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The Situation-Background-Assessment-Recommendation model, combined with assessment on the clinical communication, clinical thinking and comprehensive clinical abilities of nursing interns

Submission date
25/08/2025

Recruitment status
No longer recruiting

Registration date
27/08/2025

Overall study status
Completed

Last Edited
17/11/2025

Condition category
Other

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

Plain English summary of protocol
Background and study aims
At present, nursing interns are facing three core competency challenges: first, the fragmentation of clinical communication leads to low efficiency of information transmission and potential nursing risks; second, the traditional teaching model suppresses active thinking, and the clinical decision-making ability is weak; third, summative evaluation ignores soft skills, such as humanistic care and health education. The Situation–Background–Assessment–Recommendation (SBAR) model, with its standardised framework, can help enforce a logical communication approach, reducing information omission. The mini-clinical evaluation exercise (mini-CEX) dynamically corrects capability deviations through multidimensional, real-time evaluation and feedback. This study aims to explore the short-term effects of the SBAR model combined with the mini-CEX on the clinical communication ability, clinical thinking ability and comprehensive clinical ability of nursing interns during 3 weeks of internship.

Who can participate?
Trainee nurses over 18 years old

What does the study involve?
The enrolled interns were randomly divided into a control group (traditional clinical nursing teaching) and an observation group (SBAR model + mini-CEX (with emphasis on basic knowledge of common clinical diseases and specialised nursing operations, language communication skills and key requirements for case nursing)) according to the random number table method.

What are the possible benefits and risks of participating?
The possible benefits are that better nursing interns' clinical communication, clinical thinking, and comprehensive practical skills have improved.
There are no possible risks.

Where is the study run from?
The First Affiliated Hospital of Anhui University of Science and Technology, China

When is the study starting and how long is it expected to run for?
September 2023 to October 2024

Who is funding the study?
Anhui Provincial Department of Education 2023 Higher Education Provincial Quality Engineering Project

Who is the main contact?
Xiaodan Xia, xiaxiaodan_xd@126.com

Contact information

Type(s)
Public, Scientific, Principal investigator

Contact name
Dr Xiaodan Xia

ORCID ID
https://orcid.org/0009-0006-7571-6072

Contact details
No. 15, Fengxia Road, Changfeng County
Hefei
China
231131
+86 15395546467
xiaxiaodan_xd@126.com

Additional identifiers

Protocol serial number
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Study information

Scientific Title
Effect of the Situation-Background-Assessment-Recommendation model combined with the mini-CEX assessment on the clinical communication, clinical thinking and comprehensive clinical abilities of nursing interns

Study objectives
The combined SBAR model and mini-CEX assessment may enhance nursing interns' clinical communication, clinical thinking and comprehensive practice abilities.

Ethics approval required
Ethics approval required

Ethics approval(s)
Approved 21/10/2023, Ethics Committee of The First Affiliated Hospital of Anhui University of Science and Technology (No. 203, Huaibin Road, Tianjia'an District, Huainan, 231131, China; +86 0554-3320335; hnsyykyc@163.com), ref: 2023-KY-HL001-001

Primary study design
Interventional

Study design
Single-center single-blind cluster randomized controlled trial

Study type(s)
Prevention, Other

Health condition(s) or problem(s) studied
Training and competency assessment of nursing interns

Interventions
Control group – the interns in the control group received one-on-one teaching using the traditional clinical nursing teaching programme. Interns received introductory education after entrance, familiarising themselves with the ward environment, nursing routines for common clinical diseases, responsibilities of each shift and an understanding of nursing rules and regulations. Under the guidance of the supervising teacher, interns jointly completed the overall primary nursing work (e.g. basic nursing, specialised nursing, psychological nursing, health education) and wrote nursing cases.
Observation group – the observation group adopted the teaching method of the Situation-Background-Assessment-Recommendation(SBAR) model combined with mini-CEX assessment, with emphasis on basic knowledge of common clinical diseases and specialised nursing operations, language communication skills and key requirements for case nursing.

The stages were as follows:
(1)The SBAR model combined with mini-CEX assessment teaching group was established: the head nurse was the group leader, the department teaching secretary was the vice-chairman and the members were composed of 3–5 nurses with a bachelor's degree or above, 'competent nurse' or above and >3 years of nursing teaching experience.
(2)Teacher training was undertaken: the project leader conducted unified training for the members of the teaching team. The training content mainly included the concept, characteristics and application of the SBAR model. The team leader combined the typical cases of the department to analyse the specific application of the SBAR communication model and the mini-CEX assessment precautions. Teachers conducted SBAR scene simulation exercises in groups.
(3)The SBAR model combined with mini-CEX assessment teaching:
(i) theoretical explanation – the internship time of each group of nursing interns was 3 weeks. The observation group undertook SBAR communication model learning on the first day of admission. The vice-chairman conducted centralised theoretical teaching for new interns, issued the 'SBAR assessment form'and familiarised the interns with the contents of the table, including 'S' (current situation – general information, such as patient name, age, gender and main diagnosis), 'B' (background – current main symptoms and signs, treatment and nursing measures, past history and personal history), 'A' (assessment – main causes and potential causes of

