



Exploring Parental Acceptance of Medical Student Participation in Pediatric Healthcare: A Pilot Study

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Abstract

Background Healthcare is greatly influenced by how patients view and interact with medical students. With the incorporation of technology developments and therapeutic discoveries, current medical education techniques define the future of global healthcare. Although technology improves education, interaction with patients is still essential for fostering clinical judgment and empathy. According to studies, medical students are more responsible and well-prepared when dealing with actual patients, which boosts their self-assurance and multitasking skills. The general positive response from patients to medical student participation emphasizes the significance of comprehending patients' perspectives in order to provide effective undergraduate medical education.

Methods This study utilized a descriptive, questionnaire-based, observational methodology, conducted at a Hospital in Sharjah, UAE, between June 2022 and October 2022. The Pediatric department was chosen as the target population due to the sensitivity dilemma involved in children's healthcare especially when handled by medical students. The study employed a self-administered questionnaire with five closed-ended questions, distributed online to participating parents after obtaining verbal consent. The questionnaire responses were anonymized using the patient's medical identifier number to ensure confidentiality and minimize bias.

Results In the study, the majority of 182 (97.3%) interviewed patients' legal guardians were comfortable with medical students retrieving their children's medical history. Additionally, 153 (81.8%) had no objections to physical examinations conducted by students. However, 175 (93.6%) parents preferred examinations to be supervised by a senior doctor. Only 85 (45.5%) parents were willing to allow procedures like IV cannulation and injections by medical students under nurse supervision. 141 (75.4%) participants accepted educational sessions with medical students using patient files and laboratory results for training purposes.

Conclusion

Based on existing literature and student participation in Pediatric care, this study found positive patient attitudes towards medical student involvement. Patients were more accepting of oral communication and educational sessions, but stricter regarding physical interactions that could cause distress. This perception may limit hands-on clinical experience and learning opportunities. Teaching hospitals should focus on improving patient attitudes towards student involvement in patient care to ensure adequate training for future medical practitioners.

Introduction

The education methodology of today's medical students is what is shaping the core principles of tomorrow's global healthcare system. Generation through generation, values and skills are carried though, each time with new technological advancements, new curative outbreaks and new hope for disabling illnesses. There is no doubt nor exaggeration to mention that medical education is the foundation of the future of medicine. Things have differed from a decade ago, where the quality and delivery method of information has become advanced, thanks to technology. In Singapore (1) and vast other countries with top medical schools, collaborative learning, virtual 3D models, robotic surgery and genomic medicine are all being engraved early in the education journey. (1) However, regardless of various technological advancements being implemented through medical education, it cannot replace history taking and physical examinations carried out through patient exposure. That sort of clinical experience cannot be replaced by computers or technology. Even though simulation sessions offer numerous benefits and are opportunities to practice a similar encounter outside of the intimidating hospital setting. However, real patient encounters are still considered an important component of the early stages of undergraduate medical education. (2)

A study carried out in Maastricht University in Netherlands on fourth and fifth year clinical medical students showed that students prepared themselves better for real patient encounters than for SP encounters. They were more serious in their preparation for real patient interactions and felt more

responsible towards real patients. It also added to their confidence as a medical practitioner and ability to multitask and function under pressure, all while taking the patients socioeconomic well-being into consideration. (3)

Little is known about patients' experiences when it comes to interacting with medical students in the hospital. However, with increased awareness of patients' rights and informed consent, patients can now choose whether to have medical students present during their consultations (4). Most studies indicate that patients are, in general, positive about student participation (5). The study by Cooke and colleagues (6) showed that only 3% of patients had a negative view about the presence of a student. Another one conducted in London and Newcastle general practices and involving 335 analyzed questionnaires, showed that patients were, overall, very favorable towards the presence of medical students (7).

The previous studies all tackled adult patients. Many students in the UK were concerned that children healthcare is more challenging in communication and examination. According to a study there (8) medical students found that they lack confidence in their ability to win over a shy or unwilling child/parent. Others fear causing pain or distress. This all lead to the conclusion that at worst, they may graduate without really developing a confident approach to children which poses a threat to future healthcare practices.

Little or no studies have been carried out regarding this concept in the UAE. Therefore, we wanted to explore how patients would feel if medical students communicated with and examined their kids. The motivation for patient participation in medical student teaching is largely unexplored in the UAE, where it has not been established whether parents of inpatient or outpatient kids feel comfortable or at ease to allow their children to be a subject of education to students. It was vital to determine whether caregivers would be willing to give consent to practice various bedside teaching activities on their sick and vulnerable kids. Therefore, we concluded that more data was needed to understand patients' experiences with participating in undergraduate medical education in the hospital. In this study we hypothesized that most parents would be interested in allowing their kids to participate in medical student teaching and that this experience would overall be positive. Therefore, the aims of this study were to understand the experiences and attitudes of inpatient kids' caregivers and their willingness to participate in medical student education across hospitals in the UAE.

