Views Of Physicians On The Persistence And Efficiency Of Basic Medical Sciences Education

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ÖZET

Giriş: Bu çalışmada, tıp fakültelerinde verilen temel tıp bilimleri eğitiminin kalıcılığı, klinik bilim uygulamalarına ne kadar entegre edilebildiği ve eğitimin geliştirilmesi için katkı yapılması amaçlanmıştır.

Gereç ve Yöntem: Araştırma, tanımlayıcı tipte planlanmıştır. Verilerin toplanması için anket uygulanmıştır. Araştırma evrenini tıp fakültesi mezunu hekimlik yapan kişiler oluşturmuştur ve örneklem seçiminde herhangi bir sınırlandırma yapılmamıştır. İfadelere katılma düzeyi likert tipi ölçeklendirme ile 1'den 5'e kadar derecelendirilmiştir. Toplamda 205 katılımcının olduğu çalışmada, veriler için sayı ve yüzde değerleri kullanılmıştır.

Bulgular: Çalışmaya katılan hekimlerin; % 59,5'i aldığı temel tıp bilimleri derslerinin mesleki hayatları için yeterli ve kalıcı olmadığını, % 69,74'i temel tıp bilimleri eğitimindeki ders konularının gereğinden fazla ayrıntılı olduğunu, % 60,48'i temel tıp bilimlerinde aldığı eğitimi klinik bilimlere entegre edemediğini, % 82,91'sı temel tıp ile klinik tıp bilimleri derslerinin eş zamanlı olarak verilmesinin daha faydalı olacağını ve % 86,82'si ise teknolojiye uyarlanmış yardımcı ders araçlarının, temel tıp eğitimindeki kaliteyi artıracağını ifade etmişlerdir.

Sonuç: Tıp eğitiminde önemli gelişmelerin yaşandığı günümüzde, hekimlerin en iyi şekilde yetişebilmesi için yeniliklere ihtiyaç vardır. Bunun için temel tıp ile klinik tıp bilimlerinin entegre edildiği, ders müfredatının tekrar gözden geçirildiği ve güçlü bir teknolojik alt yapının sağlandığı bir sistem üzerinde çalışılması gerekmektedir.

Anahtar Kelimeler: Tıp Eğitimi, Entegrasyon, Teknoloji, Anket

ABSTRACT

Introduction: In this study, it is aimed to contribute to the persistence of the basic medical sciences education given in medical faculties, how much it can be integrated into clinical science practices and to the development of education.

Materials and Methods: The study was planned in a descriptive type and a questionnaire was applied to collect the data. The population of the study consisted of medical faculty graduates and there was no limitation in the selection of the sample. The level of agreement with the statements was graded from 1 to 5 with Likert-type scaling. In the study with a total of 205 participants, numbers and percentages were used for the data.

Results: Of the physicians 59.5% stated that the basic medical sciences courses they took were not sufficient and permanent for their professional life, 69.74% of them stated that the course topics in basic medical sciences education are too detailed, 60.48% of them stated they could not integrate the education they received in basic medical sciences into clinical sciences, 82.91% stated that it would be more beneficial to give basic medicine and clinical medical sciences courses simultaneously, and 86.82% of them stated that the technology-adapted auxiliary course tools will increase the quality of basic medical education.

Conclusion: In today's world where important developments are experienced in medical education, innovations are needed in order to train physicians in the best way. For this, it is necessary to work on a system in which basic medicine and clinical medical sciences are integrated, the course curriculum is revised and a strong technological infrastructure is provided.

Keywords: Medical Education, Integration, Technology, Questionnaire

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INTRODUCTION

In today's conditions, it is becoming increasingly important to make the adequacy and effectiveness of medical education based on data and evidence (Baggott, 1987). Practical training on patients is short-termed and varies according to the competence of the trainer. These differences in applied training cause the training to take place in an environment devoid of a certain standard and make learning difficult (Mıdık and Kartal, 2010). In addition, strengthening the advancement potential of future physicians and maximizing their interest and keeping their passion in the field of medicine alive are other challenges (Lum et al. 2018).

Innovative teaching techniques such as flipped classrooms, augmented reality, and gamification are among the most prominent methods in medical education. However, new studies are needed to understand whether these translate into better teaching outcomes (Lum et al. 2018; Samarasekera et al. 2015). The development of medical education will be possible with the development of horizontal-vertical integration, the provision of infrastructure opportunities, the effectiveness of education programs and the determination of the level of contribution to learning. For these reasons, getting feedback from students and instructors is a frequently used method (Baggott, 1987). One of the methods used to reach these feedbacks quickly and easily is questionnaire applications. It is thought that these practices will contribute to the improvement of education (Erpek et al. 2002).

