INTRODUCTION

Geriatrics was defined in the 1998 report of World Health Organisation (WHO) as increased disabilities and being more dependent on others. There are approximately 650 million elderly adults worldwide and this population is estimated to reach 2 billion by 2050. According to the data obtained in January 2012, the number of people aged ≥65 years was 5,490,715 (7.3%) in Turkey. Both primary and secondary care hospitals are insufficient for the elderly in Turkey. The number of specialists trained in geriatrics is also insufficient, which negatively affects the quality of healthcare. Only internal medicine specialists are entitled to act as geriatric specialists in Turkey.

The existing health services with a focus on young people are inadequate to meet the needs and to detect the complex health problems of elderly patients. The elderly adults with health problems are commonly admitted to the emergency unit (1). The rate of admission of geriatric patients to the emergency units is 14-21% (2). Although the emergency physicians are the physician group that faces elderly patients most, as compared to other physician groups, their approach, requests, learning situations and problems regarding this issue are not well known. The presence of physiological variations, concomitant diseases and the use of multiple medications lead to problems in the evaluation and treatment of geriatric patients. A more detailed
anamnesis and physical examination are recommended for the evaluation of geriatric patients, detailed laboratory and radiological findings may be necessary as well (3). The risk of misdiagnosis is higher compared to the young patient. The emergency specialists reported that they spend more time in evaluation of elderly patients and the training they receive during specialization is insufficient (4).

Elderly patients are a special group of the population. Studies, health and social services for this special group are still inadequate. Developing protocols for geriatric patient care, ensuring the presence of trained health care providers and providing a proper and convenient place for geriatric patients in the hospital are necessary; these measures can would reduce delirium, iatrogenic complications, and costs and duration of hospital stay, as well as improve the long-term outcomes of the patients and relatives thereby providing satisfaction to the clinicians.

In our study, perspectives and approach of the emergency medicine physicians towards geriatric patients are analyzed. Emergency medicine doctors in Turkey are aware of the problems caused mainly by the increase in the number of elderly patients. In order to reduce the problems created by overcrowd of the elderly patients in emergency departments; the results showed that guidelines must be created for developing an emergency medicine curriculum and for increasing the quality of patient care.

**MATERIALS and METHODS**

We conducted a complementary study designed as a survey. The emergency specialists and research assistants participated. According to the data of Emergency Medicine Physicians Association of Turkey in February 2012, 723 research assistants, 634 specialists, and 1357 doctors were working at the emergency units in Turkey. Among them, personal e-mail addresses of 780 (57.4%) individuals could be obtained.

<table>
<thead>
<tr>
<th>Table 1. The questionnaire of the survey</th>
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<tbody>
<tr>
<td>1) Age?</td>
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<td>2) Gender?</td>
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<td>a) Female</td>
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<tr>
<td>b) Male</td>
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<td>3) Institution?</td>
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<td>4) Academic title?</td>
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<tr>
<td>a) Professor</td>
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<td>b) Associate professor</td>
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<td>c) Assistant professor</td>
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<tr>
<td>d) Lecturer</td>
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<tr>
<td>e) Attending physician (specialist)</td>
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<tr>
<td>f) Research assistant</td>
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<tr>
<td>5) If you are a research assistant, your research year?</td>
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<td>a) 1</td>
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<td>b) 2</td>
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<tr>
<td>c) 3</td>
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<tr>
<td>d) 4</td>
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<tr>
<td>e) 5</td>
</tr>
<tr>
<td>6) How many years have you been working in the emergency medicine clinic?</td>
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<tr>
<td>7) Do you have geriatric department or division in your institute?</td>
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<tr>
<td>a) There is both department and division</td>
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<tr>
<td>b) There is department but not division</td>
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<tr>
<td>c) There is no department and division</td>
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<tr>
<td>8) Do you think there should be a geriatric department in the hospitals?</td>
</tr>
<tr>
<td>a) Yes</td>
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<tr>
<td>b) No</td>
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<tr>
<td>c) I have no idea</td>
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<tr>
<td>9) Which department deals with geriatrics in your hospital?</td>
</tr>
<tr>
<td>a) Internal medicine</td>
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<td>b) Neurology</td>
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<td>c) Physical medicine and rehabilitation</td>
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<tr>
<td>d) Emergency medicine</td>
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<tr>
<td>e) There is no department which deals with geriatrics</td>
</tr>
<tr>
<td>f) A team that includes few departments</td>
</tr>
<tr>
<td>10) Do you think that hospitalization of geriatric patients was avoided compared with other patients in the hospital where you work?</td>
</tr>
<tr>
<td>a) Yes</td>
</tr>
<tr>
<td>b) No</td>
</tr>
<tr>
<td>c) I have no idea</td>
</tr>
</tbody>
</table>
11) What's the primary causes of admission of the geriatric patients to emergency unit where you work? (you can mark multiple choices)
   a) Cardiovascular diseases
   b) Respiratory system diseases
   c) Gastrointestinal system diseases
   d) Nefrological diseases/Electrolyte disorders
   e) Infectious diseases
   f) Hematological/Endocrinological diseases
   g) Neurological diseases
   h) Trauma
   i) Impaired general condition
   j) Nonspecific complaints
   k) Complaints related to various disorders in other organs

