



Impact of a 3-in-1 Simulation Training Course on healthcare workers in fighting COVID-19

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Introduction:

COVID-19 is caused by a highly contagious virus SARS-CoV which is mainly spread through droplets and contact transmission. Healthcare workers (HCWs) are particularly at risk for nosocomial transmission of COVID-19 due to the close and continuous exposure of patients. In fighting COVID-19 pandemic, training for frontline healthcare is essential in order to increase the competency and confidence, as well as providing a better understanding of infection risk to protect them from infection.

Objective:

Simulation training specific for anticipated COVID-19 clinical emergencies were organized for HCWs who were working or would be deployed to isolation ward. The impact of training on their understanding of disease, confidence level in managing the infected patients were evaluated.

Method:

A comprehensive 3-in-1 training course focusing on the clinical safety of healthcare workers towards infection, teamwork approach in managing COVID-19 patients and airway management was designed by NCSTC team.

3-in-1 training

Information update:

- Updated global COVID-19 information
- Concept of self and environmental contamination

Simulation scenarios:

- 2 high-fidelity immersive scenarios focusing on the management of respiratory failure for COVID-19 infected patient
- UV fluorescent lotion to illustrate the environmental contamination

Skill station:

- Practice of the airway management
- 2-hand sealing bagging technique and the application of supraglottic airway



Pre and post evaluations was done using a questionnaire survey on a 6-point Likert Scale ranging from “strongly disagree” to “strongly agree”.

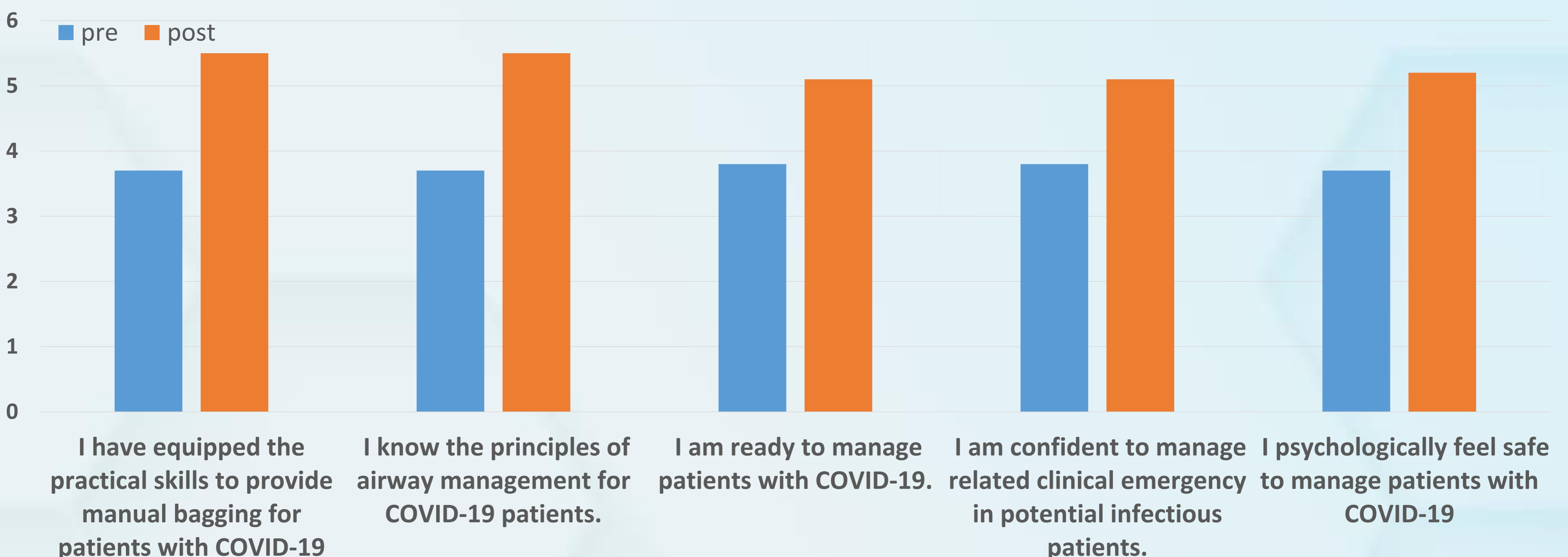
Results

From March to September 2020

25 classes

241 participants

Statistically significant increase ($p < 0.001$) in the following aspect



Conclusion

This training course had a positive impact of HCWs in increasing their understanding of infection control and confidence level in preparedness of COVID-19 pandemic. Further studies are indicated to assess how the improvements in the simulation translate to the clinical performance and clinical outcome measures.