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Original Article

## Effects of a multi-component educational intervention on nurses' knowledge and adherence to standard precautions in intensive care units

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Shiva Gomarverdi<sup>1</sup>, Mahnaz Khatiban<sup>1,2</sup> , Ali Bikmoradi<sup>3</sup>  
and Ali Reza Soltanian<sup>4</sup>

### Abstract

**Background:** The standard precautions (SPs) should be disseminated and implemented by healthcare providers. This study aimed to examine the effects of a multi-component educational intervention on nurses' knowledge and adherence to the SP guidelines in intensive care units (ICUs).

**Methods:** This small-scale study consisted of a cluster randomised trial. Two ICUs, located in different hospitals, participated in the study. Nurses ( $n = 15$ ) in one ICU received the multi-component educational intervention. The intervention involved an educational (with multiple instructional media) and a behavioural (with hands-on practice) component. Nurses' knowledge and adherence were assessed at pre-test and two and six weeks after the intervention.

**Results:** Results showed significant group by time interaction effects for both outcomes: a large improvement was found in the experimental group over time, but not in the control group. The experimental nurses' knowledge improved from  $15 \pm 2.47$  at pre-test to  $19 \pm 2.65$  and  $19.53 \pm 0.92$  at follow-ups. Similarly, their adherence increased from  $19.87 \pm 4.44$  at pre-test to  $29.20 \pm 5.00$  and  $28.40 \pm 4.37$  at two and six weeks post-test, respectively.

**Conclusions:** The multi-component educational interventions had demonstrated initial effectiveness in enhancing ICU nurses' knowledge and adherence to the SPs guidelines. The intervention is a promising approach for designing effective continuing education initiatives aimed to improve nurses' practice.

### Keywords

Education, knowledge, adherence, standard precautions, nurses, intensive care unit

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