203(87.5%) were females. The age range of the students included was between 21 and 25 years with an average of 23.14±0.543 years. All the students were hospital oriented and had received training on patient safety measures. Patient safety competencies were related to the roles of resource person ( $p<0.038$ ), role model ( $p<0.004$ ), evaluator ( $p<0.020$ ), facilitator ( $p<0.006$ ), manager ( $p<0.013$ ) and supporter ( $p<0.007$ ). The role of the manager had the most significant effect on patient safety competencies ( $p<0.001$ ).

**Conclusions:** Patient safety competencies were significantly related to the roles of resource person, role model, evaluator, facilitator, manager and supporter, but the role of the manager had the strongest correlation with patient safety competencies.

**Keywords:** Students, Nursing, Patient Safety, Surveys, Questionnaires, Hospitals, Teaching, Evaluator, Facilitator, Supporter (JPMA 74: S-48 [Suppl. 5]; 2024) DOI: <https://doi.org/10.47391/JPMA.Ind-RINC-13>

### Introduction

The need to educate nursing students to become future nurses with patient safety competencies is essential.<sup>1</sup> This is in accordance with the core goal of nursing education, which is to equip nursing professionals with an adequate level of competence to ensure patient safety and quality care.<sup>2</sup> Patient safety education is implemented by incorporating patient safety concepts and principles into classrooms and clinical areas.<sup>1</sup> In the clinical area, a clinical educator is indispensable in teaching patient safety to nursing students more comprehensively and systematically.<sup>3</sup>

Clinical education on patient safety highly depends on clinical educator roles.<sup>4</sup> The development of the level of knowledge, skills and attitudes about patient safety by nursing students is influenced by clinical educators.<sup>5</sup> Clinical educators will be able to help students gain knowledge and skills, and achieve learning goals.<sup>6</sup> Qualified clinical educators in teaching patient safety have been identified as supporting factors in patient safety education.<sup>7</sup>

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Several factors, including curriculum, number of semester credit units, learning strategies<sup>8</sup> as clinical educator roles,<sup>5</sup> influence the achievement of patient safety competencies in students.

The current study was planned to assess the correlation between clinical educator roles and patient safety competence in nursing students.

### Subjects and Methods

The descriptive, cross-sectional study was conducted from December 21, 2021, to June 7, 2022, at the Sultan Agung Teaching Hospital, Semarang City, Central Java, Indonesia. The

After approval from the institutional ethics review committee the sample was raised using purposive sampling technique. Those included were nursing students at the clinical stage of their training. Those who failed the clinical practice stage, and pre-registered nursing students who had worked in hospitals were excluded.

After taking written informed consent, data was collected regarding the clinical educators' role using a modified version of the Reeve's instrument.<sup>9</sup> It was modified by the researchers to identify the roles of clinical instructors in the implementation of patient safety. The instrument is valid and reliable, with a Cronbach's alpha value of 0.943 and with a good reliability coefficient value of >0.8.

The instrument used to measure patient safety competencies was adapted from Sari<sup>10</sup> that has 28 items and 6 indicators of patient safety goals; patient identification, effective communication, safety of using drugs with high vigilance, correctness of surgical procedures, sites and patients, prevention of infection risks, and prevention of patient falls.

All instruments were tested for validity and reliability and were found to be valid and reliable. All domains of the clinical educators' role questionnaire were valid: resource person ( $p=0.446-0.703$ ), role model ( $p=0.389-0.663$ ), evaluator ( $p=0.413-0.803$ ), facilitator ( $p=0.686-0.839$ ), manager ( $p=0.787-0.868$ ), and supporter ( $p=0.403-0.790$ ). All indicators of the patient safety competencies questionnaire were also valid: patient identification ( $p=0.424-0.751$ ), effective communication ( $p=0.814-0.814$ ), drug safety ( $p=0.630-0.630$ ), correctness of surgical procedures, sites and patients ( $p=0.539-0.898$ ), prevention of infection risks ( $p=0.495-0.620$ ), and prevention of patient falls ( $p=0.563-0.916$ ).

The dependent and independent variable data was collected using an observation sheet and a structured questionnaire, respectively. Data was analysed using SPSS 21. Bivariate analysis was done using chi-square test, and multivariate analysis was carried out using logistic regression.  $P<0.05$  was considered significant.

## Results

There were 232 nursing students. Of these, 203(87.5%) were females. The age range of the students included was between 21 and 25 years with a mean of  $23.14\pm 0.543$  years. All the students were hospital oriented and had received training on patient safety measures.

