



The Attitudes of Patients toward the Presence of Students in Internal Medicine Inpatient and Outpatient Practice

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Abstract

Objective: The medicine educators increase the clinical skills and professional thinking ability of students by examining patients, showing their attitudes towards them, and attracting their response in the presence of medical students. In this study, we aimed to investigate the attitudes of patients who applied to internal medicine toward the presence of medical students and the possible factors that may influence such attitudes.

Methods: This study was performed between February and December 2013. The patients who were admitted to our four general internal medicine outpatient clinics and one general internal medicine service were included in the study. Their ages ranged from 16 to 88. In this study, we used a questionnaire that was formed by extracting questions that were used in literature.

Results: We obtained the data of 723 individuals in the study. The mean age of participants was 40.72 ± 13.91 years (male: 41.95 ± 14.56 years and female: 40.17 ± 13.59 years; $p=0.112$). Of these patients, 31% were males and 69% were females. Of these patients, 88.4% reported that they "would not be disturbed in the presence of medical students" during the examination and 71.1% allowed "physical examination by a medical student under the supervision of a clinician". The rates of giving importance for the training of future doctors to the proposals of "the presence of medical students or being examined by the medical students, while being interviewed by the physician" were 89.2% and 97.1%, respectively.

Conclusion: Our study is the first in our country that investigated the attitudes of patients towards the presence of medical students in internal medicine practices of examination and treatment of patients. In accordance with the literature, we have detected that the patients who were admitted to the internal medicine clinics are positive and were not in discomfort in the presence of medical students for whom these attitudes may be affected by some conditions.

Keywords: Medicine education, medical student, clerkship, patient attitude, patient behavior

Introduction

A major part of the education of medical faculty students is to contact directly with the patients and to be in interaction with them (1). The most important type of education in traditional education models is the master-apprentice relationship. Many advantages of this model have been reported. Medical faculty students set the foundation of their future professional practices by increasing the clinical skills and professional thinking ability and by observing the educator's examination of the patients, their attitude towards the patients, and the patient's responses (2). Bedside education of the medical faculty students supported by physician assistants and educators is an important educational method (3).

One of the major problems of medical education is the patients' unwillingness or discomfort because of the presence of medical students. The patients' analysis of their participation in the medical education in our country is hardly known. There are a limited number of studies abroad. It was reported in the first study on this subject in our country that 29.6% of the psychiatry patients stated that they would give permission to the participation of medical students in the presence of a clinician, and 44.5% of them stated that they believed the clinician would pay more attention to them in the presence of medical students (4). On the other hand, a majority of the patients in international studies had a positive approach to the participation of students in general medical practices, and 3% of the patients had a negative attitude towards it (5-7).

There is no investigation in the Turkish literature about how the patients applying to the internal medicine clinics react to the presence of medical students. In this study, we aimed to investigate the attitudes of patients, who applied to the internal medicine inpatient and outpatient clinics, toward the presence of medical students and the possible factors that may affect their attitudes. Our hypothesis was that the patients who applied to the internal medicine clinics would not experience discomfort from the presence of medical students and this would not be affected from other factors.

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Methods

Approval for the study was received from the İstanbul University Cerrahpaşa Faculty of Medicine. The study was conducted between February and December 2013. The patients who were admitted to our four general internal medicine outpatient clinics and one general internal medicine service were included in the study. Their ages ranged from 16 to 88 years. Written and verbal informed consents were obtained from all the patients included in the study. Therefore, 950 patients, who applied to the İstanbul University Cerrahpaşa Medicine Faculty Internal Medicine, were interviewed. In total, 160 patients stated that they did not want to participate in the study. The data of 67 patients were not included because they did not complete the questionnaire. The study was completed using the data of 723 patients. Sixth grade medical students (interns) till noon and 4th grade medical students (trainees) in the afternoon participated as observers while noting the medical history, conducting physical examinations, and requesting for laboratory examinations to be conducted in the outpatient and inpatient clinics in our hospital. This is a comparative and descriptive study. One of the objectives of the study was to compare the attitudes and views of the female and male patients, who applied to the internal medicine outpatient clinic and received treatment in the inpatient clinic, about the trainee and intern medical students. Illiterate patients and the patients who had clinical observations of mental retardation and those having neuropsychiatric disorders (degenerative diseases, cerebrovascular accident, etc.) at the level that affected reading and understanding and those who had total visual problems were excluded from the study.

