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Physicians Skills Library

Fatma SELMAN[1]
[1]Department of Emergency Medicine and Medical Education, Biruni University, Faculty of Medicine, Istanbul, Türkiye

Yıldız KAYALI[2]
[2]Department of Family Medicine, Biruni University, Faculty of Medicine, Istanbul, Türkiye

Sema ARICI[3]
[3]Department of Pathology and Medical Education, Biruni University, Faculty of Medicine, Istanbul, Türkiye

ABSTRACT

Objective: After graduation, physicians must be able to perform basic skills competently from their first year. However, it has been observed that physicians, especially in their first years, feel inadequate when performing some skills and perform them without self-confidence.

The aim of our study is to enable students to develop their basic medical skills by practicing as much as they want and participating in the period they want (from Term 1 to Term 6) with the training program we have created under the name of the Basic Medical Skills Library and to enable them to perform their skills confidently, accurately and stress-free.

Methods: A training program was created for Biruni University Faculty of Medicine students to practice in the basic medical skills section of the national core training program. Applications were received from students through a system, with a maximum of 15 people in a class, according to this curriculum. Students were given practical training after a short theoretical training. After the training, they were asked to complete an online survey.

Results: Thirty-nine percent of the students who participated in the study were term 3 students, and 29% were term 2 students. The most frequently preferred applications by the students participating in the study are "Adult basic life support", "Ability to place and remove superficial sutures" and "Advanced cardiac life support in adults". All of the students said that they were satisfied with the open-door practice in which they participated. Eighty-three percent of the students who participated in the study answered "I strongly agree" to the question "I believe that I can better manage the patients I encounter with the practical training I received in the practice I attended."

Conclusion: The results of the study revealed that the applications we made under the name "Basic medical skills library" increased the students' self-confidence in performing simple procedural skills and that they would be willing to perform these applications easily when necessary in their medical life.

Keywords: Basic medical skills, Simple procedural skills, NCEP, Pregraduate medical education

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Corresponding author:
Fatma SELMAN
E-mail: selmanfatma28@gmail.com
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INTRODUCTION

After graduation, medical school students should have some knowledge, skills and attitudes to perform the profession of medicine competently. The skills that a medical student should have after graduation include physical examination skills, simple procedural skills, psychomotor skills, communication skills, and clinical skills.[12] Medical educators have conducted many studies to determine the basic medical skills that medical students should have after graduation. The Association of American Medical Colleges (AAMC) established the Medical School Objectives Project (MSOP), and according to the report of this project, the basic medical skills that each medical school student should acquire at graduation were proposed.[3] With the 2000s in Turkey, a national core education programme (NCEP) was established by medical educators for each medical school graduate to have certain knowledge, skills and attitudes. In the NQEP, which is renewed every six years, the skills that a student should have are referred to as basic medical practices. In the last national MDP, which was updated in 2020, there are a total of 160 basic medical practices that a medical school student should have. Students are expected to perform these practices according to certain levels. Four minimum levels have been determined. These are:

1:Knows how the practice is done and/or explains it to relatives
2:Perform the practice in accordance with the guideline/directive in an emergency situation.
3:Perform the practice in uncomplicated, common situations/events.
4:Performs the practice, including complex situations/events.[1]

Although the basic medical skills determined by medical educators are given in full by medical faculties, it has been revealed that new doctors are inadequate in performing basic skills after graduation. Along with this inadequacy, hesitation not to harm the patient, lack of self-confidence, and inability to meet expectations constitute a serious source of stress for new physicians, especially in their first years.[4–6] The skills training given in clinical internships in traditional education programs is not sufficient as a reason for the inability of medical school students to have basic medical skills after graduation.[7] A study conducted by Remmen et al. revealed that relying only on clinical internships was insufficient for students to have basic medical skills. As a result of this study, it was concluded that additional courses or lectures in addition to traditional education programs could increase basic medicine skills.[8] Another reason for the lack of basic medical skills was that skills training was generally left to the last years of medical education.[9,10] Many studies have revealed that exposure to certain skills at an early age increases student comfort and makes them more stress-free and self-confident.[11] However, in studies conducted in many medical faculties, students reach the last year of medical school without acquiring basic skills.[12] In a study conducted in semester 4 students at the University of North Carolina, it was found that students rarely performed most of the skills and evaluated themselves as unable to perform them without help.[11] The aim of our study is to enable students to improve their basic medical skills by practicing as much as they want and participating in the period they want (from semester 1 to semester 6) with the training program we have created under the name of the medicine skills practice library and to ensure that they can perform the skills in a self-confident, accurate and stress-free manner in their postgraduate medical years.

