ISRCTN10598469 https://doi.org/10.1186/ISRCTN10598469

The application of the spot the difference teaching method in clinical skills training for residents

Submission date	Recruitment status	[_] Prospectively registered
30/03/2022	No longer recruiting	[X] Protocol
Registration date	**Overall study status**	[_] Statistical analysis plan
02/04/2022	Completed	[X] Results
Last Edited	**Condition category**	[X] Individual participant data
03/05/2024	Other	

Plain English summary of protocol

Background and study aims
Clinical skill training (CST) is indispensable for first-year surgical residents. It can usually be carried out through video-based flipped learning (FL) within a web-based learning environment. However, it was found that residents lack the process of reflection, blindly imitate results and lose interest and passion for learning in the traditional teaching pattern. The teaching method of "spot the difference" (SDTM), which is based on the fundamentals of the popular game of "spot the difference," is designed to improve students' participation and reflective learning during skill training. This study aims to evaluate this novel educational model's short-term and long-term effectiveness for surgical residents in China.

Who can participate?
First-year residents who require a 3-month rotation in the head and neck surgery department

What does the study involve?
Participants are randomly allocated into SDTM or traditional FL (control) groups. Their clinical skill performance is assessed with validated clinical skill scoring criteria.

What are the possible benefits and risks of participating?
The experimental group may achieve better learning outcomes than the control group. The possible risk is the experimental group may fail to improve performance.

Where is the study run from?
West China Hospital, Sichuan University (China)

When is the study starting and how long is it expected to run for?
May 2019 to September 2020

Who is funding the study?
Investigator initiated and funded

Who is the main contact?
Wen Li
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Contact information

Type(s)
Public

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Additional identifiers

Study information

Scientific Title
The application of the spot the difference teaching method in clinical skills training for residents: a prospective controlled trial

Study objectives
The novel educational model's short-term and long-term effectiveness is better than the traditional method for surgical residents.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Approved 29/11/2019, the Institutional Review Board and Ethics Committee of the West China Hospital of Sichuan University (37 E Guoxue Alley, Chengdu, Sichuan, 610041, People’s Republic of China; +86 (0)2885422851; huaxilunli@163.com), ref: not applicable

Primary study design
Interventional

Study design
Prospective controlled trial

Study type(s)
Other

Health condition(s) or problem(s) studied
Medical education (clinical skill training for first-year surgical residents)

Interventions
A total of 87 residents are divided into eight subgroups in the order of rotation, and the subgroups are randomly sorted into either a traditional teaching group (the control) (n =42) or an experimental group (n = 45) using a web-based randomization program. All the residents watch the teaching video before class and then review the material (flawless and flawed) in class. The total duration of intervention and follow-up is 1 year.

Intervention Type
Behavioural

Primary outcome(s)
Performance (score) is measured using scoring criteria standards formulated following the 2020 China medical licensing examination at baseline, 3, and 12 months

Key secondary outcome(s)
Pass rate of medical licensing examination (MLE) measured by collecting the MLE performance (<60 points is considered to be unqualified) at 12 months after training

Completion date
30/09/2020

Eligibility

Key inclusion criteria
1. First-year residents who did not rotate to other surgical departments
2. Obtained a bachelor's degree in medicine

Participant type(s)
Health professional

Healthy volunteers allowed
No

Age group
Adult

Sex
All

Total final enrolment
87

Key exclusion criteria
1. Residents who had rotated to other surgical departments before the study
2. Senior residents (working time ≥1 year)
3. Residents with a graduate degree
4. Residents who have obtained the qualification certificate of a clinical practitioner

Date of first enrolment
30/09/2019

Date of final enrolment
20/10/2019

Locations

Countries of recruitment
China

Study participating centre
West China Hospital of Sichuan University
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Sponsor information

Organisation
West China Hospital of Sichuan University

ROR
https://ror.org/007mrxy13

Funder(s)

Funder type
Other

Funder Name

Investigator initiated and funded

Results and Publications

Individual participant data (IPD) sharing plan
The raw data were deposited into the Mendeley Data dataset (https://data.mendeley.com/datasets) at https://doi.org/10.17632/dfrxj839p8.1

IPD sharing plan summary
Stored in publicly available repository

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		14/07/2022	15/07/2022	Yes	No
Basic results			24/08/2022	No	No
Dataset		14/07/2022	03/05/2024	No	No
Protocol file			24/08/2022	No	No