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Opinions of Emergency Medicine Physicians on the Subspecialty of Emergency Medicine Critical Care: A Pilot Study

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Abstract

Aim: In December 2023, the Medical Specialization Board of Japan recommended granting emergency medicine as a primary specialty the right to undergo a subspecialty examination in critical care. This decision was subsequently published in the Official Gazette in May 2024, and it was officially entered into force. While Emergency Medicine Specialization Societies welcomed this decision with great enthusiasm, Critical Care Specialization Societies reacted negatively. Through this survey study, we aimed to determine the opinions of emergency medicine physicians regarding the Critical Care Subspecialty and to reflect on the current debate within the emergency medicine community.

Materials and Methods: This cross-sectional survey study involved physicians working at the Emergency Medicine Clinic of a City Hospital. After obtaining the necessary permissions, a 22-question survey was prepared using Google Forms and administered to 52 emergency medicine physicians who agreed to participate out of the 75 physicians working in the clinic. Descriptive statistics were obtained from the survey results, and categorical variables were presented as frequencies and percentages.

Results: 29% of the physicians had over 10 years of experience in emergency medicine, whereas 27% had 1-2 years of experience. All participants agreed that the critical care subspecialty is appropriate for emergency medicine, supported the recommendation, and desired the right to enter this subspecialty. Additionally, 92% of the physicians viewed the efforts of emergency medicine specialty societies regarding critical care subspecialty positively, whereas 96% considered the opposing statements from other specialty societies to be unjustified.

Conclusion: There is widespread consensus among emergency medicine physicians regarding the need for subspecialty training. Granting the right to enter the critical care subspecialty will likely result in many emergency medicine specialists occupying positions within this field, despite the potential drawbacks.

Keywords: Emergency medicine, critical care, subspecialty

Introduction

In Türkiye, the first general intensive care units were established by anesthesiology and reanimation specialists under the name "Reanimation Units" starting from the 1960s. These intensive care units were incorporated into the scope of the newly established intensive care subspecialty after publication of the Medical Specialization Regulations in 2002. The concept of "general intensive care" of this new discipline was planned to provide health services to all critical patients and to operate as units defined in three different levels. The implementation of subspecialty training programs was also defined at protocol level. In 2012, student intake for subspecialty training began. According to the Regulation on Medical and Dental Specialization Education, the duration of intensive care subspecialty training is 3 years, and the main specialties that can be selected for this subspecialty are anesthesiology and reanimation, general surgery, chest diseases, internal medicine, infectious diseases and clinical microbiology, and neurology, which total six specialties (1-3).

The emergency medicine specialty was officially established in our country in 1993. It was included in the Emergency

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Medicine Specialist Training Core Curriculum published in 2013 under the five recommended subspecialties (pediatric emergency, toxicology, critical care, disaster medicine, trauma and emergency surgery, international emergency medicine). However, this section was removed from the 2016 curriculum. Emergency medicine associations have occasionally applied to relevant authorities to enable emergency medicine specialists to take the intensive care subspecialty exam. The Turkish Emergency Medicine Foundation also has an application in this regard (4).

In the final days of the year, on December 28, 2023, the Board of Medical Specialties issued a recommendation allowing emergency medicine specialists to take the subspecialty exam for intensive care, which caused a significant stir both within the emergency medicine and the anesthesiology and reanimation communities. The Emergency Medicine Physicians Association of Turkey (EPAT) and the Emergency Medicine Association of Turkey (EMAT) announced this news as a positive development. EPAT shared it on their website under the title "fruit of a 25-year struggle: intensive care subspecialty", while EMAT posted an infographic titled "a journey started 20 years ago" on social media. This post emphasized that the association has been making necessary applications in this field since 2004. However, in the anesthesiology and reanimation community, there were statements that opposed this development. The Turkish Society of Intensive Care and the Turkish Society of Intensive Care Specialists have articulated their arguments against this development in their statements. Anesthesiology associations have made statements opposing the granting of intensive care subspecialty admission rights to emergency medicine departments. Anesthesia associations argue that allowing emergency medicine specialists to begin intensive care training while the number of emergency medicine specialists in all emergency departments remains insufficient could create a shortage of emergency service specialists. Another argument they present is that the current practice, in which physicians from six different specialties are already receiving intensive care training, could lead to a lack of uniformity in the training process, and the inclusion of emergency medicine specialists as the seventh specialty might negatively impact this process. (5-7). Ultimately, the intense efforts of the Emergency Medicine Associations bore fruit, and the Law regarding the designation of intensive care as a subspecialty was published in the Official Gazette on March 1, 2024, with issue number 32476, and came into effect (8).

