Post-print of a Survey on Newly Recruited Nurses' Perceptions and Needs Regarding Scenario Simulation Teaching for Acute and Critical Liver Diseases

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Abstract

Objective To investigate and analyze the cognitive status and needs of newly recruited nurses regarding scenario simulation teaching for critical liver diseases, and to provide a reference for further development of such training programs. Methods Using convenience sampling, a self-designed questionnaire on the cognition and needs of scenario simulation teaching for critical liver diseases was administered to 70 newly recruited nurses in the liver disease department of a hospital from January to December 2020. Results In the cognition survey of scenario simulation teaching for critical care, the top five highest-scoring items were: "Improving clinical critical care emergency skill operation ability" with a score of (4.43$±0.50), "*Enhancingclinicalemergencyexperience*"*withascoreof*(4.40±0.55), "*Strengtheningconsolidati* The results of skill training needs for scenario simulation teaching of critical care showed that "upper gastrointestinal bleeding" ranked first, with 91.43% of newly recruited nurses hoping to participate in related training, and the most appropriate training duration was 40-60 minutes. Conclusion Newly recruited nurses have a high overall cognition of scenario simulation teaching for critical liver diseases and a strong demand for training in critical care emergency knowledge and skills through scenario simulation. Departmental training should develop targeted scenario simulation training programs for critical liver diseases to further enhance the critical care emergency skills of newly recruited nurses, enable them to master operational procedures, and improve their emergency response capabilities.

Full Text

Preamble

Title: A Survey of Newly Recruited Nurses' Perception and Needs for Scenario Simulation Teaching in Critical Care Hepatology

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Abstract

Objective: To investigate and analyze the perception status and training needs of newly recruited nurses regarding critical care hepatology teaching, providing a reference for further implementation of scenario simulation training in this field.

Methods: Using convenience sampling, a self-designed questionnaire on perception and needs for scenario simulation teaching in critical care hepatology was administered to newly recruited nurses in the hepatology departments of our hospital in [month] [year].

Results: In the perception survey of scenario simulation teaching for critical care, the top five items with highest scores were: "Improving clinical critical care emergency skills operation ability" (score: [MATH_0]), "Enhancing clinical emergency experience" (score: [MATH_1]), "Strengthening theoretical knowledge of critical care medicine" (score: [MATH_2]), "Developing ability to connect theory with clinical practice" (score: [MATH_3]), and "Improving subjective initiative" (score: [MATH_4]). The skills training needs assessment revealed that "upper gastrointestinal hemorrhage" ranked first. [MATH_5]% of newly recruited nurses hoped to participate in related training, with [MATH_6] minutes being the most appropriate duration per session.

Conclusion: Newly recruited nurses demonstrated high overall perception of scenario simulation teaching for critical care hepatology and expressed strong demand for emergency knowledge and skills training in this area. Departmental training should implement targeted scenario simulation training programs for critical care hepatology to further enhance newly recruited nurses' critical care emergency skills, help them master operational procedures, and improve their emergency response capabilities.

Keywords: newly recruited nurses; critical illness; scenario simulation teaching; perception; needs; nursing education

Introduction

Critical care nursing is a comprehensive applied discipline based on modern medical science and nursing professional theory, focusing on the rescue, nursing, and scientific management of critically ill patients. Scenario simulation training improves nurses' work capabilities by simulating real work systems or scenes and completing relevant tasks according to established procedures. The application of scenario simulation in critical care nursing education can significantly enhance teaching effectiveness, allowing students to vividly experience nursing content while analyzing problems and making timely corrections, thereby deepening their understanding and mastery of nursing skills. To understand newly recruited nurses' perception and training needs for critical care scenario simulation, this study surveyed [MATH_7] newly recruited nurses in the hepatology departments of our hospital' s two campuses, providing a reference for further implementation of critical care scenario simulation teaching and training.

Materials and Methods

Study Subjects

Using convenience sampling, newly recruited nurses in the hepatology departments of our hospital in [month] [year] were selected as study subjects. Inclusion criteria: nurses who directly entered nursing positions after graduating from colleges or universities, with clinical work experience of less than one year, and who voluntarily participated after being informed about the study. Exclusion criteria: nurses unwilling to accept clinical scenario simulation training; those who had previously experienced clinical scenario simulation teaching. A total of [MATH_8] nurses were surveyed, including [MATH_9] females and [MATH_{10}] males, with an average age of [MATH_{11}] years. Family residence: [MATH_{12}] from urban areas, [MATH_{13}] from township areas, and [MATH_{14}] from rural areas. Education: [MATH_{15}] with associate degrees, [MATH_{16}] with bachelor' s degrees or above. Departments: [MATH_{17}] in hepatology internal medicine, [MATH_{18}] in hepatology surgery.

Survey Instrument

The research team developed the "Questionnaire on Newly Recruited Nurses' Perception and Needs for Scenario Simulation Training in Critical Care Hepatology" through literature review and expert discussion, tailored to our hospital' s actual conditions. The questionnaire comprised three parts: basic information of respondents, perception of scenario simulation teaching for critical care, and skills operation training needs. The perception section included [MATH_{19}] items using a 5-point Likert scale: "strongly disagree" (1 point), "disagree" (2 points), "neutral" (3 points), "agree" (4 points), and "strongly agree" (5 points). The clinical skills training needs section assessed newly recruited nurses' training needs for scenario simulation skills in critical care hepatology, including content

and training methods. To ensure quality and validity, an expert meeting was convened with [MATH_{20}] hepatology nursing experts at deputy senior level or above to evaluate the questionnaire content, yielding a content validity index of [MATH_{21}].

