Patients' Perception on Clinical Training and Informed Consent Towards Medical Students in Jazan Hospitals: A Cross-Sectional Study

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Abstract: *Background*: Bedside teaching offers many advantages for medical education. When real patients are involved in the clinical practice, teaching medicine often involves difficult ethical dilemmas so it must be precisely detected and properly dealt with.

Objective: to evaluate patients' perspectives on clinical training and informed consent within teaching hospitals in Jazan.

Method: This cross-sectional observational study targeted all adult who previously met a medical student. A self-administered questionnaire to assess the patient's perspective on clinical training and informed consent towards medical students were answered by the participants. T-tests and chi-square tests, along with multiple logistic regression, were used for analysis.

Results: 200 participants were selected for this study with a mean age of 32.52 years. 51.3% of the participants were female, and 55.3% of the participants were married. 59.6% of the patients reported that the doctor asked for their permission for the student to be present. Only 31.1 % stated that they felt uncomfortable and 70% of the participants reported that they received more explanation about their illness when medical students were present. Almost all patients felt pleased that they had contributed to the students' medical education.

Conclusion: The research has demonstrated that patients' acceptability of medical students appeared to be influenced by the nature of the interaction between the patient and the student, the education level, and the student-patient gender. In general, most patients were pleased that they were able to help in the students' medical education. In order to enhance the learning process for medical students, clinical tutors must benefit from patients who accept medical students.

Keywords: Medical training, medical education, patients' perceptive, patients' autonomy, Jazan, Saudi Arabia.

INTRODUCTION

It has been established that bedside teaching offers many advantages for medical education as it offers the students higher-order learning where they are exposed to a comprehensive approach to patient care, including history taking, examination skills, a professional attitude, and how to reach to a differential diagnosis [1]. It also serves as an example of professional clinical care to treat patients and their families [1]. The bedside teaching also provides more professional thinking, higher learner motivation, and integration of clinical skills, communication skills, problem-solving, and decision-making [2, 3]. When real patients are involved in the clinical practice, teaching medicine often involves difficult ethical dilemmas so it must be precisely detected and properly dealt with. Nevertheless, the literature on medical education continues to be devoid of information about medical ethics, particularly concerning clinical training with actual patients and the ethical dilemmas involved [4, 5].

One of the fundamental elements in clinical training is informed consent, which involves a patient's full awareness of the procedures, as well as their advantages and hazards [6]. The fundamental ethical rule in healthcare now is autonomy, i.e., the right to self-determination [7]. The patients would be more likely to participate in medical students' learning process if patients' rights were respected and staff members were competent [8], however, not all patients completely understand their rights, and appropriate consent is not always sought [9]. A study in Sweden found that 71% of all patients had participation experience with students, and of those 41% said they had been involved without being informed once or more, and 80% of respondents felt aggrieved, if they were not told [10]. Another study in Portugal found that 77% of patients said they had previously interacted with medical students; however, only 59% said they had been asked for permission to participate, and only 28% said the students had introduced themselves sufficiently [11]. A minority of patients oppose or feel unfavorable about having medical students involved in their treatment, which has been observed in several region around the globe [5], however the majority of the

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patients appeared to be open to taking part in the training of medical students [10]. Nevertheless, the majority of the patients rejected to participate whenever an examination of a sensitive part was necessary or a sexual issue was discussed [12].

Previous studies have indicated that patients' willingness to contribute to students' educational experiences constitutes a primary determinant in their acceptance of student involvement in their medical care [7]. Conversely, patients commonly cite apprehensions regarding privacy violations as the predominant rationale for declining such participation. Nevertheless, a substantial majority of patients express receptivity to including medical students in their care, provided they receive comprehensive information and are allowed to grant informed consent beforehand. Gynecology/obstetric patients were the ones who felt that it would be more comfortable without the presence of medical students [11], and older Patients tended to consent to participation more frequently without being informed [10].

