

# Analysis of the Influence of Operating Room Detail Nursing Training on the Success Rate of Emergency Operation

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**Abstract:** Purpose: To explore the impact of operating room detail nursing training on the success rate of emergency surgery. Method: 190 surgical patients were selected as subjects and randomly divided into observation group and control group. The patients in the control group were treated with routine operating room dry top. The observation group was given the operating room detailed nursing training on the basis of routine emergency surgery. The surgical safety scores and the incidence of surgical complications were compared between the two groups. Result: The safety of the operating room in the observation group was  $(98.6 \pm 0.7)$ , which was significantly higher than that of the control group  $(90.1 \pm 0.9)$ , and the difference was statistically significant ( $t=72.6632$ ,  $P=0.0000$ ). The postoperative complication rate was 2.11% (2/95) in the observation group, which was significantly lower than that in the control group (8.42% (8/95)). The difference was statistically significant ( $P<0.05$ ). Conclusion: Operating room detail nursing training has a certain correlation with emergency surgery success rate. Operating room detail nursing training can improve the safety of emergency surgery and reduce the probability of complications.

**Keywords:** Operating room; Detail care; Training; Emergency surgery; Success rate

## 1. Introduction

Emergency surgery has the characteristics of complex disease, rapid development, and tight time. The mood of patients and their families fluctuates greatly, and the expectation of medical workers is great. Efficient preoperative preparation and high-quality surgical care are the key to improving the success rate of surgery and saving patients' lives<sup>[1]</sup>. In 2010, the Ministry of Health advocated the implementation of quality nursing services, aiming at consolidating basic nursing, patient-centered, deepening the connotation of nursing profession, providing patients with satisfactory care and providing satisfactory nursing services. The implementation of quality nursing services in the emergency department is of great significance for reducing the risk of nursing, improving the quality of care, ensuring the safety of patients, and promoting the harmony of nurses and patients. Since the implementation of quality nursing services in 2010, the emergency operating room has effectively improved the quality of surgical care and met the physical and mental needs of patients<sup>[2]</sup>. The operating room is an important place in the hospital. The nursing work in the operating room needs to ensure the safety of all the details. The attention to detail can effectively ensure the smooth operation of the operation. The detailed service directly reflects the level of nursing management in the hospital operating room, and directly affects the quality of nursing man-

agement. According to the data, many of the causes of most medical accidents are caused by a small detail, which eventually led to tragedy. These heart-rending results should alert the management staff of the operating room<sup>[3]</sup>. In the details, we must provide patients with humanized, rationalized and scientific services, and try to avoid medical accidents caused by such problems. Therefore, the analysis of the impact of operating room detail nursing training on the success rate of emergency surgery helps to improve the success rate of emergency surgery.

## 2. Survey Preparation

### 2.1. Data preparation

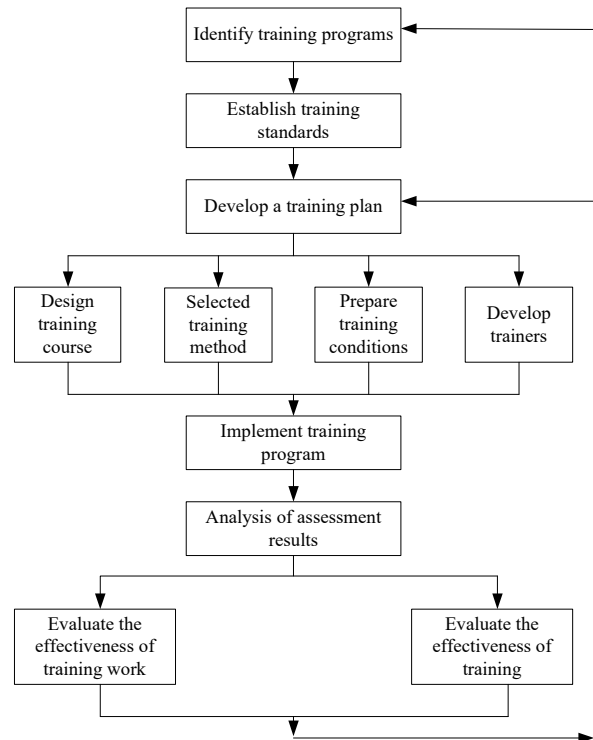
The study selected 190 surgical patients admitted to a hospital, and all 190 patients were randomly divided into experimental group (n=95 cases) and control group (n=95 cases). In order to verify the impact of operating room detail nursing training on the success rate of emergency surgery, the following comparative experiments were designed. The effect of operating room detail nursing training on the success rate of emergency surgery was divided into two groups. The emergency operation after detailed training was the experimental group, and the emergency operation without detailed training was used as the control group. Under the premise of controlling a single variable, the success rate of emergency surgery in the two groups was recorded separately<sup>[4]</sup>. Among

