

Assessment of the Satisfaction Levels of Intern Students

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Aim: Given the importance of internship in emergency medicine, intern doctors are supposed to take more responsibility during this period. They are involved in the admission, examination, planning and implementation of the treatment of patients under the supervision of assistants and instructors. This study aims to specify the expectations and satisfaction levels of XXXXXXXXXX 6th grade medicine students for emergency medicine internship in 2018-2019 academic year.

Materials and Methods: The students who practised their emergency medicine internship within one year were evaluated with a questionnaire at the beginning and at the end of the internship period. Without writing their names, the respondents are expected to answer the survey questions designed on a 5-point Likert scale.

Results: The study group consists of 149 students, whose average age is 24.4 and, 68 of the participants were male, while 81 were female. The obtained results reveal that the participants thought they would use their practical knowledge at the end of the internship, that the internship period proved efficient, that they did not have reservations about practising in the emergency department (ED), and that they wanted to be an emergency medicine assistant (p: 0.009; 0.014; 0.05; 0.029).

Conclusion: The results of this evaluation demonstrate that the emergency medical internship was efficient, and that they were able to apply their practical knowledge. Our study concludes that, following the internship period, their fears for serving in the ED decreased, their communication skills improved, and their desire to work as emergency medicine assistants at XXX increased.

Keywords: Student, intern doctor, feedback, internship, satisfaction, faculty of medicine

Short Title in English: Intern Feedback

Introduction

According to the Turkish Language Institution (TDK), the word “intern doctor” refers to “pre-physician”. In a widely used sense, it is the name assigned to students who serve in a hospital for a year to acquire basic knowledge and skills before graduating from a medical school. Intern doctors are supposed to visit hospitalized patients together with their instructors and assistants, follow up patients, and take care of their treatment. Part of their training also involves admitting the patient, taking a blood sample, measuring blood sugar, taking an ECG (Electrocardiography), and recording the findings on the files. In accordance with their internship plan, these intern doctors practise in departments, such as internal medicine, pediatrics, gynecology, public health, psychiatry and emergency medicine for two months.

Given the importance of internship in emergency medicine, intern doctors are supposed to take more responsibility during this period. They are involved in the admission, examination, planning and implementation of the treatment of patients under the supervision of assistants and instructors.

While XXXXXXXX University is preparing their intern students for the field of medicine, internship education is provided so that they assimilate the importance of preventive medicine, scientific thinking, and continuous professional education and development. During this internship period, education and training is organized by the relevant educational boards and departments in the form of practising modules. The internship process at the 6th grade is organized as two-month periods, and two weeks of this process is arranged as a general surgery

rotation. When it comes to general information on our department where 5 faculty members and 35 research assistants serve, the number of patients presenting with the emergency department (ED) annually is 119,802, and around 150 intern doctors per year complete their internships in the ED. Whereas research assistants are provided with theoretical and practical training every week, intern doctors undergo training on medical conditions and diseases they frequently encounter in the ED under 16 topics for four weeks.

Aim: This study aims to identify the satisfaction level of intern medical students doing their internship and evaluate their feedback.

Materials and Methods

The respondents filled in the survey without writing their names on it. A 5-point Likert scale was administered as the pretest with 29 questions and the posttest with 31 questions to determine the satisfaction level of the emergency medicine internship.

This study included intern medical students performing their emergency internship at XXXXX University Faculty of Medicine during the 2018-2019 academic year. The approval for the study was granted from the Non-Interventional Clinical Research Ethics Committee of XXXXXX University with the number 60116787-020/58595 and date 04 September 2018. During this period, there were 156 intern students, 149 (95.5%) of whom agreed to participate in the study. An informed consent form was obtained from each student. A pre-survey was handed out to all students at the contact meeting held collectively before embarking on their internship, and the intern students were asked about 4 questions on demographic features and 25 questions on their internship expectations. 2 additional questions related to the evaluation of the course lectured during the internship along with the same 25 questions (27 questions in total) were asked at the meeting held to receive post-internship feedback as a group at the end of the period. The items asked in the survey are provided in Table 1.

The items in the survey were designed on a 5-point Likert scale. A Likert scale refers to the scales used by combining multiple Likert-type questions (1). It is described as creating two or more Likert-type items in order to answer a single research question and using the average (combined) values of these items in the analysis phase. In addition, calculating the arithmetic average of the replies provided to the items in the Likert scale turns the data into interval data, and thus parametric tests can be run on this arithmetic average (2).