Materials & Methods

Research design

This descriptive, questionnaire-based, observational cross-sectional study was conducted between June 2022 and October 2022 at a tertiary care teaching hospital located in the emirate of Sharjah, United Arab Emirates. In this study, face-to-face interviews were conducted with legal guardians of patients from the pediatric department in order to obtain information and willingness on how comfortable parents feel toward speaking to medical students. We chose the pediatric department as children pose a sensitive dilemma when it comes to healthcare; especially when handled by medical students. The type of study chosen has permitted the coherence and generalization of the findings amongst other hospitals of the UAE.

Sampling

Our target population included the legal guardians of pediatric patients in the hospital, Sharjah. Our inclusion criteria included the parent of any child presenting to the pediatric outpatient department or the inpatient wards, who were English or Arabic speakers, for communication ease. Patients with special needs or impaired judgements were excluded from the study. Adult patients above the age of 18 from departments other than pediatrics were also excluded from the study. The sample size was calculated by using Epi Info™, which resulted in a sample size of 187 with a confidence interval of 95% and a margin of error of 5%.

Data collection methods

A self-administered questionnaire with 5 closed ended questions were used to collect responses regarding the topic. Questionnaires were distributed via an online link to those legal guardians of patients who agreed to participate. Consent was obtained from the participating party prior to answering any questions. Questions were developed by the authors based on their experiences in the workplace as well as other learning resources related to the matter and approved by (et al).

The entire process took the participants less than 2 minutes. Questionnaire responses were distinguished from one another using the patient's medical identifier number to ensure confidentiality and reduce bias.

Questionnaire content

The questionnaire comprised of only 1 section, containing the 5 short yes or no questions related to medical student practices. The questions targeted the parents' willingness to allow medical students to practice history taking skills, examinations and minor procedures on their children. The participants' attitudes and willingness were obtained from the answers selected. The question content included examples of possible scenarios being carried out within the outpatient clinic of student-patient interactions. Two questions targeted direct consent for history taking and physical examinations. One question included consent for cannula insertion as the procedure of choice. The last question included consent for teaching sessions.

Results

Characteristics of the participants

A total of 205 parents were approached, of whom 187 agreed to participate, making the response rate at 91.2%. Parents were randomly selected based on implied and verbal consent to those presenting in the Pediatrics department seeking hospital care for their children. Random age groups of pediatric patients were included up to the age of 16 years. No specific criteria was applied on the type of illness possessed by the patient.

Parents attitudes towards medical students

Out of the 187 interviewed patients, 182 (97.3%) mentioned they wouldn't mind medical students retrieving medical history from their children. As for physical examinations, 153 (81.8%) of the patients' legal guardians would not mind that being done on their children. However, 175 (93.6%) of

the parents would prefer for the examination to be carried out in front of a senior doctor present. When asked about procedures like IV cannulation and intramuscular injection being carried out by medical students on their children under nurse supervision, only 85 (45.5%) of parents are willing to allow that to occur. As for educational sessions given to the medical students by the senior doctor with the pediatric patients being of subject, 141 (75.4%) of participants are willing to accept that. This involves obtaining patient files and laboratory results for training purposes. Questionnaire content and results are available in (table 1)

<i>Questions</i>	<i>Answers</i>	
	<i>Y</i>	<i>N</i>
<i>Do you mind answering medical students' questions regarding your child's health?</i>	5 (2.7%)	182 (97.3%)
<i>Do you mind if your child is examined by a medical student in front of you?</i>	34 (18.2%)	153 (81.8%)
<i>Do you mind if your child is examined by medical student in front of a doctor?</i>	12 (6.4%)	175 (93.6%)
<i>Do you mind if a medical student inserts a canula or gives an injection to your child under nurse supervision?</i>	102 (54.5%)	85 (45.5%)
<i>Do you accept if your doctor asked to provide a teaching session for medical students on your child?</i>	141 (75.4%)	46 (24.6%)

Table 1 Patients' attitude towards the involvement of medical students in their care

