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# Attitude of Patients towards the Presence of Medical Students during Consultations

*Iyad Ali<sup>1\*</sup>, Aida S. Shaar<sup>1</sup>, Salam A. Aker<sup>1</sup>*

## Abstract

**Background and Aims:** Bedside teaching is seen as one of the most important component of medical education. A balance must be found between the best management of the patient and the education process. This study aims to determine patients' attitudes toward the presence of medical students during consultations in the newly established teaching hospital in Palestine. The factors that affect the patients' attitude were determined in order to provide valuable information to medical tutors to plan future clerkships in a way that maximize patients comfort and improve teaching process.

**Materials and Methods:** This cross-sectional study was conducted at An-Najah National University Hospital. It is based on a self-administered questionnaire from patients in the waiting rooms of different clinics. Four hundred and five questionnaires were collected between September 2015 and August 2016.

**Results:** About 64.8% of patients didn't mind the presence of medical students during consultations and 72.4% were ready to allow students to examine them under supervision. The vast majority of patients (about 90%) reported that they understand the importance of interaction of medical students with patients during their clinical education. Considering the number of students that patients will feel comfortable in their presence, 63.7% of patients preferred one or two medical students to be present during consultation

**Conclusions:** This study showed an overall positive patients' attitudes to the medical students' involvement in the medical consultation. However, it is essential that ethical conduct and professionalism are maintained to guarantee optimal care and safety to patients and good medical education to future physicians.

**Keywords:** Education, Medical, Ethics, Professional Practice, Medical staff.

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## Introduction

Medical education has always involved patients, but traditionally in a passive way. Modern medicine emphasizes patient autonomy and informed consent. Patients have the right to accept or refuse the presence of medical students

during their consultations (1). Better teaching opportunities will be attained if patients are willing to contribute to training of medical students (2-4). Making decisions regarding maximizing patients' comfort versus teaching future physicians is an ethical dilemma (5).

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Previous cross sectional studies reported an overall positive attitude of patients toward medical students with only small proportion (1–13%) refusing student participation (6-14). A study by Passaperuma *et al.* that made a comparison between different specialties (Family Medicine, Obstetrics/Gynecology, Urology, General Surgery, and Pediatrics) showed that patients' attitudes regarding medical students involvement were similar (11). This suggests that there is no need to do a similar investigation in each specialty because results from one area can be generalized between specialties. On the other hand, it is suggested that patients' attitudes vary across regions and are influenced by various social and cultural factors (15). Therefore, results from studies conducted in one region do not necessarily reflect patients' attitudes in a different region.

Appreciating factors that affect patients comfort and their willingness to consent the presence of medical students is essential. It enables medical educators to address any issue with consent so that comfort levels of patients involved in medical education are not violated. Student gender, patient's age, previous experience with medical students and level of student involvement, among others, are proposed to affect patients comfort level (8, 16).

Palestine has a short history of medical education with the first medical school opened in 1994 and a total of four schools are present now (17). The first Palestinian university hospital -An-Najah National University Hospital (NNUH) - opened in 2014 (18). Medical students at An-Najah National University (ANNU) spend a significant part of their training in the hospital clinics and wards. The background of this study arose from the experience of authors who noticed a variable

response of patients to their presence in clinics. To the best of our knowledge, no study has addressed patients' attitudes to medical students in Palestine.

The aims of this study are threefold. First, to determine patients' attitudes toward the presence of medical students in clinics at NNUH. Secondly, to assess the factors that affect patients' attitude. Finally, to determine if patients are aware of their rights to accept or refuse medical students' presence during consultations. We believe that achieving these aims will provide valuable information to medical tutors to plan future clerkships in a way that maximizes patients comfort and improves the medical teaching process.

### Methods

Ethical approval was obtained from the Institutional Review Board (IRB) at ANNU. Informed consent was obtained from all participants. All participants were assured that their involvement is voluntary and the quality of health care provided will not be affected by their decision to participate or not.

A cross-sectional study that relied on a self-administered questionnaire was conducted at NNUH between September 2015 and August 2016. Participants in the study were the patients in the clinic waiting rooms of different specialties (internal medicine, general surgery, neurosurgery, urology, cardiology, vascular surgery and orthopedics).

Patients excluded from the study included those who were seriously ill, confused or cognitively impaired. Moreover, patients who couldn't read, younger than 18 years old or who did not provide their demographic data were also excluded.