METHODS

Ethics Committee approval for this study was obtained from the Ethics Committee for Noninterventional Clinical Research of Biruni University (Date: 03.11.2023, Number: 2023/84-06). Informed consent was obtained from the participants.

The study was conducted between March 2023 and June 2023 at the Biruni University Faculty of Medicine. Practices with learning levels 3 and 4 were selected from basic medicine practices in the NQAP. A training programme was created by highlighting the priority ones of these practices. Training content was created together with volunteer faculty members. Common times that were suitable for faculty members and that students could participate intensively were determined. An announcement was made to the students under the name "library of medical skills practice", including the description of the practices, the programme and the faculty member in charge. Students applied for the courses they could attend through a previously created system. A maximum of 15 students were allowed for one lesson of each practice. Trainings were held according to the program created in the system. After the training, the students were asked to fill out a feedback questionnaire consisting of Likert-type questions. Training content: At the beginning of training, short theoretical information about the application to be made is given. The application will be explained by the instructor on duty. Each student is subsequently asked to perform the application one by one. Applications to be performed in training programs include the ability to inject IM, IV, SC, and ID; the ability to perform IM, IV, SC, and ID injections; the ability to suture and remove superficial sutures; the ability to insert urinary catheters; the ability to apply nasogastric catheters; basic life support in children; basic life support in adults; and advanced cardiac life support in adults.

RESULTS

A total of 104 students participated in the study. Eight students were excluded from the study because their feedback questionnaires could not be accessed. When we looked at the years of education of the participants, it was observed that students from semesters 2 and 3 showed the most interest in the practices. Among the students who participated in the application, 39% were from term 3, 29% were from term 2, and 19% were from term 5. The number and percentages of students' participation according to the semesters are given in Table 1.

Table 1. Practices they participated in according to their years of education

Term	Number (n)	Percent (%)
Semester 1	1	1
Semester 2	28	29
Semester 3	37	39
Semester 4	12	12
Semester 5	18	19

Table 2. Percentage of preferred applications

Name of the intervention	Number (n)	Percent (%)
Ability to make IM, IV, SC, ID injection	15	16
To be able to suture and remove superficial sutures	19	20
Urinary catheter insertion	5	5
To be able to apply nasogastric catheter	7	7
Basic life support in children	4	4
Basic life support in adults	29	30
Advanced cardiac life support in adults	17	18

IM:Intramuscular IV:Intravenous SC:Subcutan ID:Intradermal

The most preferred practices of the participants were "Adult basic life support", "Ability to suture and remove superficial sutures" and "Advanced cardiac life support in adults". The percentages are 30%, 20%, and 18%, respectively. The number and percentages of the students who participated in the application are given in Table 2. All of the students stated that they were satisfied with the medical skills they had participated in. Eighty-three percent of the students who participated in the study answered "strongly agree" to the questions "I believe that I can better manage the patients I encounter with the theoretical training I received in the practice I participated in" and "I believe that I can better manage the patients I encounter with the practical training I received in the practice I participated in". (Figure 1, Figure 2). 81% "strongly agree" to the question "In general, I believe that the practices in the library of basic medical skills will help me become a better physician." (Figure 3).

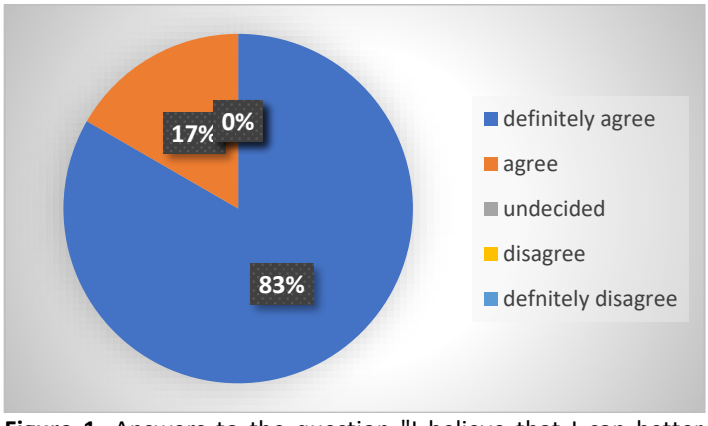

Figure 1. Answers to the question "I believe that I can better manage the patients I encounter with the theoretical training I received in the open-door practice I attended".

