



UNIVERSITÀ DEGLI STUDI
DI GENOVA

HIGH FIDELITY SIMULATION OF CINICAL EMERGENCY: A SURVEY IN MEDICAL STUDENTS, PHYSICIANS AND NURSES

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HIGH-FIDELITY SIMULATION



- Improve learning activities;
- Used to test the effects of new therapeutic approaches;
- To test the exposure to uncommon clinical scenarios;
- To test the assessment of knowledge.



Training by using realistic scenarios can lead to comparable emotions occurring in the real clinical scenario, **enhanced by repetition and feedback**, further improving technical and non-technical skills.

AIM OF THE STUDY



The **primary end-point** of the study was to investigate the role of Hi-Fi simulation in clinical emergency, assessing by a postal survey:

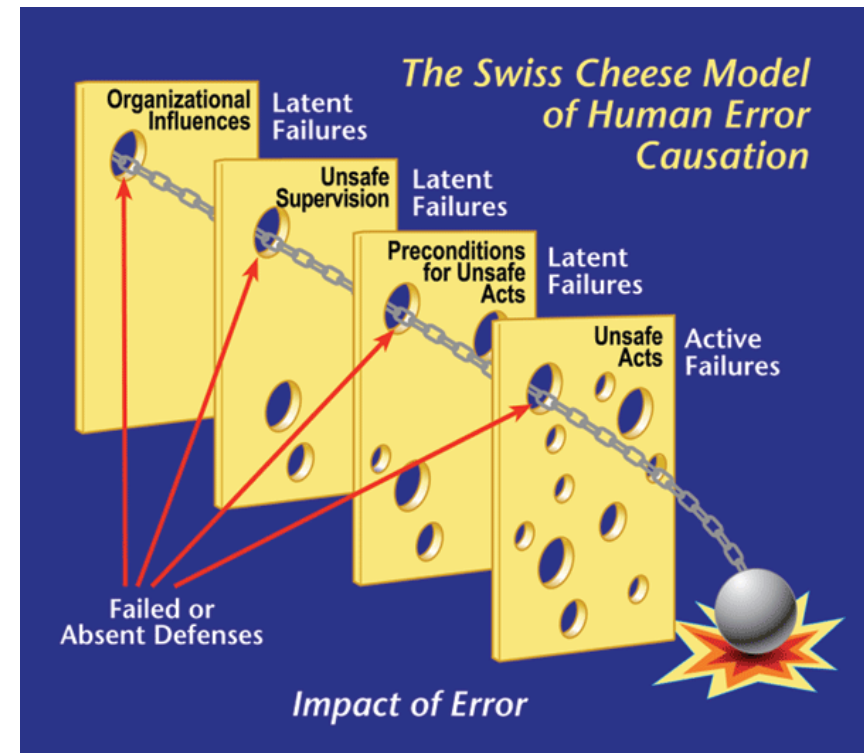
- 1) the perception of professional healthcare in intensive care unit (ICU)
- 2) the needs of further knowledge and skill acquisition.

The **secondary end-point** was the evaluation of the training and clinical management of medical students on the scenario-based learning.

CRISIS RESOURCE MANAGEMENT



1. Know the environment
2. Anticipate and plan
3. Call for help early
4. Exercise leadership and followership
5. Distribute the workload
6. Mobilize all available resources
7. Communicate effectively
8. Use all available information
9. Prevent and manage fixation errors
10. Cross (double) check
11. Use cognitive aids
12. Re-evaluate repeatedly
13. Use good teamwork
14. Allocate attention wisely
15. Set priorities dynamically





An administered questionnaire with structured questions was sent to eligible participants.

The questionnaire was designed and hosted on the “Survey Monkey” website.



