

ORIGINAL ARTICLE

**FAMILY MEDICINE IN UNDERGRADUATE MEDICAL CURRICULUM:
A COST-EFFECTIVE APPROACH TO HEALTH CARE IN PAKISTAN**

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Background: Shifa College of Medicine introduced a two-week rotation in Family Medicine for their third-year medical students in 2008. The purpose of this study was to determine what impact it made on students and how many would consider becoming Family Physicians in future. **Methods:** A questionnaire-based prospective study conducted at Shifa College of Medicine, Islamabad during academic year 2008. **Results:** A total of 46 students rotated in Family Medicine throughout the academic year-2008. Fifteen students were aware of Family Medicine as a specialty prior to starting their rotation, and only 3 expressed an interest to pursue Family Medicine as a future career. At the start of the rotation only 15 students were able to give correct definition of Family Medicine and on questioning whether it should be a part of the undergraduate curriculum, only 24 answered yes while the rest were unsure. After the rotation, a significant number of students (37%; $p<0.01$) considered having a career in Family Practice, and 80% ($n=37$) were able to give correct definition of Family Medicine as a humanistic approach of medicine with aim to prevent, treat and rehabilitate. About its utility in the undergraduate curriculum, 44 (96%) students believed it should be a regular feature in their curriculum, while 30 (65%) students agreed that their outlook towards patient care had changed. When asked what they learnt most during the rotation, students quoted empathy and development of communication skills. **Conclusion:** Family medicine rotation as part of undergraduate medical curriculum may help in fostering an interest among medical students in this newly emerging subspecialty which could have a profound effect on delivery of quality health care in this country.

Keywords: Undergraduate medical curriculum, Family Medicine, health care, medical education.

INTRODUCTION

It is an undisputed fact that quality health care system of a country depends upon the efficiency of its primary health care system. The family medicine approach to primary care is cost-effective and beneficial to patients and the country.¹

In such times when primary health care is a centre stage for policy health makers, very few Pakistani medical students select Family Medicine or General Practice as their career of first choice. Most end up becoming general practitioners by default, due to other economical and personal circumstances. Despite the fact that so many Pakistani medical graduates become general practitioners, it is ironic that most of these schools where they graduated from do not have a defined curriculum for Family Medicine. Although Family Medicine is recognized as a specialty by the College of Physicians and Surgeons, Pakistan, it is yet to be delineated as a core subject in the undergraduate medical school curriculum certified by the Pakistan Medical and Dental Council. As a result, doctors are produced who have no concept of the holistic care approach of Family Medicine. There have been concerns in various quarters about the state of medical education in the country leading to inadequate training of doctors who are unable to display basic competencies.²

Family Medicine as a career choice is not on the priority list of many medical undergraduate students

around the world.³⁻⁵ The reasons quoted from various studies have been student's lack of knowledge and interest in the subject and student's perceptions that it is a specialty with low prestige, money and personal development. The status of undergraduate training in Family Medicine seems to be an important factor that may influence student career choices in this primary care specialty.

It is imperative to find out how undergraduate medical students perceive Family Medicine as a specialty and career goal. The objective of this study was to determine what impact a two-week rotation in Family Medicine had on the students in terms of patient care and whether students would be interested to pursue a career in Family Medicine.

METHODS

A Family Medicine clerkship was initiated in 2008 for 3rd year MBBS students at Shifa College of Medicine, Islamabad. In this prospective study, a questionnaire was administered before and after the rotation. The questionnaire contained both closed ended and open ended questions. The contents of this questionnaire were based on similar studies carried out elsewhere.³⁻⁵ The questions pertained to student's demographic data and background with regards to schooling and upbringing. There were also questions related to their awareness regarding Family Medicine as a specialty and whether students would want to pursue a career in Family

Medicine or not. The study had the approval of the institution.

Quantitative data gathered was entered and analyzed through SPSS version 13. Qualitative data was manually examined by the author and coded into themes accordingly. Proportions were compared using chi square. A *p*-value less than 0.05 was considered significant.

RESULTS

A total of 46 students (22 males and 24 females) rotated through Family Medicine. Their mean age was 21 years. Out of 46 students, only 15 had ever heard of Family Medicine as a specialty before, whereas 22 had never heard of this branch of Medicine. Prior to the rotation we asked our students whether they would be interested to pursue a future career in family practice and the same was asked after the rotation. Student's responses to adopting Family Medicine as a future career are shown in Table-1. After 2-week rotation, there was a significant increase in number of students (*p*<0.01) indicating their interest in Family Medicine as a future career. Moreover, there was a significant decrease in number of students (*p*=0.01) who were unsure about adopting Family Medicine as a career prior to rotation (*p*=0.6). It was interesting to note that there was no significant change in number of students who were very clear about not having Family Medicine as a future specialization prior to rotation. It appears that most of them had already decided about their area of specialization other than Family Medicine. Students were then asked to define Family Medicine by giving them four options to choose the best definition.⁴ The provided definitions are shown in Table-2.

