



INTERNATIONAL JOURNAL OF CLINICAL SKILLS



A Peer Reviewed International Journal for the Advancement of Clinical Skills
- 'docendo ac discendo' - 'by teaching and learning'



In this issue:

Does first aid have a place in the medical curriculum? A survey of medical students

Patients' attitudes to medical student presence within a university hospital setting

Flexor digitorum superficialis absence in the small finger: a tip on screening

Foreword

Welcome to the latest edition of the **International Journal of Clinical Skills (IJOCS)**, Volume 7, Issue 1, January 2013.

When a medical emergency occurs in the pre-hospital environment, there might be an expectation from the general public for medical students to offer assistance with a similar level of competence as qualified doctors. However, the question is raised; do medical students have sufficient training in first aid skills to fulfil the role expected of them? Our colleagues at Queens University Belfast and Ulster Hospital, Northern Ireland, questioned over 500 medical students to identify knowledge of, and attitudes towards, first aid.

Researchers from Oxford University and Brighton & Sussex Medical School, United Kingdom, conduct a research study to identify patients' attitudes towards the presence of medical students within both inpatient and outpatient hospital settings. Does the involvement of medical students have a negative impact on patient satisfaction? Are patients comfortable being examined by medical students? Are patients aware of their right to refuse students' presence? Find out what the evidence shows.

Mr Lyndon Mason, University Hospital of Wales, United Kingdom, provides information on a screening tip for assessing the absence of flexor digitorum superficialis. This interesting technique illustrates the quadriga effect.

This issue also includes a review of Muhammed Akunjee et al's book 'Clinical Skills Explained'. This book aims to explain essential clinical skills and associated rationale, structured into the three main themes of history taking, physical examination and procedures. Tracey Gregory (Lead Consultation Skills Trainer, University of Leicester, United Kingdom) gives her expert analysis of what the book provides for its readers.

As always, your feedback is invaluable for the continued development of the International Journal of Clinical Skills – the only peer reviewed international journal devoted to clinical skills (e-mail: feedback@ijocs.org).

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Patients' attitudes to medical student presence within a university hospital setting

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Abstract

Aim: To identify patients' attitudes towards presence of medical students within both inpatient and outpatient settings of a UK university teaching hospital.

Methods: A cohort of 85 patients from surgical inpatient and outpatient settings completed an anonymous questionnaire exploring their attitudes to medical student presence. Significance of patient demographics and specific dimensions of care were analysed.

Results: Overall, patients were comfortable with the presence of medical students on the wards and in outpatient consultations. This held true when adjusted for hospital setting, age, gender and hospital stay. Qualitative data suggests patients support the teaching of medical students. However, this was conditional on receiving more information on their role (23%), the presence of supervising staff (59%) and assessment of the patient by a doctor beforehand (12%). 28% of patients were not comfortable being examined by unsupervised medical students and 16% were unaware of their right to refuse students' presence. The mean number of students that patients were happy to attend at any one time was four. 17% of patients reported permission was not sought for medical student presence and 8% reported students did not introduce themselves.

Conclusion: The involvement of medical students has no negative effect on patient satisfaction. Patients generally support teaching of medical students, especially when concerns regarding consent and supervision are addressed.

Introduction

In order to fulfill the extensive biomedical and psychosocial competencies required to become a doctor [1], medical students require substantial patient contact [2]. Medical education policies from the United Kingdom General Medical Council (GMC) [1] and the Association of American Medical Colleges (AAMC) [3] recommend patient contact commences early in medical training. This allows development of skills that simply cannot be acquired from a textbook: communication skills, professionalism, empathy and clinical reasoning [2]. The impact of medical students has been studied within primary care [4 – 8] and within specific secondary care situations, such as sexual health [9] or genitourinary medicine clinics [10]. However, the impact of medical student presence within a university hospital setting has not been widely evaluated. The GMC's *Tomorrow's Doctors* document [1] states that medical schools are “responsible for protecting patients and taking appropriate steps to minimise any risk of harm to anyone as a result of the training of their medical students”. As harm can be both physical and psychological, it is important to consider the psychosocial impact of medical student presence within hospital settings and the effect this has upon patient satisfaction and wellbeing.

