OPTIMIZATION OF TEAM METHOD AS EFFICIENCY STRATEGY OF NURSES’S WORKLOAD: MINI PROJECT AT MILITARY HOSPITAL IN JAKARTA

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ABSTRACT

Nursing workforce and workload greatly affect the model of delivery of nursing care. The aim of this paper is to identify the process of optimizing team methods at Military Hospital in Jakarta conducted during the residency program. Project activity begins with situation analysis using Strength-Weakness-Opportunity-Threats (SWOT) analysis, problem identification through fish-bone analysis, problem priority setting, action plans making, implementation, and evaluation. The initial assessment sample involved 62 randomly selected sample nurses in 11 wards. The sample on implementation involves 21 team leader nurses at Jakarta Military Hospital. The problem that arises from the initial assessment is the implementation of team method, especially about the imbalance division of tasks between each nurse. The evaluation shows that 100% of the team leaders have good knowledge in making daily plans and team personnel division, but the implementation cannot be maximized. The recommendation is to strengthen the regulation of team method and increase the number of professional nurses to become a team leader at Jakarta Military Hospital.

KEYWORDS: Nursing Staff, Workload & Team Method

INTRODUCTION

The manager as the leader of a hospital is obliged to have an intention and ability to develop the existing resources in the hospital (Utarini, Schmidt-Ehry, & Hill, 2009). A nursing manager is one of the manager positions that must exist in the hospital, because nursing services are always integrated with all services in the hospital. The effort to realize a quality health service needs the support of nursing managers, who are capable of performing their roles and managerial functions well (Marquis & Huston, 2015; Nelson, 2017).

Nurses are the largest healthcare group of health systems around the world. Data from Badan PPSDM Kesehatan Republik Indonesia (2016) provides an illustration that out of a total of 310.622 health workers under Direktorat Jenderal Bina Upaya Kesehatan (BUK), nurses are in the first position with the largest number of 150.512. Nursing service is an integral part that cannot be separated with health services in a hospital. Nurses are responsible for providing optimal performance to maintain and improve the quality of nursing services provided for 24 hours each day (Berry & Curry, 2012; Merav & Ohad, 2017).

Nursing care is one form of responsibility and accountability of nurses to patients and their families (Dawoud & Maben, 2008). Optimal nursing care can be a key way to achieve the expectations and outcomes of health services needed by the client. Nursing care also provided through an effective and efficient delivery of care

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system according to the availability of existing nursing human resources (Marquis & Huston, 2015). One form of provision that has evolved from the traditional system is the method of nursing team (Ferguson & Cioffi, 2011; Zimmerman, 2007).

Team methods facilitate nurses to collaborate on providing nursing care for a group of patients under the direction or leadership of a professional nurse (Marquis & Huston, 2015). The advantages of team methods are in commitment and cooperation among a group of nurses so as to be able to give satisfaction to the nurses and patients. Ferguson & Cioffi (2011) argues that although the team method has many advantages, this method also has a disadvantage of unfair division of tasks among nurses so that it can cause stress to the working system it undergoes (Hariyati, 2014).

The Military Hospital in the heart of Jakarta’s capital is the highest referral center hospital for soldiers and another military hospital throughout Indonesia. The hospital is under the membership of United Nations (UN) and World Health Organization (WHO) along with 126 other countries (Ferland et al., 2016). The hallmark of the military hospital is the organizational structure and commando unit which is the principle of giving its order.

The hospital has a total of 1134 nursing staff, 680-bed capacities, and an average Bed of Rate (BOR) of 80-85%. Since 2017, the hospital continues to develop several excellent services such as Cell Cure Center, Cerebro Intensive Care Unit (CICU), and Digital Subtraction Angiogram (DSA) unit. The high number of BOR certainly affects the ratio of nurses to patients compared to 1 in 10-12. This imbalance ratio can be one cause of the risks of increased workload on the nurse (Kang, Kim, & Lee, 2016; Sir, Dundar, Barker Steege, & Pasupathy, 2015).

