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Original Article

Factors influencing medical student participation in an obstetrics and gynaecology clinic

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Abstract

Objective: To identify factors influencing medical student participation in an obstetrics and gynaecology (OBGYN) setting.

Methods: This was a cross sectional study carried out on patients admitted in OBGYN wards of Aga Khan University Hospital, Karachi, Pakistan. A total of 250 patients consented to participate in this study.

Results: Eighty three percent of the people responded 'yes' to the question of being initially seen by a medical student. People who consented were 3.5 times more likely to know that their primary consultant was a teacher at a medical school i.e. they were initially aware that they were in a teaching hospital (p-value < 0.01). Additionally, people who did consent were 3.5 times more likely to have been admitted because of labour/delivery (p-value < 0.001) and 2.7 times more likely to have a monthly income of more than Rs. 20,000 (p-value < 0.05).

Conclusions: A number of factors have been identified in our study along with proposed solutions. Identification of these potentially modifiable factors in the medical student-patient interaction is important to improve the involvement of medical students in the care of the patients (JPMA 57:495:2007).

Introduction

Clinical skills practice is important and for all medical students. Learning through contact and interaction with patients in real life situations is necessary and beneficial if the desired skills and attitudes are to be developed. However, with time healthcare is becoming more 'consumer-based', with patients becoming selective in who sees them. In teaching hospitals, such behaviour leads to a decreased exposure on the part of medical students.[1]

At the same time, there is a conflict between the rights of the student and the patient. "There has been a tendency to assume that students have the right to clinical teaching involving patients and that patients have a moral obligation to participate."[2]

Nonetheless, teaching involving patient interaction in medical school curricula is important for better health care delivery from both the patient's and the community's perspective. Minimizing the negative factors as to why patients decline medical student participation in their care is fairly challenging. It is only by enhancement of patient cooperation that medical students will obtain the necessary training and experience to maintain high standards of

medical care in the future.

There are a variety of personal, provider-related, and contextual factors that influence a patient's decision to participate in medical education.[3-5] This survey is, therefore, an attempt to explore this issue from the clientele's perspective and offers the opportunity to study an eastern population's attitude.

Thus the primary objective of this study was to identify factors that influence medical student participation in an OBGYN clinical setting and to assess the knowledge of patients regarding medical students' involvement in their care.

Patients and Methods

A cross sectional study was carried out on patients admitted in OBGYN wards of Aga Khan University Hospital, Karachi, Pakistan. The objective of the study was explained to 279 patients and informed consent was obtained. A total of 250 patients who consented to participate in the study were interviewed by 2 female medical students. The students were trained in the administration of the questionnaire prior to the conduct of the study. The confidentiality of the records was maintained. Permission for the conduct of the study was obtained at the start of the study from the OBGYN department of Aga Khan University, Karachi, Pakistan.

The questionnaire was interviewer-based and questions were asked in Urdu. The questionnaire had 3 main parts: (a) basic socio-demographic characteristics; (b) questions pertaining to factors influencing medical student participation (adopted from Susanne and colleagues)[1]; and (c) questions about awareness of patients about involvement of medical students in their care.

A pilot study of 15 questionnaires/interviews was initially done to address any problems in administering the questionnaire, which were then rectified accordingly.

Data was collected and entered in a database developed in Microsoft Access 2000. This was then imported to Microsoft Excel 2000 and SPSS version 13 for further analysis. Frequencies and percentages were calculated for categorical variables. Means and standard deviations were computed for continuous variables. To compare differences in factors amongst groups of patients who had no problems in being seen by a medical student as opposed to those who did not wish to be seen by medical student, chi-square test and Fisher's exact test was done for categorical variables and Student's t-test for continuous variables. A double sided p-value of less than 0.05 was considered statistically significant. Parameters found to be different in those who consented versus those who did not consent for medical student participation in the univariate analysis (with a p-value of 0.25 or less) were entered into the logistic regression model with consent as the dependent variable, to identify factors that were independently related to consent.

