

Application of Continuous Improvement Teaching Mode on Clinical Teaching of Emergency Nursing

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Abstract: *Emergency medicine has evolved into a critical component of modern medicine and health care. It represents a region's or country's scientific degree of clinical medicine and its capacity for comprehensive management. This article examines 90 nursing students and classifies them into traditional and improvement groups based on their teaching techniques. The regular group manages clinical teaching in the usual manner; the improvement group manages clinical teaching using the problem-oriented continuous improvement teaching approach. The enhanced group scored much better on professional operation and comprehensive competence than the traditional group, and the gap between the two groups was considerable. The reform of the emergency teaching mode stimulated nursing students' active learning and excitement for teaching, nurtured the quality of nimble, competent, and steady nursing students, who learned first aid skills and a unique talent for reflection and accomplished the teaching objectives. Simultaneously, instructors' theory, skills, awareness of teaching, and degree of teaching have been enhanced, and clinical nursing practice has been fostered. Assume that the continuous improvement approach is implemented to nursing education in the emergency department in place of the standard teaching paradigm. In such instance, it may significantly increase the quality of emergency teaching and the interns' happiness with their teaching instructors, which has a wide range of use in hospital clinical teaching management.*

Keywords: *Emergency Medicine; Teaching Mode; Continuous Improvement*

1. Introduction

The emergency department is overflowing with individuals experiencing crises, and others are in critical condition. Emergency treatment must be provided as quickly as possible by nurses, and family members must be present during an emergency. This demands both skilled and speedy nurses. Nursing students who practice in an emergency room may feel overwhelmed and upset by the intense and chaotic work environment (Gaberson, 2010). It is difficult to reconcile theory with practice during operation. These characteristics add to clinical teaching's distinctiveness. Teachers are pressed for time to teach, students are unclear of where to begin, and opportunities for hands-on practice are few. With the advancement of medical models and the continuous improvement of people's health requirements, the comprehensive capability of medical professionals is more strained. Clinical practice, as a vital component of nursing students' development of clinical ability, has a significant impact on nursing students' clinical nursing knowledge and practical skills, professional attitude, and overall clinical ability. Clinical practice instruction is routinely focused on students' mastery of fundamental nursing knowledge and skills, oblivious to the characteristics of nursing undergraduates' strong fundamental knowledge and limited clinical ability, as well as the lack of integration of first aid knowledge skills and clinical practice ability training, resulting in a lack of training in the face of difficult diseases (MA, 2007). Clinical abilities such as issue analysis, problem solving, and critical thinking are inadequate for making quick decisions and addressing patient care challenges in a clinical practice situation. As a consequence, there is a conflict between instructional hours and instructional competence. The new clinical teaching standards need the creation of an entirely new approach to clinical nurse education. The teaching strategy is constantly enhanced, especially via the identification, analysis, and resolution of obstacles that prevent undergraduate nursing students from gaining professional information and competencies.

To improve the standard for emergency care in our country, we must emphasize emergency medicine education and develop a professional team of emergency physicians of the highest caliber. Due to a serious shortage of emergency physicians and teachers, there is still a disconnect between

emergency medical education in my country and the rise of professional education elsewhere. The training of emergency medical workers has taken precedence (McCreight, 2000).

2. Methodology

2.1 General information

Taking nursing undergraduates as the regular group with 45 nursing students; another group of nursing undergraduates as the improvement group with a total of 45 nursing students. The two groups of students have the same practice time and rotation area. Teachers with emergency clinical teaching qualifications completed the clinical practice of the two groups of students.

2.2 Methods

The routine group follows the routine clinical nursing teaching management mode:

1) The overall teaching management is carried out by the general teaching teachers of nursing undergraduates in the emergency department; theoretical training and operation demonstrations are uniformly arranged according to the syllabus of the practice teaching; according to the shifts of the clinical teaching teachers, the allocation of clinical teaching teachers and undergraduate practice nursing students are carried out Clinical practice scheduling.

2) The clinical instructor is responsible for providing clinical practice guidance to undergraduate nursing students, including the introduction of emergency work procedures, clinical, technical exercises and explanations, explanation of nursing knowledge of common emergency diseases, and training on the use of common emergency equipment;

3) After the internship, a summary and assessment will be conducted.

The improvement group adopts a problem-oriented continuous quality improvement teaching mode, which includes the following aspects:

Analysis of clinical teaching problems: According to students' feedback on clinical teaching, analyze and summarize the existing problems in the clinical teaching of emergency nursing undergraduates; according to the existing problems, improve the teaching model in a targeted manner.