In our region there is a lack of data considering our topic. Consequently, this study was conducted to evaluate patients' perspectives on clinical training and informed consent within teaching hospitals in Jazan. It specifically sought to understand the prevalence and quality of informed consent practices during medical student involvement, the levels of patient comfort in general and in sensitive scenarios involving intimate body parts, and how demographic factors such as gender, education, and occupation influenced patient attitudes. These objectives address critical gaps in understanding patient participation in medical education, particularly in culturally sensitive contexts.

This study uniquely explores patients' perspectives on clinical training and informed consent within teaching hospitals in Jazan, a region where such data is scarce. By focusing on cultural sensitivities and demographic influences, this research fills a critical gap in understanding patient attitudes towards medical education in the Middle East.

MATERIAL AND METHODS

Study Design, Setting, and Population

A cross-sectional study was conducted among the general population in Jazan province in the southwest region of Saudi Arabia to assess the patient's perspective on clinical training and informed consent towards medical students. The study targeted all adult males and females aged 18 years or older who lived in Jazan province at the time of the study and who previously met a medical student during hospital admission either in the ward or outpatient departments. Those who refused to participate or didn't complete the survey were excluded from the study.

Instrument and Method of Data Collection

To gather data for this study, a self-administered questionnaire based on the following study [11] was distributed to be filled by targeted populations. The questionnaire takes about 3-4 minutes to be completed, and it divides into 2 sections. Each section contains a specific question that aims to evaluate a specific item that fits inside a specific research goal (Tables **1** to **6**). The data collection period was from September 2022 to March 2023.

The first section contains questions regarding the patient's demographic information such as age, gender, nationality, residency, occupation, monthly income, and educational level. Followed by a question to assess if the patient was in medical care with the existence of student/s.

Second section: if the patient was with the existence of student/s was asked some questions in this regard with "yes" or "no" answers; did your doctor ask for your permission for the student(s) to be present? Did your doctor introduce the students by name and year of medical education? Did you feel uncomfortable with the situation? If yes, how much so? Did the medical student(s) that took part in your medical care introduce themselves as medical students and ask for your consent before they did the medical exam? Did the student(s) explain the procedures that they wanted to perform and answered your questions if you had them? When there are medical students present during your medical care do you feel that you get more information/explanations about your illness/condition? Was there any occasion in which the student(s) present were disrespectful towards you? Do you feel pleased by having contributed to the student's medical education? In case your condition was gynaecological, urological, or any other related to an intimate part of your body, would you feel more bothered by the presence of one or more medical students in your appointment? If yes, would you feel comfortable expressing your discomfort? Are you afraid of revealing an intimate problem during an appointment in the presence of one or more students? If you could choose not to have students present during your medical appointment, would you feel more comfortable?

Table 1: Instrument and Method of Data Collection

Question	Response Type
Did your doctor ask for your permission for students to be present?	Yes/No
Did your doctor introduce the students by name and year of medical education?	Yes/No
Did you feel uncomfortable with the presence of medical students?	Yes/No
How uncomfortable did you feel?	Moderate/A lot

Sample Size and Technique

Jazan has 1.6 million residents who are 18 years of age and older. The suitable sample size for this investigation was determined to be 196 individuals using the equation for cross-sectional study design on http://www.raosoft.com. The study uses a prevalence of p = 50% to calculate the maximum sample size, the 95 percent confidence interval, and an error margin of no more than 7%. Additionally, a research non-response rate of 25% was anticipated. The sample was drawn using a convenience sampling procedure.

The equation used by Raosoft for cross-sectional studies estimates the minimum sample size required based on population size, expected response proportion, and margin of error.

The formula is:

$$n=Z^2\times P\times(1-P)/E2$$

Where n is the sample size, Z represents the Z-score for the desired confidence level (1.96 for 95%), P is the estimated population proportion (50% used for maximum variability), and E is the margin of error (7% in this study). This approach ensures the study results are statistically representative of the population.

