# EFFECTS OF TEAM NURSING METHOD TRAINING ON NURSES' PERFORMANCE

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**ABSTRACT**
Team nursing is a method of care delivery that employs a group of individuals led by a knowledgeable nurse to provide nursing care to a cluster of patients. This study aims to analyse nurses' performance after undergoing training on the team nursing method in a hospital setting. The quasi-experimental pre and post-test design was used. Purposive sampling was utilized in selecting 38 nurses who agreed to participate in the study; 19 were assigned to the intervention group and another 19 to the control group. The nurses in the intervention group joined a training in team nursing as a care delivery method and were observed and supervised for six weeks. A questionnaire was used to measure nurses' performance in providing care. Results were analysed using rate, mean, Chi Square test and Multivariate Logistic Regression Analysis. The findings revealed that most of the respondents were between 20-30 years old with more than five years of work experience. The nurses in the intervention group significantly improved their performance by 11.35% after the team nursing method training (p value 0.0001). The OR of 27.7 may suggest that the training greatly influenced improvement in their performance. Furthermore, the training may have improved nurses' work performance 21.7 times compared to those who did not join it. The researchers recommend that training on team nursing method as a care delivery system be implemented in all units of the hospital to help improve the provision of nursing care.

*Keywords:* **Team Nursing Method, Training, Nurses' Performance**

## INTRODUCTION

Nursing is the provision of care to individuals, families, groups, or the community, whether sick or healthy (Nursing Law, Republic of Indonesia Number 38 of 2014). Nursing, a health care service rendered by professionals is an essential part of science-based health services. It provides comprehensive bio-psycho-socio-spiritual resources to individuals, families, groups, and communities both healthy and sick across the lifespan (Asmadi, 2005).

Team nursing is a care delivery model provided by a group of nurses led by an experienced nurse as the team leader. The team leader coordinates the work of two to three team members who have either a bachelor or diploma in nursing degree who are responsible for four to five patients. All nursing interventions needed by each patient are provided by one nurse. (Fairbrother, Chairella, & Braithwaite, 2015). The team nursing method is based on the belief that each group member has a contribution in planning and providing care resulting in a high sense of responsibility. Nursing performance is both the quality and quantity of work achieved by a nurse in

carrying out duties in accordance with their responsibilities. Performance can be seen or measured through several assessment methods. Nurse managers can use an operational performance process to supervise staff in their training and assessment. Those who have performed following quality standards would be rewarded because their competent performance meet patients' satisfaction levels (Nursalam, 2015).

Professional nursing care methods were developed to improve the quality of nursing service and achieve patient satisfaction. Some nursing care methods have been implemented in Indonesia. One method is team nursing, a framework that defines four elements namely standards, the nursing process, nursing education and the system of team nursing method. (Nursalam, 2015).

Rupisa's study (2018) reported that there was a significant relationship between the professional nursing team care method and the level of satisfaction among nurses working at the Panti Waluya Hospital Malang (p value 0.001). Bumulo and colleagues supported this finding that there was an influence of professional nursing team method on the quality of nursing services (Bumulo, Bidjuni, & Bawotong,

2017). Another study conducted by Mogopa and colleagues revealed that there was a correlation between the application of the team nursing method and nurses' performance at a hospital in Manado (Mogopa, et al., 2017).

The Nabire Regional Hospital is one of the organizational units that continually strives to provide health services based on their vision and mission. It employs 352 nurses where 301 are diploma holders and 51 have a Bachelor in Nursing degree. The hospital consists of class 1 care rooms, internal medicine, pediatric, surgery, gynecology and ICU but does not offer trauma, physiotherapy, medical rehabilitation, hemodialysis and nutritional consulting services. Three units in this hospital utilize the team nursing method. Team nursing as a method of care delivery needs to be implemented well so that team performance is optimal. Training is also crucial for improving the nurses' performance using this method.

Based on an early observation, the implementation of team nursing and nurses' performance at this hospital were below the optimum level. One of the reasons was that some nurses did not understand how to implement this method.

This study aims to analyse the effects of team nursing method training on nurses' performance in a hospital setting.

## METHODS

This research was conducted at the inpatient rooms of the Eastern Indonesia Regional Hospital from May 20 until June 28, 2019. Data were collected using a questionnaire to measure nurses' performance in providing care. The quasi-experimental pre and post-test design was used with an intervention group and a control group.

Purposive sampling was used and with their consent, 38 nurses were recruited for this study. They were divided into two groups, 19 nurses in the intervention group and another 19 nurses in the control group.

Those in the intervention group joined a training, underwent observation and supervision for six consecutive weeks. Both group performances were assessed twice. The intervention group's performance was assessed before and after the training, had observation and supervision sessions. The control group was also assessed twice at the same time as the intervention group.

## RESULTS

Table 1 shows that almost two-thirds of the nurses in both groups (intervention and control) were between 20-30 years old, with more than five years work experience. As far as educational background is concern, almost two-thirds (68.4%) of those in the intervention group had a diploma in nursing while most nurses in the control group (73.7%) had a Bachelor in Nursing degree.

