

IMPROVING NURSING WORK SERVICES THROUGH DEVELOPMENT MODEL OF QUALITY OF NURSING WORK LIFE

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ABSTRACT

Introduction: The performance of nurses in a hospital is influenced by the mental and emotional state of the nurse; the higher the workload, the greater the work stress of the nurse. It is a necessity to conduct research to explain a quality of nursing work life model based on the context of Indonesian nurses. **Methods:** The research process consisted of two stages: observational analytic and model trial. The first phase used cross-sectional design with cluster random sampling technique and obtained 102 samples. The second stage used a quasi-experiment design with pre-post test with control group design and obtained 33 samples. The data was analysed by Partial Least Squares and paired t-test analysis. **Results:** It was found that the number of the nurses with Burnout Syndrome in the hospital was 67.6%. The depersonalisation indicator in the low category was 73.5%, and the high category of self-achievement indicators had 89.2%. **Conclusions:** It can be concluded that improving the performance of care services is more effective through improving the quality of nursing work life. This study found that the nurses' quality of life affected the increased nursing work service because their working scope involves interacting with other professions and the environment.

Keywords: quality of nursing work life model, burnout syndrome, self-achievement

INTRODUCTION

The performance of nurses in a hospital is influenced by the mental and emotional state of the nurse; the higher the workload, the greater the work stress of the nurse. Burnout Syndrome is a manifestation of high stress in working; this term refers to the syndrome of prolonged stress that occurs in the workplace where the result is a combination of workers and their work (Papalia, Olds and Feldman, 2007). Based on the research of Cañadas-De la Fuente *et al.* (2015), the prevalence of Burnout Syndrome in from a mental fatigue aspect was 25% on the emotional fatigue dimension, 30% in the dimension of depersonalisation and 45% in the self-achievement dimension. Indonesia Ministry of Health conducted a survey which found that 10% of patients felt dissatisfied with health services in hospitals (Dinas Kesehatan Propinsi Jawa Tengah, 2012). According to Ministerial Decree no. 129 year 2008 on hospital minimum service standards, inpatient satisfaction standard was $\geq 90\%$, or patient dissatisfaction standard was $\leq 10\%$ (Abdurrouf, Nursalam and Purwaningsih, 2013). Another research from Suharti and Daulima (2013) presented their research result in Metropolitan Jakarta hospital, in which most of the nurses had moderate (86.7%) and high (3.6%) burnout syndrome.

Based on the preliminary study held at one of regional public hospitals of Semarang it

was found that, from 20 nurses, there were eight experiencing burnout syndrome. This shows that the incidence rate of burnout syndrome in this hospital was about 40% out of 20 sample nurses. The prevalence of *burnout syndrome* was almost the same in most hospitals (de Paiva *et al.*, 2016); this is due to the high demand of hospitals to nurses to work according to the best standards, which requires great physical and psychological activity from nurses in giving nursing care.

The nursing profession as an integral part of the healthcare system is a critical factor in the success of health services in general and the key to the success of hospital services in particular. Nursing services still need many innovations, such as medical services to increase patient satisfaction as a consumer (Nursalam, 2014). Morsy and Sabra (2015) said that 66.7% of nurses had experienced job dissatisfaction, which was influenced by organisational culture factors, nurse job characteristics, nursing work quality and burnout syndrome. Burnout syndrome is a dominant factor in decreasing service performance in hospitals (Gilbert Khosa *et al.*, 2014; Khamisa *et al.*, 2015; Thulth and Sayej, 2015).

The low quality of nursing service can be caused by many factors, such as quality of nursing work life and burnout syndrome (Manwatkar and Mathew, 2016). A study of (Suresh, 2013) conducted in several hospitals in India found that 48% of nurses had a bad

QNWL (Quality Nursing Work Life). Khamisa *et al.* (2015) in Africa, found nurses with emotional exhaustion contributed to 14% of treatment while emotional exhaustion and depersonalisation contributed 31% in reducing the performance of nursing service in the hospital.

According to previous research by Momeni *et al.* (2016) regarding quality of nursing work life in Mazandaran, Iran scored 27,2% of quality of nursing work life as low, 61,7% was categorised as average, and 6,7% had good quality of nursing work life. This situation shows that most of the quality of nursing work life is low, which can be an indicator of stress for nurses that work in the hospital.