Previous studies have shown the quality of consultations is not adversely affected by medical student presence [7], moreover, a significant percentage of patients consider the presence of a student to be advantageous [8, 11, 12] and the majority are favourable towards medical student presence [6, 7, 8, 13, 14, 15]. Many patients report satisfaction helping future doctors as an expression of thanks for the help they have received from their current doctors [2]. However, concerns regarding the influence of medical student presence on patient satisfaction have been raised [2], particularly concerning consent and confidentiality [12, 16]. Patients expect sufficient information in order to give informed consent for the presence of students within a consultation [6], however, even having given consent a significant proportion of patients feel uncomfortable with the student present [7]. Factors influencing patient support of student presence include age [14], ethnicity [14], previous experience with students [8, 14] and the nature of the presenting complaint [12]. Early research indicated a patient preference for male students [13], however, later research suggest that student gender is not important to patients [8, 11].

As mentioned, few studies [15, 17] have been conducted in general secondary care contexts so this study focused on surgical wards (inpatient setting) and clinics (outpatient setting) within a university teaching hospital in order to achieve a cohort with a broad cross-section of patient demographics. This study attempts to obtain patients' opinions about the presence of medical students within different situations and how this impacts upon their well-being and satisfaction with their care. As patients' needs should be placed "at the centre of the care process" [1], a negative impact of medical students upon patient satisfaction would raise challenges in creating a balance between maximising patient care whilst ensuring the education of tomorrow's doctors.

Methods

The study population was a cohort of patients attending surgical settings, as an outpatient or inpatient, within Brighton and Sussex University Hospitals Trust (UK). The sample was taken from three surgical wards (general/vascular, digestive diseases/surgical short stay, renal) and multiple surgical outpatient clinics (general surgical or speciality surgical) during October 2009 to November 2009. There were no selection or exclusion criteria used to select patients within these settings.

A questionnaire was produced (Appendix 1) to comply with UK Audit office specifications and then data was prospectively collected. The questionnaire comprised of 11 questions to gather demographic, quantitative and qualitative data. The questionnaire was anonymised by the use of sealed envelopes and no identifiable information, and patients were given the option to take part or decline. Inpatients completed the questionnaire at the bedside and outpatients within the waiting room. If necessary a relative or member of staff completed the questionnaire according to the patient's specific answers.

Outcome measures and specific dimensions of care were analysed regarding overall patient satisfaction, patient comfort in different situations with medical students and the number of medical students acceptable to patients. Overall satisfaction was adjusted to: inpatient versus outpatient settings, length of hospital stay, number of medical students present and presence versus absence of supervising staff. SPSS Version 16.0 software was used for chi-square calculations to determine significance of results.

Full consideration was given to the ethics of this research; after correspondence with the Local Audit Office, the Research and Development Office (Royal Sussex County Hospital) and the National Research Ethics Service, it was judged that ethical approval was unnecessary as this study should be classed as clinical audit for service improvement.

Results

Of the 150 patients who were approached, 85 patients completed the questionnaire (response rate 56.7%). Those questionnaires that were not returned may have been due to patient discharge, misplacement, or the patient's decision not to complete or return the questionnaire. Some patients were unable to complete it due to physical or communication difficulties.

Similar proportions of males and females responded to the study questionnaire (51% and 49% respectively). 9% of patients were aged 40 years old or under, 26% were 40 to 60 years old, 51% were 61 to 80 years old and 14% were over 80 years old.

38% of patients were outpatients and 62% inpatients, of which 30% had been in hospital for up to 3 days, 35% between 4 and 9 days and 35% for greater than 10 days.

94% of patients were aware of the presence of medical students within the teaching hospital, with no significant difference in awareness between age groups, gender, setting and length of inpatient stay. Patients were aware of medical students from:

- Observing the students on the wards: "I've seen them on the ward and they came to talk to me"
- Having been clerked by a student: "they assisted in diagnoses in A&E"
- Notices: "[I] saw the leaflet in [the hospital]"
- Staff information: "staff told me"

