

Patients Attitude Towards Presence of Undergraduate Medical Students During Consultation in 2016

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Abstract

- Background** Bedside teaching enables students and trainees to acquire many clinical skills and professional behaviors during process of learning.
- Objective** To investigate views of patients towards presence of undergraduate medical students during consultation.
- Methods** This is a cross-sectional study conducted in Al-Imamein Al-Kadhimein Medical City, Baghdad-Iraq; during period of February through July, 2016. It involved patients admitted to internal medicine, surgery, and gynecology and obstetrics departments of hospital during time of data collection. The study relied on performing face to face interviews with participants and a total of 400 individuals were enrolled in it. To be included in the study, patient's age should be 18 years or older. Seriously ill, confused or cognitively impaired individuals were not involved. SPSS program was used for computerized statistical analyses. Categorical variables were compared using Chi-square X^2 tests, and Continuous variables were compared by Student t - test or analysis of variance (ANOVA) test. P -values less than 0.05 & 0.01 was considered to be statistically significant and highly significant, respectively.
- Results** Those who allowed presence of students represented 80.3% of participants. Factors associated significantly with patients' decision were age ($p=0.034$) and hospital department ($p=0.009$). Among those with positive attitude, 145 (45.2%) thought students' number should not exceed five, while remaining did not care. Answers of patients about their view for allowing students to perform examination revealed that 169 (52.6%) accepted all times, 105 (32.7%) linked acceptance by students' sex, and remainders rejected all times.
- Conclusion** The overall attitude of our patients towards students' involvement in consultation was positive and comparable to that reported in previous studies.
- Keywords** Patients' Attitude, Bedside Teaching, Medical Consultation, Iraq
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List of abbreviations: None.

Introduction

Bedside teaching is one of conventional pillars of medical education. It enables students to acquire many clinical skills and professional behaviors during their process of learning⁽¹⁻²⁾. This method needs great interest and intense adherence by the students

and teaching staff, in addition to willingness for cooperation by patients who undertake a key role in this process⁽³⁻⁴⁾. The readiness of patients for collaboration and contribution in the medical training process is considered now a fundamental prerequisite to provide the best teaching environment at various levels of patient's care⁽⁵⁻⁷⁾.

Modern health services users are active partners in determining their care, which may lead to difficulties in training if the patients refuse to participate. With raised emphasis on issues related to patients' rights and informed consent, it becomes necessary to obtain patients' agreement regarding the presence of students during medical consultation⁽⁸⁻¹⁰⁾. Previous researches have revealed that patients tolerated well the presence of students during consultation in various medical situations, starting from emergency units and ending with outpatient departments⁽¹¹⁻¹⁷⁾. Nevertheless, the studies have showed also that patients' attitudes from students' involvement were strongly influenced by many factors like sociodemographic characteristics and the clinical situation of each condition⁽¹⁶⁻²⁰⁾.

Medical education in Iraq is recognized by its traditional nature as there are big number of students and hospital-based learning. Clinical teaching takes place in the third to sixth years of medical training⁽²¹⁻²²⁾. Till now, no study has been conducted to enquire about the acceptability of medical students by patients. In the absence of such studies and in conjunction with national efforts for quality improvement in both medical education and health care standards, it became necessary to explore the opinion of patients, what they felt and the degree of their comfort upon presence of undergraduate students during consultations.

Consequently, these facts prompted to conduct this study that aims to assess views of patients towards the presence of undergraduate medical students during consultation with their doctors at a university teaching hospital in Iraq; and to identify factors that may potentially influence their decision to allow or refuse medical students' participation.

Methods

This is a cross-sectional study with an analytic element, carried out in Al-Imamein Al-Kadhimein Medical City, Baghdad-Iraq; during

period of February through July 2016. It involved patients admitted to different departments and wards of the hospital during the time of data collection. The sampling method was systematic random sampling, i.e. sample was selected according to a random starting point and a fixed periodic interval. A sample size of 400 patients was chosen as it gives 95% confidence level with less than 5% margin of error. To be included in the study, patient's age should be 18 years or older. Seriously ill, confused or cognitively impaired individuals were not involved. Informed consents were obtained from all participants. Ethical approval was obtained from Al-Nahrain medical school.