According to the clinical practice syllabus and the actual situation of emergency, the teaching plan is formulated by integrating basic nursing and emergency nursing. Contents include tetanus antitoxin skin test solution configuration, desensitization injection, rescue procedures for common emergencies, disease observation, writing of rescue records, use of electrocardiograph, bare-handed cardiopulmonary resuscitation, simple respirator, endotracheal intubation, chest compression device, ventilator, defibrillator, gastric lavage machine, etc., from shallow to deep, step by step. According to the content of the study, write a test question bank to check the nursing students' mastery of knowledge.

In addition, the improvement group should set up a full-time post of emergency teaching, responsible for the teaching management of nursing undergraduates during the clinical practice in the emergency department (Ramsay, 2006). Improve the emergency department teaching plan, combine the characteristics of emergency work and the internship time and clinical learning needs of nursing undergraduates, and infiltrate the clinical teaching plan into the teaching task to ensure that undergraduate nursing students can better complete their internship tasks. Implement the regional nursing undergraduate clinical tutor system: determine the admission qualifications of clinical practice tutors, select nurses to serve as a regional nursing undergraduate clinical practice tutors, and be responsible for the entire clinical teaching of nursing students in clinical practice in various regions. There should also be clinical practice tutors or teacher training: the emergency nursing teaching team will train the clinical practice tutors on clinical teaching methods and skills and guide the clinical teaching process from time to time (Dent, 2005).

In addition, admission education should be carried out so that nursing students are fully familiar with the culture of the emergency department, so that nursing students can be well-organized and orderly in the practice process. The regional clinical practice tutors complete the clinical practice teaching task according to the teaching plan, implement individualized teaching in combination with the learning needs of nursing students, actively answer the doubts of the nursing students during the practice process, and help the nursing students solve the clinical practice problems. Teachers should be

patient-centered, lead by example, care for students carefully, have solid theoretical knowledge, clear lecture ideas, skilled operation techniques, and rapid knowledge updates. Life and morality are closely related. Teachers must be trained by emergency specialist nurses, organize weekly learning of first aid knowledge for a disease, assess one emergency operation technique every month (Carlough, 2005), encourage self-study to reach the undergraduate level, and have rich theoretical knowledge and practical experience can teach. To strengthen the relationship between the department and the nursing department, teachers, and nursing students, the department has 1 to 2 teaching team leaders. The department recommends the team leader to be positive, serious, and responsible, with a bachelor's degree or above, strong teaching ability, and more than three years of work. The Nursing Department will organize nursing experts to evaluate them in speeches and issue letters of appointment. At the same time, the department encourages the teaching team leader to study for a master's degree in nursing and promotes the scientific research activities of the department. The teaching team leader trains the nurses in the department in advance so that they can master the teaching content, teach in a targeted manner, highlight the key points, and reduce blindness. At the end of the year, the teachers will be evaluated for excellence. The last elimination system will be adopted to strengthen the sense of responsibility and improve the overall teaching level. Using a combination of teaching methods in multiple forms while cultivating the basic theory of emergency care and specialized operations for nursing students, it is student-led to stimulate their enthusiasm for learning, help nursing students to establish clinical nursing thinking(Keenan, 2014), expand their knowledge, and consolidate their foundation; cultivate nursing students Emergency response-ability; give full play to the enthusiasm and subjective initiative of nursing students, and focus on cultivating their comprehensive clinical analysis ability. Implement weekly summary and outpatient summary, timely understand the problems existing in clinical teaching and improve it in time; implement a two-way evaluation system for teaching, clinical practice tutors or teaching teachers to make two-way evaluations of nursing students and nursing students to teachers, according to the teachers and students—feedback, continuous improvement of teaching mode.

2.3 Statistical methods

The data analysis software SPSS 26.0 was used to analyze the data. The measurement data were first tested for normality, and the normal distribution data were statistically described by ($\bar{x} \pm s$), and the t-test was used to analyze the groups. $P < 0.05$ indicated a difference.

2.4 Results

90 undergraduate nursing students were enrolled this time, including 45 in the regular group, including 35 female nursing students and ten male nursing students, and 40 in the improvement group, including 36 female nursing students and nine male nursing students. The conventional group was between 22 and 24 years old, with an average age of (22.82 ± 0.53) years old, and the improved group was between 21 and 24 years old, with an average age of (22.20 ± 0.72) years old. There were no differences in gender, age, and educational background between the two groups of nursing students ($P > 0.05$).

Table 1: Comparison of teaching effect between routine group and observation group

| Project | Number of cases | Theoretical knowledge | Skill | Comprehensive ability |
|-------------------|-----------------|-----------------------|------------------|-----------------------|
| Regular group | 45 | 81.48 \pm 3.24 | 89.48 \pm 3.12 | 87.63 \pm 3.12 |
| Improvement group | 45 | 83.66 \pm 3.52 | 91.68 \pm 3.58 | 90.54 \pm 3.78 |
| T value | | -0.532 | -5.764 | -6.742 |
| P-value | | 0.543 | 0 | 0 |

There was no difference between the routine group and the observation group in the score of the theoretical test of leaving the subject; there was a statistically significant difference in the score of the skill test and the comprehensive ability score between the two groups ($P < 0.001$).

