

EVALUATION OF UNDERGRADUATE CURRICULUM AND FUTURE CAREER CHOICES OF MEDICAL STUDENTS AT DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

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ABSTRACT

This study designed to assess the curriculum of medical teaching and to explore the future career choices of the medical under-graduates. It is a descriptive and cross-sectional survey, carried out at the department of community medicine, Dow University of Health Sciences, Karachi. A structured pre-tested questionnaire was distributed to 292 fourth year medical students. Data was analysed by calculating the proportions of the students' responses. Sixty eight percent medical students were females. A substantial proportion i.e 32.6% of students had not decided their future choices. Among 153 students 'who decided their career choices, most of them (28.5%) intended to choose medicine, 24.7% to surgery, 11.7% to pediatrics and 7.9% to obstetrics and gynecology as their future career profession. Only two students showed interest in basic sciences and five in medical education. Medical students favoured small group discussions and problem-based learning as the teaching strategy. Most of the medical students were not satisfied with the teaching program. A substantial proportion of medical students could not decide their future path.

INTRODUCTION

Undergraduate students are generally not oriented to decide their future career paths during their graduation studies.¹ After medical graduation students are at large to follow the local trend and end up in searching for appropriate jobs in competitive and saturated health care markets. Some times they choose a career in conflict with their aptitude and capacity.² Due to a disproportionate distribution of specialties chosen by the doctors the balance among the specialist human resource is disturbed. Currently there is on alarming shortage of qualified human resource in psychiatry and mental health, public health and community medicine, and in the basic sciences subjects. According to Pakistan Medical and Dental Council (PMDC) statistics qualified psychiatrist is less than 2% of the total specialists' fraternity; ⁴ To quote our own observation there are a few doctorates in Anatomy available in the medical institutions of Karachi. In addition Karachi is devoid of any recognized institution exclusively in the field of public health and community medicine offering higher studies.⁵

This health system issue is the outcome of complex factors associated with career choices of students.⁶ Dissatisfaction during undergraduate years with the curriculum is an important factor that determines the students' career path away from the dissatisfied subject.⁷ Aziz, and colleague reported students' (of three public sector medical col-

lege) dissatisfaction from, community health sciences subject. They attributed this dissatisfaction to traditional low importance to the subject and the teaching methods and styles. In a study conducted by Farah and Yasmeen to evaluate the curriculum and career choices of students stated similar results.⁹ It is our observation that upto recently community medicine had been taught like 'a crash course' in the fourth year of MBBS. However according to PMDC regulations, curricula of community medicine should spread over initial four years of training and not be taught in the limited time of fourth year training. This is because in clinical sciences, students spend most of the time with 'patients in the hospital', however community medicine has a strong 'community component' that enables students to understand the epidemiology of diseases in its natural environment.¹¹ To date, physicians' regulatory authorities, policy formulating bodies and postgraduate medical institutes have not practically implemented any strategic plan to create the future medical human resource according to the need of country and changing pattern of disease.¹²

Keeping in mind the significance of community medicine in undergraduate learning and its impact on the future career choices we tried to evaluate our own undergraduate community medicine curriculum with the help of semi-structured questionnaire. Another objective of this study was

to identify the future career choices of the students.

The rationale behind this study was to evaluate and seek room for improvement in the curriculum, making it more relevant, interesting and inspiring for the students.

SUBJECTS AND METHODS

It was across-sectional survey on fourth year medical students of Dow University of Health Sciences, Karachi. A structured questionnaire was prepared in English including different variables on socio-demographic profile of the participants, career choices and evaluation of the Medical teaching program. Data was collected during the month of October-November, 2007. Those students who gave verbal consent were enrolled in the study. Names and addresses of the eligible candidates were kept confidential. Data was entered and analyzed on SPSS version 11. Descriptive analysis was done to see the socio-demographic characteristics and responses of medical students.