Results

A total of 250 patients consented to be part of our study (response rate~ 90%). The mean age of the responders was 29.6 $\pm$ 7.92 years (Range 19-65). Seventy percent of the patients were Urdu speaking, 8% Punjabi, 7.6% Sindhi and 14% spoke other languages. More than 90% of the respondents were residents from Karachi. Of these 208 (83.2%) were housewives; while 42 (16.8%) were working women.

Regarding educational status 22 (8.8%) females had done masters, 126 (50.4%) graduation and 59 (23.6%) were intermediate. Remaining 42 (16.8%) females had educational level of secondary or below. Their husband's level of education was also similar.

Sixty five percent of the respondents had a monthly income of more than Rs 20,000, 13.6% between Rs 10,000-20,000 and 11.2% had an income of less than Rs 10,000. We also recorded house ownership and the type of house the individuals lived in as indirect measures of economic status. Two hundred two (80.8%) owned their houses, of these 153 (61.2%) lived in bungalows, 83 (33.2%) lived in apartments/flats; while 12 (4.8%) lived in other type of houses. The most common occupation of their husband was

Table 1. Responses by those were willing to be seen by a medical student.

No.	Question	n	Yes (%)
1.	I Wanted to Contribute to the Training of Future Doctors	192	92.3%
2.	My Comfort Level With Having the Examination Procedure Done by a Medical Student	179	86.1%
3.	My Rapport With Medical Student	163	78.4%
4.	My Desire for Highest Standard of Care	156	75.0%
5.	My Comfort or Discomfort With the Gender of the Medical Student	155	74.5%
6.	The Possibility of Having Two Examinations on me	134	64.4%
7.	The Better Medical Care is Provided to me when I am Seen by Two Health Care Professionals Instead of One	126	60.6%
8.	Protection of My Privacy	120	57.7%
9.	The Level of Training of the Person Involved in my Care	105	50.5%
10.	My Prior Experience(s) With Medical Students	73	35.1%
11.	The Extra Time Needed For a Longer Visit Involving a Medical Student	53	25.5%
12.	My Comfort or Discomfort With the Race of the Medical Student	7	3.4%

Table 2. Responses by patients who were not willing to be seen by a medical student.

No.	Question	n	Yes (%)
1.	Protection of My Privacy	31	81.6%
2.	My Comfort or Discomfort With the Gender of the Medical Student	28	73.7%
3.	The Level of Training of the Person Involved in my Care	27	71.1%
4.	My Rapport With Medical Student	26	68.4%
5.	The Possibility of Having Two Examinations on Me	25	65.8%
6.	My Desire for Highest Standard of Care	23	60.5%
7.	My Comfort Level With Having the Examination Procedure Done by a Medical Student	22	57.9%
8.	I Wanted to Contribute to the Training of Future Doctors	21	55.3%
9.	The Extra Time Needed For a Longer Visit Involving a Medical Student	16	42.1%
10.	My Prior Experience(s) With Medical Students	11	29.0%
11.	The Better Medical Care is Provided to Me When I am Seen by Two Health Care Professionals Instead of One	11	29.0%
12.	My Comfort or Discomfort With the Race of the Medical Student	5	13.2%

Table 3. Variables affecting the decision to consent for medical student participation.

No.	Variable	OR	p-value
1.	Children (Yes)	1.03	0.81
2.	Occupation (Housewife)	1.42	0.48
3.	Mother Tongue (Urdu)	1.24	0.58
4.	Educated	1.47	0.384
5.	House Ownership	3.15	0.07
6.	Reason for admission (Labor/Delivery)	3.46	0.001**
7.	Monthly income > Rs. 20,000	2.71	0.024*
8.	Knowledge that the primary consultant is a teacher at a medical school	3.55	0.014*

* p-value < 0.05; **p-value < 0.01

private job 42.4%, followed by business (22.4%), engineer (7.2%) and other (35.2%).

Almost all (98.4%) were married. The median number of children were 2 (range 0-8). The mode for the number of children was '1 child (30.8%)' followed by '2 children (28.8%)'.

Less than half (48.4%) knew that their primary doctor is a teacher at a medical college i.e. were aware that they were in a teaching hospital. Only 141 (56.4%) of the respondents were aware that a medical student will be involved in their care.

