

The effects of mobile-based education on nurse self-concept among nursing students: an embedded mixed methods study

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Abstract

Objective: This study evaluates the effects of mobile-based education (MBE) on nurse self-concept (NSC) among nursing students.

Methods: This embedded mixed methods study was conducted in 2020-2021 in a main quantitative phase and a supplementary qualitative phase. In the quantitative phase, a quasi-experimental study with the Solomon four-group design was conducted on 117 second-year nursing students of Shiraz University of Medical Sciences, Shiraz, Iran. 70 students in the first (C1: n=37) and the second (C2: n=33) semesters of the 2020 academic year were respectively considered as the control groups, and 40 students in the first semester of the 2021 academic year considered as the experimental groups (I1: n=20 and I2: n=20). Participants in the experimental groups received NSC-related MBE through an Android application, while their counterparts in the control groups received no NSC-related MBE. Cowin's Nurse Self-Concept Questionnaire was used to assess the NSC. In the qualitative phase, six students from the experimental groups were purposively selected and interviewed through face-to-face semi-structured interviews. Moreover, two focus group discussions were held with a six-person and a five-person group of students from the experimental groups.

Results: While the mean scores of NSC and its dimensions did not significantly change in the C1 group, the posttest mean scores of them in the E1 group were significantly greater than the corresponding pretest values ($p < 0.05$), except for the care dimension ($p = 0.586$). Moreover, except for the care dimension ($p > 0.05$), the posttest means scores of NSC and its other dimensions in the E1 and the E2 groups were significantly greater than the C1 and the C2 groups, respectively ($p < 0.05$). Analysis of the qualitative data resulted in the generation of the main theme of multidimensional growth and development with three main categories, namely development of coping strategies, knowing professionalization strategies, and development of managerial potentials.

Conclusion: NSC-related MBE is effective in improving nursing students' NSC.

Keywords: mobile application, self concept, students, nursing, qualitative research, nursing education research