**Table 1.** Nurses' Characteristics Based on Group Type

| Nurses' Characteristics | Intervention group | | Control group | |
|---|---|---|---|---|
| | n | % | n | % |
| **Age** | | | | |
| 20 - 30 | 12 | 63.2 | 12 | 63.2 |
| > 30 | 7 | 36.8 | 7 | 36.8 |
| **Educational background** | | | | |
| Diploma | 13 | 68.4 | 5 | 26.3 |
| Bachelor | 6 | 31.6 | 14 | 73.7 |
| **Work experience** | | | | |
| <5 years | 5 | 26.3 | 5 | 26.3 |
| ≥ 5 years | 14 | 73.7 | 14 | 73.7 |

**Table 2.** Nurses' Performance Before and After Team Nursing Method Training

| Work Performance | Mean | | Mean Difference | % Difference | P value |
|---|---|---|---|---|---|
| | pre-test | post-test | | | |
| Intervention | 17.18 | 19.38 | 2.20 | 11.35 | 0.0001 |
| Control | 14.29 | 21.57 | 7.28 | 33.75 | 1.000 |

**Table 3.** Application of Chi Square Test on Nurses' Characteristics, Performance and Team Nursing Method Training

| Nurses' Characteristics | Nurses' Performance | | | | Total | | p Value |
|---|---|---|---|---|---|---|---|
| | Increased | | Decreased | | | | |
| | n | % | n | % | n | % | |
| **Age** | | | | | | | |
| 20 -30 | 13 | 54.2 | 11 | 45.8 | 24 | 100.0 | 0.126 |
| > 30 | 4 | 28.6 | 10 | 71.4 | 14 | 100.0 | |
| **Educational background** | | | | | | | |
| Diploma | 12 | 66.7 | 6 | 33.3 | 18 | 100.0 | 0.010 |
| Bachelor | 5 | 25.0 | 15 | 75.0 | 20 | 100.0 | |
| **Work experience** | | | | | | | |
| <5 Years | 6 | 60.0 | 4 | 40.0 | 10 | 100.0 | 0.258 |
| > = 5 Years | 11 | 39.3 | 17 | 60.7 | 28 | 100.0 | |
| **Team Nursing Method Training** | | | | | | | |
| Intervention | 14 | 73.7 | 5 | 26.3 | 19 | 100.0 | 0.0001 |
| Control | 3 | 15.8 | 16 | 84.2 | 19 | 100.0 | |

Table 2 shows a comparison of performance between the intervention and control groups. Both groups demonstrated mean differences on their pre and post-test performances. However, in the intervention group, performance increased whereas performance in the control group decreased. Moreover, only in the intervention group was the difference significant.

Table 3 reveals that there was a significant relationship between educational background and performance after the training (p value 0.010). However, there was no significant relationship between age, work experience and nurses' performance after the training intervention

(p value 0.05). Table 3 also shows that there was a significant difference of nurses' performance between the control group and the intervention group who received training on team nursing method (p value 0.0001).

Table 4 shows that there was a relationship between team nursing method training on the nurses' work performance (p $value$ 0.004), that their performance improved. The Odds Ratio (OR) of 21.77 may indicate that the training on team nursing had a significant influence on the increase or improvement in the nurses' work performance, especially when looking at the age characteristic of the nurses.

**Table 4.** Application of Multivariate Logistic Regression Analysis on Team Nursing Method Training and Nurses' Performance

| | | B | df | Sig. | Exp(B) |
|---|---|---|---|---|---|
| **Step 1ª** | Age int. | 1.726 | 1 | .091 | 5.619 |
| | Education_int. | 1.077 | 1 | .221 | 2.936 |
| | Training_int. | 2.841 | 1 | .004 | 17.134 |
| | Constant | -7.842 | 1 | .004 | .000 |
| **Step 2ª** | Age_int. | 1.733 | 1 | .074 | 5.656 |
| | Training_int. | 3.081 | 1 | .001 | 21.772 |
| | Constant | -6.640 | 1 | .004 | .001 |

## DISCUSSION

This research supports previous studies which showed a significant effect of team nursing method training on the nurses' performance. This was manifested in a study by Mogapa, et. al. (2017) at RSUP. R. D. in Kandou, Manado showing a relationship between the application of the team nursing method and the performance of the nurses. In this research, changes in performance were seen in the improvement of nursing care when team nursing method training was implemented in the intervention group (p value 0.0001). It is likely that the changes in work performance were greatly influenced by training on team nursing method as shown by the Odds Ratio of 27.77. In the past, the nurses used functional care delivery method where there was no clear understanding of their respective roles and responsibilities. This changed after they joined the training resulting in a clearer understanding of their tasks and responsibilities, higher sense of integrity and consequently, improved performance.

This study also revealed that most of the nurses were between 20-30 years old, and relatively young. This may explain their deficiency in implementing the team nursing method due to lack of experience. According to Mogapa, Pondaag & Hamel (2017), more mature nurses have better skills and judgment, and have earned work-related achievements compared to their younger counterparts. Thus, guidance from an experienced supervisor is needed in implementing the team nursing method.

## CONCLUSION

The findings of this study show that in the intervention group 14 (73.3%) of the nurses' work performance increased, that they improved in their delivery of nursing care and only 5 (26.3%) had a decrease in performance. However, only three (15.8%) of the nurses in the control group improved

their performance of nursing care while 16 (64.2%) did not, instead their performance decreased. Those in the intervention group improved significantly by 11.35% (p value 0.0001) compared to those in the control group where the percent difference is 33.7% on the negative side (p value 1.000).

There is a significant influence of team nursing method training on improving nurses' performance as evidenced by an OR of 27.7. Furthermore, the team nursing method may improve work performance of nurses 21.7 times compared to those who did not participate in the training, when examining the characteristic variable age of nurses. The researchers recommend that training on team nursing method as a care delivery system be implemented in all units of the hospital to help improve the provision of nursing care.

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