Study instrument

The study relied on conducting face to face interviews using paper-based, predesigned questionnaire that was used in previous similar research⁽²³⁾. Minor changes were made on original version in a way did not affect its validity and it was translated to Arabic to make it more suitable for local circumstances of current study. The research tool consisted of three main sections: First section contained questions about socio-demographic characteristics (e.g. age, sex, education, and residence) and clinical departments of patients (internal medicine, surgery, or gynecology and obstetrics wards); second section contained one question asking if patients allow the presence of medical students during their consultation with hospital doctor. If answer was "Yes", patients were requested to continue and answer the remaining questions but if answer was "No", then interview will end at this point. The third section contained set of questions seeking the volunteers' attitudes towards the presence of students during medical consultations (e.g. patients believe whether they can learn more about their problems or get more attention when students are present, their opinion about need of having some time alone with doctor, and importance of doctor's presence with students at all times during consultation).

Statistical analysis

The SPSS program, version 20, was used for computerized statistical analyses. The results were expressed as mean \pm SD (standard deviation), or frequency & percentage. Categorical variables were compared using Chi-square X^2 tests, and Continuous variables were compared by Student t - test or analysis of variance (ANOVA) test. P -values less than 0.05

and 0.01 was considered to be statistically significant and highly significant, respectively.

Results

Most of patients were women in fourth to fifth decade of age and lived in urban areas. More than half of the study sample was recruited from internal medicine departments (Table 1).

Table 1. Basic Characteristics of study sample

Character	Value
Number	400
Age; (mean \pm SD)	42.0 \pm 17.1 yr
Female Sex; n (%)	264 (66%)
Years of education; (mean \pm SD)	6.61 \pm 5.21 yr
Urban Residency; n (%)	329 (82.3%)
Hospital Department; n (%)	
- Internal medicine	207 (51.8%)
- Obstetrics & gynecology	117 (29.3%)
- Surgeries	76 (19.0%)

When patients asked for their opinion towards presence of medical students, the vast majority

(80.3%) said they allowed their existence during consultation (Figure 1).

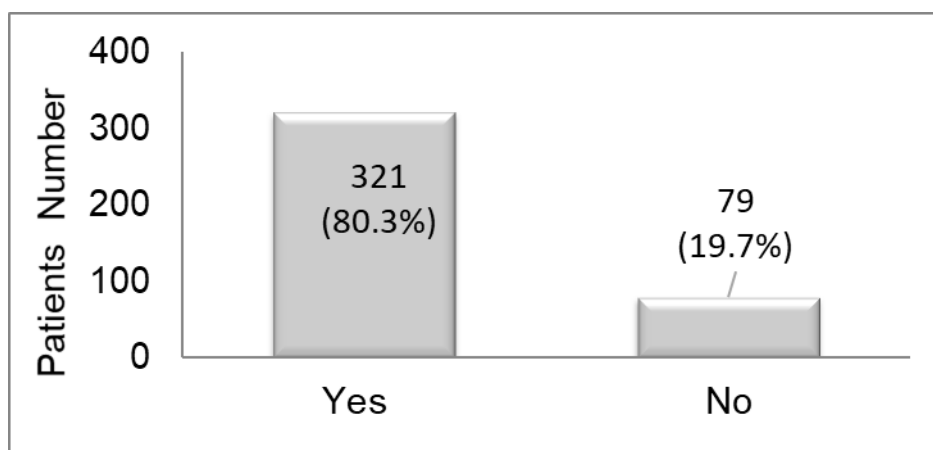


Figure 1. Patients' acceptance for presence of medical students during consultation

Factors that were found to affect significantly their decision were age (more in older people) and department in hospital (lower in obstetric

and gynecological department). Table 2 shows these relations in more detail.

Those who accepted the presence of students during consultation were asked for their

opinion for suitable number of students that should be present during consultation. The answer for this question revealed that 145 (45.2%) thought the number of students should not exceed five, while the remaining 176 (54.8%) did not care. Another question was asked to those patients if they allowed the

students to perform physical examination to them. Here, more than half said they always accepted, 169 (52.6%); around one-third linked their acceptance by presence of students from same sex, 105 (32.7%); while the remaining 47 (14.6%) patients did not permit at all.

Table 2. Relationship between patients' agreement for presence of students and study sample characteristics

Character		Results	P-value
Age (yr) (mean ± SD)	Accepted	42.9 ± 17.4	0.034
	Refused	38.3 ± 15.5	
Sex* n (%)	Men	111 (81.6%)	0.622
	Women	210 (79.5%)	
Education Years (mean ± SD)	Accepted	6.58 ± 5.18	0.780
	Refused	6.76 ± 5.35	
Residence * n (%)	Urban	265 (80.5%)	0.748
	Rural	56 (78.9%)	
Hospital department* n (%)	Internal Medicine	176 (85.0%)	0.009
	Surgeries	62 (81.6%)	
	Obst. & Gyne	83 (70.9%)	

* The results of these variables concerned those who answered 'yes' only

Analysis for possible influential factors on opinions (Table 3) discloses the following: Regarding relationship with students' number, the age of patients appeared to have high significant role. As age increases, those who care for presence of a limited number of students decline. Sex of patients and departments in hospital in which they found affected significantly their opinion also. Men and those who existed in internal medicine departments were more likely to never mind the presence of large number of students. Patients' residency & their education level did not exhibit any significant association.