It is stated that the methods used in a dynamic process such as education will also change. It has been stated that methods should be questioned and renewed in a rapidly developing science such as medicine, where the knowledge base is constantly increasing (Saçaklıoğlu, 1994). As a matter of fact, it is known that advanced technology is widely used by physicians in medical science and physicians are interested in these technological innovations (Emre et al. 2018). In addition, educational processes in national medical faculties should be organized in connection with the total quality management and accreditation process (Sözmen, 2004; Sayek, 2010).

Considering the characteristics that physicians should have, it was stated that it would be more beneficial to provide basic and clinical science education together (Cooke et al. 2010). In addition, it is stated that medical faculty students do not consider the practical and theoretical training they receive during their education sufficient to perform their profession (Kaygusuz and Erensoy, 2019). With a good education, it is possible for physician candidates to gain knowledge, skills, attitudes, and responsibility when they go out on the field. In the educational process, there is a need for both students and educators to realize the deficiencies and to eliminate them in a planned way. It is important to develop education models based on the competence of students, especially when planning practical education (Stern et al. 2000; Kaygusuz and Erensoy, 2019).

In this study, it is aimed to contribute to the persistence of the basic medical sciences education given in medical faculties, how much it can be integrated into clinical science practices and to the development of education.

MATERIALS AND METHOD

The study was planned in a descriptive type in order to get the opinions of physicians about basic medical science education. The population of the study consisted of physicians graduated from medical faculties all over Turkey. In order to determine the number of people who will form the study sample, the sample selection was not made, and it was aimed to reach the whole population. As a result, the sample of the study was formed by the volunteer physicians to participate in the study after the information was explained by stating the purpose of the study.

Our study was planned to have a total of 205 participants for 95% confidence interval and 80% power. Number and percentage values are given for numeric data. In collecting the data, a questionnaire named "Views of Physicians on Permanence and Efficiency of Basic Medical Sciences Education" was applied. The survey within the scope of the study was prepared on Google Form, an online questionnaire site and participation in the questionnaire was made at the address "https://docs.google.com/forms/d/10p1LDH4ZAOWf0P2k kBJ4KDQzPE8FI33Y60aAxPnVQOk/edit".

The level of agreement with the statements was graded from 1 to 5 with Likert-type scaling. In grading, "1=strongly disagree", "2=disagree", "3=undecided", "4=agree", "5=strongly agree" statements were included (Likert, 1932).

In order to increase the reliability of the feedback, it was stated that the physicians who filled out the questionnaire should not write their names.

Ethical statements

In order to conduct the study, approval was obtained from the Ethics Committee of Non-Interventional Clinical Researches of Siirt University with the decision number 2020/04.02, dated 16.04.2020.

RESULTS

Considering the working hours of our physicians (n=205) who participated in our study, it was observed that 33.66% (69 physician) have been practicing medicine 1-5 years, 28.29% (58 physician) for 6-10 years, 13.17% (27 physician) for 11-15 years, and 24.88% (51 physician) for more than 15 years (Figure 1).
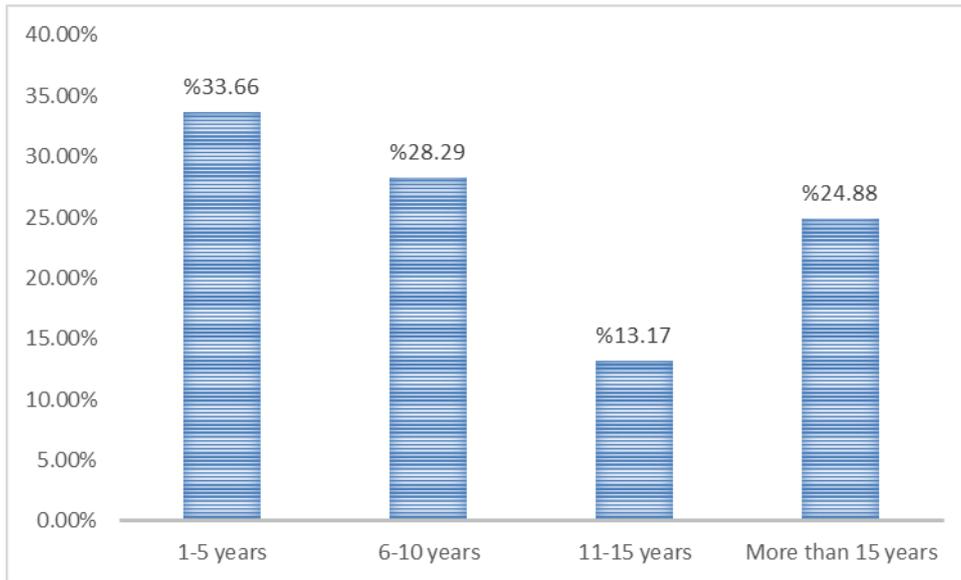
Figure 1. Distribution of the number of physicians by working years.

