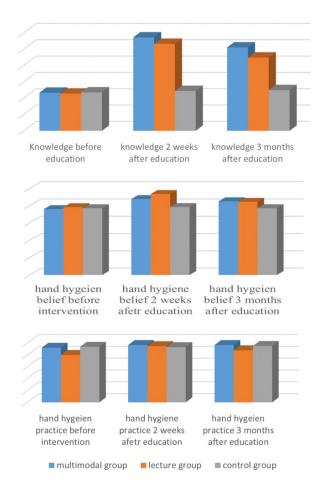


## The effect of different educational methods on nurses' hand hygiene

Nosocomial infections are among the most important causes of morbidity and mortality among hospitalized patients. Nosocomial infections have profound effects on patients, families, and healthcare systems. These infections increase length of hospital stay as well as mortality rate and impose heavy financial burdens on patients and healthcare systems. Despite the known effectiveness of hand hygiene in nosocomial infection prevention, healthcare professionals' hand hygiene is relatively poor.



Effect of different method of education on hand hygeien

Given the healthcare professionals' poor hand hygiene practice, it has been recommended to develop and implement continuing education programs for enhancing their adherence to infection control guidelines. Hand hygiene is a complex, multidimensional phenomenon. Accordingly,



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multimodal teaching strategies are required for promoting it. In multimodal strategies, multiple teaching techniques are used to enhance the effectiveness of trainings. Multimodal strategies can affect different sensory organs and hence may produce more satisfactory and long-term results. Given the scarcity of studies on multimodal hand hygiene trainings, further studies are needed for providing ample evidence regarding the effectiveness of such trainings in different contexts. The aim of this study was to compare the effects of a multimodal training program and traditional lecture on nurses' hand hygiene knowledge, belief, and practice.

In our study, 282 nurses from three hospitals were selected. Hand hygiene knowledge, belief and practice were assessed using self-reported questionnaires. We provided hand hygiene-related educations to nurses working in the lecture group by presenting one 30-minute lecture. The content of educational sessions included the significance of hand hygiene, accurate implementation of the hand hygiene technique, use of alcohol-based ha

nd disinfectants, and statistics on the role of hand hygiene in nosocomial infection prevention. On the other hand, we developed and implemented a multimodal training program for providing hand hygiene -related educations to nurses working in another hospital. The multimodal program consisted of different teaching strategies such as lecturing, video presentation, role playing, pamphlet distribution, poster and photo, audio announcement through a hospital-wide speaker system, screensaver messages, and feedback giving by the hospital infection control staff. Control group received only routine education program.

The findings of this study indicate that both lecturing and the multimodal education methods improve nurses' hand hygiene knowledge, belief, and practice. However, compared with the lecture method, the multimodal method is more effective. Also, compared with the short-term effects of the lecture method, the effects of the multimodal method last for three months. The findings of this study can be used for improving the quality of care, enhancing patient safety, and decreasing healthcare costs. Development and implementation of multimodal training programs can help nurse and hospital managers fulfill their aspirations for creating a safe and infection-free hospital environment. Teaching strategies such as lectures, accurate implementation of HH techniques by demonstration, video presentation of HH training movies, hospital-wide audiovisual announcement, provision of effective disinfectants, and giving constructive feedbacks can be used by managers for improving hospital staffs' HH knowledge, belief, and practice and decreasing the prevalence of nosocomial infections.

## **Publication**

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Najafi Ghezeljeh T, Abbasnejad Z, Rafii F, Haghani H.

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