Concerning permission for students to perform examination, the age exhibits again high significant association. More than three-quarters of those with age equal or more than 60 years allowed students from both sexes to examine them. For younger patients the decision of acceptance tends to depend more on presence of students from same sex. The

sex of patients and hospital departments has demonstrated also high significant association here. More than 80% of men allowed students from both sexes to examine them; while nearly half of women allowed examination for female students only. Nearly 70% and 55% of those in internal medicine & surgical wards allowed examination for all students, respectively. However, this percentage decline markedly in obstetrics and gynecology where sex of students plays an important role. As with opinion for students' number, the residency & education of patients did not show significant association.

The last table (Table 4) explores more in depth the perceptions & considerations of those who accepted the presence of medical students. The written answers in this table belong to those who answered with yes on relevant questions.

Table 3. Relationship between patients' opinion for suitable number of students /allowing students to do examination and sample characteristics

Character	Suitable number of students n (%)		P-value	Allowing students to do examination n (%)			P-value	
	≤ 5	≥ 6		Yes	Depend*	No		
Age (yr)	18 - 39	83 (55.0%)	68 (45.0%)	<0.001	56 (37.1%)	67 (44.4%)	28 (18.5%)	<0.001
	40 - 59	44 (43.1%)	58 (56.9%)		61 (59.8%)	27 (26.5%)	14 (13.7%)	
	≥ 60	18 (26.5%)	50 (73.5%)		52 (76.5%)	11 (16.2%)	5 (7.4%)	
Sex	Men	40 (36.0%)	71 (64.0%)	0.017	90 (81.1%)	11 (9.9%)	10 (9.0%)	<0.001
	Women	105 (50.0%)	105 (50.0%)		79 (37.6%)	94 (44.8%)	14 (17.6%)	
Residency	Urban	116 (43.8%)	149 (56.2%)	0.274	147 (55.5%)	83 (31.3%)	35 (13.2%)	0.070
	Rural	29 (51.8%)	27 (48.2%)		22 (39.3%)	22 (39.3%)	12 (21.4%)	
Hospital Department	Int. Medicine	70 (39.8%)	106 (60.2%)	0.039	122 (69.3%)	41 (23.3%)	13 (7.4%)	<0.001
	Surgeries	28 (45.2%)	34 (54.8%)		34 (54.8%)	20 (32.3%)	8 (12.9%)	
	Obstetrics and Gynecology	47 (56.6%)	36 (43.4%)		13 (15.7%)	44 (53.0%)	26 (31.3%)	

* Acceptance depends on presence of student from same sex

Table 4. Patients' perspectives concerning presence of medical students

Questions	Agreement*
Do you believe you will have more attention if medical students are present?	200 (62.3%)
Do you believe you can learn more on your problem if students are present?	219 (68.2%)
Do you think it is important to have time alone with the doctor during consultation?	243 (75.7%)
Do you think it is good and acceptable for students to see your medical records?	313 (97.5%)
Do you consider it essential for the doctor to be present with students at all times?	174 (54.2%)

* Number and percentages in this table include only those who answered with 'Yes'

Discussion

Participation of patients in medical teaching is an important tool of medical education. This study contributes to the understanding of Iraqi patients' attitudes towards the involvement of medical students in clinical teaching, as

reported by those seen at Al-Imamein Al-Kadhimein Medical City.

Overall, the degree of acceptance of medical students by patients was high (~80%) and falls within range that was reported in many other studies in the Arab World and other countries

(23-26). The study conducted by Sayed-Hassan RM & colleagues at Damascus University Teaching Hospitals (25) found that 67.8% of patients approved the presence of medical students during the medical consultation. Another study conducted at University Charity Teaching Hospital in Sudan estimated the acceptance rate to be 95.2% (26). An article, which assessed acceptability of medical education among patients and their companions in Brazil, found that 85% of participants would allow a student to be present during consultations (23).

This high allowance was attributed in previous studies to patients' willingness to participate in education process, the additional time that doctors will give to them, and availability of opportunity to talk about their illness. Moreover, it was demonstrated that patients learn more about their condition when physician teach students (3,25,27-28). The current study succeeded in finding common ground with these explanations as around two-thirds of those who accepted existence of students believed that they have more attention and care if medical students are present during consultation; and nearly 70% of them believed that they can learn more and have a better understanding of their problem in the presence of medical students.