With this survey, we aimed to determine the opinions of emergency medicine physicians, including residents, specialists, and academics, working in the Emergency Medicine Clinic of a Tertiary Care City Hospital regarding intensive care subspecialty. Our goal was to shed light on current debates within the emergency medicine community and to reflect the views of professionals in the field.

Materials and Methods

This cross-sectional study included physicians working in the Emergency Medicine Clinic of a City Hospital. Ethical approval was obtained from the KTO-Karatay University Clinical and Non-Clinical Research Ethics (decision number: E-41901325-200-79454, date: 16.02.2024) and necessary permissions were also obtained from the Hospital Education Planning Committee. Data collection took place over a period of 2 months from April 5, 2024, to June 5, 2024. A survey form was developed to evaluate the opinions of physicians working in the Emergency Medicine Clinic of the City Hospital regarding intensive care subspecialty. The survey comprised 22 questions, including 3 questions about demographic characteristics and 19 questions about subspecialty training and intensive care subspecialty. Forms were prepared electronically using Google Forms and shared with physicians working in the clinic. Reminders were sent at regular intervals. During the data collection phase, the purpose of the research was explained to the physicians, verbal consent was obtained, and those who agreed clicked on the relevant link to answer the survey. 52 out of 75 physicians working in the clinic, 52 participated in the study, accounting for 69%. Physicians who did not want to participate in the study were excluded. No specific reason was identified for the group that did not wish to participate in the study, and we believe their non-participation was due to an aversion to completing the survey.

Statistical Analysis

Statistical analysis of the data was performed using the Jamovi Statistical Package program, and categorical variables were presented in frequency and (%) format. This study was presented as an oral speech at WACEM 2024, Rome, Italy, in November 2024.

Results

A total of 52 physicians participated in the survey. Of these individuals, 4 were academicians, 12 were specialists, and 36 were resident physicians (Figure 1). The three most common responses of the participants to the question querying the total duration of work in the emergency medicine specialty were 10 years or more, with 15 participants (29%), followed by 1-2 years with 14 participants (27%), and 2-3 years with 6 participants (11%), as well as 4-5 years with 6 participants (11%) (Figure 2). Responses to single-choice questions are given in Table 1.

Regarding whether they had experience in intensive care, 50% (n=26) of the respondents answered "Yes." All participating

physicians (n=52) answered yes to the question "Should any subspecialty be defined for the emergency medicine specialty?". A total of 168 responses were received from the 52 participating physicians regarding the question "Which subspecialties should be defined?". The most common choice was intensive care/critical care (27%, followed by toxicology 25%, trauma and emergency surgery 21%). The option of disaster medicine was selected 26 times (16%), and pediatric emergency was selected 18 times (11%) (Figure 3).

For the question "Which subspecialty would you like to choose?", a total of 82 responses were received from the participants in the survey. The most common choice was intensive care/critical care (39%, followed by toxicology 37%, and trauma and emergency surgery 17%). Disaster medicine was selected 6 times, while pediatric emergency was not chosen (Figure 4).

