Quantitative Study of Risk Management Model in Emergency Nursing Care Quality

Yangyue Zheng [1, *]

[1] Second People's Hospital of Jiulongpo District, Chongqing 400052

* Corresponding Author. *Nurse*. E-mail: 417276621@qq.com

Abstract. *Objective*: Quantitative analysis and risk assessment of nursing quality for critical patients in emergency department. *Methods*: According to different clinical nursing schemes, 300 cases were randomly sampled from the data of local emergency severe patients from January 2018 to December 2018. 150 cases in the control group were routine nursing, 150 cases in the observation group were risk nursing, and the risk events, quality levels and disputes in the nursing process were quantitatively compared and analyzed. At the same time, comparative analysis was made with similar research results. *Results*: The total incidence of risk events in the observation group was 3.33%, which was lower than 17.33% in the control group. The evaluation values of nursing quality in the observation group were higher than those in the control group. The dispute rate in the observation group was 0, lower than 14.00% in the control group. The results of this study are consistent with those of other similar studies. *Conclusion*: Risk management model in emergency critical care can improve the nursing quality of emergency critical patients and reduce the risk and dispute rate.

Keywords: Risk management; Emergency nursing; Quantitative quality research

1. Introduction

In modern medical institutions, the application value of nursing work has been significantly improved, including assisting doctors to complete complex surgical work, giving patients guidance on physiological and psychological related problems, and controlling various complications, which are all the embodiment of the value of nursing work. With the enlargement of the influence scope of nursing quality, higher standards have been put forward for its management. Taking the severe ward as an example, the patient's condition is more critical, and the patient's condition changes rapidly, medical and nursing operations are more, and the incidence of various adverse events is higher. Nursing behavior belongs to the executor of specific work, which belongs to controllable factors in many nursing risks, so we need to strengthen the management of critical care behavior. [1, 2]

Risk management refers to a scientific management method that identifies, evaluates, measures, and deeply analyzes risk factors and effectively addresses the risk factors existing in each link to maximize safety and security. Nursing risk management model can reduce the occurrence probability of nursing risk by assessing, analyzing and formulating countermeasures for the risks in nursing work.[3]

In this study, we analyzed the effects of different nursing programs (regular nursing, risk nursing) in 300 cases of emergency patients in local hospitals from January 2018 to December 2018, using the method of comparative study to explore the application effect of nursing risk management in emergency care.

2. Materials and methods

2.1. Samples (Materials)

Analysis of 300 cases of emergency patients in some local hospitals from January to December 2018, according to the different programs used in clinical care, divided into 2 groups, the control group 150 patients with male to female ratio of 79:71, aged 19 to 78 years, average (44.70 ± 2.36) years old, the time from onset to emergency was 1 hour to 2.5 days, with an average of (21.75 ± 2.09)

hours; in the observation group, the ratio of male to female was 82:68, aged 19 to 75 years, mean (44.92 ± 2.66) years old. The onset time from the onset to the emergency was 1.5 hours to 2.5 days, with an average of (22.34 ± 2.23) hours; the baseline data of the 2 groups did not show a height difference (P > 0.05).

2.2. Research method

Through the nursing department's quality control records (including nursing quality ward rounds and administrative rounds records, error registration, meeting records, patient satisfaction survey records, etc.) and related records of medical departments and hospital offices, clinical care occurred in the past 3 years. Retrospective analysis of defects, disputes/complaints and disciplinary incidents. Divide care risks into care complaints/disputes (including service attitude, ward environment, hospitalization expenses, equipment maintenance, blood transfusion/infusion reaction, nurse patrol room, fall, suicide, theft, etc.), nursing defects (including performing treatment, specimen collection) , surgical equipment inventory, etc. and nurses disciplinary behavior (including off-the-job, medical ethics, etc.) three categories, the previous occurrence of nursing risk events according to different time and type of analysis, and based on the risk level and frequency of occurrence to determine its risk , and then identify the main problem of nursing risk.

In the study control group, routine nursing was selected. The nursing staff ensured that the patient's ward was clean and tidy, and the windows were regularly opened for ventilation, and the environment was kept quiet and the rest of the work was arranged reasonably. The observation group selects risk care on the basis of it: 1) Forms a nursing risk management team, divides the department nursing staff into several groups, selects one team leader for each group, clearly divides the duties of nursing staff, formulates specific rules, and conducts weekly communication. Yes, analyze the last month's nursing defects and discuss the development of corresponding measures, once a month to check. 2) The hospital arranges the nursing staff reasonably, strictly arranges the shift system, and divides it into morning, afternoon and night shifts, 24 hours a day, and matches according to the new and old energy level of the nursing staff; strengthens the risk awareness of nursing staff and strict training, including risks Identify, process, etc., master the routine processing methods, report possible adverse events and preventive measures, and conduct regular assessments. 3) Nursing staff strengthens communication with patients, maintains a good attitude of care, patiently informs patients and their families of the purpose of nursing operations, risks, etc., responsible nursing staff evaluates patient behavior, and provides targeted care to strengthen their understanding of nursing risks; Clinical nursing defects and experience sharing books, detailing the defects in the nursing process, analyzing the causes and recording the processing.

2.3. Clinical observation indicators and evaluation criteria

Patient Satisfaction: A survey of patient satisfaction was conducted using a self-made patient satisfaction questionnaire. The questionnaire included the attitude of the nursing staff, the level of professional knowledge, operational proficiency, and communication skills. The score was 100 points. The higher the score, the higher the patient's satisfaction, the dissatisfaction of 70 points or less, the basic satisfaction of 71~80, the satisfaction of 81~90, the satisfaction of 91 points and above, and the satisfaction of patients (patients) Number - number of patients who are dissatisfied) / number of patients × 100%.