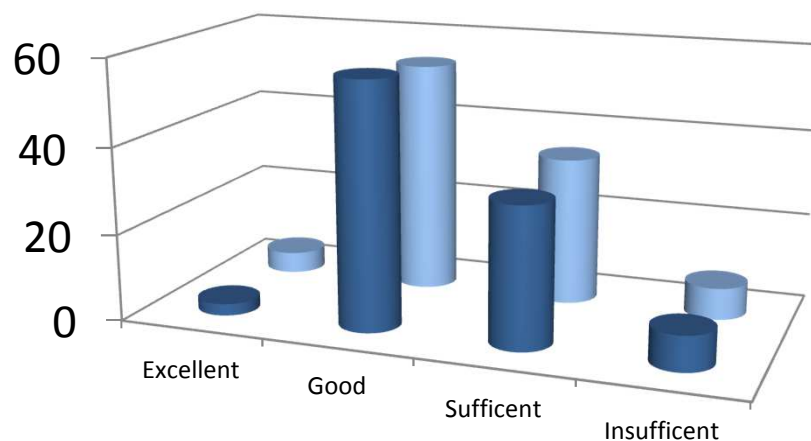
Three level of experience:

- **medical staff**, including physicians and nurses, with five to thirty years of working experience in ICU (M) (N=37/58)
- **residents** in anesthesia and intensive care (R) (N=42/54)
- **medical students** at the last year of the medicine's degree course who participated at emergency class (S) (N=128/250)

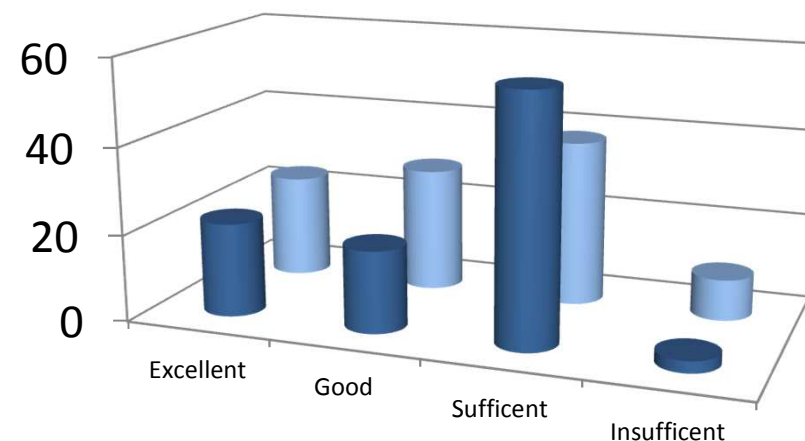
RESULTS (Medical staff & Residents)