12) Do you think that geriatrics should be a separate subject during training in emergency medicine?
   a) Yes
   b) No
   c) I have no idea

13) Would you like to organize panels and sessions on geriatrics at national congresses and symposiums?
   a) Yes
   b) No
   c) I have no idea

14) Have you received training on geriatrics within your curriculum at the institution you work?
   a) I received training in geriatrics a certain amount of time in the curriculum.
   b) I received training rarely in geriatrics in the curriculum.
   c) We talked about geriatric patients in all lessons in the curriculum.
   d) I learned about geriatrics only from the textbook.
   e) I didn't receive training in geriatrics

15) What kind of a training program should be prepared regarding the approach to elderly patients in Emergency Medicine?
   a) It should be explained as a separate course board in my clinic.
   b) Geriatric patients should be mentioned among the special cases at the end of each lecture in my clinic.
   c) Slides must be prepared through the internet.
   d) Training videos must be prepared.
   e) Booklet must be prepared.
   f) Courses must be prepared

16) Do you feel felt sufficient in approaching geriatric patients?
   a) Yes
   b) No
   c) I have no idea

17) Do you feel felt sufficient in communicating geriatric patients?
   a) Yes
   b) No
   c) I have no idea

18) Which subject(s) you feel insufficient and you want to receive training in approaching geriatric patients? (you can mark multiple choices)
   a) Cardiovascular diseases
   b) Respiratory system diseases
   c) Gastrointestinal system diseases
   d) Nefrological diseases/Electrolyte disorders
   e) Infectious diseases
   f) Hematological/Endocrinological diseases
   g) Neurological diseases
   h) Trauma
   i) Drug interactions
   j) Elder abuse
   k) Communication

19) What’s your feelings for elderly patients?
   a) Happiness
   b) Compassion
   c) Sense of protection
   d) Pity
   e) Stress
   f) Anger
   g) Insufficiency
The questionnaire of the survey was included in the link http://www.tatd.in/redcap/ (www.acilarastirma.net), which was emailed to the participants at three different times between 22 February 2012 and 22 March 2012. We included the participants who accepted to fill the survey which we emailed. 335 (24.6%) responded to the survey questionnaire and participated in the study. Of these, three were excluded because of repeated entries and one was excluded for being an internal medicine specialist. The study was approved by the Ethics Committee of Gazi University Clinical Research on 18 January 2012 (Table1).

There were 29 questions in the survey, which were prepared according to the the data in the literature. The questions were related to the presence of geriatrics department in their institutes; characteristics of the patients who were presented to the emergency units; and demographic characteristics; educational status, perspectives, and feelings and needs of the participants regarding geriatric care.

At the end of the study period, the data collected were recorded and analyzed using SPSS for Windows, version 15.0 (SPSS Inc.®, Chicago, United States of America) software package. The chi-square, Yates corrected chi-square and Fisher’s exact tests were used to define the relationship between the parameters. A p value <0.05 was considered to be statistically significant.

RESULTS

In February 2012, 723 research assistants, 634 specialists, and 1357 doctors were working at the emergency units in Turkey. Among them, personal e-mail addresses of 780 (57.4%) individuals could be obtained. 335 (24.6%) responded to the survey questionnaire and participated in the study. Of these, three were excluded because of
repeated entries and one was excluded for being an internal medicine specialist. Finally, 331 doctors (24.4%) were included in the study. Among them, three (0.9%) were professors, 30 (9.1%) were assistant professors, 38 (11.5%) were assistant professor candidates, nine (2.7%) were lecturers, 88 (26.7%) were specialists and 161 (48.9%) were research assistants. A total of 196 (60.9%) worked in university hospitals, 94 (29.2%) worked in research and training hospitals of the Health Ministry, 29 (9%) worked in public hospitals and three (0.9%) worked in private hospitals.