Table 1. Survey Questions

Demographic Information
Age
Gender
Grade
Type of High School You Graduated
Pretest and Posttest
Do you think the duration of the emergency internship is sufficient?

Do you think you will be / were able to acquire enough practice in the emergency internship?
Is emergency internship very important in preparing you for your professional life?
Do you think you will be / were able to use your theoretical knowledge in the ED?
Do you think you will be / were able to use your practical knowledge in the ED?
Do you think that emergency medicine internship will be / were effective?
I think I will be / was able to contact the emergency instructors easily.
I will be / was able to communicate with the emergency instructors.
Do you think your shifts in the ED will have / had an effect on your practice?
Do you think the visits in the ED will be / were useful?
I am satisfied with the physical conditions in the ED.
I think I will improve / improved my communication with patients / their relatives.
I think I will feel / felt like a team member.
I think I will increase / increased my self-confidence in the ED.
I am afraid to work in the ED.
I think I will not / did not have problems with the ED assistants.
I will not / did not have any problems with the emergency staff (nurses, health officers).
The solidarity between the interns was as it should be.
Are you happy to study at XXX?
Are you proud to study at XXX?
Would you recommend XXX Faculty of Medicine to those who will take the university exam?
Would you like to do your assistantship at XXX?
Would you like to be an assistant in Emergency Medicine?
I would like to be an assistant in the ED at XXX.
I think the emergency medical internship should last longer.
Internship Education
Was the content of the classes lectured in the emergency internship sufficient?
Was the theoretical and practical distribution of the classes balanced?

Statistical analysis

All the data obtained in the study were recorded and analyzed in the statistical software program SPSS 22. All the items were prepared and asked in the structured questionnaire format. The descriptive statistics were calculated as mean $\pm$ standard deviation for numerical variables and as number and percentage values for categorical variables. A Chi square test was run to analyze the between-groups differences.

Results

The study group consists of 149 students, whose average age is 24.4 (min. 22; max. 28). In terms of the distribution of both groups by gender, 68 (45.6%) of the participants were male, while 81 (54.4%) were female.

While many students at the internship period spent at least six 6 years in the faculty, some others spent maximum 9 years, and the average time of students in the faculty who were practising their internship was calculated as 6.2 years (min. 6; max. 9). In terms of the type of high school

they graduated, 3 (2%) students reported to have graduated from regular high school, 1 (0.7%) from vocational high school, 9 (6%) from private high school, 91 (61.1%) from Anatolian high school (schools with intensive English classes), 31 (20.8%) from science high school, and 14 (9.4%) from Anatolian teacher training high school (schools with intensive English classes).

As far as the answers given to all survey questions are concerned, the items revealing significant difference between the pre-test and post-test are illustrated in Table 2.

