
Abstract:

Accurate calculations of flow rate of intravenous medication are crucial to safe patient care. Flow rate of these medications can be calculated using either the formula or dimensional analysis method. However, few studies have assessed the effectiveness of this teaching method or any other method of calculating drug dosages. The purpose of this study was to compare the effects of formula and dimensional analysis educational methods of intravenous drug rate calculations on nursing students’ rapid and sustained learning. This was an experimental study in which 42s year nursing students participated. They were divided randomly into two groups, control and experimental and the drug calculating skills were taught to them through formula method (control group) and dimensional analysis method (experimental group), respectively. Before the education, immediately, and three months after the teaching intervention, the students’ skills were examined using a drug calculation test. The results showed that no significant difference between the two groups in pre-test and post-test 1 scores (P>0.05), but did show a significant difference between the two groups in post-test 2 scores (P<0.05). The mean of the scores differences of pre-test and post-test 2 were 9.8+/-3.34 and 12.85+/-3.07 in formula method group and dimensional analysis group, respectively, which showed significant difference between two groups. This study showed
that immediate post education intervention learning was significantly better in both groups, but, in the dimensional analysis method group, the sustained learning rate was significantly better than in the formula method group.