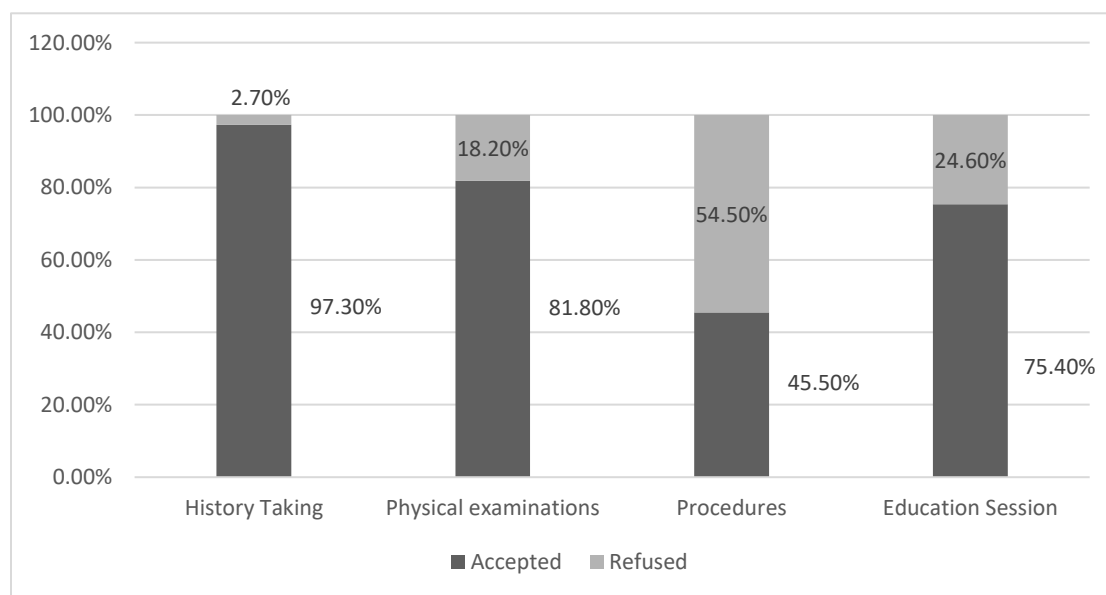


Chart 1 Patients' acceptance rates to different medical skills by students

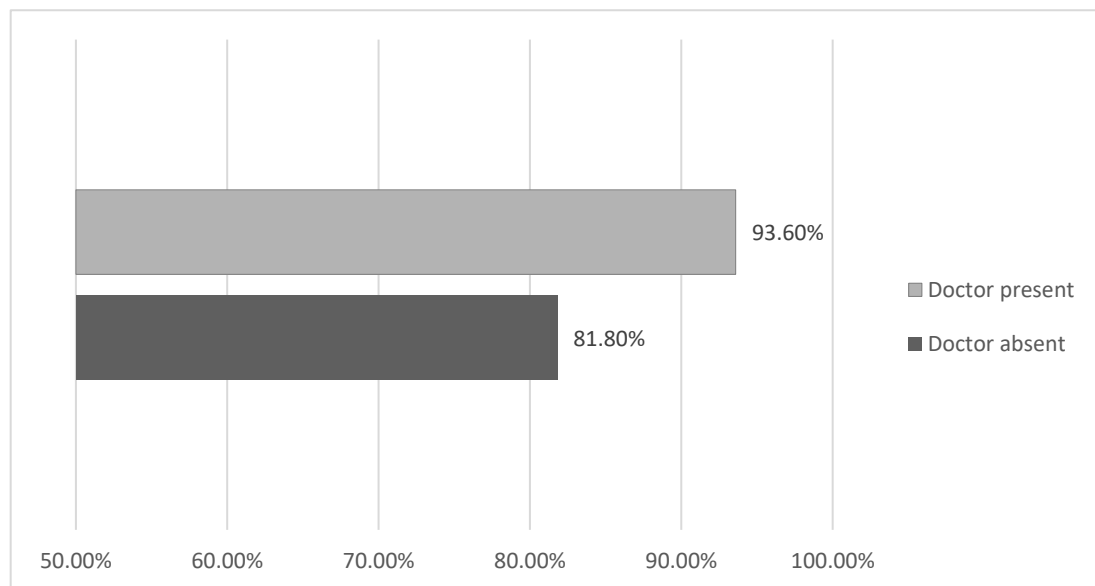


Chart 2 Patients' acceptance rates to medical students performing physical examination

Discussion

Real time Patients are essential for optimal clinical training in medicine. It helps students acquire clinical skills, communication methods and gain experience. Patients' willingness and acceptances is key in medical students training; therefore, this study was designed to gain insight on their perceptions and attitude with regard to this acceptance. In general, the results showed an overall positive attitude of patients' legal guardians towards medical student participation in their care. This phenomenon agreed with previous studies conducted in other Arab countries (10,11,12,16) and worldwide (9,13,17,18). The reasons attributed to this positive reinforcement between patients and medical students is the encouraging energy and attention coming from the senior doctors. In addition, the advanced knowledge and communication from medical students towards patients may have increased the comfort and acceptance levels.