The Head of Nursing Resources claims that the team method is a method applied in both inpatient and outpatient wards. This method is appropriate to be applied in a military hospital compared to other methods as it is supported by the principle of command unity that characterized the organization. The type of nurse’s workforce, as well as the supporting facilities of the team methods available in the ward also serve as the basis for the implementation of the care system in the room. This is in accordance with the standard team model used by the military health system in America since 2011 (Kugler, 2011).

Data from the observations and interviews to practitioner nurse shows that the existing team method is not optimal. The imbalance of the division of tasks among individuals is the cause of the increased workload of nurses (Liu, Lee, Chia, Chi, & Yin, 2012). So, it is important to optimize the implementation of team methods to create a balance nurses workload.

METHODS

The method used in the activity of a change agent is mini project related to team method optimization at Military Hospital, Jakarta. This activity involves Head of Nursing Department, Section Head of Nursing Resources, Head Nurse, Team Leader, and Associate Nurse. The mini project begins with a conducting situation analysis using the SWOT approach, problem identification, problem priority determination, action plan making, implementation, and evaluation.

The initial assessment was conducted through survey method, observation, and interview. The survey method used types of questionnaires: physical workload questionnaires and mental workload from National Aeronautics and Space Administration Task Load Index (NASA-TLX). Sample calculation using the formula Rule of Thumb got 72 nurses. Data collection through observation using work sampling method. The sample in this observation method involved 12 nurses with 116 alternate observations every 15 minutes.

Initial data collection through interviews was conducted with 3 head nurses and 3 team leaders. This activity uses
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an interview guide instrument that is created based on Planning-Organizing-Staffing-Actuating-Controlling (POSAC) management function. The ethical consideration of the mini project is the instrument used in advance to be consulted to the supervisor and through the licensing process to the Nursing Department of the hospital. The name of the respondent in each instrument using the initials also not appeared in the presentation of the results of the analysis.

Identifying the root cause using Fishbone analysis raises the problem of team methods that have not run optimally. This problem is then selected as the focus of the residency project. A strategy of team method optimization is the purpose of the action plan. Evaluations include the cognitive and effective of the team leader through pre and post-test evaluations, brainstorming, as well as the accompaniment of the daily plan of team leader.

RESULTS

The results of the questionnaire analysis illustrate the perceptions of the associate nurses on the physical and mental workload they feel during the work. The sample involved in the assessment through questionnaires was 62 nurses. Some of the preliminary assessment analyzes obtained are as follows:

![Figure 1: The Average of the Physical Workload Perceived by the Nurse at Military Hospital in Jakarta (N = 62)](image1)

The results showed that 66.1% of nurses perceived that the physical workload they felt belonged to the high category.

![Figure 2: The Average of the Mental Workload Perceived by the Nurse at Military Hospital in Jakarta (N = 62)](image2)

The results showed that 61.3% of nurses perceived that the mental workload they felt belonged to the high category (50-79). Mental workloads that can be identified through NASA-TLX instruments include work activities that require thinking, time-consuming jobs, frustrating work, and the need for motivational motivation to work.

Preliminary data collection through interviews was conducted to Head of Nursing Department, Section Head of Nursing Resources, Head Nurse, and Nurse Associate. Some of the themes obtained from the analysis of interviews, among others, the number of nurses is not adequate compared to the ratio of patients treated, the number of tasks of a non-nursing job, supply and demand nursing resources are never balanced, and the number of direct nursing care are delegated to the new nurse. The conclusion of a problem finding from interview result is the mismatch of a proportion of workforce

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with workload and unbalance of workload between nurses.

Preliminary data of observation result using work sampling instrument. This method is done to observe the daily activities of nurses. The observed activity is divided into direct and indirect nursing activities. Direct nursing activity is an interactive action between nurses and patients, such as measuring vital signs and intravenous drug delivery. Indirect nursing activity is an administrative activity to support the smoothness of nursing care such as the filling of documentation and reporting. The results of the observation analysis are shown in the diagram below.

![Figure 3: Nursing Activity Rate at Morning, Afternoon and Night Shift at Military Hospital in Jakarta (N = 116x Observation)]

Observations show that 68% of nursing activities in morning, afternoon and evening shift are indirect nursing activities. The activity is dominated by documentation and drug preparation. The result of quantification of nurse workload is 58.2% nurses have a heavy workload.