The data on frequency distribution of student characteristics is shown in Table 1. Patient safety competencies were related to the roles of resource person

**Table-1:** Frequency Distribution of Nursing Student Characteristics at University Hospital in Semarang City (n = 125).

Variable	n (%)
<b>Gender</b>	
Male	29 (12.5)
Female	203 (87.5)
<b>Age (years)</b>	
21-25	232 (100)
25-30	0 (0)
<b>Hospital Orientation</b>	
Yes	232 (100)
No	0 (0)
<b>Exposure Patient Safety</b>	
Received	125 (100)
Never Received	0 (0)

**Table-2:** Patient safety competencies related in relation to the role of educators among pre-licensure nursing students (n=232).

Variable	Achieved competencies [n (%)]		p-value	Odds ratio	95% CI
	High	Low			
Resource person	92 (71.3) 60 (58.3)	37 (28.7) 43 (41.7)	0.038	1.782	1.031-3.079
Role Model	89 (74.2) 63 (56.3)	31 (25.8) 49 (43.8)	0.004	2.233	1.284-3.884
Evaluator	63 (57.8) 89 (72.4)	46 (42.2) 34 (27.6)	0.020	0.523	0.302-0.905
Facilitator	84 (74.3) 68 (57.1)	29 (25.7) 51 (42.9)	0.006	2.172	1.245-3.791
Manager	69 (58.0) 83 (73.5)	50 (42.0) 30 (26.5)	0.013	0.499	0.287-0.868
Supporter	89 (73.6) 63 (56.8)	32 (26.4) 48 (43.2)	0.007	2.119	1.221-3.679

**Table-3:** Multivariate logistic regression analysis.

Variables	Coefficient	S.E.	Wald	df	p-value	OR	95% CI
X1 (Resource person)	0.677	0.318	4.527	1	0.033	1.967	1.055-3.669
X2 (Role Model)	0.969	0.938	1.068	1	0.301	2.637	0.419-16.573
X3 (Evaluator)	-1.028	0.334	9.458	1	0.002	0.358	0.186-0.689
X4 (Facilitator)	0.341	0.909	0.141	1	0.708	1.406	0.237-8.349
X5 (Manager)	-1.177	0.346	11.531	1	0.001	0.308	0.156-0.608
X6 (Supporter)	0.800	0.319	6.311	1	0.012	2.226	1.192-4.156
Constant	-1.568	0.812	3.728	1	0.054	0.208	

( $p<0.038$ ), role model ( $p<0.004$ ), evaluator ( $p<0.020$ ), facilitator ( $p<0.006$ ), manager ( $p<0.013$ ) and supporter ( $p<0.007$ ) (Table 2).

Variables with a score of  $p<0.25$  in bivariate analysis were included in logistic regression. The role of the manager had the most significant effect on patient safety competencies ( $p<0.001$ ) (Table 3).

## Discussion

The role of an excellent clinical supervisor determines the achievement of learning competencies, especially regarding patient safety.<sup>10</sup> The result of the current study indicated a correlation between patient safety competencies and the roles of resource person, role model, evaluator, facilitator, manager and supporter. Clinical educators has a role as a resource person.<sup>11</sup> This role is to act as a reference for students when they experience misunderstandings in clinical learning, including in learning about patient safety in the clinical area. Clinical educators are also role models. As a role model, clinical supervisors can improve the quality of student learning in the clinical area.<sup>12</sup>

Clinical supervisors also play a major role in evaluating the clinical practice performance of students.<sup>13</sup> The evaluation carried out can be used as a process to assess student progress in achieving goals, identify learning needs, and

offer strategies to improve student learning processes.<sup>11</sup> The role of a supervisor can provide constructive feedback on student performance in order to improve their clinical skills.<sup>14</sup> Furthermore, clinical educators also play roles as facilitators in patient safety learning.<sup>15</sup> The role of a facilitator is acted on by planning, implementing counselling, and being responsible for the students' learning objectives.<sup>12</sup>

Clinical supervisors also play a role in improving student learning processes through their support for students in special situations in the clinical learning process. There are several types of such support, like emotional support, support by giving awards and specific feedback that are real and immediate, and support in the form of tools, energy and other resources.<sup>16</sup> Clinical educators also play roles as managers in managing clinical education.<sup>9</sup> Furthermore, in patient safety education, clinical educators are managers who manage learning related to patient safety.<sup>17</sup>

## Conclusion

Patient safety competencies were significantly related to the roles of resource person, role model, evaluator, facilitator, manager and supporter, but the role of the manager had the strongest correlation with patient safety competencies.

**Limitation:** The current study has limitations as the sample size was not calculated which could have affected the power of the study.

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