Table 2. Items Revealing Significant Difference Between The Pretest And Posttest

Items	Answers*	Pretest	Posttest	Total	Between Groups p
Do you think you will be / were able to use your practical knowledge in the ED?	1	0 (0%)	3 (2.01%)	3 (1.01%)	0.009** ($\chi^2=13.516$)
	2	5 (3.38%)	1 (0.67%)	6 (2.02%)	
	3	17 (11.49%)	6 (4.03%)	23 (7.74%)	
	4	45 (30.41%)	45 (30.2%)	90 (30.3%)	
	5	81 (54.73%)	94 (63.09%)	175 (58.92%)	
Do you think that emergency medicine internship will be / were effective?	1	0 (0%)	2 (1.34%)	2 (0.67%)	0.014** ($\chi^2=12.539$)
	2	2 (1.35%)	1 (0.67%)	3 (1.01%)	
	3	18 (12.16%)	9 (6.04%)	27 (9.09%)	
	4	61 (41.22%)	45 (30.2%)	106 (35.69%)	
	5	67 (45.27%)	92 (61.74%)	159 (53.54%)	
I am afraid to work in the ED.	1	44 (32.59%)	56 (43.41%)	100 (37.88%)	0.05** ($\chi^2=9.343$)
	2	30 (22.22%)	35 (27.13%)	65 (24.62%)	
	3	35 (25.93%)	16 (12.4%)	51 (19.32%)	
	4	16 (11.85%)	12 (9.3%)	28 (10.61%)	
	5	10 (7.41%)	10 (7.75%)	20 (7.58%)	
I think I will not / did not have problems with the ED assistants.	1	7 (4.86%)	4 (2.72%)	11 (3.78%)	0.003** ($\chi^2=16.058$)
	2	2 (1.39%)	2 (1.36%)	4 (1.37%)	
	3	14 (9.72%)	8 (5.44%)	22 (7.56%)	
	4	54 (37.5%)	31 (21.09%)	85 (29.21%)	
	5	67 (46.53%)	102 (69.39%)	169 (58.08%)	
I will not / did not have any problems with the emergency staff (nurses. health officers).	1	5 (3.42%)	3 (2.01%)	8 (2.71%)	0.002** ($\chi^2=16.89$)
	2	8 (5.48%)	3 (2.01%)	11 (3.73%)	
	3	18 (12.33%)	11 (7.38%)	29 (9.83%)	
	4	52 (35.62%)	33 (22.15%)	85 (28.81%)	
	5	63 (43.15%)	99 (66.44%)	162 (54.92%)	
	5	104 (70.27%)	102 (68.46%)	206 (69.36%)	
I would like to be an assistant in the ED at XXX.	1	29 (21.01%)	16 (11.43%)	45 (16.19%)	0.029** ($\chi^2=10.772$)
	2	20 (14.49%)	18 (12.86%)	38 (13.67%)	
	3	43 (31.16%)	48 (34.29%)	91 (32.73%)	
	4	34 (24.64%)	30 (21.43%)	64 (23.02%)	
	5	12 (8.7%)	28 (20%)	40 (14.39%)	
Internship Education					
Was the theoretical and practical distribution of the classes balanced?	1	1 (0.79%)	6 (4.11)	7 (2.57%)	0.017** ($\chi^2=12.009$)
	2	5 (3.97%)	4 (2.74)	9 (3.3%1)	
	3	37 (29.37%)	23 (15.75)	60 (22.06%)	

	4	47 (37.3)	54 (36.99)	101 (37.13%)	
	5	36 (28.57)	59 (40.41)	95 (34.93%)	

*: 1 Strongly disagree; 2 Disagree; 3 Neither agree nor disagree; 4 Agree; 5 Strongly agree

**: Significant difference between the pretest and posttest questions chi-squared test (χ^2)

Discussion

This study tries to find out the expectations and satisfaction levels of intern medical students towards emergency medicine internship. Overall, the survey items question the duration and content of the internship, education and practice in the internship, communication skills, anxiety suffered during the internship, satisfaction with the university, and the issues related to emergency medicine. 6th grade medical students are supposed to serve actively in internships for one year before graduation. It is noteworthy to re-assess the internship content by receiving feedback on the emergency medicine internship and questioning the satisfaction levels of intern doctors.

As far as the student responses are concerned, it can be concluded that the intern students were able to exploit their practical knowledge, found the emergency medicine internship efficient overall, were frightened to work in the ED, and did not encounter problems with the ED assistants and staff. Further, significant changes were identified in the questions about working as an emergency medicine assistant at the XXX University.

On the other hand, there are no significant changes in the students' opinions on duration of the emergency internship, expectation of doing sufficient practice during this time, preparation for professional life, expectations of applying the theoretical knowledge in this period, efficiency of the internship, adequacy of the content of the courses lectured in the internship, expectations of emergency shifts on practice, and physical conditions in the ED. When it comes to communicative issues, the students' opinions remained unchanged in terms of contacting their instructors in the ED, communicating with their instructors in the ED, making visits in ED, communicating with patients, feeling like a member of the ED team, feeling self-confident in emergency medical internship, and considering solidarity among intern doctors as it should be. In relation to their sense of fulfillment and future career, no significant change was found in their satisfaction with studying at XXX, their pride in being at XXX, their recommendation to the students who will take the university exam, their opinions on becoming an assistant in the ED, and their views on a longer emergency medical internship.

As is evident in Table 2, a significant change was found only in the question related to internship education, which is "Was the theoretical and practical distribution of the courses balanced?".

Dechesne (3) suggests that designing a curriculum requires three stages. The first is "development", in which the goals and organization of the program are specified, whereas the second stage is called "implementation", in which the program already developed is implemented. In the final step called "evaluation", how much the program meets the objectives is assessed ultimately. In our case, the educational process was planned in advanced, and the guidelines which laid down the internship goals in the written form were handed out to the intern doctors in the early days of the internship period. Their practices and performances were

evaluated in their internship reports at the end of the period, while their satisfaction with the internship process was measured with the survey. The results of this evaluation revealed that the emergency medical internship was efficient and that they were able to apply their practical knowledge. The feedback provided by intern doctors should be taken into consideration in other internships, too. In the event that dissatisfaction is identified, reviewing and re-evaluating the curriculum and practices may be suggested.