Survey Methods

A questionnaire survey was conducted to understand newly recruited nurses' perception of scenario simulation teaching in critical care hepatology. After obtaining approval from the nursing department and informing participants of the study' s purpose and significance, the survey was conducted on a voluntary basis. The "Wenjuanxing"online survey platform was used to anonymously guide participants to complete the questionnaire independently. Questions about the questionnaire were answered within the same day. A total of [MATH_{22}] questionnaires were distributed, with [MATH_{23}] valid questionnaires returned, yielding a valid response rate of [MATH_{24}]%.

Statistical Methods

All data were entered into Excel spreadsheets and verified by a second person before being analyzed using SPSS software. Measurement data were expressed as mean ± standard deviation ($\bar{x} \pm s$), and count data were expressed as percentages (%). Descriptive statistical analysis was performed.

Results

Perception of Scenario Simulation Teaching

The survey results showed that the top five items with highest scores in the perception of scenario simulation teaching for critical care were: "Improving clinical critical care emergency skills operation ability" (score: [MATH_{25}]), "Enhancing clinical emergency experience" (score: [MATH_{26}]), "Strengthening theoretical knowledge of critical care medicine" (score: [MATH_{27}]), "Developing ability to connect theory with clinical practice" (score: [MATH_{28}]), and "Improving subjective initiative" (score: [MATH_{29}]). Detailed results are presented in .

Skills Training Needs

The skills training needs assessment for scenario simulation teaching revealed that "upper gastrointestinal hemorrhage" ranked first. [MATH_{30}]% of newly recruited nurses hoped to participate in related training, with [MATH_{31}] minutes being the most appropriate duration per session. Detailed results are presented in .

Discussion

High Perception Scores for Scenario Simulation Teaching in Critical Care Hepatology

Previous research has integrated qualitative studies on the standardized training experience of newly recruited nurses domestically and internationally, cultivating their practical abilities through scenario simulation training and developing their adaptive capacity in different situations. Through the implementation of diversified training pathways, nurses' job competency has been enhanced. As current medical service models continuously evolve, traditional clinical teaching models, particularly in rescuing critically ill patients and responding to various emergencies, show notable deficiencies. Studies have demonstrated that continuous quality improvement teaching models enable students to master relevant skills through continuous problem identification, analysis, and resolution, thereby achieving more significant teaching outcomes. However, there is currently no unified standard for effectively, normatively, and scientifically training newly recruited nurses in critical care hepatology nursing skills, leading to inconsistent clinical teaching applications that fail to optimally guide newly recruited nurses in practice.

During clinical training, improving newly recruited nurses' comprehensive ability to solve clinical problems is a key focus of discussion. In recent years, the continuous increase in newly recruited nurses, coupled with a younger workforce, requires nursing educators to continuously optimize teaching methods and avoid traditional single bedside teaching approaches to adapt to the development of the medical era and ensure that newly recruited nurses truly benefit.

High Demand for Scenario Simulation Skills Training in Critical Care Hepatology

The survey results indicates that the ranking of training needs for critical care scenario simulation knowledge is as follows: upper gastrointestinal hemorrhage, liver cancer rupture and hemorrhage, hepatic encephalopathy, and liver trauma. Newly recruited nurses hope to continuously receive emergency skills training to acquire more knowledge about critical care hepatology, laying a solid foundation for clinical work and enabling better adaptation to clinical practice. Training should emphasize establishing a positive learning atmosphere among newly recruited nurses, fostering collaboration among colleagues, learning from each other' s strengths, and maintaining a positive work attitude.

Newly recruited nurses have varying educational backgrounds and personal qualities, and standardized training during their initial employment stage plays a positive role in facilitating their smooth role transition and improving job competency. The core competency in critical care nursing among newly recruited nurses in tertiary general hospitals needs further improvement. Newly recruited nurses are in the adaptation and transition period of their positions, as well as in the exploratory and adaptive stage of professional development. Scenario sim-

ulation teaching can effectively improve their stress response ability to critical care situations, awareness of emergency risk prevention, and quality of critical care nursing, helping them adapt better.

Improving newly recruited nurses' practical abilities, autonomous learning capacity, and comprehensive qualities is feasible. In recent years, the liver disease patients admitted to our hospital have increasingly complex conditions, with many transferred from other hospitals presenting difficult and complicated cases, mostly complex and massive liver cancers. The hospital needs to rationally allocate nursing human resources, and the requirements for newly recruited nurses' ability to handle clinical emergencies and critical incidents are increasingly high. Nursing managers need to develop reasonable teaching plans suitable for newly recruited nurses in hepatology departments based on actual conditions, compile specialized training manuals for critical care hepatology nursing, standardize critical care nursing training procedures, and conduct teaching and training for critical care hepatology using scenario-based cases to further improve critical care rescue skills. This approach guides students to continue in-depth thinking and learning after class, enhancing their interest in exploring problems and their desire for knowledge, ensuring that newly recruited nurses truly benefit from the training.

In summary, implementing scenario simulation teaching programs for critical care hepatology is crucial for the development and growth of newly recruited nurses. Training in scenario simulation for critical care should be strengthened for newly recruited nurses in hepatology departments, continuing education training systems should be improved, and the self-confidence, clinical decision-making ability, and work adaptability of newly recruited nurses should be continuously enhanced. The limitation of this study lies in the need for further improvement in methodological quality. This paper also explores some teaching methods and suggestions, providing guidance for the next step in constructing scenario simulation teaching case programs for critical care hepatology.

Conflict of Interest Statement: The authors declare no conflict of interest.

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Note: Figure translations are in progress. See original paper for figures.