Mark and Smith (2012) stated that many factors cause stress in nurses, such as a conflict with a doctor, discrimination, over workload, handling many patients, patients' death and problem with patients' families. Beh (2016) held a research about stress impact on nurses which showed that 52% resulted in headache, 43% caused anger, 38% caused fatigue, 38% caused low interpersonal interaction and 24% caused low concentration. On the other hand, Nishitani, Sakakibara and Akiyama (2013) concluded that lack of sleep was one of the causes of depression for employees and anxiety syndrome for employees.

Efforts to reduce stress in nurses can be made through reforming the quality of nursing work life. A study by Borhani *et al.* (2016) in Teheran, Iran, concluded that the reforming of quality of nursing work life can improve the nursing service that is given to patients and the quality of nursing work life can increase nurses' role towards organisation of the nursing profession. The previous research shows the quality of nursing work life has positive impact and significance toward nursing work (Manwatkar and Mathew, 2016). Meanwhile, Borhani *et al.*, (2016) concluded that the improvement of medical service in hospitals can be started from moral improvement and learning through the environment around the hospital.

Based on the description of the background above, it is necessary to develop a quality of nursing work life in accordance with the condition of nurses in Indonesia. The development of this model will be a solution in reducing the level of nurse stressors in

Indonesia in providing therapeutic care in hospitals.

MATERIALS AND METHODS

The research process consisted of two stages, the first was observational analytic research and the second was a quality of nursing work life model. The first phase used cross-sectional design with cluster random sampling technique. The sample population were 102 samples. The variables in this research were analysed by using Structural Equation Modelling (SEM), in such a way that the minimum samples needed were 100 – 150 subjects. The number of samples for the first research had six variables, so this research needed 17 indicators with six variables, which was equal to 102 samples.

There were two variables in this research, exogenous and endogenous. The *exogenous* variable consists of organisational culture, nurse factors, job characteristics, and quality of nursing work life. Meanwhile, *endogenous* consists of *burnout syndrome* and nursing service. The data analysis used univariate analysis and then analysed using PLS (partial least square). PLS is an indeterminacy factor of powerful analytical methods used to confirm the theory (Ghozali, 2014).

The second stage used a quasi-experiment design with pre-posttest with control group design. The method used in the intervention was a structural model which emphasised the process of socialisation, externalisation, combination and internalisation. The provision of interventions used modules. The number of samples was calculated based on Sastroasmoro and Ismael (2011) formula and obtained 33 samples then performed simple random sampling. Data analysis used univariate analysis and bivariate analysis (paired t-test).

Data collection used questionnaires that contained questions according to the research variables. The study was conducted at the Dr. Adhyatama, MPH Regional Public Hospital of Semarang in the surgical wards and paediatric wards around July - September 2017. This research passed the ethical clearance conducted at Faculty of Medicine Diponegoro University and was registered with number 454/EC/FK-RSDK/VII/2017. The researcher asked consent from

respondents upon their agreement to participate on this study.

RESULTS

Table 1 shows that the mean age of nurses is 32.76 years, which belong to the productive age. Based on the educational status it was found that the largest percentage is nurses with a bachelor degree, or 54.9% while the lowest educational background is a master degree (1%). This situation indicates that most qualifications are bachelor degree, which is appropriately matched with the standard. Marital status of respondents was mostly married (79.4%)

Table 2 shows the lowest organisational culture is the success criteria with the low category of 15.7% and the mean is 2.28. Success criteria are an indicator of self-achievement for nurses. In addition to the success criteria, the organisational factors that

are still low are the orientation of the organization, with 31.4% and an average of 2.42. This is followed by strategy emphasis indicator, which is equal with 33.3%, and 31.4% organisational orientation. Organisational culture of nurses' indicator of closeness of good category organisation showed a percentage of 75.5% with mean 2.63.

Table 3 shows that the characteristics of nurses on the medium criterion indicator is 49.0% with mean 3.67, while the mental indicator model in the good category has a percentage equal to 91.2% with mean 4.26. The mental model is an assumption held by every individual and organisation that can determine how to act.

