Research Doi: 10.25282/ted.1475145

The Views of Medical Students on the Educational Processes in Pre-Clinical Period

Tıp Öğrencilerinin Klinik Öncesi Dönemde Eğitim Süreçlerine İlişkin Görüşleri

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Abstract

Aim: Medical education, unlike other educational processes, is a very important educational process because it is directly related to human health and human life. Improving the medical education process is of great importance directly for student quality and indirectly for human life. It has been stated that the main purpose of medical education is to train qualified physicians who will increase the health level of the whole society. Training qualified doctors to serve this purpose depends on qualified planning of the education-learning process. As a result of constantly changing, developing and increasing knowledge, the education and training process needs to be revised and the methods and techniques used in the process need to be diversified. The evaluation results of the educational process should be used to improve quality. When evaluating the education process, it is recommended to benefit from the opinions of students, who are among the most important stakeholders. The aim of the research is to reveal the opinions of 3rd year medical students about the education processes in the pre-clinical years. For this purpose, the problem of the research is defined as; "What are the thoughts of 3rd year medical students about the education and training process before the clinical years?".

Methods: A qualitative research design was adopted in the research and the case study method was used. For this purpose, third-year students studying at Karadeniz Technical University Faculty of Medicine in 2022-2023 constitute the sample of the research. Convenient sampling method was used to determine the students participating in the research. In addition to having experience in pre-clinical medical education; in-depth interviews were held with students who attended the courses determined by the "Circulatory and Respiratory Systems" committee, which provides the most methodological diversity possible in educational activities such as educational presentations, panels, laboratories, basic medical practices. In in-depth interviews, semi-structured interview technique was used to reveal the medical students' views on their education processes. Descriptive analysis, one of the qualitative data analysis types, was used in the research. Descriptive analysis was carried out in four stages: creating a framework for descriptive analysis, processing of data according to the thematic framework, description of findings and interpretation of findings.

Keywords:
Educational Processes, Medical Student, Qualitative Study, View

Anahtar Sözcükler:
Eğitim Süreçleri, Tıp Öğrencisi, Nitel Araştırma, Görüş

Gönderilme Tarihi
Submitted: 30.04.2024
Kabul Tarihi
Accepted: 19.08.2024

To cite this article: Akturan S, Turk Y, Delibalta B. The Views of Medical Students on the Educational Processes in Pre-Clinical Period. World of Medical Education. 2024;23(70):105-123

Results: The findings that students thought would have a positive impact on their professional developments were basic medical practices and case discussions. Non-standardized basic medical practices, limitations in measurement and evaluation and inadequate mentoring were expressed by students as negative educational activities.
Conclusions: It has been concluded that it is not possible to talk about the positive impact without well-structured training on students' professional practices. Learning opportunities in the mastery learning approach can be provided by diversifying teaching methods, and the negative situations that students notice in their own learning can be eliminated.

