

## Conference Paper

# Internal Factors Approach to Improve Hospital Nurse Performance in Developing Countries: Systematic Review

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## Abstract

The world is having serious challenge in variations in health problems and also the increasing of population. On the other hand, there is a critical problem of work-force shortage in the health system. These challenges will have greater impact on developing countries, who have large population and shortage of health work-force personnel. One of the strategies in handling the problem of the shortage of health workers is the performance improvement strategy of health personnel. The aim of the study is to find the best approaches to improve the performance of hospital nurses in developing countries. The author searched databases such as ProQuest, Springer, EBSCO Host, Science Direct, *Jurnal Kesmas*, and *Jurnal UGM* in accordance with the present research questions. The authors independently review the articles by applying inclusion and exclusion criteria. The articles included in the study discuss about the nurses in hospitals of developing countries and their performance outcome criteria. The study found 392 articles that were related to the research topic and 24 articles that were related in titles and abstracts. After the full-text assessment of the 24 articles, it was found that 4 (four) articles met the inclusion criteria. The included articles are aimed to measure impact of interventions to the job performance of nurses. The study found that the sample and the data analysis used in the articles are varied. The conclusion of the study by using systematic review indicated that the variable that affect the performance of nurses consist of external and internal factors. Developing countries can use the internal factors approach to improve the performance of the hospital nurses.

**Keywords:** nurse performance, internal factors approach, PICO, hospital

## 1. Introduction

Nowadays the world is experiencing health challenges, both in terms of variations in health problems as well as the size of the world population. To face of these challenges the role of health workers is needed, where we currently still experiencing the shortage of personnel, especially in poor countries and developing countries. One of

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Received: 17 October 2018

Accepted: 5 November 2018

Published: 5 December 2018

Publishing services provided by  
Knowledge E

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Selection and Peer-review under the responsibility of the 2nd ICHA Conference Committee.



the strategies in handling the problem of health workers shortage is by implementing the performance improvement strategy of health personnel [1].

Health workers in hospitals are generally dominated by nurses. In Indonesia for example nurses are the health workers with the largest number [2]. In the neighbouring countries Malaysia, the biggest health workers are also dominated by nurses [3]. Interventions for performance improvement programs in hospital will greatly affect the improvement of health services when applied to nurses. A study by Fritzen stated that the impact of changes on performance improvement on nurses will greatly affect the performance of the hospital [4].

Approaches to improving performance against nurses is very important and fundamental, especially for developing countries that still lack of nurse personnel and have large population with low revenue. The purpose of this research is to see the factors of nurse performance improvement in hospital especially in developing countries.

## 2. Methods

This research is a systematic review, data study is derived from the literature obtained through the online databases, in the form of research articles with topic about factors related to the improvement of nurse performance.

Population, Interventions, Comparators, Outcomes, Study (PICOS) used as a guide line of this study, with research questions what is the factors that influence the improvement of hospitals nurse performance in developing countries. Some articles related to nurse performance improvement factors in developed countries but was not included in the review, only article related to developing countries only.

Method in searching for literature in accordance with research questions, researchers have done the search of articles through the database ProQuest, Springer, EBSCO Host, Science Direct, *Jurnal Kesmas*, and *Jurnal UGM*. The time restriction for the search is between 2008 and 2016, using keyword 'nurse' and 'performance', 'nurse performance' and 'hospitals' OR 'public health' OR 'nurses' OR 'health facilities' OR 'physicians' OR 'health care' OR 'health services' OR 'medical research' OR 'nursing' OR 'decision-making' OR 'developing countries—Idcs' OR 'job satisfaction' OR 'workforce'.

Search result from several databases with different keywords has found 392 related articles from research questions about nurse performance factors in hospitals in developing countries. Then, review of titles and abstract is conducted. There are 24 articles which have titles and abstracts that meet the research criteria. The next step, the articles that meet the criteria are downloaded and the full texts are reviewed entirely.