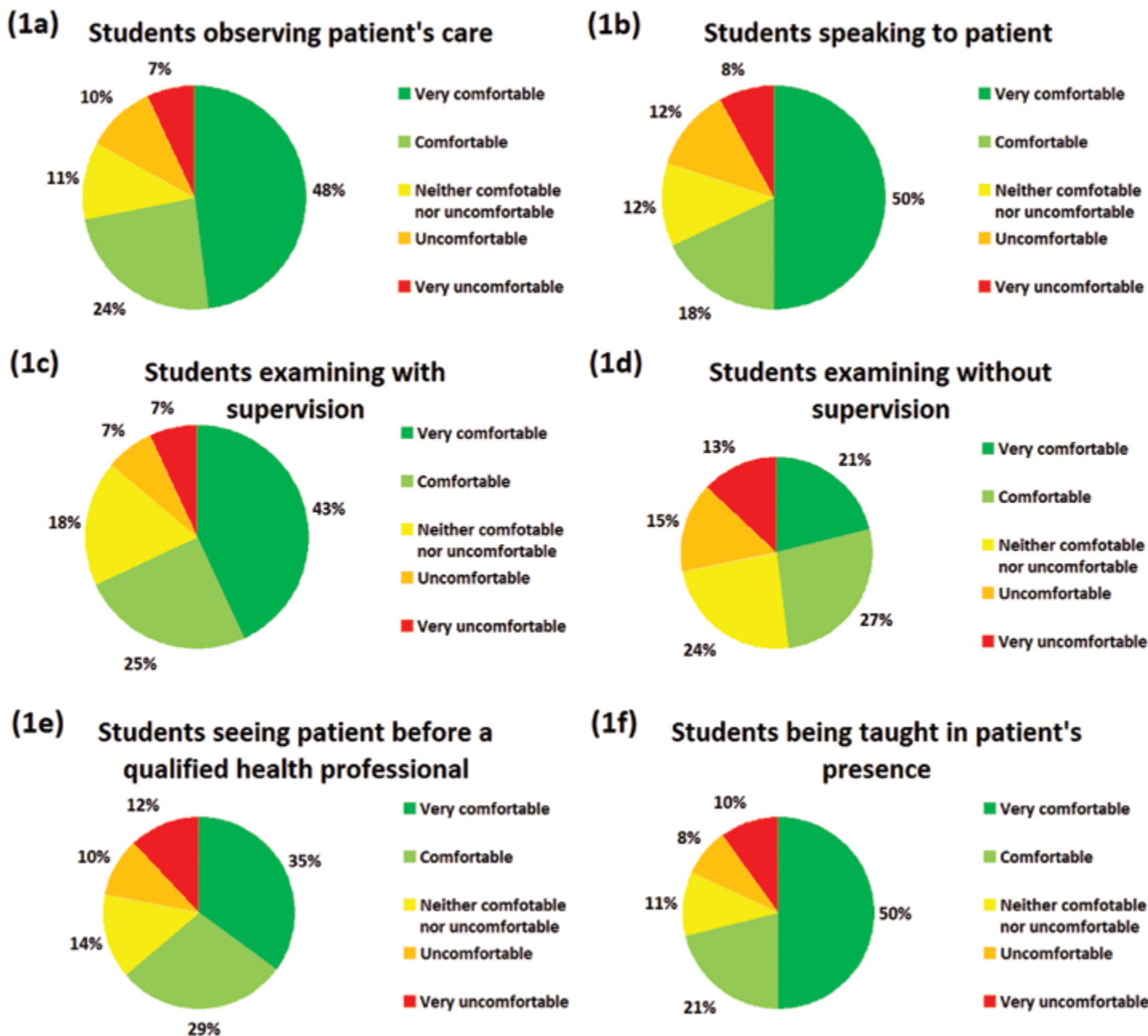
23% of patients would like to have more information about the presence of medical students, with a significant ($p < 0.05$) difference between age groups. Patients aged 40 years or under were most likely to request more information and patients between 61 and 70 years were least likely. Patients stated they would like "a leaflet explaining the need for [medical students] to meet patients", "[information] to tell me what is the best info to give the student for their benefit" and that it is important to know what stage of training the students were at and what they wanted to specialise in.

Patients were asked to rate how comfortable they are with the presence of medical students in certain situations (on a scale of 1 being "very comfortable", to 5 being "very uncomfortable"). Results are displayed in Figure 1.

Patients were significantly supportive ($p < 0.05$) of students observing their care (72% "comfortable" or "very comfortable") (Figure 1a) or speaking to them about their care (68% "comfortable" or "very comfortable") (Figure 1b). Supervision significantly affected ($p < 0.05$) patients' preferences regarding students performing examinations: 68% of patients were "comfortable" or "very comfortable" being examined by medical students under supervision (Figure 1c) compared to 48% if the student was unsupervised (Figure 1d).