The questionnaire used in the study was obtained with permission from Choudhury et al

(15) and Medical Teacher Journal. The questionnaire was applied after being translated into Arabic and two questions, about ethnicity and length of stay in the UK, were modified.

The questionnaire contained 13 questions, the first three questions asked for demographic information, including age, gender and place of residency. The next section of the questionnaire assessed patients' attitudes and comfort level toward medical students' presence during consultations. It also assessed if patients would allow medical students to observe their examination or examine them under supervision of the doctor. Effect of number, gender, previous experience with medical students and other main factors that influence their decision were also appreciated. The last two items determined patients' awareness of the importance of clinical training.

Data collected were analyzed by SPSS statistics program version 21. Binary and multiple logistic regressions were used to calculate odd ratios. Out of the 13 questions, the answers to 4 questions were considered as independent variables (age, gender, place of residency and previous experience with medical students). For all analyses, statistical significance was taken as  $p < 0.05$ .

### Results

A total of 405 questionnaires were included in the study. Around 10 patients refused to participate in the study and 20 patients were excluded due to missing demographic data. Patients' characteristics are summarized in (Table 1). Approximately 52% of patients surveyed were males. The mean age of all patients surveyed was  $37.7 \pm 14$  years. The distribution of age categories is shown in (Fig. 1). About 50% of the participants were city residents and 65.9% of them had prior exposure

to medical students.

Table 2 summarizes the answers to the main questions in the self-administered questionnaire. A positive attitude towards medical students was reported by the majority of patients. About 65% of patients don't mind the presence of medical students during consultations and 72% will allow students to examine them under supervision. More than 85% of the patients appreciate the importance of clinical training for medical students. The question that targeted awareness of patients of their right to accept or refuse medical students presence revealed that approximately 25% of the patients surveyed are unaware of that right.

Place of residency and prior exposure to medical students were not significantly associated to any outcome question. In contrast to that, patient's age and gender were significantly associated to almost all of the first five outcome questions. However, gender was not associated with the outcome of question 1 (Q1) and age was not associated with the outcome of Q1 and Q5.

Patients from the age group (18-40 years) have 2.5 times the odds of refusing medical students presence during consultations (Odd ratio (OR)=2.5). Moreover, being younger has 0.6 times the odds of allowing more than five ( $>5$ ) students to be present as opposed to choosing two or less ( $\leq 2$ ) students (OR=0.6). Belonging to the younger age group also increases the odds of refusing medical students presence during examinations by 0.8 (OR=1.8) Table 3A. On the other hand, patients from the male group have a decreased odds of refusing medical students presence during consultations by 0.47 (OR= 0.53). In addition to that, being a male has 2.6 times the odds of permitting more than 5 ( $>5$ ) students to be present as opposed to choosing ( $\leq 2$ ). Moreover, belonging to the male

group decreases the odds of refusing medical students presence during examinations by 0.6 (OR= 0.4) Table 3B.

Three questions examined if students' gender or the patient's body part examined have an effect on patients' attitude. The majority of patients (71.7%) will allow students presence during consultations in all cases regardless of students' gender. However, 11.4 % of patients, mostly females (59%), reported that their decision depends on students' gender. About 85% of patients who will allow only female students to be present are females. Similarly, approximately 90% of patients who will allow only male students to be present are males. Regarding permitting students to examine patients under supervision, the patients' body part involved (cited by 26.4% of patients) seems more important than the gender of the students present (9.1%). Similarly, the percentage of patients who will allow students presence during their examination depending on the body part involved was 37.2%, whereas 11.1% reported that their decision depends on students' gender.

Fig. 2 lists the frequencies of the reasons for the comfort or discomfort of patients with the presence of medical students. These reasons were presented to patients as tick-box options in the questionnaire and up to two reasons can be chosen. The four reasons most commonly reported by patients as determining their attitude towards the presence of medical students were: the quality of health care received (28.1%), educational reasons (27.7%), their personality (26.2%) and their health status (20.7%). Although not mentioned in the eight different tick-box options, 8% of patients wrote down an additional reason in which they expressed their readiness and satisfaction to participate in the training of future physicians.

## Discussion

Clinical training had always raised ethical challenges. Although it is an essential component of medical education, patients involved do not directly benefit from involvement of medical students in their care. This study is the first to investigate the attitude of patients towards medical students in Palestine which has a notably short history of medical education. The overall results showed a positive attitude of patients towards medical students.