In our questionnaire, to the question "I think the basic medical sciences education I received during my faculty education is sufficient and permanent for my professional life" 8.78% (18 people) answered that I strongly agree, 26.82% (55 physician) I agree, 4.87% (10 physician) I have no idea, 43.41% (89 physician) I disagree and 16.09% (33 physician) I strongly disagree (Figure 2).
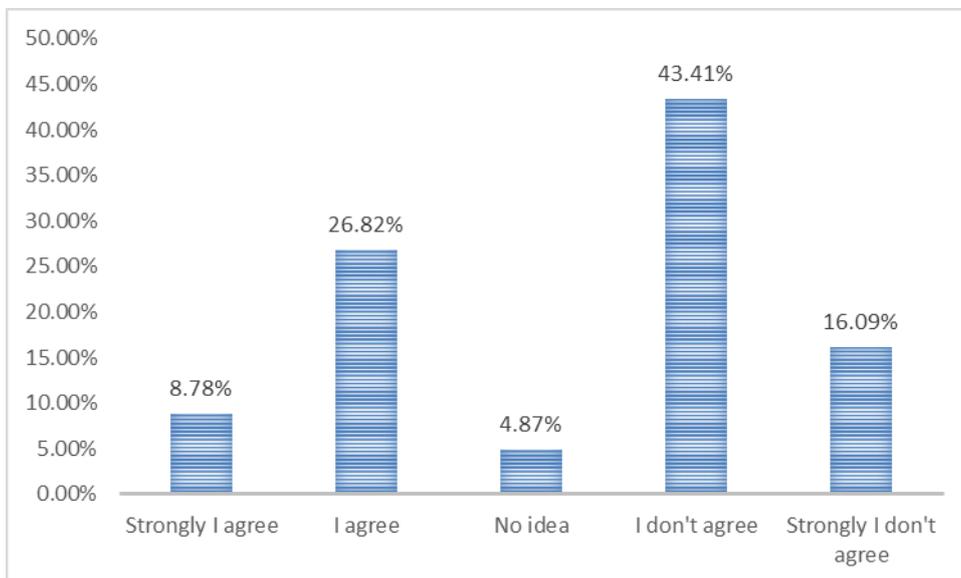

Figure 2. Distribution of the answers given to the question "I think that the basic medical sciences education I received during my faculty education is sufficient and permanent for my professional life".

To the question "The basic medical sciences education I received was too detailed" in our questionnaire, 29.26% (60 physician) of our physicians answered I strongly agree, 40.48% (83 physician) I agree, 5.36% (11 physician) I have no idea, 21.46% (44 physician) I disagree and 3.41% (7 physician) I strongly disagree (Figure 3).
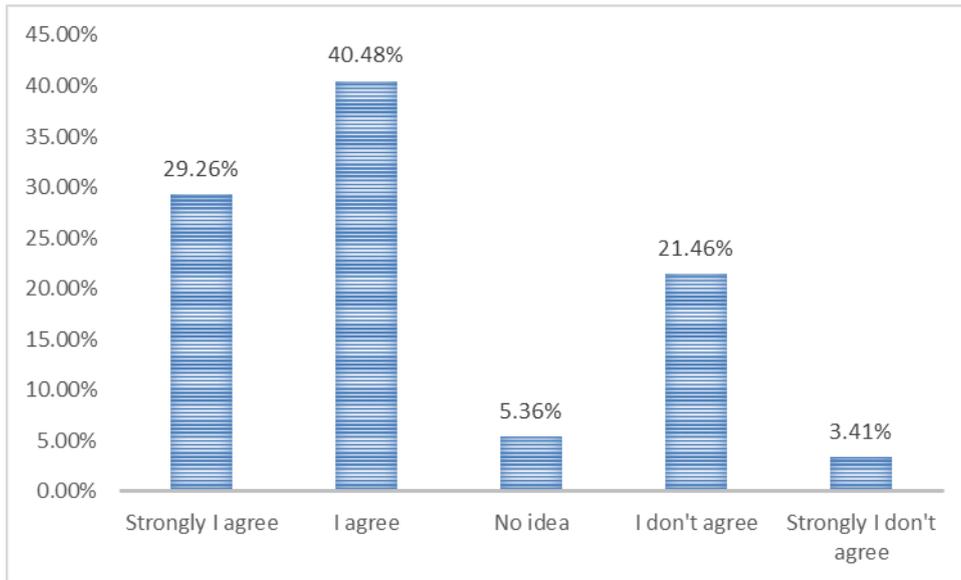
Figure 3. Distribution of the answers given to the question "The basic medical sciences education I received was too detailed in the course subjects".