The analysis of the hospital service indicator using Barber Johnson chart shows the point of being in the efficiency area based on 80% BOR rate, 5.69 day Average Length of Stay (Av. LOS), Bed Turn Over (BTO) 35.6 times, and Turn Over Internal (TOI) 1.78 days (RSGS Minimum, 2017). This illustrates the efficient use of beds in inpatient services (Respati, Djoerban, & Maryani, 2007), so that the workload of health workers should be within the balanced range. Factors that potentially increase the workload include the number of the non-nursing jobs and excellent new services such as Cell Cure Center, CICU, and DSA which requires that the competent personnel rotated from the room to the new unit.

Other factors can be identified from the observation, analysis results at 3 working shift time that there is an imbalance of task distribution between nurses, so often the method of assignment back to the functional method, or more done by the associate nurse. Relevant team methods applied in Jakarta Military Hospital should be maintained in accordance with the type of personnel, organizational structure and supporting facilities of the method. Thus, from the initial assessment results obtained one of the root problems of non-conformance nurses workload is the implementation of team methods that have not been optimal.

Determining the root of the problem is done by using the fishbone analysis tools shown in the diagram below.

![Figure 4: Determining the Root Problem of Mismatch of Workload and Type of Work with the Number of Nurses Using Fishbone Analysis]
Determining the priority of the root of the relevant problem to be solved using Magnitude (M), Severity (S), Manageable (Mn), Nursing concern (Nc), and Affordable (Af) and strengthened by quantification result of SWOT analysis showing that team method has score 0.1 higher than the root of other problems. The result of weight assessment and the score shows the priority of the most relevant problem to be solved is the problem of not yet optimal team method in the inpatient room, Military Hospital in Jakarta.

**Implementation**

Nursing management is always associated with the process of planning, organizing, staffing, direction, and control of nursing unit activities. A nurse manager performs a management function to ensure the quality of nursing care that patients receive (Swanburg, 2000). The implementation phase begins with the identification of relevant issues to be resolved, consolidate, and negotiate with the Nursing Section and Head of Space. The basic implementation of the implementation is carried out according to the action plan made in accordance with the five management functions. Roles and agreements with Head of Nursing Department, Section Head of Nursing Resources, and Head Nurse are also important in the implementation process.

**Planning**

Planning is the first and critical step in the nursing management function (Marquis & Huston, 2015). Planning is the first function of nursing management that became the basis of the manager's work as the manager of Section Head of Nursing Resources in the hospital. Planning begins with a policy availability assessment tool that forms the basis for the implementation of team methods in inpatient rooms. The policy tools include the availability of guidelines and implementation guidelines, Standard Operating Procedures (SOPs) or Decree for nurses involved in team methods.

The Hospital Accreditation Commission (2012) of Indonesia (KARS) believes that a hospital management system can work well if there has been a service regulation in the hospital work unit. Assessment results indicate that there are available guidelines for nurse assignment methods issued in 2008 and no revisions have been made. Assignment method guidelines, SOPs, as well as nursing daily plan templates, are not yet available. The results of interviews with some Team Leaders indicate that so far no Letter of Orders issued officially by the hospital, although in the job description of the Team Leader already listed the assignment.

Implementation undertaken to strengthen the regulatory basis of the team’s optimization plan is to first establish a regulatory tool. This arrangement is based on the KARS guidance regarding the procedures for the preparation of guidelines and SOPs. Guidance on team methods, SOPs of the team's daily nursing plan, and the nurse's daily plan template form is the first to be made as a complement to the regulatory basis for the implementation of team methods in inpatient wards.

**Organizing**

The organizing function focuses on the application of organizing principles and span of control in the implementation of team methods in inpatient wards. Organizing focuses on the organizational structure of team methods contained in each room. The result of the assessment indicates that the organizational structure in the room is irrelevant to the personnel of Human Resources of Nursing in the room and is currently running according to the command of the Head Nurse, without any written structure.

The task of evaluating team methods on a regular basis has not been included in the detailed description of the
Head Nurse. This may be one causes the team method has not gone well. Description of the task of the head of the chamber to perform the role of guidance and evaluation of methods of providing care regularly is a proposal that can be given to Head of Nursing Department. This task is able to provide guarantees for the implementation of methods of providing care in the running room, according to guidelines and guidelines that have been prepared.