It is noteworthy that when patients were asked about their feeling towards the presence of medical students during their consultations, the majority of patients (65%) reported "I don't mind", and a significant minority (26%) cited feeling "uncomfortable or extremely uncomfortable" (Table 2). However, when they were surveyed for whether they will actually accept or refuse the presence of students, only 16% reported that they will refuse the presence of medical students. This probably reflects that a proportion of patients will not refuse students presence despite feeling uncomfortable.

In this study, the percentage of patients who refuses medical students presence is slightly higher than what was previously reported (7-9, 11-13, 19). The most common reasons cited by patients that determined their attitude are consistent with those previously reported by Choudhury et al (15). Two of these reasons are difficult to manipulate, i.e. the health status of the patient and their personality. However, the other two reasons (quality of health care received and educational reasons) could be addressed in order to raise patients comfort level and provide a more satisfactory clinical experience for medical students.

The finding that approximately 25% of patients were unaware of their right to accept or

refuse students' presence was surprising. This presumably reflects a major defect in the process of obtaining patients' informed consent by clinical tutors regarding the presence of medical students. Unfortunately, this is consistent with the finding of some studies in other countries (20-23).

Considering the number of students that patients will feel comfortable in their presence, only 12% answered (>5) whereas about 25% answered (3-5) and the remainder reported ( $\leq 2$ ) (Table 2). This is an alarming finding since most clinical groups of students at ANNU contain five or six students in routine rotations. A critical need to re-arrange students in smaller groups is needed if patients comfort level is to be maintained. Although the majority of patients (71.7 %) had no preference for the gender of the students, those who did were mostly females and preferred students of the same gender. This is consistent with the results of previous work of Chipp et al and Mavis et al along with others (24-26).

Understanding that the younger group and female patients are more likely to provide negative responses or be less comfortable in the presence of medical students have possible implications (Tables 3 and 4). Clinical tutors should be aware of these results and implement them in daily teaching activities to avoid unnecessary discomfort to the patients and adversely affecting student-patient relationship. For example, when electively choosing a patient to be involved in teaching activities, tutors are advised to approach preferably older patients or male patients as they are more likely to be positive towards students. When the patient is young or a female and the tutor wishes to involve him/her in medical students training, it is vital that the tutor allocates more effort in educating patients. This includes mentioning

the importance of interaction of future physicians with patients, the professionalism of medical students and that their privacy will be completely respected. Similarly, this also should be stressed in cases when sensitive body parts of patients are involved in the examination. However, the comfort of patients should be prioritized and in case they decided to refuse students presence, this should be respected without questioning (1).

The place of residency of the patients was not significantly associated to the answers to any of the outcome questions. This probably reflects the homogeneity of the Palestinian society in which the majority of the population is of the same ethnicity (27). Similarly, prior exposure to medical students was not significantly associated with patients' attitudes. Although about 65% of patients surveyed recalled a prior experience with medical students, this was not significantly associated with any answers to the questions that assessed patient's attitudes. These findings are in disagreement with the results of previous studies (8, 15, 26, 28), which reported higher level of patients comfort with prior student involvement. The vast majority of patients (about 90%) reported that they understand the importance of interaction with patients for the training of medical students (Table 2). However, this result reveals that there is a considerable place for improvement of patients attitude if we address the need for further patient education.

Due to limitation in time and resources, the questionnaire was limited to assess only major points. Some additional factors such as the effect of level of students' involvement and students' level of training could have been investigated. Moreover, this study was conducted at the only teaching hospital in the

Palestine. It would be interesting to conduct a similar investigation at governmental non-teaching hospitals and observe whether patients' attitude will be different.

### Conclusions

Palestinian patients showed overall positive attitudes towards the involvement of medical students. The majority appreciate the importance of clinical training for future physicians. In general, they expressed no objection to the presence of medical students during consultations and even examining them under supervision. However, many patients were unaware of their rights to reject the presence of medical students during consultation. Taking advantage of this attitude, valorizing patients' role as educators and using further learning methods in situations where patients' consent for student involvement was not obtained should be

considered to guarantee optimal care and safety to patients and good medical education to future physicians.