RESULTS

Socio demographic

Out of 292 questionnaires distributed, 273 medical students returned the proforma with a response rate of 93.5%. In our sample a large proportion of the students were females (68%) while a small number of students (5.5%) did not disclose their gender. Among 273 students most of them were single (82.4%), 10.6% were engaged and 5.1% were married. A total of five students (1.8%) did not record their marital status.

For the question 'any of your parents is a medical doctor?' 18.7% (n = 51) pupils replied 'yes'. Only three students did not answer this question. Most of the students (79.9%) passed their exams in first attempt, 14.3% students had to take supplementary exam in at least once in the last four years and only six students (2.2%) had to repeat the whole year to get promoted. A total of 10 students (3.7%) did not reply to this question (table 1).

Evaluation of Medical Teaching Program

In the question regarding the design of the course we obtained 246 valid responses out of a total of 273. Excluding the 27 missing responses in this question, 21.1% students evaluated their course design as modular form whereas a large proportion (49.2%) reported that the course was taught as individual topics. Among 267 complete responses a large proportion 45.7% reported that objective of the session was either seldom given or not given at all (7.9%), only 41.6% reported that objectives were always given by the teachers during the program while 4.9% were not sure about the pro-

vision of objectives. Regarding provision of the schedule of teaching out of 264 total responses 56.1% reported that schedule of the teaching was given to them ahead of the classes, a quarter (27.3%) reported that schedule was given at the time of class, 5.7% stated that schedule was seldom given while a considerable percent (11.0) reported that it was not given at all.

Table 1: Socio-demographic profile of medical students.

| Variable | | N | % |
|-------------------------------|------------------|-----|------|
| Gender | Male | 72 | 26.4 |
| | Female | 186 | 68 |
| | Did not disclose | 15 | 5.5 |
| Marital Status | Single | 225 | 82.4 |
| | Married | 14 | 5.1 |
| | Engaged | 29 | 10.6 |
| | Missing value | 5 | 1.8 |
| Any of the parent is a doctor | Yes | 51 | 18.7 |
| | No | 219 | 8.2 |
| | Missing value | 3 | 1.1 |

In a total of 218 complete responses most of the students considered communicable (40.8%) and 11.9% non-communicable diseases section of course inspiring. We received 214 valid opinions about the main strengths of our teaching program. Less than a quarter (22.4%) stated that the structure is its strength while 8.4% reported quality of teaching is its strength. Concerning the question how students rate themselves in professional life we received 229 total responses. Most of the students (58.1%) rated them as top rank professional in future life, while 37.6% reported them as average professional and only 4.4% rated them below average professional in future life as shown in Table 2.

Students' suggestion on curriculum

In a total of the 255 complete responses most of the students (52.2%) suggested that community medicine should be taught in fourth year only while 11.4% were not sure about the period of community medicine training. However a sizeable (31%) proposed that community medicine (CM) should be taught from first to fourth year and a small proportion (5.5%) suggested third to fourth year for CM training.

In a total of 268 responses most of the students were in favour of small group or problem based learning 31.7%, field teaching 23.9% and a balanced combination of lecture and field visits

29.9%. Only 6.3% each suggested lectures or tutorials as mode of teaching. Among 254, valid answers most of the students (54.7%) were in support of the course design based on individual topics. Only 30% were in agreement of the modular type of course design.

Table 2: Evaluation of teaching program by the medical students.

| Responses | N | Percentage |
|--|-----|------------|
| Recommended monthly lectures | 17 | 6.2 |
| Recommended PBL | 248 | 44.2 |
| Teach Community Medicine as a separate topic | 121 | 44.3 |
| Course design should be based on individual topic | 139 | 50.9 |
| Course design should be modular | 53 | 19 |
| Objective of the session was seldom given | 212 | 52.4 |
| Schedule of teaching was given ahead of classes | 215 | 54.2 |
| Evaluation of the teaching was done at the end of the term | 74 | 27.1 |
| Infectious disease teaching portion inspired the most | 89 | 32.6 |
| None of the topic inspired the students | 25 | 10 |
| Strength of the teaching program is its structure | 48 | 17.6 |
| Quality of teaching is the strength of the teaching program | 18 | 6.6 |
| Compromised quality of teaching was the short-coming of Teaching program | 52 | 18.7 |
| To rank professional in future life | 212 | 48.7 |
| Below average rank professional in future life | 8 | 3.7 |
| Future professional rank not decided | 4 | 16.1 |

Career choices

In response to the question 'have you decided your future career choice' only 67.4% replied yes among a total of 227 complete responses. A substantial proportion (32.6%) of pupils could not decide their future career paths.