3. Discussion

3.1 Characteristics of an emergency department

"Major emergency" is an unavoidable byproduct of clinical medicine's advancement. The fast growth of contemporary science and technology throughout the middle and late twentieth centuries supplied several technological methods for clinical medicine and aided in the advancement of clinical medicine (Toon, 2008), particularly therapeutic development. The evolution of treatments has resulted in the formation of specializations defined by organ systems. Emergency medicine is a very practical clinical specialty. Emergency physician education should emphasize bedside instruction and practical emergency practice. Capability to emphasize the following clinical features of emergency medicine:

(1) Emergency patients present with a sudden start and quick change, and they present at the hospital with significant unpredictability and often in batches (Weintraub, 2010). Emergency personnel should be swift, nimble, organized, prudent, and prompt in their treatment, completely reflecting the emergency characteristic of "time is life."

(2) Emergencies include a broad range of illnesses and complicated conditions. Emergency doctors must have a strong foundation in fundamental medicine, as well as considerable interdisciplinary theoretical and clinical understanding. Patients with complicated disorders must get a holistic understanding of the issue in order to assess, diagnose, and treat multidisciplinary diseases—intractable sickness.

(3) Emergency medicine is social in nature, temporal in nature, random in nature, complicated in nature, and conditional in nature (Alexander, 2018). It is a cross-professional, interdisciplinary discipline. Regardless of academic understanding or clinical experience, there are intrinsic vertical and horizontal linkages. Emergency doctors are expected to be diligent and accountable in their job, to think broadly and decisively, and to adhere to the four nos: no preconceived notions, no deceiving, no mindlessly adopting "unified" answers, and no doubts.

Historically, there was a distinct division between professors and students, that is, the "indoctrination" approach, in which teachers taught and students passively accepted, which often left students with macroscopic impressions and made it impossible to comprehend the subject's essence (Gore, 1991). While instructors should continue to provide traditional classroom instruction, they should concentrate on assisting students to work diligently on how to learn independently in order to nurture students' abilities to acquire information independently. We value the introduction of frontier knowledge in the subject, the bold introduction of diverse schools and viewpoints, the encouragement of students to make bold innovations, to advance new ideas and new insights that contradict textbooks and teachers, and the cultivation of students' critical awareness and research ability. Different requirements are imposed on students at various levels, and non-clinical majors, junior college students, and undergraduates studying clinical medicine are all addressed differently. Along with comprehensive mastery of emergency medicine's fundamental ideas, fifth-year medical students should be expected to learn a variety of regularly utilized emergency first aid procedures in clinical practice. Simultaneously with clinical practice, the seven-year medical students are grouped into many distinct themes and given emergency medicine lectures. The subject that must be learned should be properly described to minimize ambiguity.

3.2 Course Calendar

Concentrate on certain comprehensive information in the course layout, such as multiple organ dysfunction syndromes, multiple trauma (Bone, 1996). The on-call physician utilized the morning meeting's shift time to present the day's consultation challenges and the state of the most problematic patients in diagnosis and treatment. In conjunction with the views of numerous experts, diagnosis, and therapy, the full study of the problem aided in building the proper emergency thinking mode in medical students. Simultaneously, it helps medical students to comprehend recent advancements in some areas, therefore enriching their learning material and broadening their expertise. Doctors on call should develop medical students' abilities to manage difficulties encountered during emergency rescue and emergency ward visits, as well as changes in the patient's health. Instill a greater sense of "why" in medical students and push them to develop the ability to recognize changes in a patient's state over time and to carefully correlate patients' clinical manifestations with the fundamental theoretical information they have acquired. During ward rounds, students' interest should be piqued, and their capacity to identify and resolve emergency situations autonomously should be enhanced. Historically, medical

students acted only as "supporting roles," "observers," and "recorders," patiently waiting for everything and submissively following their professors.

3.3 Methods of instruction

It is up to instructors to investigate scientific and reasonable emergency clinical teaching techniques and strategies for improving the quality of emergency clinical teaching. Thus, clinical education in emergency medicine should make every effort to ensure that medical students acquire all necessary knowledge and optimize their practice efficacy. They stress the "completeness" of information and help medical students develop their capacity for thorough application and actual operation. Due to the limitations of traditional medical concepts, medical education ideas, and, in particular, the new characteristics of emergency clinical practice in the new era, clinical instructors should strive to guide medical students in integrating basic medical theories with the specific practice of emergency medicine and in teaching medical students about themselves over a period of years—experience and understanding of the integration of various disciplines. In terms of particular ways, while needles can be inserted into stitches in certain critical and difficult conditions, as long as the situation permits, needles may also be inserted into stitches. Medical students are permitted to make the first diagnosis in the presence of the instructor to hone their diagnostic abilities and build their bravery for emergency treatment. Simultaneously, great emphasis should be made to summarizing medical students' diagnoses swiftly in order to assist them in analyzing and mastering the identification of various illnesses. Simultaneously, it places a premium on the reference and application of contemporary science and technology, as well as contemporary medical accomplishments, and on the penetration and inspiration of medical students via humanities and social science knowledge.