Among the participants, 51 (15.5%) stated that their institutes had both the division and department of geriatrics, two (9.8%) mentioned that their institute had the division of geriatrics but did not have the department, 245 (74.7%) stated that their institute had neither a division nor a department of geriatrics. In 45 (22.8%) of the university hospitals, both the division and the department of geriatrics were present, which was 4.4% in research and training hospitals. Among the participants, 318 (96.7%) believed that geriatrics departments should be present in hospitals.

261 (79.4%) stated that hospitalization of geriatric patients was avoided compared with other patients in the hospitals where they worked. In 80% of the hospitals with both the division and the department of geriatrics, doctors believed that hospitalization of geriatric patients was avoided. Participants believed that university hospitals refrained from hospitalizing of geriatric patients at a higher rate compared with other hospitals. Furthermore, 106 (32.7%), three (0.9%), one (0.3%), 13 (4%) doctors participating in the survey worked in hospitals where the geriatric patients were treated in the division of internal medicine, neurology, physiotherapy, and emergency medicine, respectively. Five (1.5%) doctors mentioned that a team made up of healthcare providers from different departments were responsible for the geriatric patients and 196 (60.5%) said that no specific department was responsible for the geriatric patients.

The participants were asked the primary causes of admission of the geriatric patients to emergency units. 267 (80.7%) participants stated impaired general condition, 218 (65.9%) stated complaints related to respiratory diseases, 175 (52.9%) stated neurological complaints, 167 (50.5%) stated complaints related to cardiovascular disease, and 164 (49.5%) stated complaints related to various disorders in other organs.

Overall, 276 (%83.4) emergency unit doctors advocated that geriatrics should be a separate subject during training in emergency medicine. When the training of the participants on geriatrics and their respective professional titles were compared, a statistically significant difference was observed. In total 15.9% of the specialists and 36.9% of research assistants mentioned that they had no training in geriatrics. (Figure 1-2). Furthermore, 21% and 33% of the participants working in university hospitals and research and training hospitals, respectively, mentioned that they had no training in geriatrics. Most of the emergency unit doctors mentioned that they rarely had training in geriatrics during their education or had just talked about geriatric patients at the end of each lecture.

Participants believed that university hospitals refrained from hospitalizing of geriatric patients at a higher rate compared with other hospitals. Furthermore, 21% and 33% of the participants working in university hospitals and research and training hospitals, respectively, mentioned that they had no training in geriatrics. Most of the emergency unit doctors mentioned that they rarely had training in geriatrics during their education or had just talked about geriatric patients at the end of each lecture.
In this survey, 177 (54.1%) participants mentioned that the geriatric patients overcrowded emergency units and 187 (57%) accepted geriatric patients as a threat for proper functioning of the emergency units (Table 2). 311 (95.9%) believed that geriatric patients should be given homecare, and 277 (83.7%) believed that homecare may reduce the overcrowding in the emergency units.

It may be concluded that an increase in the number of divisions of geriatrics have been observed; however, yet it is far below the current need of the geriatric patients in Turkey.

In the current study 79.4% of the participants said that hospitalization of geriatric patients was avoided in the hospitals where they worked compared to other patients. In the study conducted by Sahin et al. on the characteristics of geriatric patients who were presented to the emergency units, the patients were grouped according to the wards they were hospitalized 30.12% were shown to remained in the emergency unit (6). The hospitalization rate of geriatric patients varies between 11.5% and 61% in the literature. This wide range was related to the difference in the size of geriatric population in different countries (7,8).

In the study of Sahin et al., the most common causes of presentation to the emergency units were cardiovascular diseases, gastroenterological diseases, urinary disorders, trauma and respiratory diseases (6). Shah et al., reported that cardiac, respiratory or gastrointestinal diseases, as well as trauma and neurological diseases were the common causes for admission of the geriatric patients to the emergency units (9). Similar to our study, Karadağ et al., showed that complaints related to fatigue and impaired general condition were significantly higher among patients aged <65 years (10). In a thesis study conducted in Turkey, the most common reasons for presentation of the geriatric patients to the emergency units were neurovascular, cardiovascular and respiratory diseases, and 4.8% of the patients had been admitted due to an impaired general condition (11). Yim et al. reported that geriatric patients were admitted to the emergency units because of more acute conditions and diseases in multiple organs; the most common causes being impaired general condition, chest pain and, neurological symptoms (12). In our study, the experiences of individual doctors were used instead of the official data. The complaints of the patients could vary according to the region and the type of the hospital. Additionally, it may be affected by many other factors including the care provided by the relatives of the patients, distance to the hospital, ability to get services from the hospital and presence of chronic diseases.