To the question "I can fully integrate the education I received in basic medical sciences into clinical science practices", 5.36% (11 physician) of our physicians answered I strongly agree, 25.36% (52 physician) I agree, 8.78% (18 physician) I have no idea, 49.75% (102 physician) I disagree and 10.73% (22 physician) I strongly disagree (Figure 4).
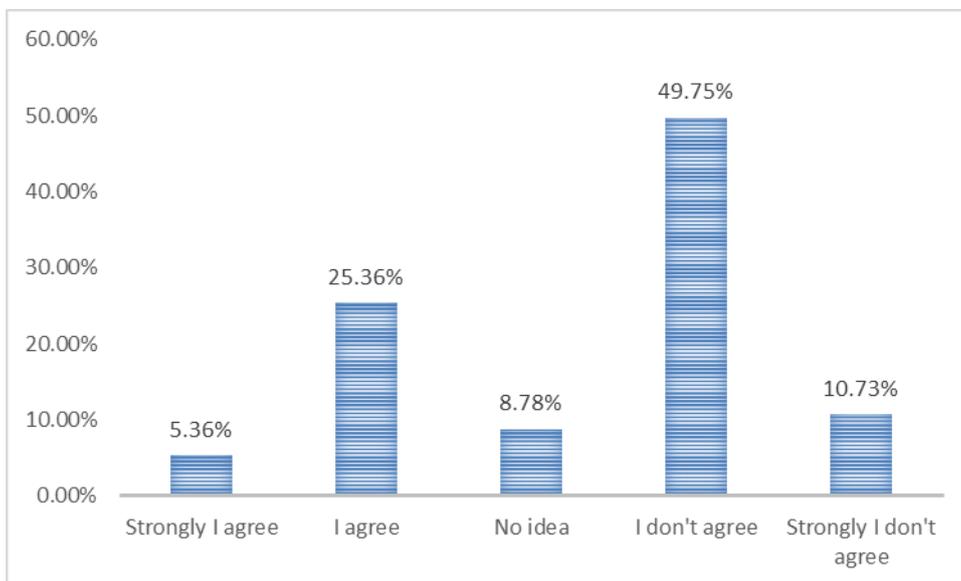

Figure 4. Distribution of the answers given to the question "I can fully integrate my education in basic medical sciences into clinical science practices".