The authors independently review the articles by applying inclusion and exclusion criteria. The included articles are articles about nurses in hospitals in developing countries and nurse performance outcome criteria (as shown in Table 1).

TABLE 1: Inclusion and exclusion criteria.

Inclusion	Exclusion
Location: hospital, developing countries	Location: primer health service, special clinic, developed countries
Participant: nurses	Participant: administration, doctor, laboratory staff, others health worker
Outcome: nurse performance	Outcome: performance institution, performance appraisal with Balance scorecard, accreditation, ISO implementation
Language: English, Bahasa	Language: Non-Bahasa or Non-English

TABLE 2: Summary of research articles.

(Yaghoubi et al.)	Factors that affect the performance of nurses	Cross sectional with the questionnaire from Hersey and Goldsmith model	85 nurse hospital on Isfahan University of Medical Sciences in Iran	3 (Three) factors affecting performance improvement are Help, incentive, and ability (skill, experience, etc.)
(Suryanto, Sutomo, and Setyawati)	To Identify the relationship between job satisfaction and nurse's perception of leadership with nurse performance	Explanatory with cross-sectional method. Research instrument are Questionnaire (with modified likert scale) and interview guidelines	95 nurses	Positive relationship between job satisfaction and nurse perception of leadership with nurse performance
(Amalia, Noermijati, and Alamsyah)	Measure the influence of organizational value on employee performance within group Managerial and nurses	cross sectional survey with managerial staff or leaders and nurses as respondents using questionnaires	80 respondents	Simultaneously the values of the organization has an influence on the performance of managerial staff and nurses
(Sharma and Dhar)	Measure the relation burnout, Perceived Organizational Support, Procedural Justice with affective commitment. And also affective commitment to job performance	cross sectional survey with nurses as respondents using questionnaires	349 respondents	Affective commitment has significant relation with job performance

TABLE 3: Summary of research results that affect the performance of nurses in the Hospital.

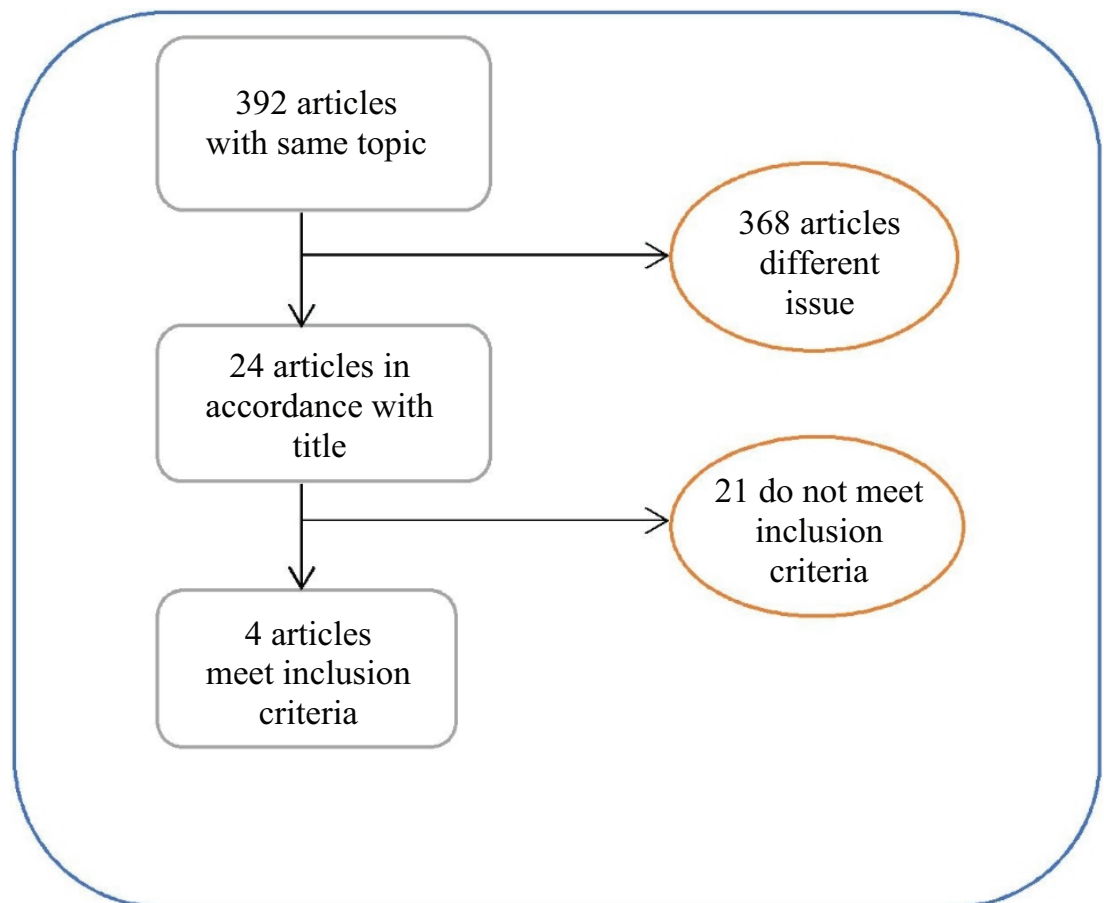
Authors	Internal Factors	External Factors
(Yaghoubi et al.)	Ability	· Environment · Validity · Evaluation · Incentive · Help · Clarity
(Suryanto, Sutomo, and Setyawati)	· Job Satisfaction · Nurse perception about leadership	
(Amalia, Noermijati, and Alamsyah)	· <i>Khidmah</i>	· Team work
(Sharma and Dhar)	· <i>Burnout</i> · <i>Affective commitment</i>	· <i>Perceived Organizational Support</i> · <i>Procedural Justice</i>