Option C which was "Humanistic approach to Medicine with aim to prevent, treat and rehabilitate" was considered to be the correct option. Table-2 shows the student's responses about their understanding of Family Medicine before and after the rotation. Prior to rotation, only 33% of students picked the correct definition. However, after 2-week rotation, 80% of the students were clear about the approach and objectives of Family Medicine (*p*<0.001).

Students were asked whether this rotation should be a regular feature of the undergraduate curriculum. Prior to rotation, 51% were found to be supportive of it, while 48% were unsure. After the rotation, 96% of the students (n=44) were in favour of having Family Medicine rotation as a regular rotation in their curriculum. We also wanted to determine if student's outlook towards patient care had changed in any way after this rotation, and 65% reported that it had. Our next question was, "how?" This was an open ended question and on examining the responses for common themes, we found out that "empathy" and "communication skills" were considered by students as

the essential traits for quality health care. Some of these responses have been listed below:

"I've developed a better understanding of patients' problems"; "I realize the importance of empathy and good communication skills"; "I have a more humane approach"; "I listen to the patient rather than advise"

In response to another open-ended question, "what is the most important thing they learned in rotation?" the students' replies were within the common theme of empathy and communication skills. Some of their comments have been listed below:

"I learned how to empathize with the patient"; "I learned how Not to lecture a patient but to listen to him"; "I realized the value of taking a psychosocial history"; "I learned how to take a history and do physical examination without annoying the patient"

Students also reported that they were more confident while dealing and interacting with patients after going through the Family Medicine rotation. For further improvement of the rotation students wanted it to be of a longer duration than two weeks and they wanted more interaction with the patients.

Table-1: Students' responses to adopting Family Medicine as a future career

Response	Pre-rotation response number (%)	Post-rotation response number (%)	<i>p</i> -value*
Yes	3 (7)	17 (37)	<0.01
No	11 (24)	9 (20)	0.6
Not sure	32 (69)	20 (43)	0.01

**p*-value is based on test of association using chi square.

Proportions of responses before and after rotation were compared.

Table-2: Students' responses about understanding of Family Medicine before and after the rotation (n=46)

Definition	Pre-rotation response number (%)	Post-rotation response number (%)	<i>p</i> -value*
General application of Medicine with knowledge of specialties	13 (28)	5 (11)	0.04
First aid to emergency medical situations in remote regions of the country	4 (9)	0 (0)	-
Humanistic approach to Medicine with aim to prevent, treat and rehabilitate	15 (33)	37 (80)	<0.001
Primary care of usual medical problems and referral to the expert	14 (30)	4 (9)	0.01

**p*-value is based on test of association using chi square. The proportions of responses before and after rotation were compared

DISCUSSION

The results of the present study are quite encouraging. The fact that students considered a career in Family Practice upon a short exposure to the subject reinforces the notion that Family Medicine/General Practice needs

to be consolidated as a permanent feature in Pakistani medical undergraduate curricula.

Some institutions in Pakistan like the Aga Khan University and Ziauddin Medical University have incorporated Family Medicine into their curricula but this trend needs to catch on in other medical colleges as well. The national need for Pakistan is for our graduates to practice as trained Family Physicians.⁶ To do so would require Family Physicians as mentors and leaders in Medical schools.⁷ However, this will prove to be a challenge as there are very few institutions which are recognized for providing a structured training program or a continuous professional development program for Family Physicians in this country. The only examples are the Aga Khan University in Karachi and Fatima Memorial College in Lahore.⁸ Shifa College of Medicine has also recognized this deficiency and developed its own continuous professional development program for practicing General Practitioners in Islamabad/Rawalpindi district in conjunction with the Royal College of General Practitioners.

With the advent of numerous medical and dental colleges in Pakistan, 73 to be exact, we have produced a total of 111,193 registered MBBS doctors till August, 2008.⁹ However, only 21,048 doctors have registered as specialists. Where have almost three quarters of the graduates gone? It may be assumed that most entered into General Practice armed solely with this undergraduate degree. Most of these graduates do not have a holistic approach in managing patients. They focus on symptomatic treatment of diseases, and although they may be filling a void in our poor quality health care infrastructure, they are also likely to pose their own hazards in terms of polypharmacy and errors in judgment due to inadequate training.¹⁰⁻¹²

For improvement of health care services in Pakistan, adequate primary services need to be established by trained Family Physicians with an appropriate referral system. Health care professionals should help and encourage promotion of Family Medicine as a specialty, and medical educators should develop a curriculum of Family Medicine and implement it in their respective institutions.

With a dearth of trained Family Physicians in the country, very few could act as role models for their students and educate them about this specialty. However as a start, all medical colleges need to introduce this subject in their undergraduate curriculum so that more students develop an interest and would consider pursuing it as a future career. This could have a very positive

impact on cost-effective delivery of health care in Pakistan.

CONCLUSION

Family medicine rotation as part of undergraduate medical curriculum may help in fostering an interest among medical students in this newly emerging subspecialty which could have a profound effect on delivery of quality health care in this country.

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