Across the globe, numerous hospitals have established high student acceptance rates, when it came to patient interactions, influenced by a variety of factors. In Saudi Arabia (10), a similar study was conducted where 88% of the participants expressed no objection to the involvement of medical students in their healthcare. Among this group, an overwhelming 98% were open to being asked about their

medical history by students, while 89% were willing to permit physical examinations conducted by these students. These results were quite close to those obtained from our study where 97.1% of our participants accepted medical history and 81.8 permitted physical examinations as per (Table 1). Additionally, 39% of patients expressed a preference for the gender of the medical student to align with their own.

In another setting, also in Saudi Arabia (11), most patients considered the general appearance and manner of the students important in determining their willingness to involve them. Regarding communication, a significant majority expressed a preference for being informed beforehand about the involvement of students in their healthcare.

Similar studies were conducted in other regions of the Arab World, considering the specific social and cultural aspects. Despite these unique factors, a noteworthy finding emerged, revealing a widespread acceptance by patients towards the involvement of medical students in their care. In Syria (12), the patients' reluctance towards examination by the students was primarily influenced by the importance they placed on privacy. Conversely, the presence of a supervisor, which ensured relative safety and comfort, played a crucial role in determining the patients' agreement. This point was in agreement to this current study where a higher proportion of participants were more willing to agree to accept medical students in the presence of a supervising attending. (Table 1)

According to a study in Northern London (13), these high acceptance rates were attributed to multiple possibilities. It was suggested that when doctors discuss cases with students, it enhances patients' understanding about their own health conditions, leading to a higher acceptance of students. (14) Patients in London expressed a strong sense of enthusiasm towards engaging in the community-oriented teaching program. This sentiment was influenced by two main factors: altruistic motives and personal benefits. Altruism was driven by the desire to contribute to the community and reciprocate the support received from the healthcare system. On the other hand, personal gain encompassed enhanced knowledge, increased self-esteem, and the opportunity for companionship.

When considering the acceptance of medical students to practice on them, parents are faced with a multitude of supporting factors alongside limitations to weigh and navigate. In central London, patients encountered two primary concerns.

Firstly, patients may feel uneasy about not knowing the students on a personal level, especially considering they have been accustomed to interacting with experienced senior doctors for a significant period of time. This lack of personalization can create a sense of discomfort and uncertainty. Secondly, patients may find themselves in situations where the student's involvement is limited to passive listening rather than engaging in interactive discussions. This lack of interaction can lead to feelings of being unheard or not fully understood by the student. Consequently, these factors contribute to patients' hesitation or refusal to permit medical students to practice on them (9).

As for the significant number of participants in our study refusing for procedures to be carried out on their children, this can be further supported by the conclusion drawn from a study carried out in Kuwait (16) about a similar concept. The rate of refusal for medical students to perform diagnostic procedures on patients was found to be significantly high in the study, exceeding half of the participants, when patients were specifically asked if they would allow students to conduct such procedures themselves. This notable increase in refusal may stem from the perception that the students lack sufficient training to perform the procedures safely, thereby potentially posing a risk to the patients' well-being. Further supportive arguments were also found in Chipp et al. (17) and Passaperuma et al. (18).

Additionally, it was discovered that patients in the field of pediatrics, along with their parents, displayed greater levels of acceptance in comparison to patients in other medical specialties. This phenomenon was greatly evident and supported by our study with its overall high acceptance rates and support towards medical students in the pediatrics department. This could be attributed to the fact that children are less prone to feeling embarrassed when being exposed in the presence of others. (16) Furthermore, a significant portion of pediatric patients are generally of a very young age, which may contribute to their limited understanding of their surroundings, thereby enabling parents to be more cooperative with medical students.

Limitations

As this study was conducted in a single public teaching hospital, where patients are used to dealing with students daily, the results may not be generalized to the rest of the UAE population, especially in relation to private sectors.

A comparison with other non-teaching hospitals across more emirates of the UAE may perceive more accurate results, nonetheless. In order to gain more perspective on patients' thoughts and perceptions, a qualitative study may be carried out in the future for better research opportunities.

Conclusions

This study was built on existing literature as well as student participation within patient care settings in the pediatric community. Overall, the patients showed a positive attitude towards the involvement of medical students in their practice. Patients' attitudes were mainly revolved around the type of medical involvement and the presence of a senior consultant. Patients were more lenient with oral communication regarding their health, as well as educational sessions retrieving sensitive medical information. However, parents were more stringent towards physical interactions especially ones that may cause distress to their children if carried by those with limited experience, like specific outpatient procedures as well as physical examinations. This perception may result in reduced hands-on clinical experience and learning opportunities within healthcare. Furthermore, less training hours and limited knowledge for our future generation of medical practitioners. In conclusion, teaching hospitals should work on improving patients' attitudes towards the nature and significance of student involvement in patient care using multiple ways regardless.

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