Özet
Amaç*: Tıp eğitimi, diğer eğitim süreçlerinden farklı olarak, doğrudan insan sağlığı ve insan hayatıyla ilgili olduğu için, çok önemli bir eğitim sürecidir. Tıp eğitimi sürecinin iyileştirilmesi, doğrudan öğrenci niteliği, dolaylı olarak ise insan hayatı için çok büyük önem arz etmektedir. Tıp eğitiminin temel amacının, bütün toplumun sağlık düzeyini arttırıcı, nitelikli hekimler yetiştirmek olduğu belirtilmiştir. Bu amaca hizmet edecek şekilde nitelikli hekimlerin yetişmesi, eğitim-öğrenme sürecinin nitelikli bir şekilde planlanmasına bağlıdır. Sürekli olarak değişen, gelişen ve artan bilgi birikiminin sonucu olarak eğitim öğretim sürecinin de revize edilmesi, süreçte kullanılan yöntem ve tekniklerin çeşitlendirilmesi gerekmektedir. Eğitim sürecinin değerlendirme sonuçları niteliği artırmak için kullanılmalıdır. Eğitim sürecini değerlendirirken en önemli paydaşlardan olan öğrenci görüşlerinden de yararlanmak önerilmektedir. Araştırmanın amacı tıp öğrencilerinin eğitim ihtiyaçlarını belirlemek amacıyla klinik öncesi dönemdeki eğitim sürecine ilişkin görüşlerini ortaya koymaktır. Bu amaçla araştırmanın problemi; "Tıp fakültesi öğrencilerinin klinik dönem öncesi eğitim ve öğretim sürecine ilişkin düşünceleri nelerdir?" olarak belirlenmiştir.*
Yöntem: *Araştırmada nitel araştırma deseni benimsenmiş olup durum çalışması yöntemi kullanılmıştır. Bu amaçla araştırmanın örneklemini 2022-2023 yılında Karadeniz Teknik Üniversitesi Tıp Fakültesi'nde öğrenim gören üçüncü sınıf öğrencileri oluşturmaktadır. Araştırmaya katılan öğrencilerin belirlenmesinde kolay ulaşılabilir örnekleme yöntemi kullanılmıştır. Klinik öncesi tıp eğitimi deneyimine sahip olmanın yanı sıra; eğitici sunumları, paneller, laboratuvarlar, temel tıp uygulamaları gibi eğitim faaliyetlerinde mümkün olan en fazla metodolojik çeşitliliği sağlayan "Dolaşım ve Solunum Sistemleri" komitesi tarafından belirlenen derslere katılan öğrencilerle derinlemesine görüşmeler yapılmıştır. Derinlemesine görüşmelerde tıp öğrencilerinin eğitim süreçlerine ilişkin görüşlerini ortaya çıkarmak amacıyla yarı yapılandırılmış görüşme tekniği kullanılmıştır. Araştırmada nitel veri analizi türlerinden biri olan betimsel analiz kullanılmıştır. Betimsel analiz dört aşamada gerçekleştirilmiştir; betimsel analiz için çerçeve oluşturma, verilerin tematik çerçeveye göre işlenmesi, bulguların tanımlanması ve bulguların yorumlanması.*
Bulgular*: Öğrencilerin mesleki yaşamlarına olumlu etki edeceğini düşündükleri bulgular temel tıp uygulamaları ve vaka bazında yapılan tartışmalar olmuştur. Temel tıp uygulamalarının standardize olmaması, ölçme ve değerlendirmedeki sınırlılıklar ve mentorluğun yetersiz olması öğrenciler tarafından olumsuz eğitim faaliyetleri olarak ifade edilmiştir.*
Sonuç: *İyi yapılandırılmamış eğitimlerin öğrencilerin mesleki uygulamalarına olumlu bir etki etmesinden bahsetmenin mümkün olmadığı ortaya çıkmıştır. Tam öğrenme yaklaşımındaki öğrenme imkanlarının öğretim yöntemleri çeşitlendirilerek sağlanabileceği, buradan hareketle de öğrencilerin kendi öğrenmelerinde fark ettikleri olumsuz durumların ortadan kaldırılabileceği sonucuna varılmıştır.*

INTRODUCTION

Education is the process of inducing behavioral change in an individual's behavior deliberately (1). Educational program is defined as the mechanism of learning experiences provided to the learner through planned activities at school or outside of school (2). However, education is not a process that can only be optimized by