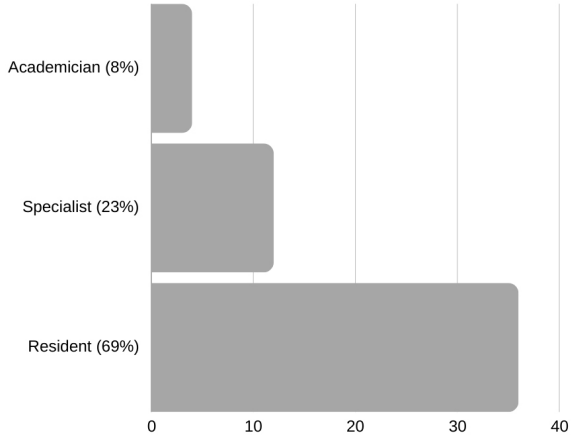

Figure 1. Role in emergency medicine

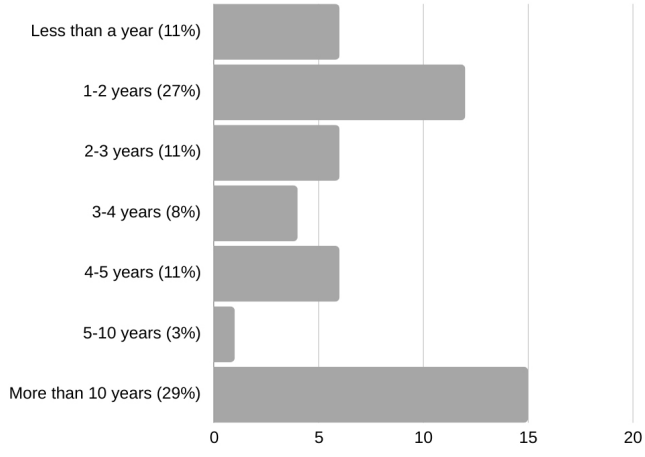

Figure 2. Total duration of work in the emergency medicine specialty

Participants evaluated the recommendation decision regarding intensive care subspecialty training for the emergency medicine specialty as 100% positive. All respondents to the survey (n=52) believed intensive care subspecialty is suitable for emergency medicine. Furthermore, all physicians (n=52) expressed their desire for the emergency medicine specialty to be granted access to intensive care subspecialty training.

Ninety-six percent of the physicians expressed that they found the statements made by Intensive Care Specialty Associations unjustified the recommendation decision to grant intensive care subspecialty rights to the emergency medicine specialty, while 2 participants (4%) stated that they found these statements justified. When asked whether they wanted to pursue any subspecialty training after completing their emergency medicine training, 81% answered "Yes." When asked whether they wanted to apply for intensive care subspecialty training if given the opportunity, 69% of the participants (n=36) answered yes, while 6 physicians responded no (12%) and 10 physicians (19%) were undecided.

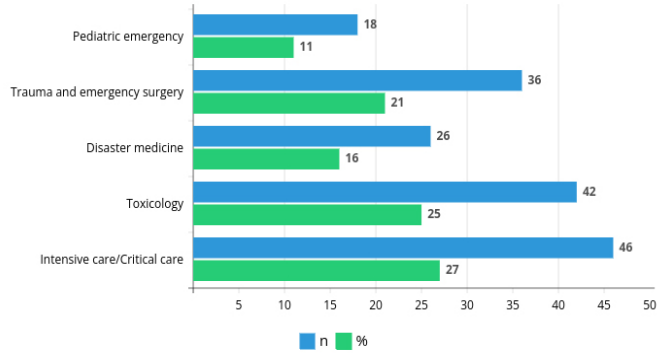

Figure 3. Responses to the question "Which subspecialties should be defined for Emergency Medicine?"*