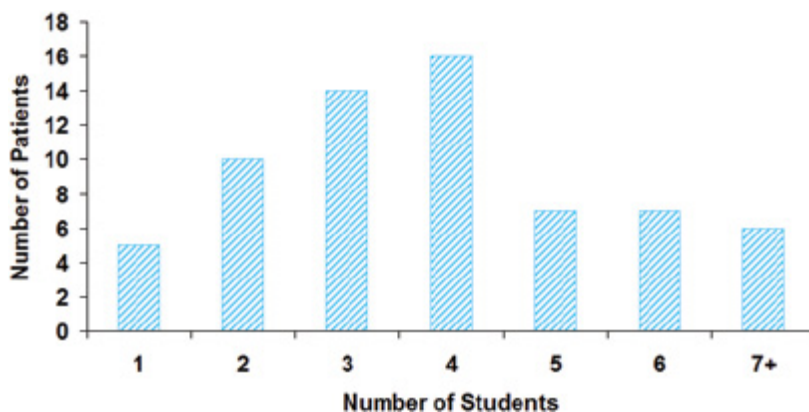
59% of patients felt that students should always be accompanied by another health care professional, and 13% felt that students should always be supervised in certain circumstances, for example, an "intimate examination". Patient comments included views that the need for supervision "depends on training level", but the presence of a supervisor "gives the patient more confidence". Patients were generally happy to see a medical student before a qualified doctor ($p < 0.05$) with 64% of patients feeling "comfortable" or "very comfortable" in this situation (Figure 1e). Most patients ($p < 0.05$) were also "very comfortable" or "comfortable" with doctors teaching medical students in their presence (Figure 1f). There were no significant differences between age groups, gender, inpatient/outpatient settings and length of stay within these results.

Figure 1: Patient comfort with medical student presence in different scenarios



Some patients highlighted issues regarding the number of medical students present at any one time: “it is very daunting having a crowd of [medical students] around your bed”. In this study, the mean maximum number of students that patients were happy to see at any one time was four (Figure 2).

Figure 2: Maximum number of medical students patients are happy to see at any one time



Generally staff sought consent for students to be present, however, of the 86% of patients who saw medical students, 17% stated that they had not been asked permission, with no significant difference between inpatient and outpatient settings. 16% of patients were unaware of their right to refuse students' presence.

85% of patients who saw medical students reported that the medical student did introduce themselves, however, 8% received no introduction and 7% could not remember. Patient comments included that it should be made "*clearer that they are students, as they look like doctors*".

Although 82% rated their experience with medical students as "good" or "very good", a minority had negative experiences; examples of the latter were provided by patients, such as "*student was 'practicing' phlebotomy*". Overall opinions were supportive of the findings, that the majority of patients are comfortable with medical students in a variety of clinical settings: "*I feel students need the experience. You can not get everything out of textbooks*".

Discussion

With the large emphasis on patient contact within undergraduate medical education [1, 3], alongside the increasing emphasis of patient-centered care [1], it is important to understand the attitudes of patients towards medical student interactions. This secondary care based study confirms the findings of primary care based studies; highlighting that patients are generally supportive of interactions with medical students.

The majority of patients were comfortable with students observing their care, taking their history and examining them under supervision, being seen by a medical student before the attendance of a qualified doctor, and the majority of patients approved of staff teaching students in their presence. However, patient comfort was significantly decreased ($p < 0.05$) in unsupervised examinations (48% "comfortable" or "very comfortable") compared to supervised examinations (68% "comfortable" or "very comfortable"). It was not clear from the questionnaire results what examinations a medical student could perform alone, however, qualitative data concurred with current practice that intimate examinations are inappropriate for medical students. The lack of patient comfort in unsupervised examinations could, therefore, be due to lack of clarity in the survey question or a genuine discomfort with medical students performing examinations. This creates a potential dilemma in medical training as the patient is central to the attainment of a good grasp of clinical skills and examination technique [1, 2, 3] and without this clinical experience, medical students will potentially falter in their education [2].

Furthermore, medical students may benefit from increased examination practice during pre-clinical study in order to appear more confident to the patient when examining them alone, which may alleviate patient and student fears, thus increasing comfort for both parties when unsupervised. Research by Hampshire [18] showed that basic clinical skills could be successfully taught to pre-clinical students in primary care settings, but that medical students were more confident in history taking than examinations after the course. It would be interesting to assess patient opinion regarding whether the presence of two students is preferred to only one, when students are not supervised by a member of staff. Many patients felt that medical students should be supervised at all times which has potential implications for current practice, whereby medical students are often left to see patients unattended and subsequently report findings to the teaching staff.