structuring the curriculum well. The education process includes social areas, cultural characteristics, educational infrastructure, educator competencies, etc. It is shaped by the interaction of many factors (3,4,5,6). Although one of the requirements to get the most of the education process is to improve the elements of the education program, other factors affecting the education process also need to be qualified. Medical education has a complex structure that might be effected from many factors such as; socio-cultural factors, relations, institutional climate, educators' skills, etc. (7). As a result of complexity, the main characteristic of medical education is to open development based on needs of changing situations. So, the education process needs to be revised and the methods used in the process need to be diversified regularly. The evaluation results of the educational process should be used to improve quality. When evaluating the educational process, it is recommended to benefit from the views of students, who are among the most important stakeholders (8). There are many studies in the literature on evaluating the medical education process in different dimensions, such as student and educator views and thoughts (9, 10, 11 12,13, 14). When these studies were examined, their aim were to reveal the quality of the medical education process through the views of students and educators, and to shed light on the selection of appropriate and correct methods for medical education. In changing and developing education processes, it is possible that the problems experienced by students during the education process and their expectations from the educational processes may also change. It has been a matter of curiosity to reveal what the problems and expectations of medical students are regarding the education process. In the light of all this, the aim of the research is to reveal the views of third-year medical students about the educational process in the pre-clinical years in order to determine their educational needs. For this purpose, the problem of the research is defined as; "What are the thoughts of medical students about the educational process for pre-clinical years?".

METHODS

Research Design

A qualitative research design was adopted and the case study method was used in the research. The case study research give researchers the opportunity to conduct in-depth research on a special subject or situation and to focus on this special subject or situation (15). Case studies are in-depth research studies that focus on individuals and groups (16, 17, 18) In this research, it was planned to focus on the thoughts of medical school students on the problems, their attitudes and behaviors, and their views on their roles in the educational activities as a group and collect in-depth data. The research was conducted in accordance with qualitative research process; noticing the problem, identifying details by analyzing the problem, determining an approach to solving the problem, designing the research, collecting data, classifying and analyzing data, interpreting data, reporting research results (19).

Research Sample

The 209 third-year students studying at Karadeniz Technical University Faculty of Medicine in 2022-2023 constitute the sample of the research. Convenience sampling method was used to determine the students participating in the research. The students were selected from the 3rd year medical students who participated in the training activities and passed the "Circulatory and Respiratory Systems" committee, which includes more methodological diversity such as lectures, panels, laboratories, problem-based learnings, and basic medical practices. Besides, 3rd year students had more experiences for preclinical years medical education. So that, we selected 3rd year medical students. In qualitative studies, the number of participants may not determine at the beginning of research. The data saturation is

the main factor effects the sample of study. So, the number of students was not determined at the beginning of the research process, as in-depth interviews will continue until information saturation is reached (defined as the repetition of said/stated opinions instead of additional-new information), which is a feature of qualitative research. The saturation of data decides by researchers based on their experiences and expertise in context of research question (20).

Data Gathering Method

In-depth interviews were conducted with 23 students who agreed to participate in the research voluntarily. In in-depth interviews, semi-structured interview technique was used to reveal the importance and necessity and the problems (difficulties) students encountered in the educational activities, their educational behaviors and attitudes, and their views on their own roles in the processes. In researches in which socio-cultural factors, institutional climate, the details of educational processes, and experiences are examined, it is more appropriate to use the in-depth interview technique (21). In this research, in order to obtain more detailed data emerged during the process of in-depth interviews, semi-structured interview technique was used. The interviews were conducted by two researchers (SA and YT). Before interviews, these researchers met many times to make consensus how manage the interviews. In qualitative interviews, researchers can use their experience and expertise to reveal data in the context of research questions and develop interview questions in a way that participants will understand and feel comfortable with. In addition, it is also recommended that the researchers empathise and ask as 'What would I think about these questions if I were the participants?' (22). In this research, in the light of this information, interview questions were prepared by the researchers in a way that would serve the purpose of the research and by focusing on the research problem. The interviewed students were informed about the research process before the interview and their informed consent was obtained. The questions of interviews are shared in Annex 1. All interviews were conducted in Department of Medical Education. One of researcher (YT) contacted with medical students to schedule interviews. The mean duration of interviews was around 20 minutes. All researchers have experiences and certificates on carrying out qualitative interviews.