**Staffing**

According to Gillies (1996), the strategic function of staff development and nursing managers' competency involvement in training are more specifically included in the third function, namely staffing. Manpower starts from the identification of the availability of competent nursing resources to run the team's assignment method in every room. The results of the assessment show that most of the team leaders in the inpatient rooms have no Bachelor of Nursing educational background recognized as professional nurses.

**Actuating**

The actuating function is the process of forming staff behavior to achieve organizational goals (Whitehead, Weiss, & Tappen, 2010). Implementation includes socialization guidance of team method that has been made, followed by a nursing workshop. The seminar and workshop were attended by 21 team leaders from 20 inpatient wards. The workshop was filled with training and brainstorming among the team leaders in making daily planning, discussion of trigger cases, as well as barriers to the application of team methods in the room.

**Controlling**

The control function is done to maintain the quality of the organization's performance. The control function is done in line with the evaluation of the knowledge and attitude of the nurses who are the target of the implementation. Knowledge evaluation was done through pre and post-test questionnaire method during workshop and field assistance activity for 3 days. Assistance is done by inviting the team leader to make a daily plan before shift activity begins and observation of the implementation of the plan.

**Evaluation**

Evaluation is the final process of the action plan being implemented. The evaluation was done by the participant brainstorming method about the expectation of team method that has been done in the inpatient room. The majority of participants argues that the implementation of an existing team method should be improved by all health personnel involved. These improvements must also be balanced with training for team leaders and implementing nurses, rewards for competent and accomplished individuals, and a shared perception of all nurses on the team's methods.

The evaluation of the nurse's attitude was observed through the accompaniment of the team's daily plan-making and observations during three times morning shifts in three different rooms. The results show that each team leader has a good knowledge of the team's personnel planning and the priority of the patient's care, but the implementation is still not optimal. Constraints in the room such as the nurse-patient ratio imbalance and the health condition of the nurse itself ultimately impeded the implementation of the daily planning that had been made by the Team Leader.

**DISCUSSIONS**

The optimal assignment method is one of the factors that is able to nurse workload efficiency. This is supported by the research of Sir et al. (2015) conducted on 54 nurses in the oncology chamber concluded that the assignment method
that could properly distribute duties and nurses was able to reduce the nurse's workload score. The Bay of Plenty District Health Board (2016) argues that team method is one of the most efficient models in balancing the nurse's workload because it employs all the resources of a group of nurses from shift to shift to provide safe care for patients and nurses.

Jakarta military hospitals also use team assignment methods on inpatient and outpatient installations. This method is the basis of nursing care system to patients and families. Kugler (2011) argues that the implementation of team methods is best used in military-based health services, one of the Jakarta Military Hospital compared to other methods because it is in accordance with the organization's organizational structure, the principle of unity command, and facilities already available in the room, such as a nurse's station for each team.

One of the disadvantages of team methods is that unfair division of duties among nurses often occurs. Equitable division of tasks is the key to the success of team methods due to mutual respect between team leaders and associate nurses (Ferguson & Cioffi, 2011). Observation results in inpatient wards indicate that this potential weakness occurs in Jakarta military hospital because in general new nurses are assigned more direct nursing tasks, such as preparation and drug administration. This happens because of the imbalance of the ratio between the nurses versus the patient and some nurses are unproductive because of illness.

Basically, the hospital has made efforts to overcome this by running and providing facilities for the healthy nurse program in accordance with the advice of the American Nurses Association (2017). The provision of a gym room at no charge, swimming pool, and regulation for morning walks together becomes a concrete form of hospital efforts. Constraints from the implementation of this program come from individual nurses themselves who are reluctant to use the facility and follow the existing regulations that have an impact on the decline in their own health.

The result of identification of a nursing problem found in this mini project in a military hospital is the unbalance of workload between nurses working in a team. The results of the observations that reinforce this finding are more junior executing nurses are often more directly assigned to nursing tasks. This is in line with the opinions of Hariyati (2014) and Falk & Wallin (2016) where the team method has weaknesses that are the unfairness of assigning the burden of duties among nurses so that the feeling of burden or stress on the job that is responsible.