Emphasizing the "newness" of methodologies, training, and cultivation of medical students' unique style of thinking the purpose of the so-called "newness" is to break free from routine and begin with the realities of emergency care. Collect potentially imperfect scenarios and train medical students in the application of extensive logical and dialectical thinking abilities to create reasonably rapid scientific conclusions. In certain circumstances, emergency patients may be treated empirically and then followed up with laboratory and auxiliary investigations to prevent the illness from progressing to an irreversible stage. Due to the fact that this method's invention embodies the personality traits of emergency medicine, the instructor should explain it thoroughly to ensure that medical students grasp it correctly.

4. Conclusion

The reform of the emergency teaching mode stimulated nursing students' active learning and excitement for teaching, nurtured the quality of nimble, competent, and steady nursing students, who learned first aid skills and a unique talent for reflection and accomplished the teaching objectives. Simultaneously, instructors' theory, skills, awareness of teaching, and degree of teaching have been enhanced, and clinical nursing practice has been fostered.

With a primary focus on the cause, demonstration and teaching of moral awareness and positive psychological qualities are carried out. In comparison to other clinical departments, the emergency department offers a diverse variety of expertise, although physicians are compensated comparatively little. Individuals are not only required to make several sacrifices, but they are also prone to conflict with patients and their relatives. As a result, the emergency department helps to strengthen medical staff's professional ethics—also it's one of the greatest locations to rehabilitate. Only with a high level of professionalism and psychological stability can a medical-style match be formed for the emergency department. This non-intellectual characteristic cannot be developed just via "words," particularly for medical students who have not yet graduated. Concerning pupils, it is primarily about requiring instructors to teach by example, infecting and influencing them by common instances, particularly practical activities. From another angle, the emergency department practice experience may not only help medical students improve their knowledge structure, but it can also serve as spiritual richness, enabling them to properly perform the holy duty of saving lives and assisting the injured in the future.

References

[1] Gaberson, K. B., & Oermann, M. H. (2010). *Clinical teaching strategies in nursing*. Springer publishing company.

- [2] MA, Z. P., YANG, L. N., & MA, A. (2007). *Application of continuous quality improvement in management of nursing education [J]. Chinese Journal of Nursing Education, 3.*
- [3] McCreight, C. (2000). *Teacher Attrition, Shortage, and Strategies for Teacher Retention.*
- [4] Ramsay, J., Denny, F., Szirotnyak, K., Thomas, J., Corneliuson, E., & Paxton, K. L. (2006). *Identifying nursing hazards in the emergency department: A new approach to nursing job hazard analysis. Journal of safety research, 37(1), 63-74.*
- [5] Dent, J. A. (2005). *AMEE Guide No 26: clinical teaching in ambulatory care settings: making the most of learning opportunities with outpatients. Medical teacher, 27(4), 302-315.*
- [6] Carlough, M., & McCall, M. (2005). *Skilled birth attendance: what does it mean and how can it be measured? A clinical skills assessment of maternal and child health workers in Nepal. International journal of gynecology & obstetrics, 89(2), 200-208.*
- [7] Keenan, C. (2014). *Mapping student-led peer learning in the UK. Higher Education Academy, 8.*
- [8] Toon, J., Meek, G., Vogel, A., Cappello, N., Felt, R., Robinson, R., & Thomas, S. (2008). *Research Horizons [Volume 25, Number 2, Winter/Spring 2008].*
- [9] Weintraub, N. L., Collins, S. P., Pang, P. S., Levy, P. D., Anderson, A. S., Arslanian-Engoren, C., ... & American Heart Association Council on Clinical Cardiology and Council on Cardiopulmonary, Critical Care, Perioperative and Resuscitation. (2010). *Acute heart failure syndromes: emergency department presentation, treatment, and disposition: current approaches and future aims: a scientific statement from the American Heart Association. Circulation, 122(19), 1975-1996.*
- [10] Alexander, D. (2018). *Natural disasters. Routledge.*
- [11] Bone, R. C. (1996). *Immunologic dissonance: a continuing evolution in our understanding of the systemic inflammatory response syndrome (SIRS) and the multiple organ dysfunction syndrome (MODS). Annals of internal medicine, 125(8), 680-687.*
- [12] Gore, J. M., & Zeichner, K. M. (1991). *Action research and reflective teaching in preservice teacher education: A case study from the United States. Teaching and teacher education, 7(2), 119-136.*