Data Analysis

Descriptive analysis, one of the qualitative data analysis types, was used in the research. In descriptive analysis, the researcher creates a framework by taking into account the research questions, the conceptual framework of the research, or the dimensions included in the interviews or observations. This framework is used for data analysis and, as a result, it is determined under which themes the data will be organized and presented (23). In this study, descriptive analysis of the data was conducted based on the questions asked to the students in the interview. Descriptive analysis took place in four steps as blow:

Step 1: Creating a framework for descriptive analysis; In the research, a framework was first created based on the interview questions and the data analysis process started.

Step 2: Processing of data according to the thematic framework; Each of the researchers analyzed the data individually, according to the thematic framework created, and then the necessary number of meetings were held to come together and collaborate.

Step 3: Description of findings; The findings obtained as a result of the analysis of the raw data set are written and presented in tables.

Step 4: Interpretation of findings; The findings were interpreted as a result of discussions between the researchers (19,24,25,26).

Ethical Approval

In this study, ethics committee approval was received from the Scientific Research Ethics Committee of Karadeniz Technical University Faculty of Medicine, dated 02.06.2022 and with protocol number 2022/114.

RESULTS

Findings Regarding The Effects Of Educational Activities Nn Student's Professional Life

The most important activities they focused on were basic medical practices and case discussions (Table 1). In addition, interesting course content and compliance with the planned curriculum were also mentioned as positive educational activities by the students (Table 1). Non-standardized basic medical practices, poorly designed theoretical courses, limitations in measurement and evaluation, inadequate clinical case discussions and inadequate mentoring were expressed by students as negative educational activities.

Table 1. Positive or negative Educational Activities ("S" represent the student)

Positive Lecturer Activity		**Student**	**Negative Lecturer Activity**		**Student**
Basic medical practices	Blood collection laboratory	S1, S5	**Activities for non-standardized basic medicine practices**	Non-systematic skill laboratories	S2, S6, S13, S14, S15, S18
	Suturing laboratory	S1		Inadequate laboratory	S3, S5, S6
	Skills laboratory	S16		Insufficient practical training	S4, S5, S6, S7, S8, S10, S12, S14, S23
	Vascular access	S4	**Poorly designed theoretical course**	Intensive course content	S2, S4, S9, S21, S22
	Suturing	S12		Training with insufficient content	S8
	Clinical skills laboratory	S16		Direct instruction technique	S2, S3, S4, S5, S6, S20
	Skill practices	S3, S16, S19		Insufficient slides	S4
				Not using different teaching methods	S6
Case discussion		S2, S3, S4, S5, S7, S9	**Limitations in measurement and evaluation**	Skills exams at the end of the year	S13
Interesting course contents		S16	**Inadequate clinical case discussion**		S8
Compliance with the planned curriculum		S3	**Inadequate guidance (inadequate mentoring)**		S1
			High number of students		S1

Findings about the Problems Encountered in Pre-Clinical Years and the Medical Students Suggestions

The problems revealed from analysis were classified as: limitations in curriculum design, insufficient training, negative consequences of education policies and poorly designed theoretical courses (Table 2). Suggestions for solutions to the problems were regarding curriculum design, educational processes, student integration and course materials (Table 2).

Table 2. Problems Encountered in Pre-Clinical Years and Suggestions

Problems		**Students**	**Suggestions**		**Students**
Limitations in curriculum design	Insufficient time	S1, S2, S3, S4, S5, S6, S7, S8, S9, S12, S13, S16, S17, S18, S23	**Recommendations for curriculum design**	Lessons should be balanced (not the same lesson all day)	S14
	Excessive lesson hours per day	S1, S2, S7, S18, S22		Conflicting topics in courses (course contents) should be simplified	S23
	Order of lessons	S12		Some of the lessons should be transferred to other committees	S9
	Lessons are held only as lecture hall lessons.	S21			
	Intensity of the program	S2, S3, S4, S5, S7, S8, S9, S12, S13, S17, S18, S20, S21, S22, S23		School should open 1 week early	S6, S7
	Excessive theoretical lesson hours	S1, S2, S12, S18			