In a study by Yeniceri et al. (4), the State-Trait Anxiety Inventory with 18 questions was administered to 45 intern medical students to identify the anxiety about their prospective professional life and their trait anxiety. The results revealed that 70% of the students suffered moderate trait anxiety, and that the highest anxiety states were listed as failure in examination for specialty in medicine, inadequate preparation for this exam and not working as a specialist in their future career. On the other hand, our study deals with the contribution of the internship to the student, intern doctors' training during the internship, communication skills during this period, and their preference for being emergency medicine assistants. Our study concludes that, following the internship period, their fears for serving in the ED decreased, their communication skills improved, and their desire to work as emergency medicine assistants at XXX increased. One of the plausible reasons for this could be the positive communication among the emergency personnel.

In a study by Celebiler et al. (5), in which a survey with 84 questions was administered to 125 4th, 5th, 6th grade medical students to specify their satisfaction level, the participants primarily reported that they had difficulties in buying lunch tickets from the registrar's office, did not have an intern doctor's room, and were beset with transportation problems in getting to the hospital. In our study, the participants reported that the physical conditions in the ED were not sufficient, and that the solidarity among the intern doctors was not adequate, which was not statistically significant.

In a review study by Steinert (6) et al., the main features of effective faculty development are cited as effectiveness, encouragement of experimental learning, feedback, effective peer relationships, properly-planned interventions subsequent to educational principles, and interventions through various instructional methods. On the other hand, our study aimed to evaluate the feedback as a survey, the relations with peers and other staff, the feedback on education, reporting that positive feedback was received in relation to the internship process.

In his study, Teutsch (7) states that efficient and effective communication can be promoted through a well-designed training, but still that current and future developments will not eliminate the importance of empathic and caring dialogue between the physician and the patient. He further concludes that communication proves to be an integral part of patient management, and that communication tended to be treated informally in the form of faculty feedback in the curriculum of medical schools, rather than allocating some space for clinician-patient communication in their curriculum. When our study is evaluated as pre- and post-internship, it can be concluded that no change occurred in the intern doctors' perceptions of communicating with their instructors in the ED, in their opinions on improving the communication with the patient/patient relatives, and in the communication among their own peers. This may have resulted from the fact that the internship period is not long enough to create a change in communication skills over a period of two months.

Karabilgin et al. (8) listed the issues to be considered at every stage from planning to using the results of student feedbacks which are frequently used to evaluate the educational program and instructor. It is stated that surveys should allow students to assess the performance of the educator through with quantitative and qualitative data, reflect the instructional effectiveness of the educational program or the educator, and have a clear and expressive title. Besides, the authors conclude that student feedback by means of surveys cannot be used alone as a resource for evaluating education and educators, and that surveys should be such as to complement other evaluation methods. Apart from the present study, the feedback by the students in our university is evaluated through post-training surveys in their pre-intern years, but no feedback is received from our intern students in their final year. Our research tries to specify the satisfaction level of intern doctors during their emergency medicine internship. As a result of the current study, no significant changes were observed in the participating intern doctors in terms of performing adequate practice, employing theoretical knowledge, doing beneficial rounds, boosting self-confidence in the emergency internship and developing solidarity among themselves.

Study Limitations

As our study encompasses the intern students only within a period of one year, it does not include sufficient amount of data. In addition, even though similar studies have been carried out in different universities, it is difficult to draw comparisons owing to the varying numbers of patients and students in every university as well as students' different perceptions. Similar studies should be conducted in other universities with a larger population to unveil the full picture of internship in the ED.

Conclusion

This study reveals that the emergency internship proved efficient, and that the intern students were able to implement their practical knowledge. In addition, it can be concluded that, following their emergency internship, the intern students did not feel reserved about working in the ED, got along well with the ED personnel, and wished to be an assistant in emergency medicine. This study also suggests that the surveys may act as effective instruments in evaluating the satisfaction levels of the intern students, and that the required arrangements should be made in the light of the student feedback in order to further improve these satisfaction rates.

Ethics Committee Approval: The consent was obtained from XXX University Faculty of Medicine Ethics Board prior to the study (approval no: **:60116787-020/58595** date: **04.09.2018/17**).

Informed Consent: Informed consents were taken from the participants.

Peer-review: Externally peer-reviewed.

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