Pilot Study

The pilot study was conducted as an initial assessment to determine the feasibility and validity of the research methods used in the main study. It involved a 20 participants and aimed to identify any potential challenges or limitations in data collection, analysis, and participant recruitment. The findings from the pilot study were used to refine the research design, modify research instruments, and address any issues encountered.

Statistical Analysis

Statistical Package for Social Sciences (SPSS) was used to analyse the data. The chi-square test was to compare participants' responses and to compare the participants' level of education. An Independent Sample T-Test was used to analyse the median age of patients who responded positively and negatively to each question. Based on the responses, a database was built, and the threshold for statistical significance was set at a p-value of 0.05.

Ethical Consideration

The ethical approval was obtained by Standing Committee for Scientific Research at Jazan University (Reference No.: REC-44/02/304) on 18 September 2022). The study objectives were fully explained, and their consent was obtained before starting the questionnaire. The questionnaire was maintaining the anonymity of respondents. The autonomy of respondents was preserved, and the participant has the right to stay or withdraw at any time without harm or loss of benefit. All the necessary steps to protect the participant's personal information were taken and the confidentiality of the study participants was maintained.

RESULTS

Table **2** provides an overview of the demographic characteristics of the 200 participants. The average age was 32.52 years, with a standard deviation of 11.9 years. Gender distribution was nearly equal, with 48.7% male and 51.3% female participants. The majority of respondents were Saudi nationals (96.5%) and married (55.3%).

In terms of education, a significant proportion (72.4%) held a bachelor's degree, with 7% having postgraduate qualifications and only 0.9% uneducated. Employment status varied, with the largest group (31.1%) working in the non-health sector, followed by students in health colleges (23.2%). Regarding income, 43% of participants reported earning less than 5,000, while 29.8% earned between 10,000 and 20,000 (Table **2**).

Table **3** focuses on the participants' responses to the presence of medical students during their care.

Table 2: Demographic Characteristics of the Participants (n=200)

Mean	Median	Standard Deviation
Age (years)		
32.52	29	11.9
Variable	**n**	**%**
Sex		
Male	111	48.7
Female	117	51.3
Nationality		
Saudi	220	96.5
Non-Saudi	8	3.5
Marital Status		
Married	126	55.3
Single	91	39.9
Divorced	10	4.4
Widowed	1	0.4
Educational level		
Uneducated	2	.9
High school diploma and below	45	19.7
Bachelor's degree	165	72.4
postgraduate	16	7.0
Occupational		
Unemployed	19	8.3
Business	11	4.8
Housewife	16	7.0
Student in health colleges	53	23.2
Student in a field other than health colleges	22	9.6
Retired	12	5.3
Employee in the health sector	24	10.5
Employee in the unhealthy sector	71	31.1
Monthly income		
Less than 5,000	98	43.0
From 5,000 to 10,000	43	18.9
From 10,000 to 20,000	68	29.8
More than 20,000	19	8.3

Over half (59.6%) of the respondents indicated that their doctor sought permission for students to be present, but fewer (43.9%) mentioned that the students were introduced by name and year of study. Most participants (68.9%) did not feel uncomfortable with the presence of medical students; however, when dealing with intimate conditions, 63.6% expressed being more bothered.

Medical students introduced themselves and sought consent before examinations in 67.1% of cases, and 74.6% of participants reported that students adequately explained procedures and answered questions. Patients appreciated the presence of students, with 94.3% feeling pleased to contribute to their education. Interestingly, while 68.9% believed they received better explanations about their conditions due to the students, only 10.1% reported disrespectful behavior.