### 3. Results

The study found 392 articles that related to the research topic and 24 articles that are related in title and abstract. After downloading the 24 articles and review the whole articles, the study found 4 (four) articles which meet the inclusion criteria. The rest of articles are excluded from the study, one (1) article is about alternative theory related to work motivation (Hee) [3], 4 (four) article in systematic review (Dawson, Nkowane, and Whelan) (Parmelli et al.; Dubois et al.; Petros) [5, 6], 3 (three) article review performance of institution with Balanced Scorecard (Qingwei) (Kwang and Ayuningtyas) (Purnamanita, A. Pasinringi, and Maidin) [7], 2 (two) article in literature review (Ora et al.), (Gerhart) [8, 9], one (1) article related to implementation of good management (Ekowati) (Soetisna et al.) (Pomey et al.) [6, 10], one (1) article about relationship organization culture and job satisfaction (Tsai). The flow chart of the review is shown in Figure 1.

### 4. Discussion

In the first article (Yaghoubi et al.) is a study that was conducted on seven (7) variables that influenced the nurse’s performance: Environment, Validity, Evaluation, Incentive, Help, Clarity and Ability using correlation test method. Validity and reliability tests were performed, with reliability test results Cronbach’s alpha value  $r = 0.85$ . There



**Figure 1:** Flowchart of the review and the searched and retrieved reference for the review.

is no minimum sample calculation result in the article, article described the number of samples with 85 nurses.

From the seven (7) variables tested, all had significant relationships with nurse performance. Only 2 (two) variables had a strong correlation with nurse performance. Variables Ability and Help have the strongest correlation value with the performance of nurses. The definition of Ability in the article is skill, experience and other that performed by nurses. The definition of Help (Help) is support form hospital to the nurses to perform tasks and functions

The second research (Suryanto, Sutomo, and Setyawati) was conducted on 2 (two) independent variables that influence nurse performance, job satisfaction and nurse perception about leadership. The study took 95 samples of nurses and did not explain the minimum sample calculations. Data were taken by using questionnaire without explanation of validity and reliability test result from questionnaire. Data analysis used simple linear regression and multiple linear regression.