*Multiple responses are possible for this question

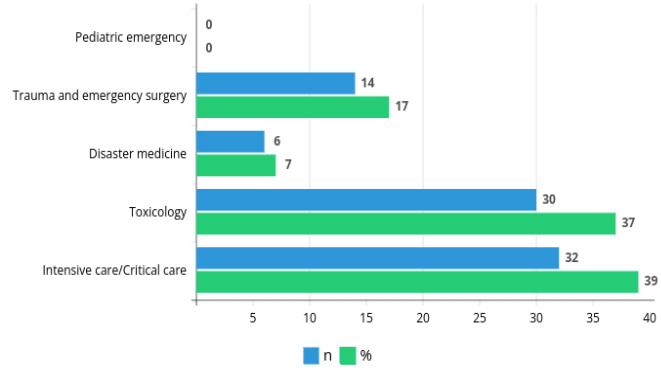

Figure 4. Responses to the question "Which subspecialty training would you like to pursue after completing your emergency medicine training?" *

*Multiple responses are possible for this question

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Table 1. Responses to single-choice questions in the survey (n=52)			
Question	**Response options**	**n**	**%**
Do you have experience in intensive care?	Yes	26	50
	No	26	50
Should a subspecialty be defined for the emergency medicine specialty?	Yes	52	100
	No	0	0
Would you like to pursue a subspecialty training after emergency medicine residency?	Yes	42	81
	No	2	4
	I'm undecided	8	15
How do you evaluate the recommendation for the entry right to Intensive Care Medicine Subspecialty training for Emergency Medicine?	Positive	52	100
	Negative	0	0
	I'm undecided	0	0
Is emergency Medicine related to Intensive Care?	Yes	52	100
	No	0	0
	I'm undecided	0	0
Is the Intensive Care Fellowship suitable for the emergency medicine specialty?	Yes	52	100
	No	0	0
	I'm undecided	0	0
Do you think entry to the Subspecialty Board Exam should be granted for the Emergency Medicine specialty?	Yes	52	100
	No	0	0
	I'm undecided	0	0
How do you evaluate the efforts of the Emergency Medicine Specialty Associations regarding the Intensive Care Subspecialty?	Positive	48	92
	Negative	2	4
	I'm undecided	2	4
How do you evaluate the statements of other specialty associations opposing Emergency Medicine Physicians' access to the Intensive Care Subspecialty Board Exam?	Agree	2	4
	Disagree	50	96
	I'm undecided	0	0
Would you consider applying for the Intensive Care Subspecialty Board Exam if given the opportunity?	Yes	36	69
	No	6	12
	I'm undecided	10	19
Would you consider preparing for the Intensive Care Subspecialty Board Exam?	Yes	34	65
	No	8	15
	I'm undecided	10	20
What is your view on long-term patient care?	I want	22	42
	I do not want	10	19
	I'm undecided	20	39
What is your opinion on the requirement for a third compulsory service?	I can do it	8	15
	I can not do it	30	58
	I'm undecided	14	27
What is your opinion on working outside of shifts?	I can do it	20	39
	I can not do it	12	22
	I'm undecided	20	39
What is your opinion on working on-call?	I can do it	32	62
	I can not do it	12	23
	I'm undecided	8	15

When evaluating their willingness to study for the intensive care subspecialty exam, 65% of the participants answered "Yes," while 20% remained undecided.

It is essential that patient care in emergency departments does not exceed 8 hours. However, in many cases, especially due to bed shortages, the length of stay in the emergency department often exceeds 24 hours. This situation is referred to as long-term care. In response to the question "What is your view on long-term patient care?" 42% of the physicians answered "I would like to", while 39% remained undecided. Regarding the question "What is your opinion on a third mandatory service?" 58% of the physicians answered "I cannot do it", while 27% remained undecided. For the question "What is your view on the working schedule outside of shifts?" responses were 39% yes, 38% undecided, and 23% no. Regarding the question "What is your view on the call duty system?" 62% answered "Yes", and 15% were undecided.

