Enferm Clin. 2019;29(S2):252–256

Enfermería Clínica

www.elsevier.es/enfermeriaclinica

Nurses' self-efficacy in Indonesia☆

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Received 13 November 2018; accepted 17 April 2019
Available online 24 June 2019

KEYWORDS
Nurse efficacy;
Action self-efficacy;
Coping self-efficacy

Abstract
Objective: The purpose of this study was to find out the overview of nurses' characteristics and self-efficacy based on nurse characteristics.
Method: This cross-sectional study used cluster sampling involved 12 hospitals in 6 provinces in Indonesia, followed by proportionate random sampling, and obtained 1323 nurses. Data collected by questionnaire.
Results: There were significant differences in self-efficacy of male and female nurses ($p = 0.009$). There were significant differences in self-efficacy of nurses in private hospitals and public hospitals ($p = 0.005$). The mean self-efficacy of nurses was 32.50 ± 4992 (81.25%), the composition value of action-related self-efficacy (82.38%) was higher than coping-related self-efficacy (80.15%).
Conclusions: Male nurses have higher self-efficacy than female. Nurses in private hospitals have higher self-efficacy than nurses in public hospitals. Nurses in Indonesia have good self-efficacy. Nevertheless, the nurse's belief in the ability to strive for achieving goals is not as big as the initial belief of the nurse in setting the goals.
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☆ Peer-review under responsibility of the scientific committee of the Second International Nursing Scholar Congress (INSC 2018) of Faculty of Nursing, Universitas Indonesia. Full-text and the content of it is under responsibility of authors of the article.

https://doi.org/10.1016/j.enfcli.2019.04.030
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Introduction

Health quality service requires staff self-efficacy in dealing with problems/various situations within the organization. The organizational analysis is not only related to tradition but also shared values and beliefs about the organization's ability to innovate and be productive, the efficacy of being productive is an important part of organizational culture.[1] Self-efficacy refers to the belief in one's ability to regulate and carry out the actions needed to manage the situation that will be faced.[2] Efficacy affects how a person thinks, feels, motivates himself, and acts. Self-efficacy shows the level of ones' ability to control themselves.[2] Self-efficacy is related to an individual's ability to cope with challenging and stressful events.[3]

Self-efficacy is important in nursing practices. The self-efficacy of nurses influences the attitudes and behaviour of nurses[4]; it is related to nurses' knowledge of the existing protocols and its actual implementation.[5] Self-efficacy is a mediator between knowledge and action and also influences the treatment selection taken by nurses.[5] Nurses' self-efficacy includes speaking or express when patient safety is in danger, by not engaging the silence culture when there are adverse effects related to patient safety.[6] The importance of nurses' self-efficacy in carrying out their duties and there has never been extensive research regarding the self-efficacy of nurses in various regions in Indonesia are the reasons for this research. This study aims to describe the self-efficacy of nurses in hospitals in various regions in Indonesia and to find out the relationship between the characteristics of nurses and self-efficacy.

This study examines two factors found in the general self-efficacy (GSE) scale instrument namely actions-related self-efficacy and coping-related self-efficacy.[7] Self-efficacy related to action describes the initial belief (*pre-intention*) while coping-related self-efficacy describes the beliefs shown (*post-intention*).[8] The discussion begins by describing the characteristics of nurses followed by describing self-efficacy based on the characteristics of nurses.

Method

Design, population, settings, and samples

The cross-sectional study involved 12 public and private hospitals in Indonesia in 6 provinces, namely Banten, Riau, Aceh, West Java, Yogyakarta, and Jakarta. This study used a cluster sampling technique to represent several regions in Indonesia and continued with proportionate random sampling to obtain 1323 nurses. Inclusion criteria are nurses who provide direct services to patients.

Data collection

The instrument used included the characteristics of respondents and General self-efficacy scale (GSES)[9] with the Likert scale of 4. GSE has been translated into Indonesian and has been tested for validity and reliability with Alpha (0.671).

Data analysis

Data were analyzed in two stages: (1) descriptive statistics included nurses' self-efficacy, age, length of work, gender, education, hospital status and (2) bivariate analysis between age and length of work with nurses' self-efficacy using *Pearson Product moment*, gender and hospital status with nurses' self-efficacy using *Independent t-test*, education with nurses' self-efficacy using *ANOVA*.

Ethical aspects

Research permits and Ethics review information has been obtained from the Dean and Ethics Committee of Faculty of Nursing, Universitas Indonesia. Other agreements have been obtained from the Director of the hospital, and written approval from the respondent. Anonymity, voluntary and confidentiality principles have been explained to respondents.

Results

Majority nurses were female (76.9%), and diploma of nursing (83.1%); most respondents work in public hospitals (96.6%); mean age of nurses 32.02 ± 7019 years; mean length of work of nurses was 8.75 ± 6.886 years; and the mean of self-efficacy of nurses was 32.50 ± 4992 (81.25%) (Table 1).