Despite the majority of patients being aware of the presence of medical students, many patients would have liked more

information, particularly those aged under 40 years old or those aged over 70 years old. Qualitative information from this study suggests that leaflets are desirable in order to increase patient understanding of the student role, put the patient at ease, and to provide the patient with information so that they can maximise the students' learning experience. This concurs with previous findings that patients have a lack of awareness about what is expected or allowed from students [12].

The available literature regarding medical student presence is available in both inpatient and outpatient settings, however, the authors feel that its relevance to patients could be improved and more comprehensive information should be included, regarding when and what interactions with medical students might occur and the right to refuse medical students. The availability should be increased so that all patients can make informed consent: an important issue to patients [6, 12, 16] including those with poor communicatory abilities, learning disabilities, or foreign language speakers [12]. Guidelines should also be made available for staff as to how to approach teaching medical students in patient interactions, and how feedback should be obtained from everyone involved in the teaching process: staff, students and patients [12].

The patient understanding of the medical student role could also come from the student themselves, in addition to literature. Despite the emphasis in current medical education of effective communication [1, 3], 8% of patients reported medical students who did not introduce themselves. Whilst this had no significant effect on patient satisfaction with medical student interactions, studies suggest communication skills, which includes a thorough introduction, has the potential to affect patient comfort [19].

Qualitative data suggests that patients would like to know the students name, level of study and career intention, but would also appreciate an "informal chat" at the start of the interaction. This may increase patient comfort, but would not be appropriate to all interactions, for example, if medical students are on ward rounds with senior staff at the time of meeting patients, a lengthy introduction may not be appropriate. In fact, from the authors' experience, even brief introductions of each team member seldom occurs on ward rounds, due to issues of time management, despite the potential detriment to patient comfort.

More specific questioning of patients would allow clearer indication in which situations the medical student does or does not introduce themselves. Additionally, despite introducing themselves, the role of the medical student may still not be clear to patients. Differing terms can be used, which patients may perceive differently. Perhaps the word 'student' instills discomfort in the patient and terms such as 'trainee doctor' [20], or 'medical trainee' may be more appropriate and invoke more confidence from the patient's perspective.

Patients described difficulty distinguishing medical students from junior doctors and other members of staff, a finding also noted in previous studies [15]. This can create confusion for patients as to who they should address certain questions or requests to. At the university teaching hospital where this study was conducted, UK National Health Service (NHS) identification badges contain the wording "medical student", however, this text is small and the badges appear very similar to other members of staff, which may ultimately not assist patients. A distinctive badge, or even uniform for medical students, along with sufficient introduction and explanation of the student role, may increase patient satisfaction and prevent concerns regarding misidentification.

Alongside the introduction of the medical student, consent must be gained for student interaction and 17% of patients stated that they were not asked permission. Whilst this did not significantly affect overall satisfaction with the student-patient interaction, it is certainly an issue which must be addressed. Permission and consent must be the joint responsibility of both the supervising

professional and the medical student themselves, however, it is important to consider the situation in which consent is requested. For example, if patients are asked permission by the professional in the presence of the medical student, in some cases, the patient may feel under pressure to accept. It is also important to consider that consent should be an ongoing process from first contact [12] and should be readdressed if the situation changes.

The median number of 'maximum number of medical students' that patients were happy to be in attendance at any one time, corroborates with the average size of medical student firms within the university hospital in which this study was conducted. However, the setting or number of other healthcare professionals present was not taken into account. Certain situations, such as ward rounds, can have large numbers of people at the bedside which one patient described as "daunting". In this case, it may be worth investigating how many people in total patients feel comfortable seeing at once, to help determine whether the sheer number of bedside attendees is uncomfortable for patients, or whether the junior nature of the medical student is the overriding issue.

In light of this, it may be prudent to further investigate the utility and efficacy of medical student involvement on ward rounds. Jaye et al [21] found that medical students often felt excluded from surgical ward rounds and ambivalent about the "educational value of formal whole team ward rounds" [21] which raises further questions about the way surgical ward rounds are conducted and their impact on all concerned, including medical students, doctors and importantly, the patient. Jaye et al [21] advise that clinical staff are more active in their involvement of medical students by encouraging patient examination and questioning during the ward round.