The dramatic increase in the geriatric population will affect a wide range of fields including social and health services. Geriatrics should be considered as a special field in the training program for emergency medicine as well as in the training of the medical faculty. Arai et al. have highlighted the importance of this issue and have reported that training programs and research studies are being designed at the National Geriatrics and Gerontology Center of Japan which targeted specialists other than geriatricians (13). Shah et al. concluded that medical students should be provided with a geriatric training as a part of the emergency medicine curriculum, and that the importance of geriatric diseases should be emphasized as well (14). Similar to these studies, the participants of our study have mentioned that geriatrics should be a separate

<table>
<thead>
<tr>
<th>Table 2. Comparison of the participants with regard to age, duration of occupation, title and their beliefs about the high number of geriatric patients</th>
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<tbody>
<tr>
<td>Is the high number of geriatric patients a threat for the emergency units today or in the future?</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>Count</td>
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<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>Age</td>
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<tr>
<td>24-29 years</td>
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<td>30-35 years</td>
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<tr>
<td>36 years or older</td>
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<tr>
<td>Title</td>
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<tr>
<td>Specialist</td>
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<tr>
<td>Research assistant</td>
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<tr>
<td>Duration of occupation</td>
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<tr>
<td>5 years or shorter</td>
</tr>
<tr>
<td>6 years or longer</td>
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<tr>
<td>p= Chi-square test</td>
</tr>
</tbody>
</table>

Among all participants, 226 (68.9%) emergency unit doctors stated that they encountered patients who had been subjected to elder abuse, and 186 (56.5%) said that they reported such cases to judicial authorities or social services.

The survey showed that 241 (72.8%) participants felt no unwillingness towards providing resuscitation to the elderly patients without cancer or those who were not terminally ill.

Finally, 62.2% of the participants mentioned that geriatrics should be a sub-division of the emergency department.

**DISCUSSION**

In Turkey as well as globally, the geriatric population and their expected survival rate are increasing due to easy access to health services and the development of new therapeutics. This has directly affected the healthcare sector and healthcare staff who are untrained and unaware of the problems related to geriatrics. Admission to the emergency units and the rate of hospitalization are high among geriatric patients due to the presence of comorbid diseases.

Geriatrics has been newly introduced in Turkey and there are no geriatrics specialist or a geriatric division in most of the hospitals. In a review, the division of geriatrics was shown to be present in 10 hospitals in Turkey in 2009 (5).
subject in the training program for emergency medicine, 
additionally, the rate of doctors advocating this opinion 
is increasing. This may be attributed to the increased 
experience of the doctor leading a better evaluation of the 
needs of geriatric patients.

Several studies have reported that the needs and 
diseases of the geriatric population are underestimated 
in many fields of medicine including emergency medicine; 
additionally, and that insufficiently trained emergency 
medicine specialists have been working in this field 
(13). Most emergency specialists believe that geriatrics 
is underestimated during their training and that the 
time spent on this field is insufficient (4). The American 
College of Emergency Physicians (ACEP) recommends 
working with PowerPoint presentations, interactive case 
discussions, pocket cards, and reading the literature 
when the necessary issues have been defined. At the 
end, the effectiveness of the training is evaluated using 
evaluations scales, tests and clinical scenarios (15). Salvi 
et al. reported that a disease-based geriatric training, as 
a part of the emergency medicine curriculum was not 
ideal for geriatric patient care. The study suggested that a 
training program devoted to atypical presentations of the 
geriatric patients should be prepared (16). Schumacher et 
al. recommended that geriatric training should become 
widespread via professional organizations, lectures, and 
online courses (17). Wang et al. have emphasized that 
each emergency unit should plan its own training program 
when dealing with geriatric patients (18). In our study, most of the emergency specialists 
mentioned that a specific lecture committee should be 
prepared and geriatric patient care should be discussed 
at the end of each lecture; some of the specialists have 
mentioned that geriatric training could be better provided 
through courses.

In our study, 68.2% of the emergency doctors stated that 
they felt sufficient in approaching geriatric patients and 
67% said that they felt sufficient in communication with 
geriatric patients. Contrary to our study, McNamara et al. 
reported that the emergency unit doctors found the training 
on geriatrics insufficient and thus, they felt themselves 
uncomfortable dealing with the geriatric patients (19). 
However Aksay et al. conducted a study on the present 
situation of emergency medicine training in Turkey; 60.7% 
of the specialists and 50.6% of the assistants have stated 
that their training and knowledge regarding the geriatric 
patients were sufficient, similar to the finding in our study 
(20).