Liu et al. (2012) & Lorber (2012) argues that nurses who are given jobs exceed the ability and competence. They feel frustrated or stressed due to a workload, that is not appropriate. The actual problems that occur in Jakarta military hospital if not addressed are very potential to cause burnout to nurses. This is supported by the results of a preliminary assessment showing that most nurses already have a perception that their physical and mental workload is high. Thus, managers have an important task in maintaining the balance of workload, job satisfaction, and career growth nurse in order to create optimal nursing services. Nursing managers at Jakarta Military Hospital should be aware of the problem of workload. It can be a trigger of the decrease in quality of nursing services and patient safety outcome in the hospital.

The problem of the limitation of nursing resources and the imbalance of the nurses’ workload in the team's assignment method has also become one of the crucial issues in an Education Hospital in Thailand. This data was obtained from interviews with the vice director of nursing during a study visit to an educational hospital in Chiang Mai, Thailand. Chaisom (2017) says that the problem of nurses' workload imbalances greatly affects nurse turnover rates.

The mini project related to team method optimization at Jakarta Military Hospital, firstly made a regulation device that can be the basis of the implementation of team method in the inpatient room. This is in line with the opinion of Kelly
(2010) that regulatory planning is the first function of nursing management that becomes the basis of the manager's work. Guidance on general assignment methods was made in 2008, but has not been revised and there is no specific guidance regarding team methods yet. So as a first step made a guide team method that can be the basis of team leader in dividing the tasks and responsibilities to the nurse associate fairly with the competence and clinical authority it has.

In the socialization and workshop activities, one of the training topics is the making of the daily plan of the nurse. Daily plans are fundamental to the team's assignment method. This is in line with Babiker et al. (2014) concludes that in the team method an associate nurse often undergoes a forming stage where there is ambiguity with the tasks assigned to him. The daily plan of the team leader to be applied in Jakarta Military Hospital is expected to be a tool to regulate the suitability of personnel and priority of each associate nurse to make the work more effective.

The results of the brainstorming evaluation of 21 team leaders concluded the need to recreate the clear and written organizational structure of the room, as well as the reward system for the accomplished team leader. This is in line with the argument from Kelly (2010) that the clarity of organizational structure also clarifies the span of control and the role of each individual is socialized to all personnel of the room. Corsalini (2012) also believes that rewards and rewards significantly have a positive contribution to the nurse's work motivation. This became one of the basic proposals, that every team leader should be assessed, appointed, and assigned directly by Head of Nursing Department. Providing rewards such as educational development, training, or praise should also be given to motivation and performance as team leaders can be more leverage.

Team leader in team management methods is very important, especially his role as a leader for nurses and patients. The Jakarta Military Hospital should be a team leader should be a professional nurse (Batson & Yoder (2012), Hariyati (2014), Thoms (2011). It is also supported by Jakarta Military Hospital has passed KARS accreditation which also requires caregivers or team leaders to have professional nursing qualifications. The Nursing Department of Military Hospital should take this into account, because a team leader is essential to apply all intellectual, leadership, assertive communication, and cooperation with his associate nurse.

CONCLUSIONS

The optimized team method can maximize the workload of the nurse. The nursing manager should ensure that the implementation of team methods is complemented by regulatory basis, organizational structure, compatible staff, and good monitoring systems. The residency project on optimizing this team method has resulted in guidelines, SOPs, and nurses' daily plan templates.

Several things that need to be considered by the Nursing Division of the Jakarta Military Hospital is the strengthening of regulation related to the team method in the inpatient room and planning the increasing number of professional nurses to become team leader. Evaluation of team methods should also be undertaken periodically, to identify constraints and strategies that can be undertaken for further improvement. Suggestions that can be given to the leader of the hospital, in general, is to make efforts to minimize non-nursing job for the method of assignment can run more optimal.

Efforts to maximize the facilities that have been provided by the hospital, for example, the cubing tube to the laboratory, should also be done so that the nursing work capacity becomes more effective. Reflecting on the Thai state that provides nurse aide as a manpower that helps nurses to minimize non-nursing jobs can also be considered so that the constraints of assignment methods can be resolved.
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