all patients, 60 patients underwent general surgery, 71 underwent orthopedic surgery, 16 underwent gynecologic surgery, 35 underwent oncology surgery, and 8 underwent neurosurgery. All patients had no cardiac dysfunction and pulmonary and renal dysfunction. In the experimental group, 48 males and 47 females, aged 16-69 years, the average age ( $43.2 \pm 14.2$ ) years old. 50 males and 45 females, aged 18-72 years, the average age ( $44.1 \pm 13.5$ ) years old. All patients were informed about the content of the study and volunteered to sign the informed consent form. The patient's basic data (age, gender, type of surgery) were observed and analyzed. There was no significant difference between the two groups ( $P > 0.05$ ). The data of the two groups were comparable<sup>[5]</sup>. The corresponding conditions were set for the two sets of experimental data. In order to ensure the fairness of the experiment, the parameters of the experimental group and the control group were consistent.

**2.2. Method preparation**

Patients in the control group were treated with routine operating room care: (1) Psychological care: Nursing staff should actively communicate with patients, and Taiwan and Taiwan should be decent in one line, so that patients can put down their psychological defenses. In addition, the nursing staff should pay attention to observe the patient's psychological and emotional changes, according to the specific circumstances of each patient for psychological counseling<sup>[6]</sup>. The nursing staff let the patient know the pathogenesis of the disease, the treatment plan, the top and the precautions, etc. The nursing staff also introduces the treatment conditions and doctor qualifications of the hospital-related diseases, so that the patient can establish the confidence of rehabilitation and relieve the patient's nervousness and anxiety. (2) Skin care: The duration of this operation is long, the position cannot be changed during the operation, and part of the patient's skin is pressed for a long time, which is easy to form pressure sores. Therefore, the nursing staff should check the integrity of the patient's compressed skin before starting the operation, and apply the skin moistening on the patient's bone protrusion, and use foam dressing to protect the patient's skin, and assist the patient to adjust to a comfortable position while ensuring the surgical field to prevent the patient's nerve skin from being compressed<sup>[7]</sup>. (3) Preoperative handover check: The nurse should prepare the appropriate surgical instruments and equipment before the operation to assist the anesthesiologist in preparing the anesthesia. After the patient is sent to the operating room, the patient's basic information is checked, and the handover form is filled according to the patient's preoperative preparation. (4) Postoperative care: After the operation is completed, the patient will be sent out of the operating room to hand over to other nurses, organize surgical instruments and equipment, clean the

operating table, and do the disinfection work. The experimental group is strictly in accordance with the detailed nursing training process, as shown in Figure 1 below:



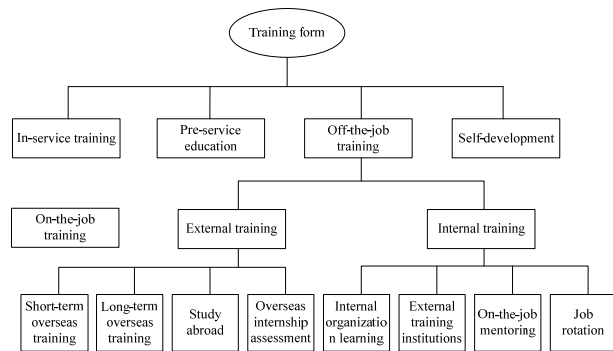
**Figure 1. Experimental group operating room detail nursing training process**

The patients in the experimental group took the operating room detail care on the basis of the control group. The details are as follows: (1) Develop operating room care process: After receiving the operation notice, the nursing staff visits the patient 1 day before the operation, and scans the patient's pathological data to understand the patient's operating room, past medical history, allergy history, infectious disease history and post-hospital related examination results. The patient's psychological status, vital signs, and physical activity were evaluated, and then the layers were decomposed according to the patient's specific condition and surgical plan. A complete set of operating room detailed nursing procedures was developed to clarify the nursing responsibilities of each person<sup>[8]</sup>. (2) Intraoperative thermal care: maintain the operating room temperature at 22-25 ° C, and minimize the exposed area of the patient's body under the premise of ensuring the surgical field. The liquid instilled to the patient during operation and the sodium chloride solution for rinsing should be heated to about 37 ° C by a liquid warmer. The gauze used during the operation should be soaked in warm saline, and the surgical incision should be covered with gauze during the operation pause. (3) Postoperative care: After the operation, the disinfectant

and blood residue on the patient's skin should be cleaned up to help the patient to organize the clothes. The nursing staff should properly arrange the various pipelines to keep the patient's oxygen, infusion and drainage smooth, and assist the staff to send the patient to the ward to hand over to the ward nurse, fill in the handover form and inform the ward nurse about the surgical procedure, type of anesthesia, drainage name, infusion, blood transfusion, and inform the family members of the relevant precautions<sup>[9]</sup>.