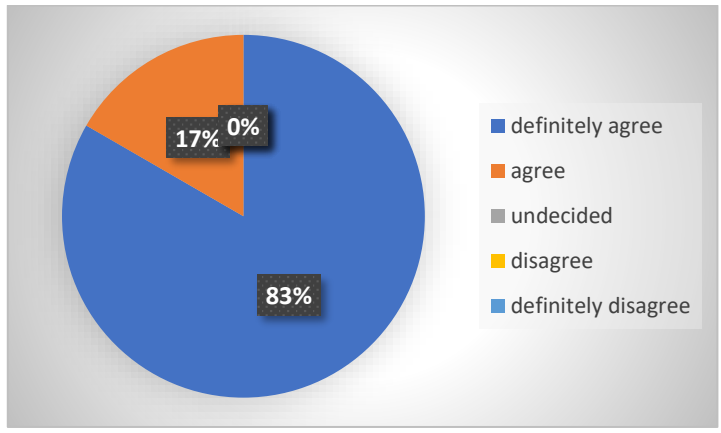

Figure 2. Answers to the question "I believe that I can better manage the patients I encounter with the practical training I received in the open-door practice I attended".

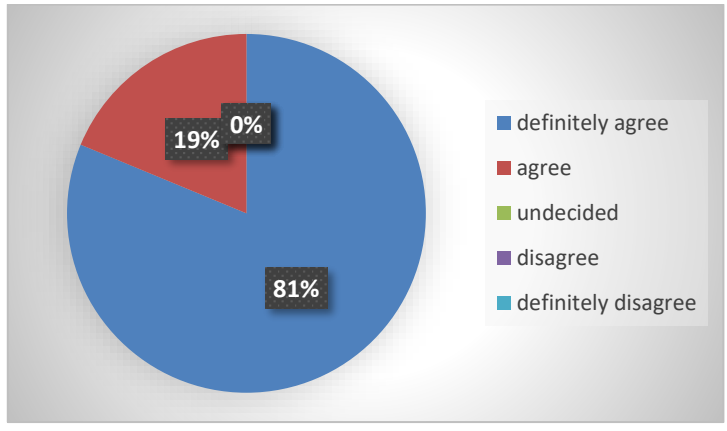

Figure 3. "In general, I believe that open-door practices will make me a better physician." Answers to the question

For the open-ended question in the questionnaire, "Thanks to this practice, I was able to reflect the information we learned in theory into practice." "I would like to have more hours." "I like that we can make as many trials as we want." "It was a more effective training because there were fewer of us." "It was good at improving our basic medical skills." "We saw our deficiencies one-to-one." "I think being able to practice gives us self-confidence." "It encouraged us to improve our medical skills."

DISCUSSION

The results revealed that the students who participated in the study were generally satisfied with the practice and wanted to participate again. Medical students are expected to perform basic skills correctly, quickly and confidently after graduation. However, studies have revealed that many newly graduated physicians are deficient in skills.[7] Therefore, skilled laboratories have been established in many medical faculties around the world to support traditional education.[13,14] A study examining students' expectations and attitudes toward skills training in skills laboratories revealed that students were more confident in basic skills and motivated them to become doctors.[10] Similarly, after the training given in the skills laboratories with the name of the

basic medical skills library, a large proportion of the students thought that they would manage patients better with the training they received. It was observed that students were more willing to participate, especially in the first years, which we call preclinical. In the pregraduation medical faculty education programs of many countries, skills training has generally been left to recent years.[9] This situation causes students to act more inexperienced and insecurely when they move on to clinical training. The application performed in this study ensures that students have certain skills starting from the preclinical years. It causes them to pass to clinical education with self-confidence. At the same time, students have a more comfortable education process because they are exposed to basic skills from an early age. In this study, students participated more frequently in courses such as basic life support and advanced cardiac life support; this finding shows that they experienced deficiencies in subjects such as patient management and patient overview. The answers they gave to open-ended questions such as "Practicing gives us self-confidence" and "I think I will not have difficulties in my medical life with these practices" suggest that this practice makes us think that students will be able to manage patients confidently in their future medical life. This study has several limitations. One of them is that the frequency of training could not reach the desired level because our skills laboratories were not sufficient and we used them together with other faculties. Since it is a new practice, we cannot perform all of the basic medicine skills practices in the NPAP because we cannot obtain enough support from faculty members in different majors. In future studies, all basic medicine skills practices may be distributed to the education year and an application in which the training given is measured by exams such as the OSCE and DOPS after the courses.

CONCLUSION

The results of this study revealed that the practices we carried out under the name "practice library of medical skills" increased the students' self-confidence in performing basic medical skills and that they would be willing to perform these practices comfortably when necessary in their medical life.

Ethics Committee Approval: Ethics Committee approval for this study was obtained from the Ethics Committee for Noninterventional Clinical Research of Biruni University (Date: 03.11.2023, Number: 2023/84-06).

Informed Consent: Informed consent was obtained from the participants.

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