

The effect of tactile stimulation on consciousness and vital signs of traumatic brain injury patients hospitalized in intensive care units in social health care system and medical science university centers in Qazvin,Iran

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Abstract

Background: hospitalization in intensive care units (ICUs) result in tactile deprivation and receiving excessive tactile stimulation, which may cause physiologic imbalance in the patients.

Patients and method: the current clinical trial was conducted on 60 patients with severe brain trauma admitted to ICUs in Qazvin, Iran, in 2016. The subjects were selected by the convenience sampling method and assigned into 2 groups of intervention and control. Hands, wrists, and palms were touched for 3 minutes twice a day, morning and evening, and the level of consciousness and vital signs of the patients were recorded immediately from the day 1 to 5 of admission. Data were analyzed using SPSS version 21 by the paired and independent *t* tests.

Results: according to the results of the current study, tactile stimulation increased the level of consciousness ($P=0.001$), decreased systolic blood pressure level ($P=0.0001$), diastolic blood pressure ($P < 0.05$), and respiration rate ($P < 0.05$) in the intervention group. However, the tactile stimulation had no significant effect on the body temperature of the patients ($P > 0.05$).

Conclusion: considering the positive effect of tactile stimulation on the increase of consciousness and decrease of heartbeat rate and blood pressure in patients with brain trauma, it is recommended to employ tactile stimulation methods on patients admitted to ICUs.

Keywords: tactile stimulation, vital signs, level of consciousness, brain trauma, tactile deprivation