Among of 153 students who decided their career choices, many students (28.5%) intended to choose medicine, 24.7% to surgery, 11.7% to paediatrics and 7.9% to obstetrics and gynecology as their future career profession. Only two students

showed interest in basic sciences and five in medical education as illustrated in figure 1.

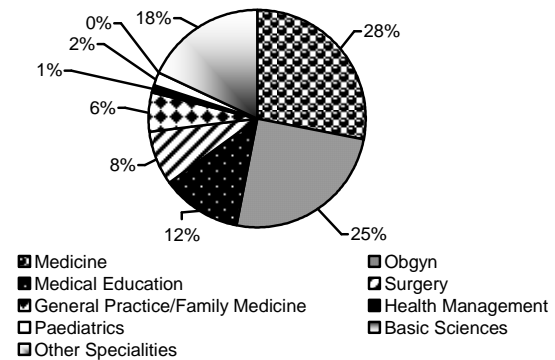


Figure 1: Distribution of career choices.

Among of the 232 valid responses, in the question 'are there any chances that you switch from your medical profession altogether' a considerable proportion of students showed intention to change their careers altogether (13.4%).

DISCUSSION

The percentage of women in the medical field is steadily increasing although there are still a few in the highest echelons of the profession. Lawrence, Poole and Diener investigated the factors that influenced 305 New Zealand women medical graduates in their career decision-making. There are 4 distinct factors influencing career choice: interest, flexibility, women friendliness and job security.¹³

Surveys of medical students are widely used to evaluate course content and faculty teaching within the college.¹⁴ Survey information that students provide is valuable because students are uniquely able to evaluate many important aspects, of educational experience. Although in many instances students are unable to judge the appropriateness of course content, they can provide valuable insight regarding teacher's ability to communicate instructions in ways that will enhance their learning.¹⁵

Community based education (through problem-based learning) is an academic approach that aims to prepare-students for future professional work at community level.¹⁶ Medical education should prepare the students for deciding future career choices.¹⁸ It is unlikely that there will be a significant move away from the requirement for most doctors to work in primary care and, given the low rate of preference for general practice as a career option, further thought is required about how to improve the attractiveness of this option.¹⁹

Finally, it is important that trends in career preferences continue to be monitored. Many stu-

dies reviewed the nature and distinctive influences of a variety of factors on medical students' career choices. They generally support a conceptual model embracing the predominance of personal variables (socio-demographic data, aptitude) and experiential variables (medical school and later sources of information and experiences) as the major forces influencing the initial career decision.²⁰ Regarding the choice of surgery as a career the influences encompasses sex, economic and prestige expectations. In many countries not enough medical graduates choose a career in medical research. Career guidance ought to be early, based on evidence, and tailored to the characteristics and needs of the individual. Kupfer et al. proposed early identification and recruitment at the undergraduate level.²³ Therefore, students' research activities should provide clues for the identification of potential scientists since good research experiences during medical school predict far-reaching career achievements in academic medicine. However, to affect the career choice of potential scientists, medical schools should provide enough research opportunities, stimulate students to publish research articles before graduation and encourage them to pursue a scientific career.

It is **concluded** that most of the medical students were females. Medical students favour problem-based learning (PBL) as the teaching strategy. Majority of the medical students prefer medicine and surgery as their future choices while a substantial proportion of medical students had not decided their future path.

ACKNOWLEDGEMENT

The authors acknowledge Dr. Farah Asad Mansuri for using the same tool of assessment as designed by her. An original research was done in Karachi Medical & Dental College during the month of October, 2007 under the supervision of Dr. Farah Asad Mansuri.

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