**2.3. Operating room details nursing training content**

The operating room is a relatively stressful and insecure environment for the patient. The detailed service of the operating room not only provides effective surgical treatment for the patient, but also provides a relaxed environment for the patient. Therefore, the main training forms for operating room detail nursing training are as follows:



**Figure 2. Main form of operating room detail nursing training**

According to its main form of training, the main training content of the experimental group is:

The embodiment of the details of care: The operating room is a relatively stressful and insecure environment for the patient. The detailed service of the operating room not only provides effective surgical treatment for the patient, but also provides a relaxed environment for the patient.

In the ideological education of medical staff: the details are slowly cultivated into a habit, an idea. First of all, the operating room nursing staff should have a deep understanding of the importance of the details in terms of ideas, and gradually establish a detailed and humanized service concept. It is possible to hold some lectures on topics related to the work, not only to improve the medical skills of medical staff, but more importantly, to cultivate the moral cultivation level of medical staff and to provide patients with the highest quality humanized service<sup>[10]</sup>. Especially when the patient is going to undergo surgery or treatment, the patient is suffering from physical pain, and the psychological pressure is constantly increasing. At this point, the medical staff will have a heartfelt smile

and a sincere and cordial concern about the words, which will bring a pleasant and trusting psychology to the patient and comfort the patient's nervous and anxious mood, stabilize the patient's nervousness and help the patient to successfully pass the psychological pressure.

In providing a therapeutic environment: it is important to keep the patient in a safe and comfortable environment before and after the patient's surgery. First, the patient must be placed in a safe environment, and the safety of the building's facilities needs to be fully met. Secondly, the patient must be comfortable. First of all, the operating room must have a good physical environment, from the temperature and humidity, noise and cleanliness of the details of the care staff<sup>[11]</sup>. During the operation, the operating room door must be closed, minimizing the entry and exit of medical personnel, and not allowing unrelated personnel to enter the operating room. The medical personnel must perform a comprehensive disinfection operation when entering the operating room. The operating room temperature is set to about 25°C, the relative humidity is about 50%, and the noise should be kept within 50 dB<sup>[12]</sup>. When the patient is on the operating table, the patient should be covered with a quilt in time to keep the patient in the most comfortable state.

The embodiment of the safe use of surgical instruments: First of all, the instruments that need to be used during the operation must be strictly disinfected and sterilized. Before the equipment is packaged and sterilized, two management personnel are required to check and sign, and it is absolutely forbidden to pass the unqualified equipment into the package<sup>[13]</sup>. Moreover, it is necessary to establish a base list of surgical instruments, including the name and specifications of the instruments, and sterilize them together with the instruments, and have corresponding records for the packagers and users to avoid errors. In the course of surgery, the use of medical instruments must be regulated carefully. For example, when performing caesarean section, you must pay attention to the use of scalpels and tongs. Be sure to carefully collect them and have enough time to carefully check the instruments. Instruments that need to be temporarily added during the operation need to be opened by the roving nurse and recorded in time. All the operation procedures emphasize the detailed inspection of the three parties, strictly abide by the operational norms, must not only be a formal walk through the field, should be carried out in a practical manner, is a powerful means to avoid medical accidents<sup>[14]</sup>. When performing surgery, the electric knife must be placed in order to avoid accidental burns or smashing the patient. According to strict regulations, the nurse must wash the table for 20 minutes in advance to prepare the item, and the orthopedics must be 30 minutes ahead of time.

In the embodiment of the nursing record: the nursing record should follow the principle of timely, accurate,

complete and clear. Where the signature of the person is required, the phenomenon of modern signing must not be carried out, and the alteration should not be carried out at will. The writing should be kept clear and clear, and the nursing records should be checked in time. Whether the contents on the record sheet are completed as required. Once problems are found, they should be resolved in a timely manner, and they should not be ignored or sheltered, and the consequences should be minimized<sup>[15]</sup>.