Table 3: Descriptive Answers Regarding Questions about the Presence of Medical Students on a Previous Consultation and/or Hospital Admission

Variable	Response	n	%
Did your doctor ask for your permission for the student(s) to be present?	Yes	136	59.6
	No	92	40.4
Did your doctor introduce the students by name and year of medical education?	Yes	100	43.9
	No	128	56.1
Did you feel uncomfortable with the situation?	Yes	71	31.1
	No	157	68.9
If previous question answer yes, how much so?	Moderately	47	66
	A lot	24	34
Did the medical student(s) that took part in your medical care introduce themselves as medical students and ask for your consent before they did the medical exam?	Yes	153	67.1
	No	75	32.9
Did the student(s) explain the procedures that they wanted to perform and answered your questions, if you had them?	Yes	170	74.6
	No	58	25.4
When there are medical students present during your medical care do you feel that you get more information/explanations about your illness/condition?	Yes	157	68.9
	No	71	31.1
Was there any occasion in which the student(s) present were disrespectful towards you?	Yes	23	10.1
	No	205	89.9
Do you feel pleased by having contributed to the students' medical education?	Yes	215	94.3
	No	13	5.7
In case your condition was gynecological, urological or any other related to an intimate part of your body, would you feel more bothered by the presence of one or more medical students in your appointment?	Yes	145	63.6
	No	83	36.4
IF YES to previous question, would you feel comfortable to express your discomfort?	Yes	58	39.9
	No	87	60.1
Are you afraid of revealing an intimate problem during an appointment in the presence of one or more students?	Yes	131	57.5
	No	97	42.5
If you could choose not to have students present during your medical appointment, would you feel more comfortable?	Yes	135	59.2
	No	93	40.8

Table **4** explores how educational level influenced responses to medical students' involvement. Participants with higher education levels (bachelor's and postgraduate degrees) were significantly more likely to feel pleased about contributing to students' education ($p = 0.038$). However, no significant differences were found in other aspects, such as consent for students' presence, introductions, or feelings of discomfort. This indicates that while education level may influence positive attitudes toward teaching contributions, it does not substantially affect perceptions of the interaction process.

Table **5** examines discomfort with medical students in sensitive cases, such as appointments involving intimate body areas, based on demographic characteristics. Female participants were significantly more likely (77.8%) than males (48.6%) to feel uncomfortable in such scenarios ($p < 0.001$). Occupational differences also emerged, with housewives (87.5%) and students in health colleges (77.4%) being the most uncomfortable groups ($p = 0.015$). These findings highlight the importance of gender and occupational context in determining patients' comfort levels during sensitive consultations.

Table **6** investigates whether age influenced responses to questions about medical students' involvement. The analysis revealed no significant differences in the mean age of participants who responded affirmatively or negatively to any of the

Table 4: Number and % of Answers to the Questions Regarding the Presence of Medical Students on a Previous Consultation and/or Hospital Admission According to Patients' Level of Education