Certain factors seem to have a marked influence on attitude of patients towards involvement of medical students during consultations. Concerning sociodemographic factors, the main feature that can be noted is that mean age of those who accepted the presence of students is higher than those who refused. Nevertheless, no one of other factors like sex, education and residence succeeded in achieving such significant association. Socio-demographic and individual variables were found in previous studies to have positive association with patients' attitudes (3,16,24,29). The results, however, were inconsistent and sometimes contradictory with each other indicating the effects of local conditions and circumstance related to each study. In Nigeria,

Onotai et al. (29) also reached that older patients tend to show more positive attitude and willingness to accept students in their care. Another study conducted by Ben Salah et al. in Tunisia (3) concluded that female patients accepted more the role of medical students in reading their medical files, being present in outpatient clinic, attending ward rounds and surgical intervention and taking medical history. Lastly, Ghobain et al. study (16) in Saudi Arabia reported that those in middle age group (45-64 years) and those with low education level have lower acceptance of medical students' participation in their healthcare.

The lower rate of acceptance of presence of students in gynecology/obstetrics departments was expected due to nature of work in them, which requires exposure of hidden parts of bodies and dealing with women recently recover from delivery and labor. These findings were consistent with results of Shann et al. (12), Mavis B et al. (13), and Hartz et al. (30) which reported that approval of students' involvement in obstetrics and gynecology as well as in Genito-Urinary departments were lower than in others.

As the degree of student participation increased (from observation to records review to examination and procedures), the rejection rate increased. This is most probably related to privacy issues which have also been noted in study conducted by Ben Salah and colleagues in Tunisia (3). Another reported reason for objection towards students' involvement in physical examination was low confidence in medical students' skills to do a proper examination that can detect findings (26,31). More than half of patients in the current study considered it is essential for tutor/doctor to be present with the students at all times; and this finding matches with the results of Sayed-Hassan et al. (25), who concluded that the patient's feeling of safety and comfort relies on presence of a supervisor.

The current study revealed also that patients' reaction towards allowing medical students to perform examination depend on certain

characteristics of patients themselves (such as sex and age). Female patients showed nearly equal acceptance rate to male patients when asked about situations where there was a minimal direct contact with students (e.g. observation and checking records). However, when asking for examinations, they were less likely than male patients to accept students, mainly of different gender. This finding agrees with that previously obtained in other Muslim countries ^(3,25) and even in Muslim women living in non- Muslim countries ⁽³²⁾; where cultural and religious issues might affect attitude of patients toward male students. This attitude may lead to poorer clinical experience of male students ⁽²⁵⁾. Similarly, Male students have been reported in other study conducted in obstetrics and gynecology clinics ⁽³³⁾ to be more likely to experience gender bias from patients.

One of the noticeable finding of this study is the view of patients for the suitable number of patients that should be present in consultation. The results, which revealed that female patients and those who admitted to obstetrics and gynecology departments preferred more limited number of students seems logical. The presence of large number may aggravate the feeling of embracement and confusion that they already have. However, the influential effect of patients' age on opinion for suitable students' number may need further reflection. Those with older age tolerated more the higher numbers than younger. No clear explanation was found; however, it has been reported in literatures that elderly patients tend to hold fewer negative views for young students than younger patients who are more likely to feel vulnerable from students ⁽¹⁸⁾.

The important strength of this study is its originality. Up to our knowledge, this study is the first one in Iraq that aims to assess patients' acceptability of medical students in a teaching hospital, in a country where medical education is based on bedside teaching. Social desirability bias (tendency of survey respondents to answer questions in a manner

that will be viewed favorably by interviewer) may be a limitation to our study. In fact, patients were surveyed while they still hospitalized which could influence response rate and answers. However, data collectors were alerts for this issue and have informed patients that their answers would not affect the quality of care provided.

As a conclusion, this study revealed that patients in Al-Imamein Al-Kadhimein Medical City showed overall positive attitudes towards the involvement of undergraduate medical students in consultation which was comparable to that reported in previous studies. The reasons for this positive attitude can be attributed among other causes to patients believe that they will have more attention and care if medical student is present and/or they can learn more and have a better understanding of their problem.

This study explores an important and sensitive aspect in medical education. It highlights the need for patient's education and giving information regarding importance of students' involvement in consultation. Modern medical teaching programs must take into consideration advantage of positive attitude, emphasize patient role as educator and use alternative learning methods in situations where patient's consent for student involvement was not obtained in order to guarantee optimal care and safety to patients and good medical education to future physicians. Patients, students as well as clinical teachers need further learning about the ethics of patients' involvement in medical teaching.

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Conflict of interest

The author has declared that no competing interests exist.

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