ORIGINAL RESEARCH

INFLUENCE OF PEER GROUP SUPERVISION ON THE NURSE PERFORMANCE IN DRUG ADMINISTRATION

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ABSTRACT	Keywords
The number of deaths and disabilities is one of them due to errors in the administration of drugs. This can be prevented with optimal supervision. The purpose of the study was to determine the influence of Peer Group Supervision on the performance of nurses in drug administration. The study sample numbered 23 implementing nurses and 23 nurse leaders. The results of observation of the performance of nurses before being given supervision training at the head of the nurse (70%) are sufficient and after being given good performance training (100%). The results of the analysis found a meaningful influence of peer group supervision on the performance of nurses (p = 0.00) by showing a positive pattern. The better the leadership supervises, the performance of nurses is also increasing. Efforts to improve nurse performance by improving peer group supervision in a planned and scheduled manner, continuous training on supervision, and socialization of Standard Operating Procedures to nurses.	**Nurse performance, supervision, drug administration**

BACKGROUND

Treatment becomes one of the elements that are very important to cure the disease and restore health. In general, it is caused by the use of drugs that should not be given or drugs that can cause injury to patients. Drug errors at every event must be prevented through the control of health workers, patients, and consumers (WHO, 2016). Drug error cases are not uncommon to become lawsuits and end up in court. The impact caused by the increasing cost of treatment, the day of hospitalization that extends even the worst is the loss of patient life. One of the characteristic aspects of medication error is the rate of occurrence that is quite frequent but still under-report caused by a reporting system that is not good (Ramya, K. R., Vineetha, 2014).

The nurse performs his role using the nursing process approach by paying attention to the correct principles on drug administration. Principle 7 correct in the administration of such drugs is true patient, correct drug, correct dosage, correct route of administration, correct time, correct documentation, and correct information (Lestari, 2016).

Deaths and disability rates are increasing due to drug errors, especially in cases that do not cause death. Errors in drug administration often occur in patients caused by many factors including increased nurse workload, fatigue, and communication

misunderstandings. In 2000, about 7,000 people are estimated to die each year from medication errors. Drug errors are estimated to be one in 10 patients worldwide. (Hughes RG, 2010).

The results of the study found that factors that affect the application of the principle of patient safety in drug administration include the lack of supervision from the leadership, lack of the number of nurses' human resources, high turnover of nurses, the unavailability of Standard Operational Procedure drug administration with principle 7 correct, socialization that is not done continuously and the absence of training programs or training in hospital (Tampubolon, 2018).

A study found that 20% of nurses made at least one mistake during working hours.[1] Another study found that 25% of court cases about nurses had been due to some medication error. 10-18% of all reported hospital injuries are attributed to medication errors. 24% of side effects are reported to be drug or fluid-related. Improper drug administration was the most common occurrence of unsafe patient care (56.49%), while others reported a 19% prevalence of drug errors arising from oral medications. (Cebeci et al., 2015).

Errors in the administration of drugs can endanger the safety of the patient's life. Errors in drug administration include inaccurate prescriptions, incorrect drug administration, miscalculation of drugs, improper timing of administration, and giving the wrong dose. (Potter & Perry's, 2017). The types of errors that cause death in patients include 40.9% is-dosing, 16% incorrect drugs, 9.5% incorrect routes of administration (Hughes RG, 2010).

Research at Mardi Rahayu Kudus hospital on the experience of implementing nurses in applying the six principles correctly in drug administration obtained data 30% of drugs given are not

documented, 15% of drugs are given inappropriately, 23% of drugs are given at an inappropriate time, 2% of drugs are not given, 12% of drugs are given at inappropriate doses (Lestari, 2009).

Research conducted by Halimah found that the implementation of principle 7 is true drug administration that has less value interpretation is the correct time and correct document (Ba-Lashraf, 2020). Errors in drug administration occur a lot because nurses do not consistently apply the principle of six correctly in the administration of drugs to clients. Nurses can prevent accidents in drug administration by following strict drug procedures so that they will prevent errors in treatment. One way to prevent accidents in treatment is to apply the principle of six correct in drug administration, namely 1) Correct drug, 2) correct patient, 3) correct dose, 4) correct way of administration, 5) correct time of administration, and 6) correct documenting (Potter & Perry's, 2017).

Observation data of 5 patients in January 2020 at Anwar Medika hospital obtained drug results were not given on time (40%), patients did not get the drug because they could not get a prescription from a doctor (20%), nurses did not ask for the patient's signature or family, nurses only gave a checkmark after the patient was given the drug without a nurse's signature. Nurses who have not carried out according to operational standards of existing procedures will be at risk of errors in the administration of drugs because drug administration is a daily routine that is always done by nurses when caring for patients to endanger the safety of clients.

Efforts to improve the implementation of drug administration by Standard Operational Procedure is through Peer Group Supervision conducted between groups in the hospital room. This supervision can consist of 2-3 nurses. Cross-supervision between groups can improve the

quality of drug administration. This supervision will be carried out through 3 stages, namely the initial stage, the training stage, and the implementation-evaluation stage. Supervision is approximately 1-2 months.