Data analysis of two (2) independent variables to the performance of the nurses, both have significant relationships. Through bivariate test on nurse performance it is found that two variables separately have a significant relationship. Between job satisfaction variable and nurse performance in bivariate test have close relationship of 30.7%. Job satisfaction were related to work environment aspect and work aspect. The work aspect value analysis showed the highest result, where the aspect of nursing work is a noble job. Variable nurse perception about leadership and nurse performance show relationship of 20.2%. The aspect of leadership that has the highest value is the perception about leadership in solving problems done humanely and listen to the opinions of subordinates.

In the third article (Amalia, Noermijati, and Alamsyah), the study analysed independent variables of internalization of organizational values consisting of *khidmah*, professional and teamwork with nurse performance variables. The research is cross sectional study with 50 respondents as sample, and the minimum of sample calculation is not stated. Data were collected for independent variables using closed questionnaires after validity and reliability test, while for dependent variable using questionnaire in Awases article and Nursing Board of Tasmania [11]. Data analysis used in the study is multivariate linear regression.

The multiple linear regression analysis of the three independent variables simultaneously shows a significant relationship to the dependent variable. The dominant factor affecting nurse's performance is *khidmah* variable with beta coefficient value 0,371 with  $p$ -value 0.032. The definition of *khidmah* is to serve patient sincerely to gives what can be given in helping others.

Bivariate analysis in professional variables does not have significant relationship with nurse performance variable with  $p$ -value 0.883. Professional variables in definition is the ability, expertise or skill of a person in a particular field that performed with a long period, so the job results had high value, acknowledged and accepted by the community. The work team variable does not have significant relationship with nurse performance variable with  $p$ -value 0.036. The team work variable in definition is desire to explain what one wants, the ability to be a good listener, to set aside fear, not assume that if someone loses, the other must win.

The fourth article (Sharma and Dhar) is a research using cross-sectional method to analyse the affective commitment variable to nurse's performance in hospital. The affective commitment variable is a construct variable that is formed from Burnout, Perceived Organizational Support, and Procedural Justice.

The study use Structural Equational Modeling analysis. Questionnaires were given to 520 respondents (nurses) but only 349 returned. The questionnaires measure five variables and the result of the validity and reliability test shows Cronbach's value between 0.825–0.952. The results of the factor analysis test show GFI: 0.878, AGFI: 0.858, NFI: 0.914, RMSEA: 0.046 which shows good fit model.

The results of the analysis show that there is a relationship between Burnout, Perceived Organizational Support, and Procedural Justice with affective commitment. The correlation of Burnout with affective commitment has a negative value of  $-0.54$  which explains that the effects of stress impact to the relationship of fellow nurses. The Correlation Perceived Organizational Support with affective commitment has a positive value of  $0.37$  which explains that the greater the organization's support for the nurse, improves the emotional relationship among fellow nurses. The correlation of Procedural Justice with affective commitment has a positive value of  $0.19$  which explains that fair and transparent procedures of the organization, enhance the emotional relationship of fellow nurses. The correlation of affective commitment with nurse performance showed a positive value of  $0.7$ .

## 5. Conclusion

The findings from the research about nurse performance in developing countries (Iran, India, and Indonesia) on the factors that affect the performance have varied methods. The sample used and the data analysis used also varied. Conclusions of the study by using systematic review is that the variable that affect the performance of nurses consist of external and internal factors.

Developing countries commonly experience the shortage of nurses. Therefore, a strategy to improve the performance of nurses is needed, either through internal factors or external factors. Several approaches maybe used to improve performance through internal factors such as good emotional relationships among nurses, job satisfaction and nurse abilities and external factors such as increasing teamwork or fair treatment and transparent organizational procedures.

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