Know the environment



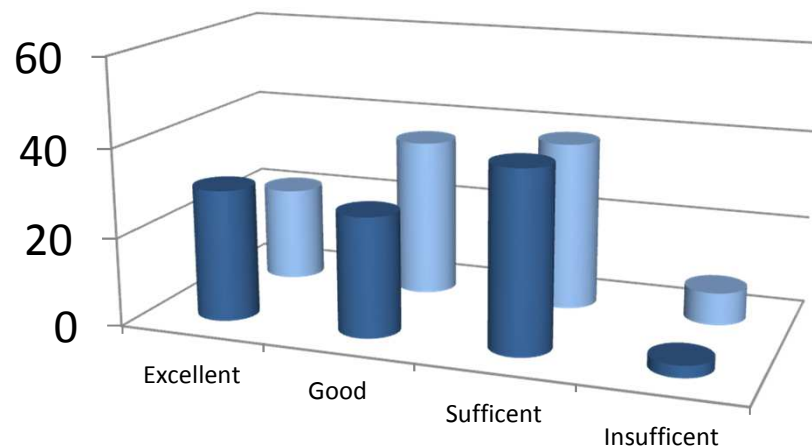
Exercise leadership and followership



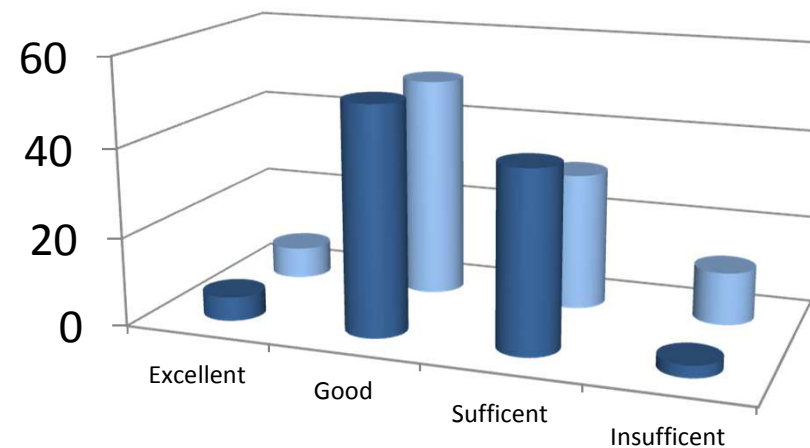
■ M

■ R

Distribute the workload



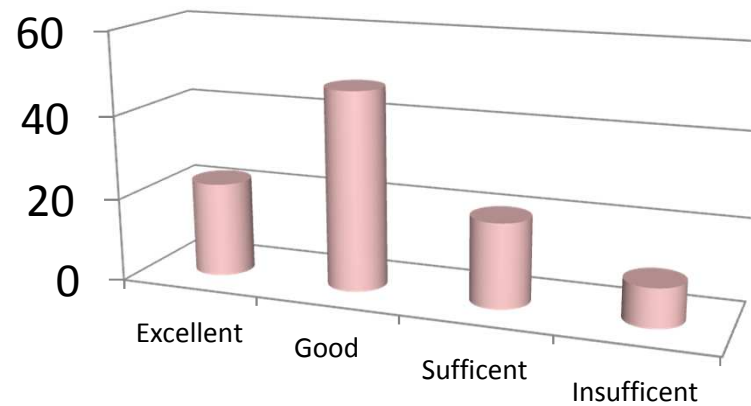
Use cognitive aids



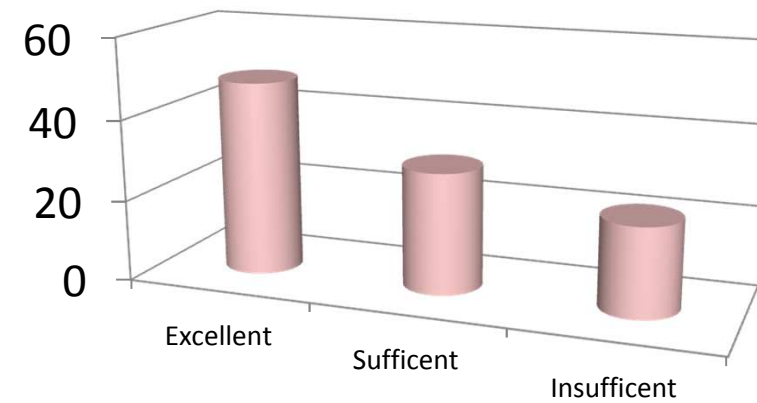
RESULTS (Students)