		Educational level				
		Uneducated	High school diploma and below	Bachelor's degree	Postgraduate	P-value
Did your doctor ask for your permission for the student(s) to be present?	Yes	2 (1.5)	26 (19.1)	97 (71.3)	11 (8.1)	0.568
	No	0 (0)	19 (20.7)	68 (73.9)	5 (5.4)	
Did your doctor introduce the students by name and year of medical education?	Yes	2 (2)	22(22)	70 (70)	6 (6)	0.331
	No	0 (0)	23 (18)	95 (74.2)	10 (7.8)	
I felt uncomfortable with the students' presence	Yes	1 (1.4)	11 (15.5)	53 (74.6)	7 (8.5)	0.648
	No	1 (0.6)	34 (21.7)	112 (71.3)	10 (6.4)	
If previous question answer yes, how much so?	Moderately	0 (0)	7 (15.2)	34 (73.9)	5 (10.9	0.429
	A lot	1 (4.2)	4 (16.7)	18 (75)	1 (4.2)	
Did the medical student(s) that took part in your medical care introduce themselves as medical students and ask for your consent before they did the medical exam?	Yes	2 (1.3)	30 (19.6)	109 (71.2)	12 (7.8)	0.678
	No	0 (0)	15(20)	56 (74.7)	4 (5.3)	
Did the student(s) explain the procedures that they wanted to perform and answered your questions, if you had them?	Yes	2 (1.2)	33 (19.4)	121 (71.2)	14 (8.2)	0.520
	No	0 (0)	12 (20.7)	44 (75.9)	2 (3.4)	
When there are medical students present during your medical care do you feel that you get more information/explanations about your illness/condition?	Yes	2 (1.3)	31 (19.7)	111 (70.7)	13 (8.3)	0.523
	No	0 (0)	14 (19.7)	54 (76.1)	3 (4.2)	
Was there any occasion in which the student(s) present were disrespectful towards you?	Yes	0 (0)	2 (8.7)	19 (82.6)	2 (12.5)	0.517
	No	2 (1)	43 (21)	146 (71.2)	14 (6.8)	
Do you feel pleased by having contributed to the students' medical education?	Yes	1 (0.5)	43 (20)	155 (72.1)	16 (7.4)	0.038*
	No	1 (7.7)	2 (15.4)	10 (76.9)	0 (0)	
In case your condition was gynecological, urological or any other related to an intimate part of your body, would you feel more bothered by the presence of one or more medical students in your appointment?	Yes	2 (1.4)	24 (16.6)	106 (73.1)	13 (9)	0.146
	No	0 (0)	21 (25.3)	59 (71.1)	3 (3.6)	
IF YES to previous question, would you feel comfortable to express your discomfort?	Yes	1 (1.8)	6 (10.5)	44 (77.2)	6 (410.5)	0.428
	No	1 (1.2)	18 (20.9)	60 (69.8	7 (8.1)	
Are you afraid of revealing an intimate problem during an appointment in the presence of one or more students?	Yes	1 (0.8)	24 (18.3)	97 (74)	9 (6.9)	0.922
	No	1 (1)	21 (21.6)	68 (70.1)	7 (7.2)	
If you could choose not to have students present during your medical appointment, would you feel more comfortable?	Yes	1 (0.7)	29 (21.5)	95 (70.4)	10 (7.4)	0.841
	No	1 (1.1)	16 (17.2)	70 (75.3)	6 (6.5)	

questions. This suggests that age was not a determining factor in patients' perceptions of or reactions to medical students during consultations or hospital admissions.

DISCUSSION

Informed consent is the process by which a healthcare professional informs a patient about the risks, benefits, and alternatives to a certain operation or intervention. The patient must be able to make a voluntary decision about whether to undertake the operation or intervention [8].

The principle of self-determination recognizes patient autonomy and independence to make own decisions without coercion, providing educational programs to patients is mandatory to fill knowledge

Table 5: Shows the Association between Sensitive Specialties (Dealing with Intimate Areas) with Socio-Demographic Characteristics

In case your condition was gynecological, urological or any other related to an intimate part of your body, would you feel more bothered by the presence of one or more medical students in your appointment?				
p-value**	**No**	**Yes**	**Factor**	
0.154	34; 12.6	31; 11.5	(Mean; SD)	Age group
<0.001*	57 (51.4)	54 (48.6)	Male	Gender
	26 (22.2)	91 (77.8)	Female	
0.495	81 (36.8)	139 (63.2)	Saudi	Nationality
	2 (25)	6 (75)	Non-Saudi	
0.238	50 (39.7)	76 (60.3)	Married	Marital status
	32 (35.2)	59 (64.8)	Single	
	1 (10)	9 (90.0)	Divorced	
	0 (0)	1 (100)	Widowed	
0.146	0 (0)	2 (100)	Uneducated	Educational level
	21 (46.7)	24 (53.3)	High school diploma and below	
	59 (35.8)	106 (64.2)	Bachelor's degree	
	3 (18.8)	13 (81.3)	Postgraduate	
0.015*	9 (47.4)	10 (52.6)	Unemployed	Occupational
	4 (36.4)	7 (63.6)	Business	
	2 (12.5)	14 (87.5)	Housewife	
	12 (22.6)	41 (77.4)	Student in health colleges	
	6 (27.3)	16 (72.7)	Student in a field other than health colleges	
	6 (50)	6 (50.0)	Retired	
	8 (33.3)	16 (66.7)	Employee in the health sector	
	36 (50.7)	35 (49.3)	Employee in the unhealthy sector	