symptoms and signs) and 'R' (recommendation – recommended care measures). Each intern arranged a fixed teacher to implement one-to-one teaching, focusing on the application status of the SBAR model in key nursing links in clinical practice, such as operation/ward transfer handover and disease reporting, and organised discussions among nursing students. The mini-CEX assessment teaching model was introduced, and the scoring items, specific standards and implementation methods of the scale were explained in detail.
(ii) case teaching (the second week) – for the implementation of case teaching, the 'one-on-one teacher' selected a specialist case every day, guiding the intern to the bedside to observe the patient's condition, understand the patient's physical and psychological status and evaluate the patient's current nursing risks. Under the guidance of the teacher, the intern used the SBAR assessment form to communicate with the patient, collect and evaluate the medical history and make a brief record. Every Friday afternoon, the departmental teaching secretary conducts a 1–2-hour session of focused guidance for interns, centered on 2–3 specialized knowledge points. The core objective is to promptly address the problems interns encounter in applying the SBAR model, thereby facilitating their rapid improvement.
(iii) teaching assessment (third weekend) – the teacher assigned one patient to each intern. The intern was asked to apply the SBAR communication model to care for the patient independently. The teacher first used the mini-CEX assessment scale to evaluate the intern, and the teacher evaluated the intern from the aspects of nursing assessment, nursing examination, humanistic care, clinical communication, nursing problems and health education and instructed the intern to optimise the comments. At the end of the third week, the clinical teaching assessment was performed on the intern. The theoretical knowledge, operational skills assessment, clinical communication ability and clinical thinking ability of the two groups of nursing interns after the intervention were compared. The clinical comprehensive ability and teaching satisfaction were assessed to evaluate the teaching effect.
(4)Teaching summary: the teachers reported the problems existing in the teaching of the SBAR model combined with mini-CEX assessment, and the vice group leader and the group leader summarised them to facilitate continuous improvement of the teaching work.

The specific teaching plan for the SBAR model combined with mini-CEX assessment was as follows:
(I) Implementation of the teaching plan:
(i) S (situation) – understand the current status of interns and grasp the key teaching points
(ii) B (background) – analyse the relevant factors in the key teaching points
(iii) A (assessment) – sort out the key and difficult content in teaching, and evaluate using the mini-CEX assessment scale
(iv) R (recommendation) – identify, analyse and solve related problems based on the results of the assessment.

(II) Implementation of the individual nursing plan:
(i) S (situation) – understand the current condition of the patient and identify the main existing problems
(ii) B (background) – analyse physical, psychological and other factors based on the problems
(iii) A (assessment) – clarify the key points of the observations based on the current condition and existing problems of the patient
(iv) R (recommendation) – develop appropriate nursing measures and provide nursing interventions.

The 3-week assessment endpoint was selected to capture the immediate effects of the structured SBAR–mini-CEX intervention cycle. This timeframe allows for two complete iterations

of the SBAR training loop, minimising confounding from long-term rotations. The mini-CEX evaluations during weeks 1–3 served formative feedback purposes, while the week-3 scores quantified short-term competency progression.

Intervention Type
Behavioural

Primary outcome(s)
The following primary outcome measures are assessed on the first day and third weekend of enrolment:
1. Assessment of theoretical knowledge and operational skills was measured using a standardised written assessment (maximum: 100 points) and an operational assessment. Each skill was scored according to the Standard Rating Form (100 points), with higher scores indicating better teaching effectiveness
2. The clinical communication ability of interns was measured using the Nurses' Clinical Communication Ability Scale
3. The clinical thinking ability of interns was measured using the Clinical Thinking Ability Teaching Assessment Scale
4. The comprehensive clinical ability of interns was measured using the mini-CEX assessment scale

Key secondary outcome(s)
There are no secondary outcome measures

Completion date
31/10/2024

Eligibility

Key inclusion criteria
1. Aged ≥18 years
2. Junior college or undergraduate degree
3. Completed basic theory and skills courses
4. Internship period of ≥8 months
5. Provided informed consent and voluntarily participated in this study
6. Normal cognitive function

Participant type(s)
Learner/student

Healthy volunteers allowed
No

Age group
Adult

Lower age limit
18 Years

Upper age limit

60 Years

Sex
All

Total final enrolment
405

Key exclusion criteria
1. Those who repeated a course
2. Those with mental disorders or cognitive impairments

Date of first enrolment
30/09/2023

Date of final enrolment
01/10/2024

Locations

Countries of recruitment
China

Study participating centre
The First Affiliated Hospital of Anhui University of Science and Technology
No. 1 Renmin North Road
Huainan
China
232001

Sponsor information

Organisation
Anhui University of Science and Technology

ROR
https://ror.org/00q9atg80

Funder(s)

Funder type
Government

Funder Name
Anhui Provincial Department of Education

Alternative Name(s)
Anhui Department of Education, , Department of Education, Anhui Province, Department of Education of Anhui Province, Educational Commission of Anhui Province

Funding Body Type
Government organisation

Funding Body Subtype
Local government

Location
China

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not expected to be made available

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		13/11/2025	17/11/2025	Yes	No