Participants were asked to fill out a short socio-demographic data form. In this study, we used a questionnaire that was formed by extracting questions that were used in the literature (3, 8-11).

Statistical analysis

The Statistical Package for the Social Sciences 21.0 (SPSS Inc; Chicago, IL, USA) program was used for analyzing the data of the study. Student's t-test was used for comparing continuous variables, and chi-square test was used for comparing categorical variables. $P < 0.05$ was accepted as the value for statistical significance.

Results

We obtained the data of 723 individuals in the study. The mean age of participants was 40.72 ± 13.91 years (male: 41.95 ± 14.56 years, female: 40.17 ± 13.59 years; $p = 0.112$). In total, 91.1% of the participants were patients of the outpatient clinic. Of these patients, 31% were male and 69% were female. It was observed that there was a significant difference with respect to the education and income status between male and female participants ($\chi^2 = 31.38$ and $p < 0.001$; $\chi^2 = 77.91$ and $p < 0.001$, respectively). The socio-demographic features of the female and male patients are summarized in Table 1.

Totally, 55% of the participants stated that they were previously examined in the presence of a medical faculty student. Although 88.4% of the patients stated that they would not be disturbed from the presence of medical students during examination, 2.4% stated that they would be disturbed to a large extent. In addition, 71.1% of the patients allowed physical examination to be conducted by

Table 1. Comparison of the sociodemographic data of females and males

| | Male % (n) | Female % (n) | p |
|---|----------------------------|----------------------------|---------|
| Age * (M±SD) | 41.95±14.56 years (224) | 40.17±13.59 years (499) | 0.112 |
| Marital status[†] | | | |
| Married | 70.5 (158) | 70.3 (351) | 0.952 |
| Single | 29.5 (66) | 29.7 (148) | |
| Educational status[†] | | | |
| Literate | 1.3 (3) | 6.8 (34) | |
| Primary school graduate | 22.8 (51) | 37.9 (189) | |
| Secondary school graduate | 12.1 (27) | 10.8 (54) | <0.001* |
| High school graduate | 33.0 (74) | 22.6 (113) | |
| University graduate | 30.8 (69) | 21.8 (109) | |
| Occupational status[†] | | | |
| Civil servant | 12.9 (29) | 5.8 (29) | |
| Worker | 30.4 (68) | 9.0 (45) | |
| Self-employed | 24.6 (55) | 4.4 (22) | |
| Student | 8.5 (19) | 10.6 (53) | <0.001* |
| Retired | 18.8 (42) | 6.0 (30) | |
| Unemployed | 4.9 (11) | 2.6 (13) | |
| Housewife | 0.0 (0) | 61.5 (307) | |
| Outpatient service-clinic status[†] | | | |
| Outpatient clinic | 30.3 (200) | 69.7 (459) | 0.299 |
| Clinic | 37.5 (24) | 62.5 (40) | |
| Income status[†] | | | |
| Below 1000 TL | 28.6 (64) | 62 (313) | |
| Between 1000 and 2000 TL | 46.4 (104) | 28.3 (141) | <0.001‡ |
| Above 2000 TL | 25 (56) | 9.0 (45) | |

M: mean; SD: standard deviation

*Student's t-test was used; †chi-square test was used; ‡statistically significant

a medical student under the supervision of a clinician in all cases, 12.4% of them stated that they would allow physical examination to be conducted if the student is a female, 2.2% of them stated that they would allow physical examination to be conducted if the student is a male, and 14.2% of them stated that they would not allow physical examination to be conducted in any case. Moreover, 64.4% of the patients agreed that the clinician would apply the code of clinical practice and skills more attentively in the presence of medical students, and 17.6% of them disagreed with it. Furthermore, 97.1% of the patients thought that the presence of the medical student while they were being examined by the clinician or the students' examining them was extremely important for the education of future doctors, and 89.2% of them thought that it was important. It was observed that 58.2% of the patients replied yes to the question of "Do you think that the presence of a medical student would affect your interview with the clinician?" The responses to the question of "Why do you think that the presence of a medical student would affect your interview with the clinician?" were "I would not tell sufficiently" (37.5%) and "examination time would extend." Also, 86.3% of the patients stated that they would

allow the medical student to examine their outpatient clinic file. To the question of “Would you think that the medical student can understand your problem sufficiently?” 54.9% patients replied yes, 28.1% replied no, and 17% stated it would not make a difference (Table 2).