A multiple-choice question was posed to the participants regarding the reasons for their desire to pursue specialization training, yielding a total of 66 responses. The most common response, at 46%, was "To pursue an academic career," followed by 24% selecting "To escape the emergency department environment," and 12% choosing "To change specialties" (Figure 5). Another multiple-choice question was asked to assess the positive aspects of specialization training, obtaining a total of 78 responses. The most frequent response, at 51%, was "To specialize in a specific field," followed by 23% each for "To acquire new knowledge" and "To gain new skills" (Figure 6). Furthermore, a multiple-choice question was posed to examine the negative aspects of specialization training, and 86 responses were received. The most common response, at 51%, was "To potentially undergo mandatory service again," followed by 23% each for "To undergo three years of training" and "To potentially experience a decrease in monthly income". The concept of a third compulsory service refers to the mandatory assignment by the Ministry following subspecialty training that physicians in Türkiye are required to undertake after completing their general practitioner and specialty training (Figure 7).

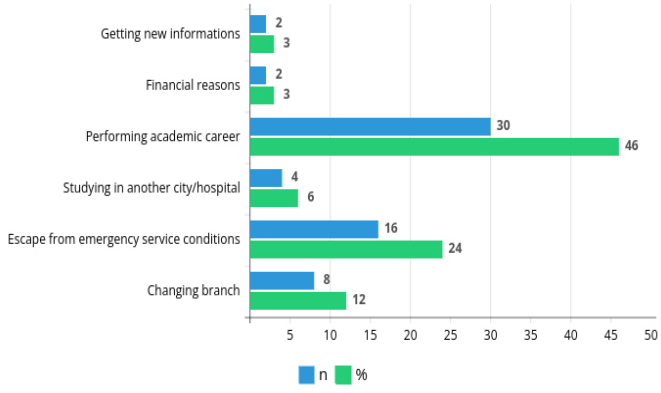

Figure 5. Responses to the question "What could be the reason(s) for wanting to pursue subspecialty training?"*

*Multiple responses are possible for this question

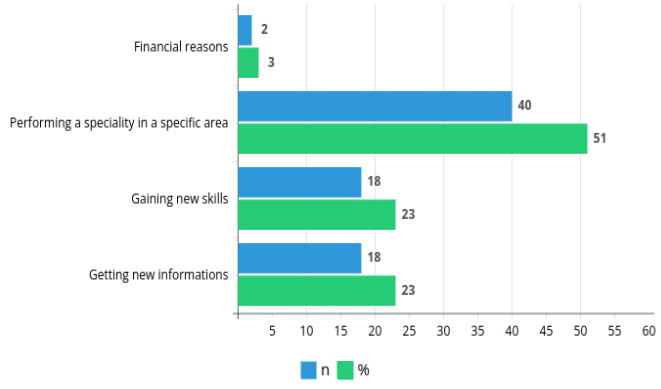

Figure 6. Responses to the question "What could be the positive aspects of subspecialty training?"*

*Multiple responses are possible for this question

Discussion

Academic emergency medicine education in Türkiye began in 1993 and has since evolved to the point where emergency medicine specialization training is now offered in almost every university and training hospital across Türkiye. With approximately 1200 specialists and 4000 residents involved in educational activities, emergency medicine education continues to rapidly progress with the development of specialty competency boards (9).

Emergency medicine specialization training is a rigorous four-year program. In addition to theoretically understanding all major emergency topics in medical education, emergency medicine physicians undergo numerous procedural interventions during their residency training, allowing them

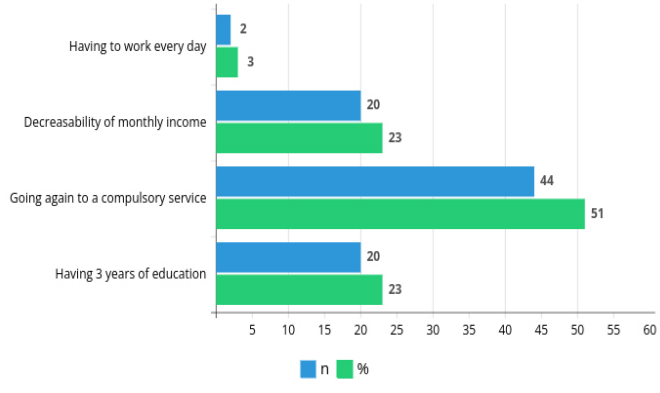

Figure 7. Responses to the question "What could be the negative aspects of subspecialty training?"*

