THE EFFECT OF REPETITIVE PRACTICE OF PRACTICAL PROCEEDURES ON STUDENTS’ PERCEPTION OF THEIR SKILLS AND COMPETENCES

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Abstract

Introduction
At our faculty, we teach a series of practical skills (PS) in scope of the subject Propedeutics. The aim of this subject is to ease the transition into a clinical environment for students by practicing PS on manikins in Clinical Skills Laboratory (CSL). A survey was conducted to evaluate the effect of repetitive practice of PS in CSL on students’ perception of their skills and competences.

Methods
The students and residents answered a series of questions regarding their first-time procedure of PS on a patient. Participants were divided in one of the two groups: those who practiced PS on manikins less than or equal to three times (group 1) and those who practiced PS more than three times (group 2) for each of the examined clinical skill. Student’s T-test for independent samples was used for statistical analysis. Statistical significance was set at p<0.05.

Results
The survey was filled out by 41 participants. The results showed statistically higher mean answer scores in group 2. Group 2 had statistically higher self-confidence, reduced fear of mistake, enhanced familiarity with the procedure and materials. Both groups were indecisive on whether or not more practice on the models would improve their first procedure of PS on the patient (Fig. 1).

More detailed analysis according to different PS showed statistically significant higher, reduced fear of mistake, greater familiarity with the procedure and the materials used during the procedure of PS in group 2 (Table 1).

Discussion
According to our results, more practice of PS in CSL significantly lifts student’s self-confidence, enhances familiarity with the procedure and materials and decreases students fear of a mistake during the procedure. Participants agreed that they have enough possibilities for practice in CSL before performing PS on the patients. In the future, students should be offered also a possibility of a structured PS learning in a clinical environment after the practice in CSL in order to gain more confidence and dexterity.

Conclusion
The repetitive practice on manikins proved to be beneficial for students’ first encounter with PS in clinical environment. The limited time students spend in the clinical environment can be used more effectively as students are already familiar with materials and procedure of PS.

Figure 1: Comparison of mean answer scores from group 1 and group 2.

Table 1: Mean answer scores for individual PS with related p-values.
The effect of repetitive practice of practical procedures on students’ perception of their skills and competences

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Methods: The survey was carried out in January 2017. The students and residents answered a series of questions regarding their first-time procedure of PS on a patient (self-confidence, fear of making a mistake, familiarity with the procedure and materials). Participants were also asked whether they would need more practice on manikins prior performing PS for the first time on a patient. The questions were answered on a scale from 1 to 5, where 5 represented highest self-confidence, lowest fear of making a mistake, and highest familiarity with the procedure and materials. Participants were divided in one of the two groups: those who practiced PS on manikins (regular and elective courses or workshops in propaedeutics) less than or equal to three times (group 1) and those who practiced PS more than three times (group 2) for each of the examined clinical skill (rectal examination, venepuncture, infusion set up, intramuscular injection, subcutaneous injection, radial artery puncture, venous cannulation and urinary catheterization). Student’s T-test for independent samples was used for statistical analysis. Statistical significance was set at p<0.05.

<table>
<thead>
<tr>
<th></th>
<th>GROUP 1</th>
<th>GROUP 2</th>
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<tr>
<td>SELF-CONFIDENCE</td>
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<td>NEEDED MORE PRACTICE</td>
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Figure 2: Comparison of mean answer scores from group 1 and group 2.
Results: The survey was filled out by 41 participants. The results showed statistically higher mean answer scores in group 2. Group 2 had statistically higher self-confidence (p<0.001), reduced fear of mistake (p<0.001), enhanced familiarity with the procedure (p<0.001) and materials (p<0.001). Both groups were indecisive on whether or not more practice on the models would improve their first procedure of PS on the patient (p=0.51) (Fig. 1).

Discussion: According to our results, more practice of PS in CSL significantly lifts student’s self-confidence, enhances familiarity with the procedure and materials and decreases students fear of a mistake during the procedure. Participants agreed that they have enough possibilities for practice in CSL before performing PS on the patients. In the future, students should be offered also a possibility of a structured PS learning in a clinical environment after the practice in CSL in order to gain more confidence and dexterity.

Conclusion: The repetitive practice on manikins proved to be beneficial for students’ first encounter with PS in clinical environment. The limited time students spend in the clinical environment can be used more effectively as students are already familiar with materials and procedure of PS.