Although the female participants stated that they would be disturbed more from the presence of a medical student than the male participants when they reported their complaints, no significant difference was detected. Female participants did not allow being examined by the medical student under the supervision of the physician or not at a higher rate than the male participants ($\chi^2=66.62$ and $p<0.001$, $\chi^2=44.90$ and $p<0.001$). Female participants thought that the presence of a medical student would affect their examination at a higher rate than the male participants ($\chi^2=4.80$ and $p=0.022$). The differences in the attitudes of the female and male groups are summarized in Table 3.

The rate of the patients allowing medical students to observe the examination was significantly high in married patients ($\chi^2=17.56$ and $p=0.007$). The rate of the patients allowing medical students to examine themselves without the supervision of a physician was significantly high in married patients ($\chi^2=17.71$ and $p=0.001$). The rate of single participants stating that they would want the presence of a medical student during the interview was significantly higher than that of the married participants ($\chi^2=10.41$ and $p=0.034$). The rate of the patients who thought that they had the right not to request the presence of a medical student during the examination was significantly higher in married participants ($\chi^2=11.58$ and $p=0.003$). The rate of the patients who thought that the medical student could sufficiently understand their problem was again significantly higher in married participants ($\chi^2=9.77$ and $p=0.008$).

Discussion

Our study revealed that 9 of the 10 patients would not be disturbed from the presence of medical students, 7 of the 10 patients would allow medical students to perform physical examinations under the supervision of a physician, and half of the patients would allow physical examinations to be conducted without any supervisor. Studies across the world have observed that few patients object to the presence of medical students. The reasons underlying this positive attitude of the patients in the literature are counted as altruism to contribute to medical education, paying their debt to the system (thankfulness), feeling honored, the possibility that students detect the information that may not be noticed, to be able to receive more information, and the increase of self-confidence due to interaction (3, 8-10). Additionally, in our study, 64.4% of the patients stated that the clinician would more attentively apply the code of clinical practice and skills in the presence of medical students during the examination. O' Flynn et al. (11) suggested that although the patients would not be disturbed from the presence of medical students when they had sore throat, chest infection, or emotional cases, the majority of them did not want the presence of medical students during anamnesis or examination about sexual problems. Not asking questions regarding their problems and examinations in our study may be considered a deficiency. However, the rate of allowing medical students to conduct examinations in the absence of a physician falls to 50%, similar to the other studies. The aspects discussed in the literature,

Table 2. Summary of patients' attitudes in internal diseases examination

| | % | n |
|--|------|------|
| Do you allow a medical student to examine you under the supervision of a physician? | | |
| Yes | 71.1 | 514 |
| If female, yes | 12.4 | 90 |
| If male, yes | 2.2 | 16 |
| It does not matter | 14.2 | 103 |
| Do you allow a medical student to examine you without the supervision of a physician? | | |
| Yes | 50.2 | 363 |
| If female, yes | 9.5 | 69 |
| If male, yes | 1.4 | 10 |
| It does not matter | 28.4 | 205 |
| No | 10.5 | 76 |
| Do you allow a medical student to perform interventions such as “bloodletting” and “catheter insertion” under the supervision of a physician? | | |
| Yes | 73.9 | 534 |
| If female, yes | 3.7 | 27 |
| If male, yes | 1.1 | 1.1 |
| It does not matter | 16.9 | 16.9 |
| No | 4.4 | 4.4 |
| The physician will apply the code of the practice and skills more attentively in the presence of medical students. | | |
| I agree | 65.4 | 473 |
| Not sure | 17 | 123 |
| I disagree | 17.6 | 127 |
| How important is the presence of the medical student while you are being examined by the physician for the education of future doctors? | | |
| Very important | 73.2 | 529 |
| Important | 23.9 | 173 |
| Not sure | 1.9 | 14 |
| Not important | 1 | 7 |
| How important is a medical student to examine you for the education of future doctors? | | |
| Very important | 67.9 | 491 |
| Important | 28.9 | 209 |
| Not sure | 2.8 | 20 |
| Not important | 0.4 | 3 |
| Do you allow a medical student to get information from you about your personal information and the history of your disease? | | |
| Yes | 86.3 | 624 |
| If female, yes | 2.1 | 15 |
| If male, yes | 0.1 | 1 |
| It does not matter | 11.5 | 83 |
| Do you think that you have the right of demanding the absence of a medical student during examination? | | |
| Yes | 45 | 325 |
| No | 40 | 289 |
| It does not matter | 15 | 109 |
| Do you think the presence of a medical student during examination will affect your examination? | | |
| Yes | 58.2 | 421 |
| No | 41.8 | 302 |