McNamara et al. showed that emergency physicians most 
commonly faced the issues of abdominal pain, chest pain, 
dizziness, fever, headache and trauma when evaluating 
geriatric patients (19). In study reported by Prendergast 
et al., 86% of emergency medicine assistants stated that 
the most beneficial subject in the training programs was 
polypharmacy in geriatric patients (21). In our study, the 
subject that is mostly desired as a part of training for 
the specialists was drug interactions. In the geriatric 
population, due to widely prevalent polypharmacy, drug 
interactions are common and patients may sometimes 
present to the emergency unit solely because of drug 
interactions.

In our study, the emergency specialists felt compassion, 
protectiveness and insufficiency; whereas the research 
assistants felt pity and stress. Similar to the study of 
Schumacher et al., the stress levels and feeling of pity 
decreased with the increase in the duration of occupation 
and age of research assistants. This may be explained by 
insufficient training and less experience of the research 
assistants compared with those of the specialists (17).

The performance of emergency units is threatened by 
problems such as overcrowding, long waiting, time 
extended stay at the emergency unit. As a result of the 
overcrowding in the emergency units, patient safety is 
compromised moreover, misdiagnosis and unexpected 
situations become more common.

The emergency unit staff is expected to deal with many 
public health problems including elder abuse. Elderly 
abuse is common in the emergency units; however, it is 
hardly known as a social health problem. The only person 
to detect the abused elderly patient is the doctor of the 
emergency unit. The duties of the doctor are increased 
awareness, public information, social services, and 
warning of judicial authorities. In a study, 75% of the 
emergency unit doctors have mentioned that child abuse 
protocols are built in the institutes they work; however, 
only 27% had protocols on elder abuse (22). In a survey 
conducted by the ACEP, it was reported that only 25% of 
the emergency unit doctors had been given training on elder abuse (23). In our study, 68.9% of the participants 
thought that elder abuse was possible, and 56.5% 
mentioned that there are patients who have experienced 
elder abuse that required reporting social services and 
judicial authorities. These low rates may be related to the 
non-discrimination, honesty and providing patient privacy 
are indispensable for the patient-doctor relationship. First 
the expected from the doctor is non-discrimination 
of geriatric patients (3). Age is not the only factor that 
affects the frequency of cardiopulmonary resuscitation; 
however, it is a determining factor. In the near future, an 
increase is expected in the number of geriatric patients 
bring the emergency unit due to sudden myocardial 
infarction (24). In two different studies in the literature, 
it was reported that age was an important factor in the 
treatment and requests of DNR by the doctors in the US, 
whereas in England, it was reported by the doctors that 
and age of research assistants. This may be explained by 
insufficient training and less experience of the research 
assistants compared with those of the specialists (17).

In every fields of medicine, ethical principles such as 
nonmaleficence, beneficence, respect for independence, 
non-discrimination, honesty and providing patient privacy 
are indispensable for the patient-doctor relationship. First 
expected from the doctor is non-discrimination 
of geriatric patients (3). Age is not the only factor that 
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infarction (24). In two different studies in the literature, 
it was reported that age was an important factor in the 
treatment and requests of DNR by the doctors in the US, 
whereas in England, it was reported by the doctors that 
age was not an important factor (25). In our study, similar

Ethical approval: The study was approved by the Ethics Committee of 

Financial Disclosure: There are no financial supports. 

Competing interests: The authors declare that they have no competing interest. 

LIMITATIONS 

Our study was conducted as a survey and there is limitations about the surveys. We had only the answers of our questions. There can be another important questions we didn’t ask about the geriatric patients. We couldn’t reach most of the residents working research and training hospitals and research assistants. There would be better results and outcomes if we could reach more participant. 

CONCLUSION 

According to the data obtained in our study, the number of geriatricians and geriatrics departments are insufficient in Turkey. There is no specific clinic that is responsible for the geriatric patients in the hospitals, thus problems are encountered on admissions to hospitals. Emergency doctors are not provided with a specific training about geriatrics and have difficulties in approaching them. It was observed that the emergency specialists in Turkey are aware of the problems with the increase in the number of geriatric patients. Training on geriatrics is insufficient and a new training program is needed on the subject. 

REFERENCES 