Observed and compared the adverse events (violation, unclear observation, medication error), quality of care and complaints during the two groups of nursing. Nursing quality evaluation criteria: Prepare a quality assessment form, including risk assessment, patient management, service attitude, avoidance disputes, disinfection isolation and emergency response capabilities, with a score of 100 points, and the score is directly proportional to the quality of care.

Quality of care: The quality of care mainly includes the writing of nursing documents and the degree of standardization of nursing operations. The evaluation criteria are scored according to the scoring system of nursing "Code of Writing of Nursing Documents" and "Code of Practice for Nursing Techniques". The scores are 100 points. High, the better the quality of care. Nursing risk events: tube slippage, skin crushing, medication errors, and blockage of the tubing. [4]

2.4. Statistical methods

Data analysis was performed using statistical data analysis software SPSS21.0, with the (x ± s) reaction normal measurement data, the normal count data was calculated by the number of cases (n, %), and the inter-group condition of the normal measurement data was compared by t test, while the count data was compared with x2 test. (P values are all less than 0.05, while no more discussion in this study)

3. Results

3.1. Comparing the adverse events during the two groups of care

Compared with the control group, the total incidence of adverse events during the observation group was lower (Table 1).

Table 1 Compare adverse events between the nursing of 2 groups (n, %)

Risk events	Control group (n = 150)		Observation group (n = 150)		x^2	[a]P
	Number of cases	%	Number of cases	%		
Violation operation	7	4.67	0	0.00	1.3184	>0.05
Lack of communication	11	7.33	3	2.00	1.5763	>0.05
Unexplained condition	7	4.67	2	1.33	0.6461	>0.05
Medication error	1	0.10	0	0.00	0.0282	>0.05
Total	26	17.33	5	3.33[a]	7.7562	<0.05

3.2. Comparing the quality of care between the two groups

Compared with the control group, the quality of care in the observation group, such as risk assessment and patient management, was higher (Table 2).

Table 2 Compare the quality of nursing in 2 groups ($\bar{x}$ ± s , score)

Group (n= Number of cases)	Risk assessment	Patient management	Service attitude	Avoiding disputes	Disinfection isolation	Emergency response capability
Control group (n = 150)	83.81 ± 0.11	88.20±0.21	86.77±0.23	85.33±0.48	85.15±1.42	83.86±0.27
Observation group (n = 150)	96.07±1.10[a]	98.30±1.32[a]	96.42±1.92[a]	96.37±1.64[a]	97.20±2.45[a]	96.27±1.41[a]
t	73.2394	70.8393	46.0497	53.1305	34.9273	60.7412
[a]P	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

3.3. Compare the complaints of the 2 groups

There were no complaints in the observation group, the complaint rate was 0.00%, and 21 complaints occurred in the control group. The complaint rate was 14.00%. Compared with the control group, the observation group had an especially lower complaint rate.

4. Discussion

In recent years, with the advancement of society and the improvement of people's living standards, the requirements for hospitals have also been continuously improved. In addition, the nursing staffs in the emergency room and ward need to face unpredictable risks, increase the contradiction and conflict between doctors and patients, and bring new challenges to the quality of clinical care. Therefore, taking risk care plays a crucial role in ensuring patient safety [5-7].

Nursing risk management is a management model with functions such as identification, assessment and treatment of nursing risks. Applying it to intensive care management helps to control various nursing risk factors, thereby improving the overall quality of care.

Risk management can improve the quality of care and patient satisfaction, reduce the incidence of care risk events, and also protect the rights of both patients and health care workers.

It shows that the implementation of nursing risk management can significantly reduce the incidence of adverse care events. The reason: the implementation of nursing risk management can make the whole intensive care rounds more standardized, including rounds of ward rounds, ward rounds, risk prevention directions, etc. Under the unified planning, the risk prevention capability is greatly improved, thereby reducing the incidence of various adverse care events.

The results of this study are also consistent with other studies.[8]

4.1 Suggestions

1) To establish a nursing risk management organization. The risk management team is mainly to establish relevant risk prevention management mechanisms as well as operational rules and procedures, and identify and assess care risks;

2) To revise of clinical nursing risk management system and emergency plan; and

3) To train nurses' awareness and ability to prevent risks.

4.2 Deficiencies and countermeasures in implementing nursing risk management

Some nurses and even nursing managers still lack understanding of the purpose and requirements of nursing risk management. The management skills, especially the risk identification and reporting skills, need to be further familiar and mastered, resulting in a few nursing risk events failing to be effective in time. Ground to stop and avoid. In addition, in the case of patient complaints, many problems are closely related to medical and logistics systems, and it is difficult to obtain a fundamental and effective solution by the nursing system alone.

Therefore, in the future, while managing the risk of care by the system, people should still strengthen the various forms of nursing risk education and patient-centered nursing culture construction, and strive for the support of the hospital leadership to implement comprehensive hospital risk management. Ensure that care risk management works more effectively.

4. Conclusion

Through the comparative analysis of actual cases, it can be seen that the risk management mode in emergency critical care can improve the quality of care for emergency critically ill patients and reduce the risk and dispute rate. Difficulties and obstacles encountered in practice still require further research to facilitate an early resolution.

Statement

The program was approved by the Medical Ethics Committee, and the subjects voluntarily signed the consent form. After the emergency treatment, the condition was stable and the mental disorder was excluded.

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