Table 4 shows the indicator of job variation with the low criterion of 27.5% with the mean of 0.61, while the job feedback indicator on the good criterion is 42.2%. Task

Table 1. Demographic characteristic of the respondents

Characteristic of the nurse	n	%
Age	102	32.76±5.9 (Mean & SD)
Education		
Vocational degree	45	44.1
Bachelor degree	56	54.9
Master degree	1	1,0
Doctoral degree	0	0
Marital status		
Single	18	17.6
Married	81	79.4
Widower	3	2.9

Table 2. Distribution of organisational culture

Organisational culture	Criteria			Total (%)	Mean	Score
	Good (%)	Moderate (%)	Bad (%)			
Organisational orientation	66 (64.7)	32 (31.4)	4 (3.9)	102 (100)	2.42	1-3
Organisational leadership	71 (69.6)	18 (17.6)	13 (12.7)	102 (100)	2.49	1-3
Management of staff	55 (53.9)	35 (34.3)	12 (11.8)	102 (100)	2.46	1-3
Organizational closeness	77 (75.5)	22 (21.6)	3 (2.9)	102 (100)	2.63	1-3
Strategy emphasis	62 (60.8)	34 (33.3)	6 (5.9)	102 (100)	2.43	1-3
Success criteria	51 (50.0)	35 (34.3)	16 (15.7)	102 (100)	2.28	1-3

Table 3. Distribution characteristics of nurses.

Characteristics of the nurse	Criteria			Total (%)	Mean	Score
	Good (%)	Moderate (%)	Bad (%)			
Commitment	82 (80.4)	20 (19.6)	0 (0.0)	102 (100)	3.88	1-5
Mental Model	93 (91.2)	6 (5.9)	3 (2.9)	102 (100)	4.26	1-5
Motivation	81 (79.4)	21 (20.6)	0 (0.0)	102 (100)	3.94	1-5
Attitude	52 (51.0)	50 (49.0)	0 (0.0)	102 (100)	3.67	1-5

Table 4. Distribution of job characteristics of nurses.

Job characteristics	Criteria			Total (%)	Mean	Score
	Good (%)	Moderate (%)	Bad (%)			
Work feedback	43 (42.2)	46 (45.1)	13 (12.7)	102 (100)	0.76	0-1
Task Variety	11 (10.8)	63 (61.8)	28 (27.5)	102 (100)	0.61	0-1

Table 5. Distribution of burnout syndrome

Nursing Work Service	Criteria			Total (%)	Mean	Score
	High (%)	Medium (%)	Low (%)			
Emotional Fatigue	2 (2.0)	31 (30.4)	69 (67.6)	102 (100)	1.64	0-6
Depersonalisation	3 (2.9)	24 (23.5)	75 (73.5)	102 (100)	1.24	0-6
Self-achievement	91 (89.2)	9 (8.8)	2 (2.0)	102 (100)	5.19	0-6

Table 6. Distribution of service performance

Service Performance	Criteria			Total (%)	Mean	Score
	Good (%)	Moderate (%)	Low (%)			
Nursing Care Standard	101 (99.0)	1 (1.0)	0 (0.0)	102 (100)	4.54	1-5
Professional Performance Standard	102 (100)	0 (0.0)	0 (0.0)	102 (100)	4.52	1-5
Nursing Satisfaction	31 (30.4)	69 (67.6)	2 (2.0)	102 (100)	3.43	1-5

Table 7. Results of the model development of the working quality model of nurses' work (QNWL) on increased nursing work service at the hospital

Relationship between variables	Coefficient	Information
Organisational culture with QNWL	0.55	Significant
Characteristics of the nurse with QNWL	0.33	Significant
QNWL with nurse performance	-1.07	Significant

variations include discussion with peers, seminars, workshops or continuing education.

Table 5 shows that the burnout syndrome among nurses with the indicator of low emotional fatigue category is 67.6% with the mean of 1.64. Emotional fatigue is characterized by physical, mental or emotional fatigue that lasts for a long time. The depersonalisation indicator in the low category was 73.5% with an average of 1.24, characterised by less sensitivity or less care towards the patient and a tendency to withdraw from the work environment. The highest category of self-achievement indicators has a value of 89.2%, which includes feelings of helplessness, disrespect and feeling the tasks imposed on the official are too great.

Table 6 shows that service performance applied to the nursing care standard indicator is 99.0% with 4.54 average, as well as 100% professional performance standard with a mean of 4.52.