Research by Siagian et al (2019), showed the supervise of the head of the room is related to the application of seven principles of correct drug administration. The nurse's leader can also optimize the implementation of supervising in the application of seven principles of correct drug administration.

Supervision is one of the directing functions in the management process, one of which has the goal to improve the quality of nursing services to clients to improve safety and satisfaction in clients. Clinical supervision involves a supportive relationship between supervisors and supervision that facilitates reflective learning and is part of professional socialization (Bifarin, Oladayo & Stonehouse, 2017). Supervision fosters a work environment that supports opportunities to reflect caring values, a commitment to raising standards of care, and the courage to challenge standards of care (Markey, 2020).

The health system in Indonesia still does not carry out proper clinical supervision and lacks an understanding of supervision. There are still many nurses who have the assumption that supervision is not the leader or manager to look for employee errors. This causes negative connotations when the leader conveys the word supervision, as well as the head of care who also does not understand properly about the implementation of supervision so that the nurse manager who has not carried out regular supervision to his employees.

The implementation of supervision is not only aimed at supervising whether all nursing staff performs their duties as well as possible, in accordance with the instructions or provisions that have been outlined, but also how to improve the ongoing nursing process. So, in the supervision activities of the entire nursing staff not as objects but also as subjects. Nurses are positioned as partners who have ideas, opinions, and experiences that need to be heard, appreciated, and included in nursing care (Bifarin, Oladayo & Stonehouse, 2017).

The purpose of this study is to find out the influence of Peer Group Supervision on improving the quality of drug administration.

METHODS

This study uses the quasi-experiment method with a pre-post test design only one group approach. The population is the head of the room and the team leader as well as the managing nurse. The sampling technique used is purposive sampling so that a sample of nurse leaders is obtained over the head of care in the room and team leader as many as 23 and nurse implementing 23. The instrument used refers to the academic supervise model consisting of 3 elements, namely educative, supportive and managerial. While the instrument of observation of drug administration refers to sop issued by the Ministry of Health of the Republic of Indonesia. Data collection is done before and after peer group supervision training. The study was conducted at Anwar Medika Sidoarjo hospital. Data analysis using the Wilcoxon signed-rank test.

RESULTS

Table 1 Characteristics of nurse leaders at Anwar Medika Sidoarjo hospital (n=23)

No	Variable	Category	Number	Percentage
1	Gender	Man	3	13
		Woman	20	87
		Total	23	100

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No	Variable	Category	Number	Percentage
2	Education level	Diploma	10	44
		Ners	13	56
		Total	23	100
4	Age	1. 20-25	0	0
		2. 26-30	10	44
		3. 31-35	7	30
		4. 36-40	6	26
		Total	23	100
5	Work length	1. 1-5 years	4	17
		2. 6-10 years	11	48
		3. 11-15 years	2	1
		4. >16 years	6	26
		Total	23	100

Table 1, shows that the lead nurses who were respondents by gender were the majority of women, which was 20 nurses (87%). The educational background is dominated by Ners which is 13 nurses (56%). Based on age, nurses aged 26-30 years as many as 10 nurses (44%) and the working period of nurses between 6-10 years as many as 11 nurses (48%).

Table 2 Understanding of nurse leaders about supervision before training and after training at Anwar Medika Sidoarjo Hospital (n=23)

No	Variable Understanding	Category	Number	Percentage
1	Pre	Good	0	0
		Enough	4	17
		Less	19	83
		Total	23	100
2	Post	Good	22	96
		Enough	1	4
		Less	0	0
		Total	23	100

Table 2, shows that the understanding of the supervision of nurse leaders who were respondents before training was 79% in the lack of theory, while after training showed 100% in the good category.

Understanding of the supervision of nurse leaders before and after training at Anwar Medika Sidoarjo Hospital
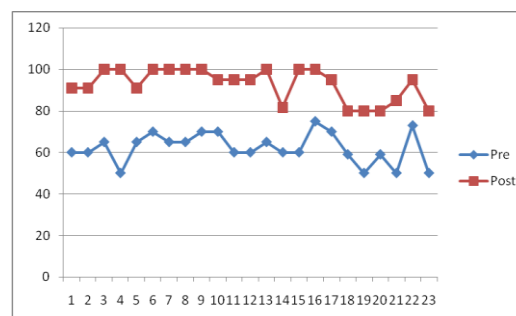

Table 4. Performance of nurses before and after training at Anwar Medika Sidoarjo Hospital (n=23)

No	Variable Performance	Category	Number	Percentage
1	Pre	Good	0	0
		Enough	16	70
		Less	7	30
		Total	23	100
2	Post	Good	23	100
		Enough	0	0
		Less	0	0
		Total	23	100

Table 4 shows that nurse performance before the training nurse leadership is 70% in the sufficient category, while after the supervisory nurse leadership shows 100% in the good category.

