ISRCTN34671997 https://doi.org/10.1186/ISRCTN34671997

Application of the BL-BOPPPS model in electric operating bed training for operating room nurses

Submission date
08/10/2024

Recruitment status
No longer recruiting

Registration date
08/11/2024

Overall study status
Completed

Last Edited
12/05/2026

Condition category
Surgery

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol
Background and study aims
One of the skills that operating room nurses (ORNs) need to master is operating an electric operating table (EOB). However, previous studies have shown that many ORNs lack sufficient knowledge and confidence in using an EOB, which can lead to problems during surgery. To address these challenges, we propose that the BL-BOPPPS model be applied to ORNs' EOB training.

Who can participate?
The participants were 200 ORNs who worked in a tertiary hospital in Beijing, China.

What does the study involve?
The participants were randomly assigned to either the experimental group or the control group. The experimental group received the EOB training based on the BL-BOPPPS model, while the control group received the traditional EOB training. The study was conducted in a simulated operating room in a nursing school.

What are the possible benefits and risks of participating?
Operating room nurse (ORN) participants may improve their skills, self-efficacy, and satisfaction regarding electric operating bed (EOB) operation.

Where is the study run from?
Hunan Provincial People's Hospital (The First Affiliated Hospital of Hunan Normal University) (China)

When is the study starting and how long is it expected to run for?
September 2021 to May 2022

Who is funding the study?
Natural Science Foundation of Science and Technology Department of Hunan Province (2023JJ60313,2023JJ60315) (China)

Who is the main contact?
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Contact information

Type(s)
Public, Scientific, Principal investigator

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Additional identifiers

Study information

Scientific Title
Application of the BL-BOPPPS model in electric operating bed training

Study objectives
The BL-BOPPPS model would result in higher electric operating bed (EOB) operation skills, self-efficacy, and satisfaction than the traditional training method

Ethics approval required
Ethics approval required

Ethics approval(s)
Approved 06/09/2021, Hunan Provincial People's Hospital (The First Affiliated Hospital of Hunan Normal University) (No. 61 of West Jiefang Road, Furong District, Changsha, 410005, China; +86 0731-82278047; kybgcp@163.com), ref: 2021 SRLR No.93

Primary study design
Interventional

Study design
Interventional randomized controlled trial

Study type(s)
Other

Health condition(s) or problem(s) studied
Operating room nurses

Interventions
The participants were 200 Operating room nurses (ORNs) who worked in a tertiary hospital in Beijing, China. The participants were randomly assigned to either the experimental group or the control group. The experimental group received the EOB training based on the BL-BOPPPS model, while the control group received the traditional EOB training. The study was conducted in a simulated operating room in a nursing school.

The participants were randomly allocated to the experimental group (n = 100) or the control group (n = 100) using a computer-generated random number table.

EOB training procedures
The intervention was the EOB training based on the BL-BOPPPS model. The training consisted of two sessions, each lasting for 90 minutes. The first session covered the basic knowledge and operation of the EOB, such as the structure, function, and safety precautions of the EOB. The second session covered the advanced operation of the EOB, such as the adjustment of the patient's position and angle according to the surgical needs. The training was delivered by two experienced ORNs who were trained in the BL-BOPPPS model and the EOB operation.
The BL-BOPPPS model was applied in the following way:
- Bridge-in: The instructors introduced the topic and the objectives of the training, and activated the learners' prior knowledge and motivation by asking questions, showing videos, and sharing stories related to the EOB operation.
- Learner outcomes: The instructors stated the specific and measurable learning outcomes of the training, and explained how they would be assessed and evaluated.
- Body of new information: The instructors presented the new information about the EOB operation using various methods, such as lectures, demonstrations, animations, and handouts. The instructors also highlighted the key points and the common errors of the EOB operation.
- Pre-assessment: The instructors assessed the learners' baseline knowledge and skills of the EOB operation using multiple-choice questions, short-answer questions, and case scenarios. The instructors provided feedback and clarification to the learners based on their performance.
- Participation: The instructors engaged the learners in active learning activities, such as discussions, quizzes, games, and simulations, to reinforce the new information and practice the EOB operation skills. The instructors also facilitated the learners' interaction and collaboration with each other and with the instructors.
- Post-assessment: The instructors assessed the learners' final knowledge and skills of the EOB operation using the same methods as the pre-assessment. The instructors compared the learners' pre- and post-assessment scores and provided feedback and reinforcement to the learners based on their improvement.
- Summary: The instructors summarized the main points and the learning outcomes of the training, and encouraged the learners to reflect on their learning experience and apply their EOB operation skills in their clinical practice.
The control group received the traditional EOB training, which was also delivered by two experienced ORNs who were not trained in the BL-BOPPPS model. The traditional EOB training also consisted of two sessions, each lasting for 90 minutes. The traditional EOB training followed a teacher-centered approach, which mainly relied on lectures and demonstrations to convey the information and skills of the EOB operation. The learners had limited opportunities to participate, interact, or receive feedback during the training.

Intervention Type

Behavioural

Primary outcome(s)
The EOB operation skills of the participants assessed by the instructors at baseline and 3 hours

Key secondary outcome(s)
The self-efficacy and the satisfaction of the participants assessed by the instructors at baseline and 3 hours

Completion date
31/05/2022

Eligibility

Key inclusion criteria
1. Having at least one year of working experience in the operating room
2. Having no prior EOB training or certification
3. Being willing to participate in the study

Participant type(s)
Employee

Healthy volunteers allowed
No

Age group
Adult

Sex
All

Total final enrolment
200

Key exclusion criteria
1. Having any physical or mental conditions that could affect the learning process
2. Being absent from the training or the assessment sessions

Date of first enrolment
05/03/2022

Date of final enrolment
05/04/2022

Locations

Countries of recruitment
China

Study participating centre
Hunan Provincial People's Hospital (The First Affiliated Hospital of Hunan Normal University)
No. 61 of West Jiefang Road,Furong District, Changsha,410005, China
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Sponsor information

Organisation
Hunan Provincial People's Hospital (The First Affiliated Hospital of Hunan Normal University)

Funder(s)

Funder type
Government

Funder Name
Natural Science Foundation of Science and Technology Department of Hunan Province (2023JJ60313,2023JJ60315)

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Data sharing statement to be made available at a later date

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		05/05/2026	12/05/2026	Yes	No
Study website		11/11/2025	11/11/2025	No	Yes