Table 3. Comparison of female and male attitudes in internal diseases examination*

| | Male % (n) | Female % (n) | p |
|--|---------------|-----------------|--------|
| How do you feel in the presence of a medical student when you are telling about your complaints to a physician? | | | |
| Strongly disturbed | 2.2 (5) | 2.4 (12) | |
| Disturbed | 6.3 (14) | 10.6 (53) | 0.082 |
| Not disturbed | 91.5 (205) | 87 (434) | |
| Do you allow a medical student to examine you under the supervision of a physician? | | | |
| Yes | 74.6 (167) | 69.5 (347) | |
| If female, yes | 0.4 (1) | 17.8 (89) | <0.001 |
| If male, yes | 6.3 (14) | 0.4 (2) | |
| It does not matter | 18.8 (42) | 12.2 (61) | |
| Do you allow a medical student to examine you without the supervision of a physician? | | | |
| Yes | 54.9 (123) | 48.1 (240) | |
| If female, yes | 0.9 (2) | 13.4 (67) | |
| If male, yes | 4 (9) | 0.2 (1) | |
| It does not matter | 31.3 (70) | 27.1 (135) | |
| No | 8.9 (20) | 11.2 (56) | |
| Do you allow the presence of a medical student in the room while you are being examined by physician? | | | |
| In any case, yes | 68.8 (154) | 57.5 (287) | |
| If female, yes in any case | 0.9 (2) | 15.8 (79) | |
| If male, yes in any case | 9.4 (21) | 0 (0) | |
| If female, it depends which region of the body will be examined | 5.4 (12) | 8.6 (43) | <0.001 |
| If male, it depends which region of the body will be examined | 3.1 (7) | 7.8 (39) | |
| No | 4 (9) | 4.8 (24) | |
| It does not matter | 8.5 (19) | 5.4 (27) | |
| Do you allow a medical student to perform interventions such as "bloodletting" and "catheter insertion" under the supervision of a physician? | | | |
| Yes | 76.3 (171) | 72.7 (363) | |
| If female, yes | 1.3 (3) | 4.8 (22) | |
| If male, yes | 3.1 (7) | 0.2 (1) | 0.001 |
| It does not matter | 16.1 (36) | 17.2 (86) | |
| No | 3.1 (7) | 5 (25) | |
| Do you think the presence of a medical student during examination will affect your examination? | | | |
| Yes | 52.2 (117) | 60.9 (304) | 0.028 |
| No | 47.8 (107) | 39.1 (195) | |

the patients' low trust in the knowledge and skills of the medical student, the patients' belief that the medical student cannot perform the physical examination appropriately and that the student may cause harm, and their observance of it as being unfruitful may be counted among the reasons for this downfall (3, 11). Supportive of the literature, worries of extension of the examination time and not being able to sufficiently explain problems were high in the patients in our study. Nevertheless,

the rate of believing that the presence of medical students did not affect care quality was quite high (12).

It is considered that the majority of female patients have worries for the gender of medical students, particularly during gynecological examination (13). For instance, although the rate of wanting female students in maternity hospitals was 59.7%, this rate was found to be 14.6% in university hospitals (9). On the other hand, the rate of wanting medical students of the same gender for examining dermatology patients was found to be 23% (14). In our study, considering the gender of the medical student as a problem was higher in female patients as in the literature ($p=0.082$). Moreover, the rate of considering the gender of the medical student important was 10%, and the rate of caring about the gender of the medical student in interventional cases such as inserting a catheter and bloodletting was found to be approximately 4%.