Limitations

Patients who required assistance to complete the questionnaire due to poor eye sight or writing difficulties could dictate answers to family members, friends or members of staff. However, in the rare circumstances where they were not available, the researchers (who were medical students themselves) assisted the patients. Despite introducing themselves as researchers, it is possible that patients identified them as students either from identification badges or observation of the student within the hospital setting. Intervention which may sway the patients' responses and therefore bias the results was avoided, however, in order not to exclude certain patients integral to the survey and to provide the most wide ranging coverage of the study, it was felt this was unavoidable.

It is possible that patients who support the presence of medical students may be more inclined to complete the questionnaire and may recall experiences with students differently, which could potentially create subsequent bias. In addition, patients that had a negative experience with medical students may have participated as an opportunity to express a complaint.

Recruiting a larger cohort, with a greater response rate, would have increased reliability of the results. Due to the anonymised nature of this study, patients who had, or had not, completed the questionnaire could not be identified. Therefore, circulating the questionnaire over a lengthy period of time was difficult due to the unavoidable movement of patients and the need to avoid re-sampling the same patient.

Future Recommendations

Future studies could utilise hospital computer software to generate lists of patient attendees (e.g. all surgical attendees at any one time point) and subsequent distribution of the

questionnaire to each listed patient, thereby ensuring that no patients are missed, so as to try to increase the validity of the research.

This study could be expanded to a national scale, to look at surgical inpatient and outpatient settings in other teaching hospitals, thereby giving a larger cohort size and allowing comparison of data between different institutions.

Furthermore, the questionnaire could be applied to other specialties in order to establish an overall 'complete picture' regarding patient acceptance of medical student presence within the healthcare system.

Finally, aspects of the questionnaire could be used to understand patient attitudes towards other healthcare students, for example, midwifery or nursing students.

Conclusion

Encouragingly for medical education, the majority of patients were happy regarding their experiences with medical students. However, addressing certain issues could maximise satisfaction, such as increasing levels of supervision, limiting the number of attendees at the bedside at any one time, improving introduction and identification of medical students, and providing more available and comprehensive information.

Declarations

The authors have no financial or other interests to declare in relation to this paper.

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Appendix I: Medical Student Presence Questionnaire



Medical Student Presence Questionnaire

We are trying to find out how comfortable patients feel about the presence of medical students in the wards and clinics of BSUH. We would be grateful if you could take the time to fill in this anonymous questionnaire. Taking part in this survey is voluntary. All the information you supply is treated confidentially and will not affect your treatment in any way.

Age Under 40 40 - 60 61 - 70 71 - 80 80 +
 Male Female Outpatient Inpatient ___ days

1) Are you aware that medical students are present at this hospital? Yes / No*
 If yes, how were you made aware of this? _____

2) Would you like more information about medical students' presence/role at the hospital? Yes / No*
 What information would you like? _____

3) If you experienced any of the following please tell us how you felt about it:

	1 = Very comfortable	2	3	4	5 = Very uncomfortable
Students observing your care	1	2	3	4	5
Students speaking to you about your care	1	2	3	4	5
Students examining you with supervision	1	2	3	4	5
Students examining you without supervision	1	2	3	4	5
Students talking to you before a qualified doctor has been to see you	1	2	3	4	5
A doctor teaching medical students in your presence	1	2	3	4	5

4) Do you think a doctor or nurse should always accompany medical students?

Yes / No / Don't know / In certain circumstances* such as _____
 If no, why? _____

5) Are you aware of your right to refuse medical students to be present? Yes / No*

6) What is the maximum number of medical students you would be comfortable to see at any one time?

7) If you were seen by a medical student, did a member of staff ask your permission first? Yes / No / Can't remember / I was not seen by a student*

8) If you were seen by a medical student, did they introduce themselves to you? Yes / No / Can't remember / I was not seen by a student*

9) If you were seen by a medical student, how would you describe your experience? Very good / Good / Neither good or bad / Bad / Very bad*

10) What do you feel could be done to improve your experience with medical student involvement?

Any other comments:

Thank you! Medical students are extremely grateful when patients allow them the privilege of observing their care and the opportunity to learn from their experiences.

Please return this questionnaire in the sealed envelope provided.

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