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

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**Table 1: Overall patients' characteristics.**

Characteristic	No. of patients* (%)
<b>Gender</b>	
Female	193 (48.5)
Male	205 (51.5)
<b>Age (years)</b>	
18 – 40	228 (61)
>40	146 (39)
<b>Place of residency</b>	
Village	160 (40.7)
City	198 (50.4)
Camp	35 (8.9)
<b>Prior student involvement</b>	<b>267 (65.9)</b>

\* These numbers don't sum up to 405 due to some missing data

**Table 2: Summary of frequencies of responses to main outcome questions.**

Question	Results of Outcome		
	Yes	No	Being careful
Do you feel comfortable towards the presence of medical students during your consultation?	64.8 %	26.3%	9%
Would you allow medical students to be present during your consultation?	83.8%	16.3%	N/A
How many medical students would you feel comfortable with?	≤2	3-5	>5
	63.7 %	24.8 %	11.5%
Would you allow medical students' presence during your examination?	80.5%	18.3%	N/A
Would you allow a medical student to examine you under supervision?	72.4%	26.7%	N/A
Do you think you have a right to refuse medical students presence?	56.1%	27.4%	Not sure
			16.2%
Is it important for medical students to be present during consultation for their medical education?	89.1%	4%	Not sure
			6.7%
Is it important for medical students to do examination for their medical training?	88.3%	4.7%	Not sure
			6.9%

N/A: not applied

**Table 3A: Odds ratios of answers to outcome questions by younger age group (18-40 years)**

Answers to outcome questions	Odd ratio
Refusing medical students presence during consultations	2.5
Refusing medical students presence during examinations	1.8
Allowing more than five ">5" students to be present	0.6

**Table 3B: Odds ratios of answers to outcome questions by male group**

Answers to outcome questions	Odd ratio
Refusing medical students presence during consultations	0.5
Refusing medical students presence during examinations	0.4
Allowing more than five ">5" students to be present	2.6



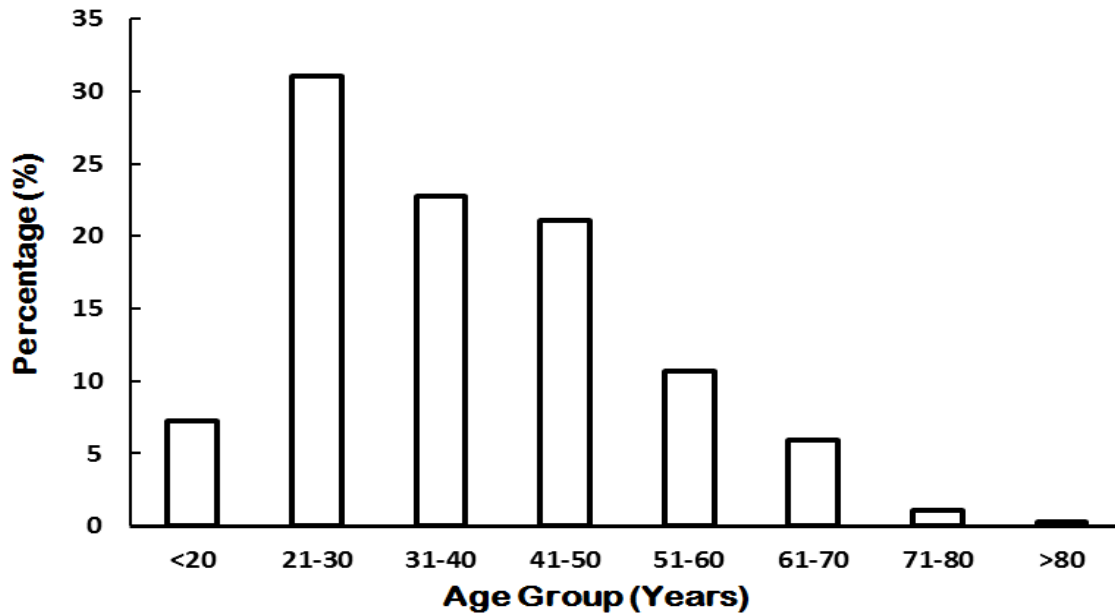


Fig. 1: Age distribution of patients who completed the self-administered questionnaire.