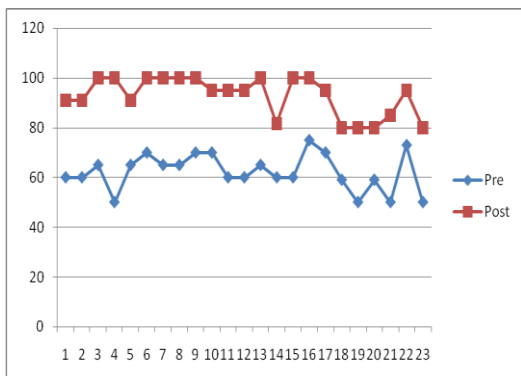Graph 2. Performance of nurses pre and post-training at Anwar Medika Sidoarjo Hospital

Table 5. Analysis of the influence of peer group supervision training on performance

Performance	Mean	Pean difference	p-value
Pre	62,2	30,6	0,000
Post	92,8		

*Significant at p-*value* <0.05

Table 5 shows that nurse performance scores performed before and after supervised training make significant differences. This is seen from the difference in the mean in the group of 30.6 points. The results of the statistical test were evidenced by a value (p = 0.000, α = 0.05) which showed there was an influence of peer group supervision on improving the performance of nurses in drug administration at Anwar Medika Sidoarjo Hospital.

DISCUSSION

The results showed that the quality of implementation of standard operating procedures for intravenous parenteral drug administration by the implementing nurse before and after supervise had a significant difference (p = 0.000). Before supervising the head of the room and the team leader, the performance of nurses in drug administration was mostly insufficient and fewer categories. After supervising training the performance of nurses is mostly in the good category. The managing nurse adheres to the operational standards of procedures seen from positively patterned relationships.

The peer group team guides nursing staff to comply with the SOP of intravenous drug administration. The managing nurse began to realize that work must be in accordance with Standard Operational Procedure guidelines in the hospital. The ability of the head of space as a leader has a very important role in improving the quality of intravenous drug administration. This is seen from the graph image that shows a straight comparison between the implementation of the supervising of the head of the chamber and the implementation of intravenous drug administration. The ability of the head of the room in carrying out supervision will have an impact on improving the quality of intravenous drug administration by the managing nurse compared to before receiving supervision training.

The results of this study support previous research in clinical supervision. Supervision has the potential to improve staff skills which will ultimately affect the achievement of the hospital's vision. Supervision is a tool to ensure or ensure the completion of tasks in accordance with goals and standards. The implementation of supervision is not only to monitor whether all nursing staff perform their duties as best as possible according to instructions or provisions but also how to improve the nursing care that is being provided to clients (Yuswanto et al., 2018).

A study showed that there was an influence on the performance of inpatient room nurses before and after clinical supervision training 0.048. Supervised training can improve knowledge, attitudes, and skills. Supervision includes educational, supportive, and managerial activities in the inpatient room, as well as improving the discipline, care, and care of nursing after

clinical supervision by trained cadres. (Ikbal et al., 2019).

Nursing supervision is useful for nurses to increase feelings, support, reduce professional isolation, reduce work and emotional exhaustion, increase job satisfaction and morale, develop professional practice and support in practice. Clinical supervision not only monitors whether all nursing staff is doing their job as well as possible according to procedures but also about how to improve the nursing process that is being implemented (Mohammadi et al., 2019).

Nursing supervision benefits nurses in terms of improving feelings, support, reducing professional isolation, reducing work and emotional exhaustion, improving job satisfaction and morale, and developing professional practice as well as support in practice. The implementation of clinical supervision is not only to monitor whether all nursing staff performs their duties as best they can as per the instructions or provisions outlined but also on how to improve the ongoing nursing process (Pinol, 2018).

Supervise training has opened up the insights of the head of the room and the team leader that the implementation of supervising is not done secretly to look for staff errors but must be communicated to staff and scheduled. This is important because the purpose of supervision is to measure staff performance is up to standard or not. If not, the head of the room must make a strategy to solve the problem instead of sanctioning nursing staff.

Supervision that is done well or effectively must have two skills, namely interpersonal skills and practical skills. Interpersonal skills are the main thing that must be owned by supervisors. Supervision activities will occur interpersonal relationships between supervisors and people involved in supervision. The practical skills required by a supervisor are to have high skills as a communicator. These skills include being an active listener, clarifying questions, and concluding conversations. Communication is one of the most important factors in supervision activities. A supervisor must master skills in communicating so that the implementing nurse understands supervising activities and does not cause conflict (Lynch, L., Hancox, K., Happel, B., & Parker, 2008).

Efforts to improve the achievement of nurse performance must then carry out supervision in a planned and scheduled manner, socializing repeatedly to the implementing nurse to comply with the standards that have been set.

CONCLUSIONS

Supervised training affects the performance of nurses in intravenous drug administration. Supervision activities can improve the ability of nurses to reach standards to improve the quality of nursing services. Supervision will train nurses to be responsible for the actions of nursing and provide a responsive response to problems that occur.

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