To the question "It would be more beneficial to give all of the basic medicine course subjects together with clinical sciences (For example, while explaining the anatomy of the heart, histology, etc., at the same time, giving clinical information of cardiology together)" in our questionnaire, 46.82% (96 physician) of our physicians answered that I strongly agree, 36.09% (74 physician) I agree, 5.85% (12 physician) I have no idea, 8.29% (17 physician) I disagree and 2.92% (6 physician) I strongly disagree (Figure 5).
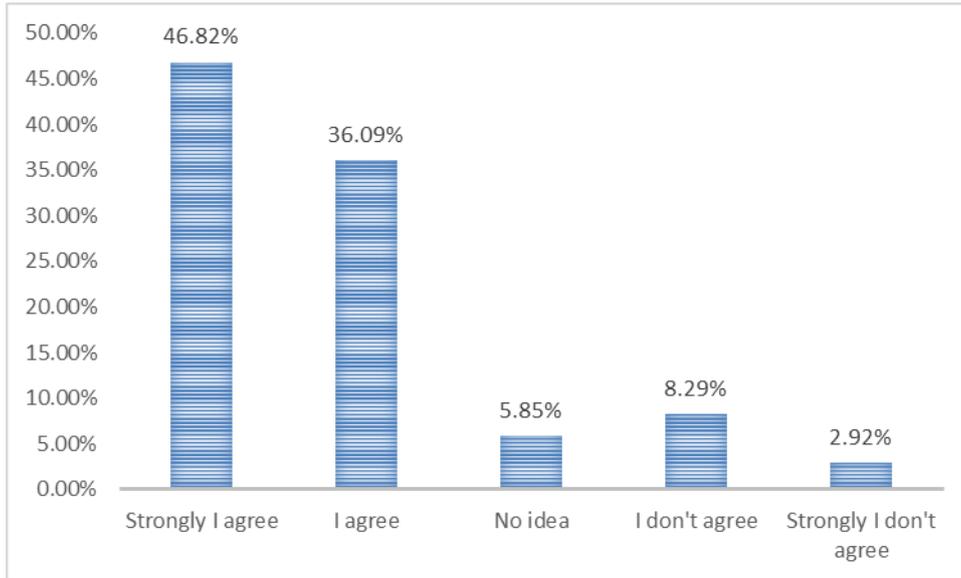
Figure 5. Distribution of the answers given to the question "It would be more beneficial to give all the basic medicine course topics together with clinical sciences"

To the question in our questionnaire, "By using technology-adapted auxiliary course tools (mobile application, tablet, etc.) in basic medicine courses, it will increase the permanence of carrying the education out of the classroom and laboratory", 48.78% (100 physician) of our physicians answered that I strongly agree, 38.04% (78 physician) I agree, 8.29% (17 physician) I have no idea, 4.39% (9 physician) I disagree and 0.48% (1 physician) I strongly disagree (Figure 6).
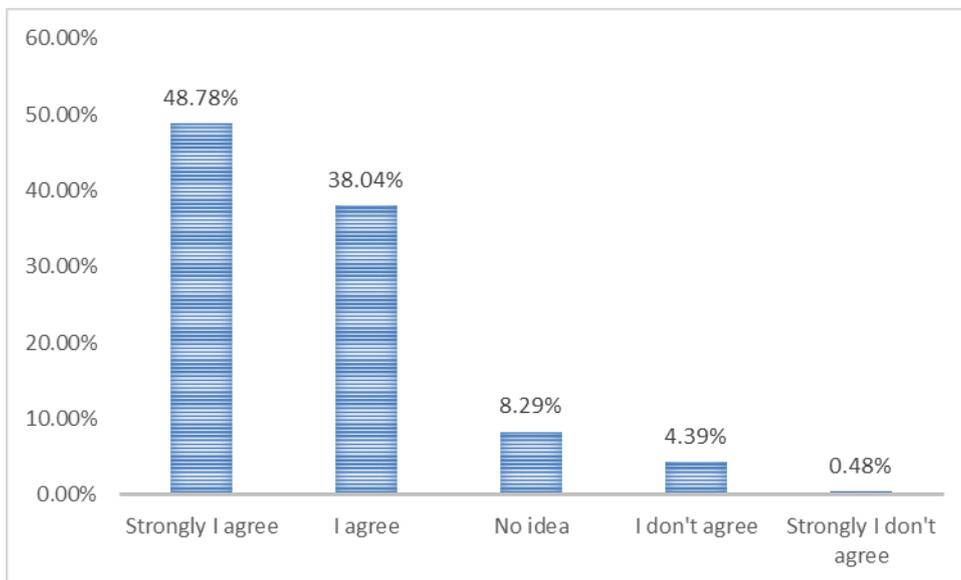

Figure 6. Distribution of the answers given to the question "By using technology-adapted auxiliary course tools (mobile application, tablet, etc.) in basic medicine courses, it will increase the permanence of carrying the education out of the classroom and laboratory".