*Multiple responses are possible for this question

to learn and master these procedures firsthand. Furthermore, emergency medicine specialization training includes rotations in various major branches, providing resident physicians with the opportunity to gain experience in these fields. Throughout their residency training and professional careers, emergency medicine physicians follow many critically ill patients and participate in their diagnosis, treatment, and even discharge processes. Due to the high occupancy rates of services and intensive care beds in our country, many critically ill patients experience extubation after being intubated in emergency departments once their treatment is complete. This situation can be considered an expression of the fact that emergency medicine physicians, contrary to common belief or expectation, are also involved in long-term patient follow-up.

It was found that half of the physicians participating in our study had intensive care experience. Intensive care experience refers to the care services provided by emergency physicians to patients who require intensive care admission but are monitored in the emergency department due to bed unavailability during their daily practice. The concept of intensive care is closely related to emergency medicine in daily practice. Critically ill patients diagnosed and treated in the emergency department are admitted to intensive care beds if available. For many emergency physicians, the first question they ask at the beginning of their shift is often about the occupancy rates of intensive care beds in the hospital. With the concept of intensive care being so intertwined with emergency medicine practice, Intensive Care Specialty, which is one of the subspecialties entered through the Specialty Qualification Examination, has naturally attracted the attention of the emergency medicine community for a long time in our country. All participants agreed that subspecialty training should be defined for emergency medicine. A significant number of emergency medicine physicians are willing to pursue subspecialty training after completing their emergency medicine education.

The discussions regarding subspecialty training for emergency medicine are not new, and this effort has a history of at least 20 years. Throughout this process, repeated requests have been made to relevant authorities for emergency medicine specialists to grant them the right to apply for intensive care subspecialty training. As a result of this process, on December 8, 2023, the Specialty Board of Medicine issued a recommendation to grant emergency medicine specialists the right to take the intensive care subspecialty board examination. This recommendation has been positively received by the emergency medicine community. Both of the emergency medicine specialty associations in our country have announced this as a positive development. Additionally, the Türkiye Emergency Medicine Foundation expressed similar sentiments. However, on the other side of the scale, in the field of Anesthesiology, Reanimation, and intensive care, this development has been met with negativity and even significant backlash; the specialty associations in these fields have made statements opposing this development.

In the literature, the characteristics of an intensive care unit (ICU) responsible physician are as follows: "Being able to diagnose, monitor, and treat patients at risk; managing hemodynamic instability, heart failure, arrhythmias, respiratory failure, acute neurological events, acute and chronic renal failure, acute endocrine and metabolic disorders, drug reactions, coagulation disorders, severe infections, nutrition, liver failure, acid-base and fluid-electrolyte balance." Additionally, the ICU-response physician should be knowledgeable about poisonings and able to make necessary interventions. These conditions are part of the routine daily practice of emergency medicine physicians. Similarly, in the same literature, the interventions that an ICU responsible physician should know are listed as follows: "Airway management and care, placement of intravascular catheters and hemodynamic monitoring, temporary pacemaker, cardiopulmonary resuscitation, chest tube insertion, bronchoscopy, percutaneous tracheostomy, renal replacement therapy." Almost all interventions are already performed by emergency medicine residents and specialists in emergency departments in today's practice (9).

In one study, the knowledge of physicians regarding cardiopulmonary resuscitation was evaluated according to their specialties. In this survey, the mean number of correct answers was determined to be 7.71±1.93, with only emergency medicine and cardiology specialties exceeding the threshold of 10 correct answers. In another study, emergency physicians used echocardiography more than anesthesiologists and intensivist (10,11).