### 3. Data Processing

The safety of the two groups was evaluated using a questionnaire and the complications of the patients were counted. The study data was processed by SPSS18.0 statistical software, and the count data were compared by  $\chi^2$  test. The test results were expressed by (%). Measurement data were compared by t test, expressed as  $(\bar{x} \pm s)$ ,  $P < 0.05$ , the difference was statistically significant.

Comparison of operating room safety scores between the two groups: The safety score of the experimental group was  $(98.6 \pm 0.7)$  points,  $(90.1 \pm 0.9)$  points, the difference was statistically significant ( $t = 72.6632$ ,  $P = 0.0000$ );

The complication rate was compared between the two groups: the complication rate was 2.11% (2/95) in the experimental group and 8.42% (8/95) in the control group, the difference was statistically significant ( $P < 0.05$ ). As shown in Figure 3:

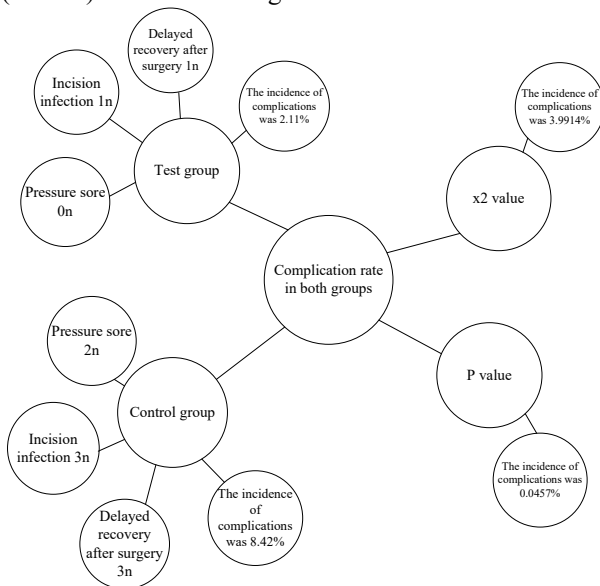


Figure 3. Comparison of complication rates between the two groups

#### 3.1. Comparison of data results

The experimental group and the control group simultaneously conducted an experiment on the success rate of emergency surgery, and recorded the success rate of

emergency surgery after 12, 24, 36, 48, and 72 operations. In order to avoid the interference caused by the sudden event to the experimental results, the experimental group and the control group have the same processing parameters, and the specific results are as follows:

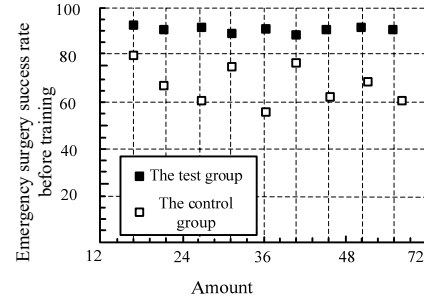


Figure 4. Emergency surgery success rate before training

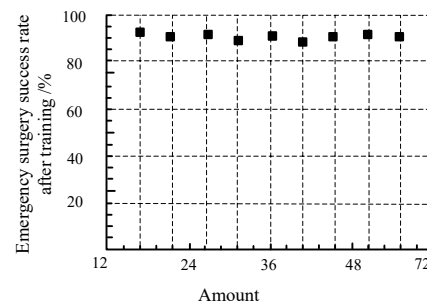


Figure 5. Emergency surgery success rate after training

### 3.2. Discussion of results

The quality of the operating room care service is closely related to the therapeutic effect of the operation and the life and safety of the patient. If the operating room caregiver does not pay attention to the details during the operation of the operating room, it may lead to aggravation of the patient's condition, prolong the patient's postoperative recovery time, and even lead to postoperative disability or death. In the survey, 190 surgical patients were selected for comparison experiments. The control group used routine surgical dry top mode to perform routine psychological care, skin care, preoperative cross-checking, and post-operative care. The study used the detailed nursing dry top on the basis of the implementation of the routine dry top, the operating room nursing process before surgery, the intensive care during the operation, and the postoperative care transfer. The results showed that the safety score of the experimental group was higher than that of the control group; the complication rate of the experimental group was lower than that of the control group, and the difference was statistically significant ( $P < 0.05$ ). The addition of detailed care to basic care can effectively increase the safety of operating room care and reduce the number of complications. In summary, the application of detailed nursing in the safety

of operating room can improve the safety of nursing, reduce the probability of complications, and has high clinical application value<sup>[16]</sup>.