There was a significant difference in the mean of self-efficacy between male and female nurses ($p = 0.009$). There was no significant difference in the mean of self-efficacy of nurses based on education level ($p = 0.333$). There was a significant difference in the mean of self-efficacy among nurses in public and private hospitals ($p = 0.005$). There was no significant relationship between age and length of work with nurses' self-efficacy ($p = 0.492$; $p = 0.724$) (Table 2).

The composition value of the nurses' action-related self-efficacy (82.38%) was higher than the nurses' coping-related self-efficacy (80.15%) (Table 3).

Discussion

Most nurses were female, and there was a significant difference of mean self-efficacy between male and female nurses. The mean self-efficacy of male was higher than the female. Similar results found that there were significant differences in mean self-efficacy between male and female, male had higher self-efficacy than the female.[10] Male have more mature readiness in solving problems and finding solutions, as well as thoughts than female, this is evidenced according to the analysis conducted from the self-efficacy questionnaire in the statement ''I can find several solutions to overcome a problem faced to me'', male had a higher level of self-efficacy (*mean* = 3.41, SD = 0.572) for this item compared to female (*mean* = 2.90, SD = 0.889).[10] The differences of ability development and competence lead to the self-efficacy of the male is higher than female.[1]

The majority of nurse was a diploma of nursing, and there was no significant difference in the mean self-efficacy of nurses based on education levels. The level of education was not related to nurses' self-efficacy.[11,12] Bandura in 1997

Table 1 Descriptive statistics of nurses ($n = 1323$).

Measurement	n	%
Gender		
Male	306	23.1
Female	1017	76.9
Education		
High School of Nursing	15	1.1
Diploma of Nursing	1099	83.1
Ners (Bachelor of Nursing)	207	15.6
Master of Nursing	2	0.2
Hospital status		
Public	1278	96.6
Private	45	3.4

	n	Mean (%)	SD	Min.	Max.
Age	1323	32.02	7.109	21	58
Length of work		8.75	6.886	0	36
Self-efficacy of nurse		32.50 (81.25)	4.992	10	40

Table 2 Nurse characteristics and self-efficacy of nurses ($n = 1323$).

Independent variables	Dependent variables	p	Mean (%)	SD
Gender	Self-efficacy of	0.009		
Male	nurses		33.16 (82.9)	5.097
Female			32.31 (80.77)	4.946
Education		0.333		
High School of Nursing			30.60 (81.5)	3.906
Diploma of Nursing			32.55 (81.37)	4.004
Ners (Bachelor of Nursing)			32.29 (80.72)	4.948
Master of Nursing			26.50 (66.25)	10.948
Hospital status		0.005		
Public			32.44 (81.1)	5.013
Private			34.24 (85.6)	4.046
		p	r	
Age		0492	−0.019	
Length of work		0724	−0.010	

stated that individuals who have a higher level of education usually have higher self-efficacy because they learn more through formal education so that they get more opportunities to learn to cope the problems.[1] The difference between the results of the study and literature review can be caused by the poor allocation of nurses' assignments, for example there is an equal division of tasks between Ners and Master of Nursing backgrounds, Ners, and Diploma nurses. This will reduce nurses' trust and self-esteem with Master of Nursing and Ners background, and impact on the low self-efficacy. Two nurses with a Master of Nursing background were still assigned as executive nurses because they just completed their study for 1 year and there was no vacancy in the higher position. Nurses with Ners background mostly occupied nurse executive positions, this is because the higher positions such as Primary Nurse or Team Leaders are occupied by senior nurses even though with a lower level of education.

The allocation of nurses' assignment which is not well-differentiated will reduce the nurses' self-efficacy. Gloudemans,[11] 2013 stated that the allocation of nurses assignment with diplomas and undergraduate degrees were not well-differentiated would have a negative impact on the confidence and self-esteem of the Bachelor degree nurse, this would lead to the self-efficacy decrease of nurses with Bachelor's degree than those with Diploma. The allocation of well-differentiated assignment and position will lead the nurses to feel valued according to their abilities and educational background, thus affecting their self-efficacy.

Most respondents work in public hospitals, and there are significant differences in the mean self-efficacy between nurses in public and private hospitals. The difference in mean self-efficacy due to the differences in shared values and belief systems between public hospitals and private hospitals. Public hospitals and private hospitals often have different values, visions or missions. Efficacy in

Table 3 Sub-variables values of nurses self-efficacy ($n = 1323$).

Composition of questionnaires	Mean value (%)	Rank
Efficacy of actions	16.48 (82.38%)	1
Efficacy of coping	16.03 (80.15%)	2

organizations relates to shared values and belief systems in organizations that establish formal and informal practices.[2] Culture in the organization influences self-efficacy by influencing the basic system of workplace organization. There are significant differences in self-efficacy based on individual perceptions of organizational culture.[13] Cultural differences in organizations between public hospitals and private hospitals can lead to differences in nurses' self-efficacy. In addition, this study has a much smaller number of respondents who work in private hospitals than public hospitals (45: 1278). The number of nurse respondents in private hospitals that are quite small and only in one hospital can influence the results of the study.