Studies have reported that marital statuses of the patients may affect their preference of medical students. In a study conducted, it was found that 26% of the single and 14.9% of the married patients were not concerned about gender, and 44.8% of the married and 36.8% of the single patients preferred the clinician alone (1). In our study, married patients allowed the presence of medical students, their observing and performing the examination more than the single patients, and the single patients stated that they would allow medical students noting down their history more than the married patients. These preferences make us assume that single patients are concerned about privacy (1).

This study has some limitations. Firstly, there is no reliable and valid standard questionnaire that has been used and that measures the attitude of the patient. Secondly, questions regarding the attitudes of the patients about the regions of their bodies and the presence of medical students may have been asked. Thirdly, survey studies by their nature do not depend on observation but on the individual, and they do not state their real thoughts but give expected-acceptable responses.

Conclusion

This was the first study in our country in which the attitudes of the patients towards the presence of medical students were investigated in internal medicine patient examination and treatment practice. In accordance with the literature, we have detected that the patients who were admitted to the internal medicine clinics had a positive outlook and were not in discomfort in the presence of medical students for whom these attitudes may be affected by some conditions. However, to strengthen our findings, multi-centered studies have to be conducted, and attitudes and thoughts of the patients about the presence of medical students should be more comprehensively evaluated.

Ethics Committee Approval: Ethics committee approval was received for this study.

Informed Consent: Written informed consent was obtained from patients who participated in this study.

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References

1. Abdulghani HM, Al-Rukban MO, Ahmad SS. Patient attitudes towards medical students in Riyadh, Saudi Arabia. *Educ Health (Abingdon)*, 2008; 21(2): p. 69.
2. Doshi M, Brown N. Whys and hows of patient-based teaching. *Advances in Psychiatric treatment* 2005; 11: 223-31. [\[CrossRef\]](#)
3. Marwan Y, Al-Saddique M, Hassan A, Karim J, Al-Saleh M. Are medical students accepted by patients in teaching hospitals? *Med Educ Online* 2012; 17: 171-2. [\[CrossRef\]](#)
4. E Yüksek, AS Kani, V Çeri, M Toprak, E Yıldız, CA Poyraz, M Emül. Psikiyatri Poliklinik Uygulamalarında Tıp Fakültesi Öğrencisinin Bulunması Hakkında Hastaların Tutumları. *Güncel Psikiyatri ve Psikonörofarmakoloji* 2014; 4: 12-7.
5. Howe A, Anderson J. Involving patients in medical education. *BMJ* 2003; 327: 326-8. [\[CrossRef\]](#)
6. Mol SS, Peelen JH, Kuyvenhoven MM. Patients' views on student participation in general practice consultations: a comprehensive review. *Med Teach* 2011; 33: 397-400. [\[CrossRef\]](#)
7. Cooke F, Galasko G, Ramrakha V, Richards D, Rose A, Watkins J. Medical students in general practice: how do patients feel? *Br J Gen Pract* 1996; 46: 361-2.
8. Coleman K, Murray E. Patients' views and feelings on the community-based teaching of undergraduate medical students: a qualitative study. *Fam Pract* 2002; 19: 183-8. [\[CrossRef\]](#)
9. Sayed-Hassan RM, Bashour HN, Koudsi AY. Patient attitudes towards medical students at Damascus University teaching hospitals. *BMC Med Educ* 2012; 12: 13. [\[CrossRef\]](#)
10. Haffling AC, Hakansson A. Patients consulting with students in general practice: survey of patients' satisfaction and their role in teaching. *Med Teach* 2008; 30: 622-9. [\[CrossRef\]](#)
11. O'Flynn N, Spencer J, Jones R. Consent and confidentiality in teaching in general practice: survey of patients' views on presence of students. *BMJ* 1997; 315: 1142. [\[CrossRef\]](#)
12. Price R, Spencer J, Walker J. Does the presence of medical students affect quality in general practice consultations? *Medical Education* 2008; 42: 374-81. [\[CrossRef\]](#)
13. Ramanayake RP, Sumathipala WL, Rajakaruna IM, Ariyapala DP. Patients' attitudes towards medical students in a teaching family practice: a sri lankan experience. *J Family Med Prim Care* 2012; 1: 122-6. [\[CrossRef\]](#)
14. Townsend B, Marks JG, Mauger DT, Miller JJ. Patients' attitudes toward medical student participation in a dermatology clinic. *J Am Acad Dermatol* 2003; 49: 709-11 [\[CrossRef\]](#)