**represents a significant value in the one-way ANOVA test and chi-square test (considered when 0.05 or less).

Table 6: Mean (Standard Deviation) of the Age of the Inquired Patients who Answered Affirmatively or Negatively to the Questions about the Presence of Medical Students on a Previous Consultation and /or Hospital Admission

	Yes Mean (SD)	**No Mean (SD)**	**P-value**
Did your doctor ask for your permission for the student(s) to be present?	31.81 (12)	33.5 (11.8)	0.273
Did your doctor introduce the students by name and year of medical education?	31.7 (12)	33.1 (11.9)	0.347
I felt uncomfortable with the students' presence?	32.5 (10.6)	32.5 (12.5)	0.981
Did the medical student(s) that took part in your medical care introduce themselves as medical students and ask for your consent before they did the medical exam?	32 (12.3)	33.5 (11)	0.403
Did the student(s) explain the procedures that they wanted to perform and answered your questions, if you had them?	32 (12)	35(11.3)	0.072
When there are medical students present during your medical care do you feel that you get more information/explanations about your illness/condition?	32 (11.8)	34 (12)	0.209
Was there any occasion in which the student(s) present were disrespectful towards you?	28 (10)	33 (12)	0.093
Do you feel pleased by having contributed to the students' medical education?	32 (12)	33.6 (10)	0.734
In case your condition was gynecological, urological or any other related to an intimate part of your body, would you feel more bothered by the presence of one or more medical students in your appointment?	32 (11.5)	34 (12)	0.154
IF YES to previous question, would you feel comfortable to express your discomfort?	30.6 (11.3)	32.6 (11.5)	0.302
Are you afraid of revealing an intimate problem during an appointment in the presence of one or more students?	31.40 (11.8)	34 (12)	0.100
If you could choose not to have students present during your medical appointment, would you feel more comfortable?	32 (11.5)	33 (12.2)	0.388

gaps and improve the quality of the informed consent process [5].

Informed consent is aimed to protect patients from unwanted medical intervention, safe guard patients' rights to autonomy and self- determination.

To the best of our knowledge, there is a paucity of studies in literature evaluating patients' perspectives on clinical training and informed consent within teaching hospitals, and that represents a strength point of our study.

Informed consent is a must, and it helps patients to understand their role in medical education and be more accepting and comfortable with the presence of medical students. The results of our study revealed significant insights into patient perceptions of clinical training and informed consent in teaching hospitals in Jazan.

The sociodemographic characteristics show a balanced sample in terms of gender, with 51.3% female and 48.7% male participants, and an average age of 32.52 years. Most respondents (72.4%) had at least a bachelor's degree, highlighting a relatively educated sample. Occupational distribution varied, with the majority working outside the healthcare sector (31.1%) or being students in health colleges (23.2%). This diverse representation ensures the findings reflect a broad range of patient experiences and perspectives.

Compared article in Teshome and colleagues the finding was 40% of the mean age of studied cases was 28.2 SD ± (7.9) with range (25-29), Nearly a quarter (22.6%) had no formal education, while 20.9% have attended only primary school. Nearly all (92.2%) of the women involved in this study were married and more than half (53%) were housewives [13].

Informed consent practices were a focal point, with only 59.6% of patients reporting that doctors sought permission for medical students' presence during consultations, and an even smaller percentage (43.9%) stating that students were introduced by name and year of study. Despite this, 67.1% of patients acknowledged that medical students introduced themselves and sought consent before conducting examinations, showcasing a discrepancy between doctor- and student-led consent practices. Patients also noted that students often provided detailed explanations of procedures (74.6%), which enhanced their understanding of their conditions.

