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## High fidelity simulation educational model about trauma patients

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**Background:** Recently, an innovative teaching strategy, scenario-based full-scale high-fidelity simulation in nursing education is gaining more attention to improve nursing students' clinical skills and competencies. Although previous researches showed that simulation-based teaching contributed to nursing students' learning outcomes, satisfaction, and self-confidence, there is no study related to using high-fidelity simulation in nursing education and its effects on students' learning outcomes in Turkey.

**Aim:** A quasi experimental design was used to determine the effects of high-fidelity simulation experience on students' learning outcomes, self-confidence, and satisfaction.

**Methods:** The sample consisted of 40 volunteer undergraduate nursing students who studied at one university in Turkey and took part in a high-fidelity simulation session related to the care of trauma patients. Students were randomly allocated to either a control or an experimental group. Students from the experimental group, as well as following their normal curriculum, were exposed to scenario-based full-scale simulation training. Subsequently, both experimental and control groups were re-tested and completed a Trauma Case Questionnaire; experimental group students also completed a Student Satisfaction Questionnaire and a Patient Intervention Self-Confidence/Competency Scale. The data was collected between January 2012 and May 2012.

**Results:** There were no statistical differences between experimental and control group learning outcome scores ( $p > 0.05$ ). After the simulation session, the mean score of the experimental group students' satisfaction was  $114 \pm 5.09$  (out of 135) and confidence/competency score was  $76.35 \pm 5.69$  (out of 90). There was a statistically significant strong positive correlation between students' satisfaction score and confidence/competence scores ( $r = 0.974$ ,  $p < 0.000$ ). Students also reported that high-fidelity simulation was an effective method to improve their clinical skills and competencies.

**Conclusion:** This study indicated that students' satisfaction and confidence/competency were high after participating in high-fidelity simulation sessions. According to the study results, it is recommended to use high-fidelity simulation in nursing education as an innovative teaching strategy to develop students' clinical competencies and confidence.

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