The mean of nurses aged 32.02 years, and there was no relationship between age and self-efficacy of nurses ($p = 0.492$). Age is not related to self-efficacy.[12,14] Different research results found that personal characteristics including age were related to nurses' self-efficacy, older nurses had higher self-efficacy in giving caring to patients.[15] Increasingly mature and productive age will influence a person's thinking and perception of their ability to perform tasks, and it will affect the self-efficacy. Age is one of the factors that affect a person's self-efficacy.[1] Age will effect on how to think and work, the more mature a person is, the more mature he or she will be in thinking and the better the performance.[16]

The results of the study showed that the average nurse, both young and old had a positive feeling towards their ability to complete the task and could find a solution to solve the problem. This can be seen from the value of the action self-efficacy statement of 82.38%, namely that the average nurse perceives his ability well in carrying out the tasks, solving problems and finding solutions to these problems. Self-efficacy of nurses is formed through the social learning process in the entire life so that nurses can have different experiences, whether it is a successful experience or a failure experience. Self-efficacy depends on how individuals face the successes and failures they experienced during work.[1] Successful experience will increase self-efficacy, on the contrary failure will reduce self-efficacy, but if failure experience is always faced by individuals by continuously trying to improve performance, self-efficacy will increase as well.[1] Increasing age leads to nurses to have more experience of failure or success.

The average length of work of nurses was 8.75 years, and there was no relationship between the nurses' length of work and self-efficacy. The results of different studies found that the length of work and the long-serving were related to the self-efficacy ($r = 0.277$; $p = 0.007$ and $r = 0.297$; $p = 0.003$).[11] Length of work is weak but significant with self-efficacy ($r = 0.29$; $p < 0.0001$). [17] The difference in the results obtained in this study can be due to the differences in the experience of the respondents. As you get older, the nurse's experience will also increase. Individual experience influences self-efficacy. The longer a person works, the self-efficacy increases, remains or decreases depending on one's response to the successes and failures they experience during work.[1] A person must have experienced severe challenges and solved it with persistence and hard work so that the self-efficacy can be formed.[1]

The mean score of nurses' self-efficacy was 32.50 (81.25%) of the maximum score that could be obtained, 40, this indicates that nurses in several hospitals in Indonesia have good self-efficacy. The higher the mean score the higher/positive the self-efficacy of the nurse.[9] Self-efficacy cannot be felt thoroughly, to get a sense of self-efficacy, complete the task successfully, get positive feedback about the task completed, or observe other people who complete the work successfully.[18]

The results of various previous studies have shown the importance of self-efficacy related to individual work. Self-efficacy is negatively correlated with burnout, emotional fatigue, depersonalization, work stress, and signs of stress.[19,20] Self-efficacy is positively correlated with achievement, job satisfaction, positive aspects of the individual.[12,19,20] Leadership-related research finds that self-efficacy is a predictor for supervisor/supervisor performance.[14] Self-efficacy is related to transformational leadership, trust in leaders,[20] and nurse performance.[17]

The high/positive Self-efficacy of nurses plays an important role for nurses in working because it will affect in improving the performance of nurses. Self-efficacy in nursing is the main factor to improve work skills[21] so that it can lead to job satisfaction. Nurses with strong self-efficacy were also identified as having higher compliance to nursing practice behaviour.[22] Self-efficacy of nurse's influences performance, compliance, care provided by nurses, and nurse job satisfaction.

Nurses who have high self-efficacy will have high confidence in their ability to successfully perform certain tasks. High self-efficacy increases the capacity of staff to collect relevant information, make the right decisions, and then take appropriate action.[23] Nurses' self-efficacy affects self-confidence, the ability of nurses providing care to patients, collaborating with patients and families, and formulating patient care plan goals.[24] Self-efficacy of nurses greatly determines the ability of nurses to improve the performance and quality of nursing care.

Research by Zhou (2015) gets two factors contained in the questionnaire of general self-efficacy (GSE) scale that measures the action-related self-efficacy and coping-related self-efficacy.[7] The difference between these two types of efficacy is needed because this allows an individual to be very confident in setting goals and taking initiatives (have high action efficacy) but not so confident in their ability to pursue goals (coping efficacy).[7] The nurses' coping-related self-efficacy sub-variables had a lower score (80.15%) than action-related self-efficacy (82.38%) which meant that nurses' beliefs in terms of their ability to achieve goals were not as large as the nurses' initial beliefs in setting goals. Nurses need to increase self-efficacy, even though the score was at 81.25%.

Male nurses have higher self-efficacy than female. Nurses in private hospitals have higher self-efficacy than in public hospitals. Nurses in Indonesia have good self-efficacy. Nonetheless, the nurse's belief in the ability to strive for goal achievement (coping efficacy) is not as large as the nurse's initial belief in setting goals (action efficacy).

The female nurses need to improve self-efficacy more. Good allocation of assignments for nurses according to the educational background is very necessary. Public hospitals need to strengthen the organizational culture to strengthen the basic system which in turn can improve nurses' self-efficacy. Nurses need to improve self-efficacy, especially coping-related self-efficacy.

Conflict of interests

The authors declare no conflict of interest.

Acknowledgement

This work is supported by Hibah PITTA 2018 funded by DPRM Universitas Indonesia No.1842/UN2.R3.1/HKP.05.00/2018.

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