Based on the model analysis results obtained it shows that the organisational culture affects QNWL. Characteristics of nurses significantly affect QNWL and QNWL significantly affects service performance. Based on the model results, it can be concluded that improving the performance of care services can be done more effectively through QNWL.

DISCUSSION

The relationship of organisational culture to the performance of nurses

In this study, the researcher found that there is a significant correlation between organisational culture and nurse performance. This situation can be caused by organisational culture that can cause changes in work rhythm, especially for nurses. The existence of a new policy can affect the work patterns of the hospital, such as leadership and system changes. In this study, the hospital that was chosen was a government hospital, so that service performance that is often perceived by society is lower than when compared with private hospitals. One fundamental difference is that the existing systems in government hospitals are different from those in private hospitals as well as there being different financing systems between government hospitals and private hospitals. This situation causes the service performance between public hospitals and private hospitals to be different. The results of this study are in line with previous research conducted by (Sharma and Kamra, 2013)

The results of this study are in line with the opinion from Qaisar, Rehman and Suffyan (2012) which states that organisational commitment among employees is an important aspect, as a result of which they perform better. Low commitment can

lead to poor service performance (Hamdi and Rajablu, 2012). Nurses are human resources who participate in colouring health services in hospitals. Therefore, nursing service has a contribution to this.

Relationship between characteristics of nurses and the quality of life of nurses' work

There is a significant correlation between nurses' characteristics with the quality of work life of nurses. This situation can be caused by the emotional and spiritual circumstances of the nurse that affect the pattern of nurse perception in performing hospital care services. Nursing work perceived as a burden is a source of stressor for the nurse, so that it impacts the pattern of life of nurses in the family and society. Changes in life patterns can be seen from the attitude and behaviour of nurses in everyday life at home.

Nursing behaviour patterns in running care services can easily make nurses being emotional. Changes in the work design are important for nurses to improve the quality of care that is provided for patients. According to previous research by Nursalam (2012), design of the nursing work can be done principally in the efficiency of the work, so that the nursing service process does not cause a stressor. The efficiency of job design can be done with work shift management for nurses, work-off systems and reward systems.

Motivation of nurses in running the service can be a factor that affects the state of nurses' life. Motivation is an important factor for nurses in providing patient care services. Previous research by Faraji Khiavi *et al.* (2015) states that the low motivation of nurses can cause low performance in the hospital.

Relationship of nurse characteristics with nurse performance

Based on the results of the analysis, it is found that the characteristic of nurses that most significantly affects the quality of working life is home dimension. Based on the results of the analysis it is found that the most significant nurse characteristics affecting burnout syndrome is self-actualisation

According to the results of the study, it is found that there is a relationship between job characteristics and the quality of life of nurses in hospitals. This situation can be caused by a variety of complex tasks imposed on the nurse and it is shown by the percentage

of moderate to low category variation categories. The state of task variation can cause the nurses to experience fatigue in working, so that some aspects of the life needs of nurses is cyclically changed, such as time with family because, when they are in family time, they are still doing the task. This circumstance leads to changes in the quality of life of nurses.

Konstantinos and Christina (2008) concluded that the characteristic factors of nurses related to job satisfaction include the characteristics of the organisation, relationship with staff and patient care related to work stress. Collaboration between nurses and physicians is significantly related to work stress and a significant relation to job satisfaction. Collaboration between nurses' colleagues relates significantly to leadership and job satisfaction. Thus, leadership is related to nurse job satisfaction.

Konstantinos and Christina (2008) emphasise that the interaction aspects between individual circumstances (nurses), the environment of the nurse and the circumstances influence nurses' work. Individual circumstances include the characteristic state of the nurse, such as age, length of work, education, marital status and income. Conditions associated with the organisation include leadership, nurse workload and issues related to the nursing organisation. Environmental circumstances of the nurse include interaction between patient and nurse, interaction between nurse and doctor and nurse authority in providing care services.

Characteristics of nurses in burnout syndrome based on the results of research found that there is a significant relationship between job characteristics with burnout syndrome. This situation can be caused by a variety of tasks and the impact of the job as the source of stressor for nurses, which can be seen from the work of nurses which requires performing a comprehensive job regarding the patient. Job feedback has an impact on the emotional and spiritual state of the nurse, which can be reflected in the results of this study, indicating the low attitudes and commitment of nurses in running care services.