#### 4. Conclusion

Operating room detail care refers to providing detailed and humanized services to patients during the service process, and is the most sincere expression of caring for patients. The level of hospital care in the operating room not only reflects the overall service level of a hospital and the service skills of nursing staff, but also reflects the moral culture of hospitals and nursing staff. And the detail care service emphasizes not only the qualified operation of a skill, but more importantly, the patient's human care and personalized service to maximize the patient's requirements. Providing patients with more than just the satisfaction of physical care, but also the comfort of the soul. Pay attention to details and decide success or failure. As the saying goes, "If someone can't sweep a house by himself, then he can't conquer the world", only in the details of excellence can have an overall excellent service level. The hospital should pay attention to details in the operation management of the operating room, provide detailed and humanized services, develop good work habits in the details, slowly make the details into a habit, and pay attention to every small link in the work. It is necessary to improve the management awareness of the operating room nursing management staff, and to do things according to the procedures, not only for the hospital, but also for the health of the patients. In summary, scientific and correct rehabilitation care is the key to the recovery of patients' functions. Let patients receive exercise in the establishment of a good relationship between nurses and patients. Effective communication can promote the establishment of nurse-patient relationship. Instructing patients to exercise also means having enough knowledge, which requires nurses to strengthen their studies and improve their professional level and cultivation. Nurses only have enough knowledge to gain the trust of patients and get positive cooperation from patients and their families.

#### References

[1] Zhang Zhen, Li Li, Jing Shu. Nursing management of "one-stop" hybrid procedures[J]. Journal of Interventional Radiology, 2017, 26(5):475-478.

- [2] Xu Mei, Pu Xia, Wang Huizhen. Establishment and practice of post management system for nursing staff in operating room[J]. Chinese Journal of Nursing, 2017, 52(9):1055-1058.
- [3] Feng Yinzhen, Hhuang Suzhen, Chen Weizhen. Nursing strategy and effect of operation room in total hip arthroplasty[J]. Guangdong Medical Journal, 2017, 38(s2):186-187.
- [4] Zhao Tiyu, He Guolong, Chen Hong. A new approach of operating room management in a general public hospital with multiple wholly-owned campuses[J]. Chinese Journal of Nursing, 2017, 52(12):1469-1472.
- [5] Hua Ying, Zhang Yaping. Application analysis of humanistic care in quality nursing service in operation room[J]. Chongqing medicine, 2017(A03):437-438.
- [6] Zhao Yongqing, Hu Mengqiang, Li Ruibo. Effect evaluation of comprehensive intervention on surgical site infections in operating rooms[J]. Chinese Journal of Nosocomiology, 2017, 27(7):1670-1672.
- [7] Wei Rongting, Wu Xiuhong. Study on construction and effect of closed loop supply chain in operation room[J]. Chinese Journal of nursing, 2017(7):780-784.
- [8] Yang Yufen. Application value of comfortable nursing in operation room nursing work[J]. Chongqing medicine, 2017(A02):324-326.
- [9] Qin Shuyu, Li Dongxue. Application of menu teaching in clinical nursing teaching of nursing undergraduates in operation room[J]. Chongqing Medicine, 2017, 46(11):1573-1575.
- [10] Gao Xinglian, Su Faan, Tan Xiaoyu. Clinical application and effect evaluation of logistics robot in distribution management of high value consumables in operating room[J]. Chinese Journal of Nursing, 2017, 52(9):1052-1054.
- [11] Zhou Gexia, Zhan Lilin, Zhang Aiqun. Practice of bar code management for implanted high-value consumables in operating room[J]. Chinese Journal of Nursing, 2017, 52(4):422-425.
- [12] Cao Wenping, Wang Xiling, Cao Yan. Clinical effect of humanized operation room nursing for patients with mild brain injury[J]. Chongqing medicine, 2017(A01):172-173.
- [13] Qi Hefang. Logistic regression analysis of correlation between operation room nursing management and nosocomial infection in general surgery patients[J]. Chinese Journal of endemic disease prevention, 2017(6):710-710.
- [14] Jiang Weijiao, Jiao Kai, Zhang Hongyan. Efficacy and safety of emergency coronary stenting with tirofiban in the treatment of acute ST-segment elevation myocardial infarction[J]. Chinese Journal of endemic disease prevention, 2017(6):657-658.
- [15] Dong Jiangnan, Fu Daiquan, Zhu Qingyun. Endoscopic catheterization of ileus tube combined enterectomy for the treatment of elderly patients with acute sigmoid volvulus:feasibility and efficacy[J]. The Journal of Practical Medicine, 2017, 33(24):4097-4101.
- [16] Qin Yingxian, Xing Li, Zhang Yue. Vulnerability analysis and preventive measures of nursing risk in interventional operation room[J]. Chongqing medicine, 2018(1):139-140.