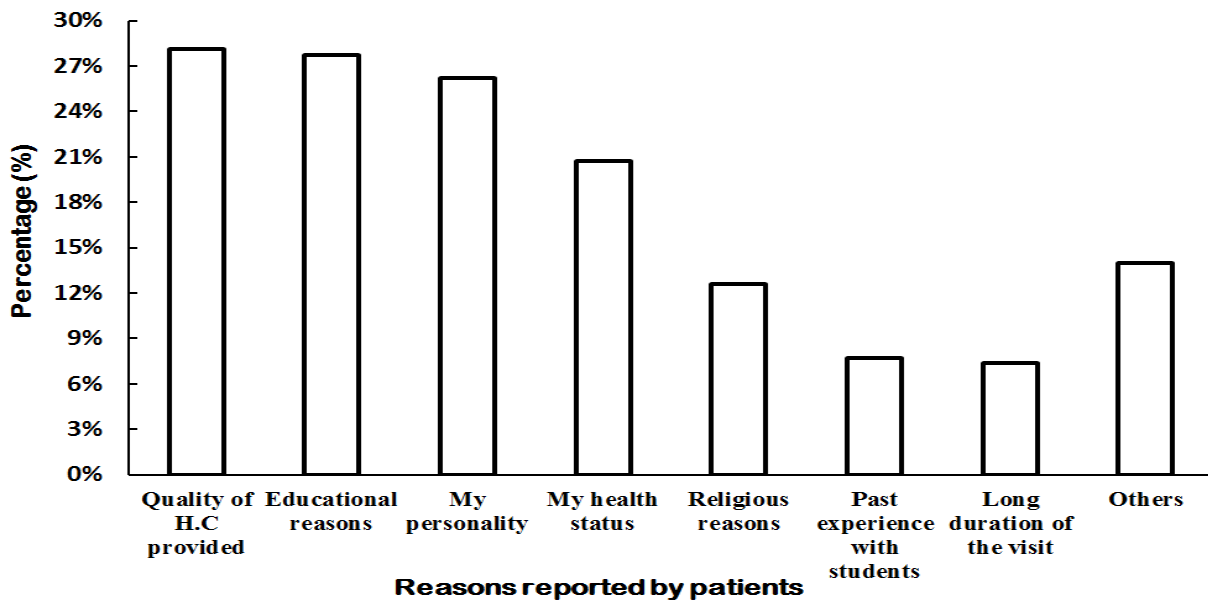


Fig. 1: Reasons reported by patients for their comfort or discomfort with the presence of medical students.

The Numbers do not sum up to 100% as every patient could choose up to two reasons. H.C: health care.

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## مواقف المرضى تجاه وجود طلاب الطب خلال الاستشارات الطبية

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### الملخص

**الخلفية والأهداف:** يعتبر التدريس السريري أحد أهم مكونات التعليم الطبي، إذ لا بد من إيجاد توازن بين سير العملية التعليمية وبين أفضل طريقة علاج للمريض. تهدف هذه الدراسة إلى تحديد مواقف المرضى تجاه وجود طلاب الطب خلال الاستشارات الطبية في المستشفى التعليمي الذي أنشئ حديثاً في فلسطين، وقد تم تحديد العوامل التي تؤثر على مواقف المرضى من أجل توفير معلومات قيمة لمعلمي طلاب الطب للتخطيط للتدريس في المستقبل بطريقة تزيد من راحة المرضى وتحسن من عملية التدريس.

**الأساليب:** أجريت هذه الدراسة المستعرضة في مستشفى جامعة النجاح الوطنية، وتستند إلى استبانة ذاتية من المرضى في غرف الانتظار في عيادات مختلفة، وقد تم جمع أربع مائة وخمسة استبانات بين سبتمبر 2015 وأغسطس 2016.

**النتائج:** حوالي 64.8% من المرضى لم يمانعوا وجود طلاب الطب خلال الاستشارات الطبية، وكان 72.4% منهم على استعداد للسماح للطلاب بفحصهم تحت الإشراف. وقد أفاد الغالبية العظمى من المرضى (حوالي 90%) أنهم يفهمون أهمية التفاعل بين طلاب الطب والمرضى أثناء تعليمهم السريري. بالنظر إلى عدد التلاميذ الذين سيشعر المرضى بالراحة عند وجودهم، فضل 63.7% من المرضى أن يكون هناك واحد أو اثنان من طلاب الطب خلال فترة الاستشارة.

**الاستنتاجات:** أظهرت هذه الدراسة اتجاهات إيجابية للمرضى بشكل عام تجاه مشاركة طلاب الطب في الاستشارة الطبية، ومع ذلك فمن الضروري الحفاظ على السلوك الأخلاقي والمهنية الطبية لضمان الرعاية المثلى والسلامة للمرضى والتعليم الطبي الجيد لأطباء المستقبل.

**الكلمات الدالة:** التعليم، الطبية، الأخلاقيات، الممارسة المهنية، الطاقم الطبي.