Problems		Students	Suggestions		Students
Insufficient training	**Lecturers not coming to class**	S20		**1 week should be added to the 2nd committee (from the 3rd committee)**	**S1, S12, S18**
	Lecturers who do not comply with class hours	S11		1 week should be added to the 2nd committee (from the 3 weeks allocated for the final exam)	S1, S2, S5, S7
	Lecturer behavior and attitudes	S5		Committee must be 7 weeks	S3, S4, S6, S7, S8, S12, S16,
	Undisciplined lecturers	S11, S20	**Suggestions for student integration into educational processes**	Student opinions should be listened to	S11
	Misdirections from lecturers (questions will be asked here)	S4, S22		Presentations should be supported with visuals and case examples.	S21
	Discourses of the lecturers (it is difficult to memorize these drugs and you will not use them, but memorize them)	S22	**Suggestions for course materials**	Slides should be updated	S11, S4
Negative consequences of education policies	High number of students	S19			
Poorly designed theoretical courses	More information less time	S16, S22			
	Heavy theoretical knowledge	S16			
	Committee is difficult	S22			

Findings Regarding the Contributions Of Pre-Clinical Years in Gaining the Necessary Professional Competencies

Students stated that pre-clinical years provided them with theoretical knowledge, competence in basic medical practices, and supported them in gaining clinical reasoning skills in gaining the necessary competencies in professional practices (Table 3). In addition to these positive contributions, they also expressed lack of proficiency in basic medical practices, limitations regarding training methods and materials, and experiences on negative situations in the measurement processes (Table 3).

Table 3. The Contributions of Trainingsi Pre-Clinical Years for Gaining the Necessary Competencies

Positive		Student	Negative		Student
Gaining theoretical knowledge	Preventive medicine teaching	S6, S7	**Lack of BMP qualification**	Did not teach physical examination	S3
	Acquisition of high knowledge and skills in cardiology and chest diseases	S20		Taught physical examination with plain explanation.	S4
	ECG teaching	S16, S23		Didn't give us a chance to practice	S4, S6, S7, S10, S18
Competence in BMP applications	Suturing teaching	S1		Did not provide professional skills	S4, S6, S7, S10, S18
	Bloodletting teaching	S16	**Limitations regarding training methods and materials**	Listened to the experiences of the lecturers	S2, S6,
	Hypertension teaching	S15		Made me feel very well that the one who memorizes well will be a good doctor.	S4

Positive		Student	Negative		Student
Acquisition of clinical reasoning skills	Gaining insight into treatments	S14, S15, S21		Indifferent lecturer and insufficient resources offered	S4
	Teaching correct guidance in difficult cases	S14, S15, S17	**Measuring processes**	Taught me to study the questions that came up	S8
	Gain competence by demonstrating common diseases and cases	S9, S13, S23		Taught me to work for points	S12
Attitude development in educ.	Teaching listening to lectures	S2	**Failure to obtain outputs**	Did not gain competency	S4, S5,
				It was a very important establishment, but it achieved nothing.	S12
				Didn't make any gains	S19

Findings on Educator Behaviors or Attitudes Affecting Students' Interest in Pre-clinical Years

Students expressed their educational behaviors that support their interest in lessons under the headings of ‘‘establishing qualified communication’’, ‘‘effective educational management’’, and ‘‘effective body language’’ (Table 4). It was concluded that they focused on "inquiry lecturing" and "interactive lecturing" as positive educational behaviors (Table 4). Negative educator behaviors include the educator's limited use of methods and materials, the educator's unprofessional attitudes and behaviors, deficiencies in communication skills, and the educator's inadequate behavior regarding preparation for lessons (Table 4).