According to the survey results, the most preferred subspecialty branch desired by emergency medicine physicians was intensive care/critical care. In addition, intensive care/critical care was the most frequently chosen subspecialty department by emergency medicine physicians. All participants agreed that the intensive care subspecialty is suitable for emergency medicine, deemed the recommendation decision correct, and expressed a desire for access to the intensive care subspecialty. While 92% of physicians found the efforts of emergency medicine specialty associations regarding the intensive care subspecialty to be positive, 96% considered the opposing statements of other specialty associations to be unjustified. These findings underscore the justified rationale behind the efforts made by emergency medicine associations to date and highlight the appropriateness of achievement in the intensive care subspecialty.

In recent years, healthcare policies have been claimed to have led to defensive medicine practices, which also affect physicians' specialization preferences. Emergency medicine is considered a high-risk field. According to the "Regulation on Principles and Procedures Regarding Institution Contribution to Compulsory Financial Liability Insurance for Medical Malpractice" published in the Official Gazette dated July 21, 2010, No. 27648, when examining the risk groups of medical specialties, the emergency medicine specialty is placed in the 4th, i.e., the highest-risk group. Although specialties in the 4th risk group obtained placement with scores significantly below the general average in the Turkish Medical Specialty Examination in 2007, this gap widened even further compared with other specialties in 2015 (12).

When examining the years of experience in the emergency medicine specialty among the physicians who answered our survey questions, it was observed that approximately one-third of the physicians had been working for more than 10 years, while another one-third had been working for 1-2 years. This indicates that the experiences of physicians in the emergency medicine specialty are heterogeneously distributed. Therefore, the opinions regarding the Intensive Care Medicine Subspecialty belong to both physicians who are new to emergency medicine and those who have been in this field for more than 10 years.

Emergency physicians' desire to pursue a subspecialty may reflect an attempt to escape the chaotic environment of the emergency department. Emergency departments are among the healthcare settings where incidents of "violence in healthcare" have been increasingly prevalent in recent years. Additionally, the chaotic environment of the emergency department can lead to feelings of burnout and contribute to depression among staff. In one study, depression scales were compared between emergency medicine residents and physicians in other internal medicine specialties, revealing higher scores indicating "mild mood disorder" and "borderline clinical depression" among emergency department physicians. Another study examined burnout and job satisfaction among emergency department staff and found that physicians exhibited higher levels of emotional exhaustion and depersonalization than other emergency department workers (13,14). The fact that 24% of respondents in our study cited "escaping the emergency department environment" as a reason for wanting to pursue subspecialty training supports this notion. However, the most common response to this question, cited by 46% of the participants, was "pursuing an academic career," indicating that the primary motivation behind emergency physicians' desire for subspecialty training lies in academic aspirations.

Study Limitations

This study was conducted at a single emergency medicine clinic; therefore, caution should be exercised when generalizing the results. Replicating the study in a broader sample of emergency medicine physicians may enhance the generalizability of the findings.

Conclusion

In conclusion, the field of emergency medicine is inherently intertwined with the concepts of intensive care and critical care. Emergency physicians routinely provide care to critically ill patients and perform all necessary interventions. There is broad consensus among emergency physicians, particularly those specializing in intensive care. Granting access to intensive care subspecialty training for emergency medicine specialists will likely result in many emergency medicine experts occupying positions within these subspecialty fields, despite the potential drawbacks.

Ethics

Ethics Committee Approval: Ethical approval was obtained from the KTO-Karatay University Clinical and Non-Clinical Research Ethics (decision number: E-41901325-200-79454, date: 16.02.2024) and necessary permissions were also obtained from the Hospital Education Planning Committee.

Informed Consent: During the data collection phase, the purpose of the research was explained to the physicians, verbal consent was obtained, and those who agreed clicked on the relevant link to answer the survey.

Footnotes

Authorship Contributions

Concept: Y.Y., Design: Y.Y., M.K.Y., Data Collection or Processing: Y.Y., M.K.Y., Analysis or Interpretation: Y.Y., M.K.Y., Literature Search: Y.Y., Writing: Y.Y., M.K.Y.

Conflict of Interest: The authors declare that they have no conflict of interest.

Financial Disclosure: There are no financial conflicts of interest to disclose.

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