A study conducted at a central University Hospital in Porto, Portugal in 2022, showed that the departments with fewer rates of doctors who ask for consent for the presence of medical students were the same departments that had higher rates of patients feeling uncomfortable in the presence of medical students [12]. Lynöe *et al.* and Ruth Tapp discussed that receiving the appropriate information and the opportunity to deny students' participation plays an essential role in patient's comfort levels and willingness to accept their presence [10, 14].

Discomfort emerged as a significant theme, particularly in scenarios involving intimate body parts. While only 31.1% of participants reported feeling uncomfortable in general, this figure rose to 63.6% in cases involving intimate examinations, with women (77.8%) significantly more likely to express discomfort than men (48.6%). Among those uncomfortable, only 39.9% felt comfortable voicing their concerns, and 57.5% expressed fear of discussing intimate issues in the presence of students. This underscores the need for sensitive handling of such scenarios and the importance of patient autonomy.

A particularly positive finding was the overwhelming satisfaction patients expressed in contributing to medical education, with 94.3% indicating they were pleased to help students learn. This highlights a general willingness to support clinical training despite the challenges outlined.

Unfortunately, patients' informed consent was not a priority for a large number of doctors in clinical teaching. Our study found that more than one-third of doctors didn't ask for the patients' permission for students to be present, and more than that didn't introduce the students by name and year of medical education. These results were similar to previous studies conducted in Portugal, Sweden, and the United Kingdom, in which a large number of patients were not informed nor asked for consent for the presence of medical students during the consultation [10, 13-15]. Such bedside manners in bedside teaching could be attributed to the lack of training for formal clinical skills as reported in previous studies [16, 17].

On the other hand, medical students were found to be more inclined to introduce themselves and take consent before performing medical examination. Patients also reported receiving more explanations about the examinations that are going to be performed as well as about their illnesses and conditions.

Practicing such bedside skills has reflected positively on the patient's experience.

Several studies have shown that patients were accepting of the presence of medical students in their consultations [18-22]. This could be attributed to the fact that patients were receiving more information and more explanations about their conditions during their visits as well as more time was spent with those patients. Others were just pleased to be contributing to medical education and believed that medical students could improve the quality of healthcare [13, 18-23].

Our study has found that patients would be more comfortable if they could choose to not have medical students during their appointment. Another study found that almost half of the patients didn't know they have the right to refuse medical students [23, 24]. This highlights the importance of informed consent and its strong association with comfort level [10, 13, 15].

Informed consent should always be sought and taken from patients; implied or presumed consent isn't enough for the patients and doesn't preserve their right. More information and explanation of the purpose and the benefits of the presence of medical students should be provided for patients. As this will help in raising more awareness and acceptance of medical students' involvement as well as providing more opportunities for students to learn and practice.

When a condition is related to an intimate part of the body, most patients stated that they would be bothered by the presence of the student during their appointment, and they would be afraid to reveal or discuss the condition. This was more prominent among females. This could be also noticed in Maternity and Obstetrics/Gynecology departments due to the nature sensitivity of these specialties. Studies conducted in Syria, Saudi Arabia, United Arab Emiratis, and the United States reported that females from Obstetrics/Gynecology departments preferred medical students of the same gender [23, 25-28].

Generally, patient characteristics such as age, education, race, and socioeconomic status have been found to be unrelated to patients's willingness to consent to medical students' involvement in their visits. Religious background and parity have been identified as mediating factors in students' involvement in obstetrical care [18, 21]. Mavis *et al*. found that patients in Obstetrics/Gynecology departments were more likely to agree to medical students' involvement if the physician requested from the patients [27]. This could be explained by the nature of physician–patient relationship and the trust patients have in their doctors. This highlights the essential role of clinical teachers in Bedside encounters of medical students and emphasis the importance of communicating with the patients professionally.