Table 4. Positive and Negative Educational Behaviors That Affect Student Interest

Positive Educator Behavior		Student	Negative Educator Behavior		Student
Behavioral characteristics exhibited in communication	Be sincere	S2	**Limitations on the use of educational methods and materials**	Reading slide	S1, S2, S3, S6, S7, S12, S13, S15, S17, S20
	Be affectionate	S2		Not using different effective methods in lecture	S6, S21

Positive Educator Behavior		Student	Negative Educator Behavior		Student
	Be well spoken	S3		Not teaching interactive lessons	S6, S7, S18
	Behaving in a pleasant manner	S2, S3		Reading lecture notes	S1, S6, S7, S12, S23
	Make jokes	S6		Showing boredom in practical training	S11
	Using different expression methods	S6		Not making an objective evaluation	S11
Associated with the training method	Make a summary at the end of the lesson	S9	**Unprofessional attitudes and behaviors**	Offend the student	S2, S3, S12
	Make an effort to make us understand the logic	S12		Say bad words	S2, S3, S12
	Explaining why the theoretical knowledge taught will be important in the profession	S14		Mobbing	S3, S4
	Make inquiries and explanations	S12, S15, S17		Trip	S4
	Making an explanation with practical examples	S16		Derogatory speech	S2, S3, S5, S12
	Explaining by giving cause and effect relationship	S12		Teaching with negative energy	S6
	Interactive course processing	S6, S7, S18		Not seeing the student as a colleague	S11
	Diversifying teaching methods	S6, S21, S23		Not trusting the student	S11

Positive Educator Behavior		Student	Negative Educator Behavior		Student
Use of positive body language	Use good tone of voice	S13		Scolding students for bringing their private life into the classroom	S12
			Limitations in communication skills	Have bad diction	S8
				Not communicating with the student (not looking at the student's face, not making eye contact)	S19
	Using facial expressions and movements well	S13	**Limitations related to course preparation**	Not coming to class	S1, S2, S3
				Not coming to class on time	S11, S16
				Not informing that you will not come to class	S1, S2, S3
				Not preparing dynamic and up-to-date presentations	S2, S8, S23
				Reading aged slides	S1, S2, S8

Findings Regarding the Adequacy of the Feedback Received from the Educators in the Pre-Clinical Years

All students participating in the research stated that they received sufficient feedback from their educators They stated that this feedback enabled them to interact with the educators (S3), encouraged them to learn better (S1, S5, S8, S11, S13, S14), supported their interest and motivation (S7,S9,S15), increased their participation in the course (S15,S17), and helped them to access the right information quickly (S16,S21).

Findings about Student Criticisms of the Education Processes and Students' Views on Their Role in the Education Processes

The students' criticisms of the education processes were related to educational behavior, attitude, skills and technological competences, educational design, and educational methods (Table 5). In addition to the fact that students have undefined roles in the education process, giving feedback to the educational processes and taking responsibilities in developing educational processes were among the roles of the student (Table 5).

Table 5. Students' Criticisms and Their Role

Student Reviews		Student	The student's role		Student
Criticisms regarding educational behavior and attitudes	Lecturers not coming to class	S1, S2 S3	**Undefined roles**	The student has no role	S1, S12
	Lack of dynamism	S4		I don't know	S2

Student Reviews		Student	The student's role		Student
Criticisms regarding educational behavior and attitudes	Lecturer attitudes	S5	**Taking responsibilities in educational processes**	Feedback should be given to the student. Include the student in this process (once a month).	S3, S16, S21
	Mobbing	S5		Giving the student a say in the preparation of the curriculum	S10
	Students not being listened to	S20		Each student is required to fill out a survey at the end of each course	S6
Criticisms of educational design	Density	S1, S8, S13, S20	**Request to give feedback**	Filling out surveys honestly	S8, S11, S14, S16, S17, S21, S23
	Incomplete practical training	S7, S13		If the surveys were a little simpler, fill out all the surveys.	S8, S11, S15, S17, S21, S23
	Very detailed course content	S4, S7	**Desire to support the institution**	Participating in active projects	S19
Criticisms regarding educational materials and methods	Missing slides that are out of date	S3, S4, S11	**Inability to communicate effectively**	If there was no fear of management, there would be communicating problems	S11, S15
	Common slides of educators	S8			
Limitations in educational skills	Lack of training of lecturers	S4, S9			
Lack of technical support	Lecturers' lack of technology	S9			