DISCUSSION

The number of medical faculties is increasing in the world. This situation may lead to financial, institutional and academic inadequacies in newly opened medical faculties. These inadequacies prompted the World Federation of Medical Education, and it was planned to develop quality and establish basic standards by determining the

infrastructure situation and requirements in education (Bulut, 2003). However, a standard could not be established in medical faculties and a minimum curriculum could not be established in the course content (Benli et al. 2018). In order to ensure certain standards, medical faculties should determine their own curriculum and aim for their graduates to have basic competencies (Turan, 2005). It is thought that the standards that are aimed to be realized in medical education are also necessary in terms of evaluating the education programs and making comparisons between faculties (Leinster, 2003). It is known that while the education programs in the medical faculty are being organized, students should be trained to acquire scientific methods, attitudes, and behaviours (Turan et al. 2007). Our study was carried out to determine the thoughts of physicians about basic medical sciences education. In terms of medical experience, 205 physicians from different age groups participated in the study and it was aimed to increase the reliability of the results by ensuring the participation of different groups in the questionnaire.

Pre-graduate medical education should provide students with basic knowledge and skills, social ethical elements, and general medicine skills (Sandars et al. 2007; Gürpınar et al. 2014). In studies on basic medical sciences, students stated that the education provided is not permanent (Budakoğlu et al. 2002; Tuygar, 2014). Physicians stated that they had difficulty remembering that knowledge in their clinical life (Ganguly et al. 2019). In our study, 69.74% of the physicians think that the course subjects in basic medical sciences education are too detailed, and 59.5% think that the courses are not sufficient and permanent for their professional life. In medical education, there is always a need for reforms and innovations in order for physicians to perform their profession in the best way (Karle, 2006). Therefore, we think that new studies are needed to increase the quality of education.

All of the elements factors of learner, trainer, curriculum and environment are expressed as components of education (Özdemir, 2003). We think that standardizing the curriculum, which is one of the basic components of education, as a result of the feedback received from physicians and medical students, is important for a quality medical education. Students stated that encountering patients during basic medical science education (Goldie, 2000; Howe, 2000) and a curriculum with intensive clinical content would be more beneficial for their professional lives (Özdemir et al. 2001; Arı and Şendemir, 2003). 60.48% of the physicians participating in our study stated that they could not integrate the education they received in basic medical sciences with clinical sciences, and 82.91% stated that it would be more beneficial to give basic medicine and clinical medical sciences courses simultaneously. This result supports the view that integrated models in which disciplines come together should be used instead of discipline-based education when curriculum updating studies are carried out in basic and clinical science education (Özkan et al. 2017).

In recent years, developments in computer and internet technology have caused changes in traditional medical education. While developing new education models for basic medicine courses, it may be beneficial to create a technology-supported infrastructure such as web-based education programs, virtual laboratories and smart models, in addition to traditional methods such as cadaver and microscope. In addition, it is also important to ensure the continuity of education, to learn on one's own, to stretch course hours, and to have easy and fast access to educational materials outside of classroom and laboratory conditions (Green et al. 2015, Mackay et al. 2017). In addition, digital education with a strong technological infrastructure can be considered as a supportive and alternative method in medical education in epidemics that cause many negativities in the world such as the Covid-19 pandemic (Osman et al. 2020).

In our study, physicians (86.82%) stated that the assistive course tools adapted to technology would increase the quality of basic medical education. This result reveals that in modern medical education, physicians need technological innovations as well as traditional methods. It would be beneficial to develop existing technological opportunities and integrate them with traditional medical education in order to make basic medicine courses easier to understand and to increase efficiency in education. As a matter of fact, seeing that the learning performance of students who use different learning strategies (tablets, smart phones, etc.) increases and have different points of view support (İnan, 2006; Chang et al. 2011; Bolatlı and Korucu, 2020) our view.

Limitation

As with many studies, this study has several limitations. The study population of our study was based on graduates from all medical faculties in Turkey and without any limitation in the sample. The introduction of more specific criteria when creating the population and sample can further increase the value of the study results. Secondly, by increasing the number of questions in the questionnaire with the physicians participating in the study, it can be ensured that the study data are of better quality.

CONCLUSION

In today's world where important developments are experienced in medical education, innovations are needed in order to train physicians in the best way (Karle, 2006). At every stage of medical education, it is important to ensure the participation of students, who are the real subjects of this work, in the education process (Odabaşı et al. 2011). In order to ensure this participation, the feedback received from the students by using methods such as questionnaires allows to make arrangements about the applied education programs and to understand the quality of education (Yılmaz et al. 2017; Güler et al. 2019). In this context, we think that this questionnaire study on physicians who graduated from medical school will contribute to the literature.

INTEREST STATEMENT

The authors declare that there is no conflict of interest.

We thank all the physicians who contributed to the study.

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