CLINICAL IMPLICATIONS OF THE STUDY

This study adds to the existing body of knowledge on medical education by examining patient perceptions of clinical training and informed consent in a region where such data is scarce. It highlights the ethical challenges and communication gaps in bedside teaching, reinforcing the importance of patient autonomy and informed consent in medical education. By providing empirical evidence on gender and cultural sensitivities, it advances the understanding of how demographic factors influence patient comfort and acceptance, thereby enriching the theoretical framework surrounding medical ethics and education.

Practically, this research provides actionable insights for teaching hospitals to improve clinical training protocols. The findings emphasize the need for structured informed consent practices and enhanced communication between medical professionals and patients. Recommendations include mandatory training for clinical tutors and medical students in patient-centered communication and consent-seeking skills. The study also informs policy adjustments, particularly in sensitive specialties like gynecology, where gender-specific discomfort is pronounced, guiding targeted interventions to increase patient comfort and cooperation.

STRENGTHS OF THE STUDY

This study has several strengths that contribute to its significance and reliability. First, it explores an important ethical aspect of clinical training—patients' perspectives on the presence of medical students. The study includes a well-defined questionnaire that assesses a broad range of factors, including patients' comfort levels, experiences of informed consent, and reactions to medical students' participation in care. Additionally, the study highlights specific demographic variables, such as gender, education, and occupation, which provides a nuanced understanding of how these factors influence patients' acceptability of medical students. Another strength is the large sample size of 200 participants, which ensures robust statistical analysis and meaningful insights.

LIMITATIONS OF THE STUDY

It is essential to acknowledge certain limitations inherent in our study. Firstly, our reliance on an online questionnaire raises the potential for information bias, which impacting data accuracy. Secondly, the study's sample size, may limit the generalizability of our findings to a broader population. Additionally, the possibility of recall bias must be considered, as respondents' recollection of past experiences can introduce measurement error. Furthermore, the distribution of our survey was contingent upon the authors' personal network, which may introduce an element of selection bias, potentially impacting the representativeness of our sample. To address these limitations and enhance the robustness of future research, we recommend conducting a nationwide survey with a more extensive and diverse participant pool. Adopting this approach would enhance the generalizability of our findings to a broader population and reduce the likelihood of biases that could be associated with the way our study was conducted.

CONCLUSION

This study highlights the importance of patient perceptions in clinical training and informed consent, addressing gaps in how ethical and communicative practices impact patient comfort. It provides valuable insights into optimizing bedside teaching while respecting patient autonomy.

Patients generally welcomed involvement in medical education (94.3% satisfaction), though discomfort was prevalent in intimate scenarios (63.6%, especially among women at 77.8%). Gaps in informed consent were evident, with only 59.6% of doctors seeking permission and 43.9% introducing students.

These findings are applicable to improving clinical training protocols in teaching hospitals, enhancing informed consent practices, and addressing patient discomfort in sensitive specialties like gynecology and urology.

Future studies should examine the impact of improved consent practices and explore interventions to address patient discomfort, especially in sensitive scenarios. Broader studies could also uncover regional and cultural variations in patient attitudes.

AUTHOR CONTRIBUTIONS

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

CONFLICTS OF INTEREST

The authors have no conflicts of interest to declare.

CONFIDENTIALITY OF DATA

The authors declare that they have followed the protocols of their work center on the publication of data from patients.

PROTECTION OF HUMAN AND ANIMAL SUBJECTS

The authors declare that the procedures followed were in accordance with the regulations of the relevant clinical research ethics committee and with those of the Code of Ethics of the World Medical Association (Declaration of Helsinki).

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FINANCIAL RELATIONSHIPS

All authors have declared that they have no financial relationships at present or within the previous three years with any organizations that might have an interest in the submitted work.

OTHER RELATIONSHIPS

All authors have declared that there are no other relationships or activities that could appear to have influenced the submitted work

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