DISCUSSION

Instructional Problems

There were some instructional problems that affected the implementation of program. The main issue that students focused on curriculum design was "insufficient time", and students stated that the time allocated for committees were very insufficient. In a similar study, researchers concluded that although the 3rd year clinic entrance internship committee period was deemed sufficient by the faculty members, the 3rd year medical students did not find the period sufficient (27). In this research, students stated that student integration into the educational processes was not carried out and the lack of student integration negatively affected their education. In support of this finding, the literature states that feedback received in clinical training increases student performance (9, 28,29).

Educational Activities That Have A Positive Impact On The Student's Professional Practices

When the findings were analyzed, it was revealed that basic medical practices and case discussions would have a positive impact on medical students' professional developments. Medical students expressed "interesting course content" and "compliance with the planned curriculum" as positive educational activities. When the data regarding negative impact on medical students' professional developments were examined, non-standardized basic medical practices, poorly designed theoretical courses, limitations in measurement and evaluation, insufficient clinical case discussions, insufficient guidance (insufficient mentoring) and the large number of students were revealed from medical students' opinions. In our research, it was revealed that "inadequate practical training" and "unsystematic skill laboratories", which are activities related to non-standardized basic medical practices, would have negative effects on the professional developments of the 3rd year medical students participating in the study. Based on this data, it can be said that students do not receive adequate clinical skills training. Similarly, in the study conducted by senior students of Istanbul University Faculty of Medicine, it was revealed that the interns considered themselves inadequate in clinical skills (30). In addition, when the results of many studies in the literature are examined, it is seen that the common result in these studies is that professional skills laboratories prepare students better for clinical years in terms of knowledge and skills (31, 32, 33, 34).

Our medical students stated that carrying out basic medical practices in a non-standardized manner would have negative effects on their professional developments. As a result, it can be said that it is not possible to talk about the positive impact of non-standardized training on students' professional practices. In literature, it is stated that skill training based on the master-apprentice relationship is far from standardization, and accordingly, there are differences in students' practices and ability to learn the skill, and a standard clinical skills training is recommended instead of clinical skills training based on the master-apprentice relationship and chance (35, 36). However, in recent years, with the acceleration of accreditation studies in undergraduate medical education (37), there has been an increase in the use of methods and evaluations that ensure the acquisition of medical skills (38,39). There is a need to increase activities in our faculty to adopt a standard approach in acquiring and evaluating basic medical skills.

It was revealed that "poorly designed courses" negatively affected the medical students' learning in pre-clinical years. Learner centered presentations, insufficient slides, intense course content, and lack of use of different teaching methods are among the learning activities that negatively affect students' learning. However, diversification of teaching methods is an approach that should be applied not only in medical education but also at all stages of education. Bloom (1976) suggests that with a planned approach, almost all students can learn all the new behaviors that are aimed and desired to be taught (40). It can be said that what is meant by a sensitive and planned approach is to choose a suitable way for all students to learn by diversifying teaching methods. It can be concluded that learning opportunities can be provided by diversifying teaching methods. Therefore, this negative situation that students notice in their own learning can be eliminated.

Educational Methods That Negatively Affect Student Learning

The other revealed data that students encountered problems mostly seen in committees were due to education methods. As a result, it can be said that the educational methods that students encounter in this committee negatively affected their education. Teaching methods used in lectures, insufficient educational roles of educators, excessive number of students as a result of educational policies, and poorly designed lectures were

identified as problems that students encountered in this committee. It was determined that 3rd year students focused on "intensive course content" in the lectures that was not well designed. Similarly, when the findings obtained by researcher from the evaluation survey of Muğla Sıtkı Koçman University Faculty of Medicine 3rd year committees were examined (40), it was seen that the overload of course content was mentioned by the students as one of the aspects of the committee that needed to be improved (42).