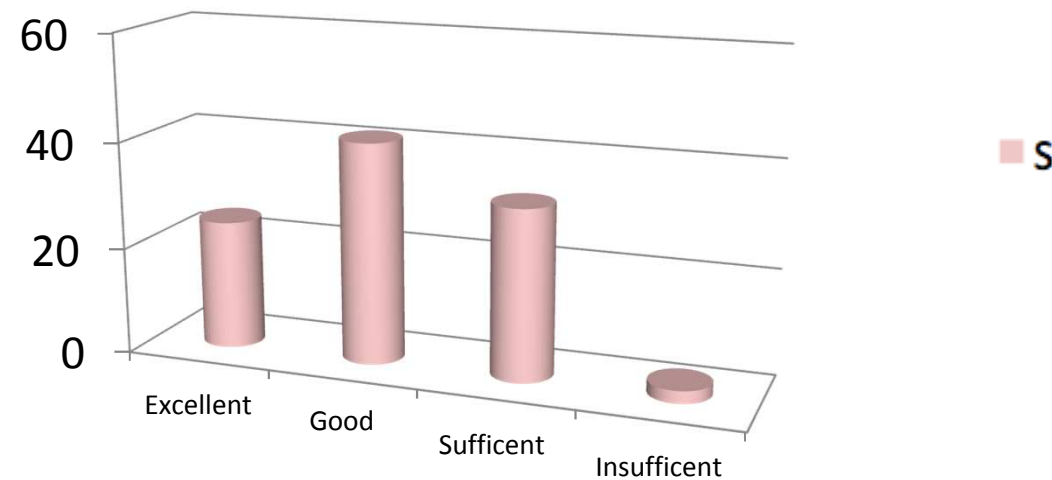
Exercise leadership and followership



Distribute the workload



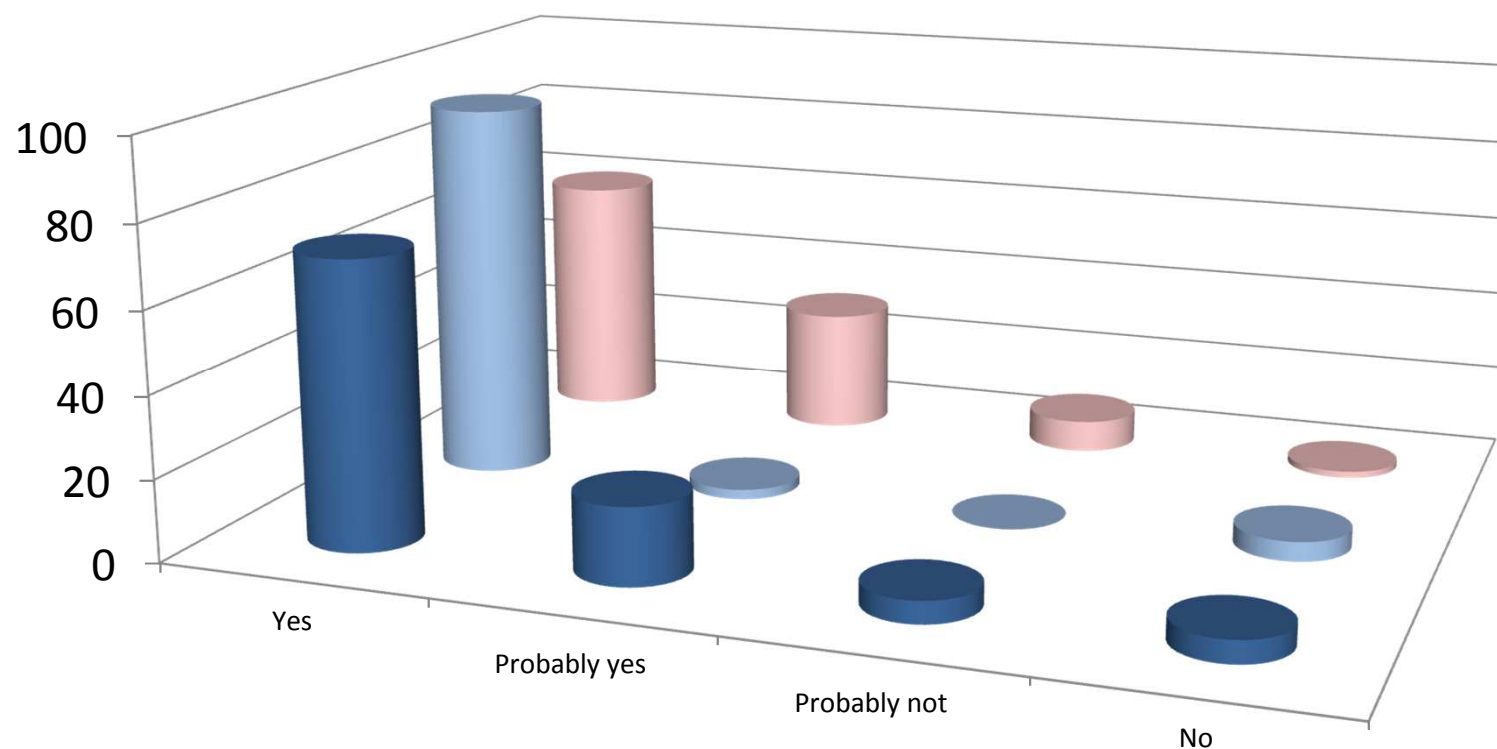
Prevent and manage fixation errors



RESULTS (Medical staff, Residents & Students)



Desire to attend other courses



	Yes	Probably yes	Probably not	No
■ M	70,27	18,92	5,41	5,41
■ R	92,86	2,38	0	4,76
■ S	60,16	30,47	7,81	1,56

CONCLUSIONS



- Major weaknesses related to the organization and management of clinical emergencies have been identified in different clinical conditions, with the need for periodical updating.
- Hi-Fi simulations may help to better prepare medical students, residents, physicians and nurses to manage uncommon events in controlled emergency settings and improve teamwork, with no additional risk to patients.
- Finally, we are planning to increase the training proposal through Hi-Fi simulation to meet the needs of this survey.

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