The nurse profession is central to the service centre given to the patient, so that the patient is concerned with the services provided

by the nurse to the patient. Nursalam (2014) mentions that the main role of nurse professionals is to provide nursing care to the patient (as the main object of study of nursing philosophy, which includes: 1) Paying attention to the individual in the context of the life and needs of the client; 2) Nurses use the nursing process to identify nursing problems, including physical, psychological, social and spiritual examinations; 3) Providing nursing care to clients (clients, families and communities) ranging from simple to complex.

The complex role of a nursing and the holistic demands of service lead to an emotional change in the nurse. This situation is supported by the results of research that show the low attitudes of nurses to the service, so that the nurse is experiencing a distressed perception in running the service in the hospital. Perception of pressure when working is the cause of burnout syndrome in nurses.

Characteristics of work with the performance of nurses

The results show that job characteristics significantly affect the performance of nurses. This situation can be caused by a heavy burden of duty for the nurse and high task variations, which lead to burnout conditions, thereby degrading the quality of nursing work. The quality of nursing work is decreased due to fatigue experienced by nurses.

The results of this study are in line with research by Khamisa, Peltzer and Oldenburg (2013) which states that the impact of burnout syndrome can affect the health of the nurses themselves. The circumstances of burnout can be caused by the long-lasting state of stress experienced by nurse, so that burnout syndrome occurs. Khamisa, Peltzer and Oldenburg (2013) mention that the cause of burnout syndrome in heavy workload has an impact of health itself.

Work-related stress can affect job satisfaction. The stressful state of work that lasts long will disrupt the health of nurses. Factors associated with the health condition of nurses include the stress experienced by nurses, which affects the nursing work condition in the provision of services to the patient. The nurse's stress condition leads to a decrease in job satisfaction, which affects the health condition of the nurse in general.

The relationship between nurse's quality of life and the performance of the nurse

Based on the results of the study it is found that nurses' quality of life significantly affects the performance of services. Circumstances can be caused by a nurse's work system, which always interacts with other professions and patients who change each day, causing the need for emotional skill in adapting to new circumstances. This situation causes pressure in the work so that it has an effect on the output of services provided by the nurse.

The nursing profession is a fundamental profession in patient care in hospitals, so the quality of service in the hospital rests on providing services provided by nurses to patients. Several previous researches conducted by Borhani et al. (2016) in Tehran, Iran, concluded that improving the nurses' quality of work life can improve the service performance provided by nurses to patients in the hospital. A study of Sirin and Sokmen (2015) in Turkey mentioned there are five indicators used in measuring the quality of work life of a nurse; they are work environment, relationship with manager, job condition, job perception and service support.

Horrigan *et al.* (2013) state that quality of work life reveals the importance of respect for humans in their work environment. Thus, the important role of quality of work life is to change the organisational climate in order to technically and humanely bring about a better quality of work life. Quality of work life formulates every policy process decided by a company in response to what their employees desire and expect.

The environmental factors of nurse work are important factors that influence the nurse's service to the patient. Kivimäki *et al.* (2008) state that the nurses' work environment factors include the physical environment in the workplace, home and various work rules that shape the atmosphere and working spirit of nurses that are implicated in performance. Meanwhile, Horrigan *et al.*, (2013) stated that positive nursing work quality can support high-quality patient care and contribute to the continuation of the healthcare system.

CONCLUSIONS

The quality of nursing work life model in accordance with the condition of Indonesian

nurses is influenced by organisational culture, nurse characteristics, job characteristics and efficient nursing life quality. It can be concluded that improving the performance of care services is more effective through the quality of nursing work life and in reducing the state of increased nursing work service among nurses is more effective through QNWL. The study found that the nurses' quality of life affects the incidence of increasing nursing work service, because their working scope involves interacting with other professions and the environment. The benefit of intervention in quality of nursing work life is to improve understanding in working, so that it can encourage the learning process. The typical Indonesian nurse QNWL model needs to be tested on other nurse work environments, so it can correct the possibility of imperfections in this research data. In addition, testing is required in the application of interventions to prevent burnout syndrome in nurses based on this model.

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