With student-centered teaching methods in medical education, negative student opinions can be prevented or minimized. Student-centered teaching methods (43) will ensure the mentally active participation of students in the teaching process. With well-designed student-centered courses, students can be enabled to construct the knowledge themselves. One way to improve educational methods that negatively impact student learning is to focus on interactive course content (44). On the other hand, it can be said that other factors that need to be focused on include preparing educators for lessons, arranging the intensity of the content, ensuring the integration of basic science and clinical science, and improving the quality of presentation skills in order to ensure the active participation of students in classes. If these factors are not handled or carried out at an optimum level, they may limit student-centered educational activities (44). In addition to these limitations reflected in the literature, the most important data revealed in our study are the effects of the traditional education approaches on students, which they are mainly trained in until they enter medical education, and their hesitations regarding the equivalent of the competencies to be obtained as a result of pre-clinical years trainings in clinical environments. In addition, it is seen that students' lack of awareness of their responsibilities emerges as one of the factors limiting learner-centered educational activities.

The most important reasons for negative effects on educational activities are the inadequacy of educators, inadequate funding, structural problems in the curriculum, not including students in the educational process and inadequacy of infrastructure (44-46). However, the revealing data emphasized the negative effects of ‘unprofessional attitudes and behaviors’ on medical education more strongly than in the literature.

Other Factors That Negatively Affect The Students’ Education

In our study, students stated that they were afraid of the administration and if this fear did not exist, they could easily convey their problems. Fear is defined in the literature as a psychological reaction that may occur in the body of people who are under stress (47). Based on this, we can say that students feel under stress. When the education process of medical students is examined, it can be said that they go through a very intense education and this is a direct source of stress. According to researcher, medical school students work in a high-stress learning environment (48). In this case, in addition to the fact that the educational process they are in is stress-related, it is thought that students feeling stressed for different reasons will negatively affect their academic success. There are studies in the literature showing a relationship between stress and academic success (49).

Students stated that they wanted to support the faculty by taking an active role in projects during education and training processes. They stated that the faculty should support students on this path, but they did not receive such support. There are similar studies in the literature showing that students are enthusiastic about carrying out research projects (50). Social activities and research projects might be used to increase the interactions between administration and medical students. Administrations might support the medical students’ club endeavors

and activities. Besides, administrations might arrange the design of researches by taking support of faculty members in which medical students take responsibilities and make good relations with faculties and administrations. So, the fear and the stress level also decrease by increasing well planned activities.

Finally, our study revealed that our students did not feel competent in the context of the development of professional competencies. The feeling of inadequacy can be overcome with the healthy development of the professional identity formation process (51). In the study conducted by Tesfaye et al. (2020) with 267 students, it was observed that only 39.3% of the participants perceived themselves as clinically competent (52). In addition, in another study conducted on intern physicians in 2017, the self-efficacy of intern physicians was evaluated within the scope of the National Core Training Program and it was found that their self-efficacy beliefs were significantly lower than expected (53). Our finding are similar with literature.

This study only involved the opinion of 3rd year medical students. So, this limitation might be strenghten by including other pre-clinical years students in the future.

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Annex 1. Interview Questions

The interview questions in this form will be asked for an ongoing study to determine the education and learning needs of students. The identities of the students will be kept confidential, and the information obtained from the students will be used solely for scientific purposes.

1.Could you share the training activities that affected you, that were different in a positive or negative sense, and that you thought had a positive or negative impact on your professional development? Explain with reasons.

2.What problems do you mostly encounter during the education process? What is your solution suggestion/suggestions?

3.Please explain how you think your education process contributed to you gaining the necessary competencies to demonstrate your professional practice.

4.Which behaviour/behaviors of the educator affects your interest in the course positively or negatively? Please explain.

5.Do you receive sufficient feedback from the instructors to your questions during the training process? If your answer is "yes", what does this bring to you? If your answer is "no", do you have any suggestions about what should be done about this? Could you please explain?

6.What kind of contributions can you make to the education process? In other words, what might be your role in this process? What can you do? Could you please explain?