Eighty three percent of the people responded 'yes' to the question of being seen by a medical student. They were further inquired about factors that may have been involved in their decision to say 'yes' or 'no'. Table 1 and 2 outline the responses selected by patients willing to be seen and not willing to be seen by a medical student.

One of the most important reason for acceptance in patients who were willing to be seen by a medical student were: 'want to contribute to the future training of doctors'.

Reasons cited for refusal by patients who did not consent to be seen by a medical student were 'protection of privacy', 'discomfort with the gender of the medical student' and 'the level of training of the person involved in care'.

Most of the patients wanted the medical student to be only involved in the aspects of history taking and counseling (72%). However, when given the option of only the female medical student being present during the examinations, the willingness increased to 52% for the physical exam and 44% for the pelvic exam.

The characteristics affecting consent are given in Table 3. Age and number of children did not reach level of significance. People who did consent were 3.5 times more likely to have been admitted because of labour/delivery (p-value < 0.001) and 2.7 times more likely to have a monthly income of more than Rs. 20,000 (p-value < 0.05).

Interestingly, people who consented were more likely to know that their primary consultant was a teacher at a medical school i.e. they were initially aware that they were in a teaching hospital (p-value < 0.05). Similarly, they were 2 times more likely to know that a medical student would be involved in their care.

In the multivariate analysis, knowledge that their primary consultant was a teacher at a medical school was an independent predictor of outcome i.e. consenting to involve a medical student in their care (p-value < 0.01).

Discussion

Identification of potentially modifiable factors in the medical student-patient interaction is important to improve their involvement in the care of the patients.[3-5] Currently, there has been no published work from Pakistan regarding factors that may influence the medical student participation in an OBGYN setting.

In this study a significant number of individuals accepted the participation of a medical student in their care, which is similar to a study done in the West.[1] Within this subset of patients, it might be noted that those who had a better socioeconomic status and had presented because of labour were more inclined towards medical students' participation in their care.

The most important reasons cited for acceptance of medical student participation were 'want to contribute to the future training of doctors', 'comfort level with the examination done by a medical student' and 'rapport with

the medical student'. The first two, however, are difficult to modify. With respect to the 'rapport with the medical student', it seems that if there would be a relation of mutual understanding or trust between the patient and the medical student, the patients were more likely to consent. The level of interaction between the patients and the students also needs to be progressed slowly.

On the other hand, the most important reasons cited for refusal included 'protection of privacy', 'discomfort with the gender of the medical student', 'the level of training of the person involved in care' and 'rapport with the medical student'. With respect to refusal, some of these factors are very difficult to modify and require further study. Counseling patients regarding the presence of students, and explaining their role, the discomfort might be minimized, which will eventually enhance the student clinical experience.

Knowing that many patients have altruistic motivations for participating in the education of future professionals, and providing them with clear information about the role and training level of medical students can help patients make an informed decision. The patients, therefore, need to be informed in advance about the involvement and the role of medical students in their care.[6-8] Arguments for not informing patients in advance seem to be based more on assumption rather on substantial evidence.[9,10]

The limitations of this study include a 'selection bias', since most of the patients recruited were from a single hospital and had a good socio-economic background. The results of this study may not be representative of the entire country's population.

Along with this, attitudes and behaviour are dynamic processes and hence cannot be measured in one point in time. Patient satisfaction with medical education and health service is difficult to measure and even more difficult to interpret. While still in the hospital, women might hesitate to criticize the health provision.

In summary, explicit course of actions are needed for attaining patients' consent for medical students' involvement.[11] There is evidence that patients become more receptive when presented with information about medical students' involvement in their clinical encounter.[12] Consideration should be given in designing a brief well-written role of students, being outlined in information leaflets, available in all teaching hospitals. Additionally, all teaching faculty should introduce the students accompanying them in clinics to their patients, explaining their roles and responsibilities.

As a complementary strategy standardized and simulated patients and mannequins should be used to enable medical student improve their examinations skills.[13,14]

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