Can parents’ profession influence the attitude and competency among the first year medical students?

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Abstract

Introduction: The aspiration and career selection of students depend on the family atmosphere that includes parents’ profession. Children of doctors are more influenced by their parents in selecting the medical field. Yet, every year many students whose parents are from other professions also enroll in medical college. Students with humanitarian touch, service oriented minds aiming towards global health care should opt for this service. Awareness about this profession would certainly help to remove their misconceptions and achieve their aims. This study is aimed at finding out the differences in attitude and awareness about this profession between children of doctors and non-doctors.

Methods: A questionnaire was administered to all students admitted to first year MBBS course. Content, construct validity and test retest reliability were applied to a questionnaire that was developed by the investigators after consulting the experts in the field. Responses were compiled and statistically analysed. Reliability coefficient for each question was calculated using Cronbach’s alpha score. The data was analysed for normal distribution and parametric results were reported.

Results: The results revealed that motivation for selecting this profession seems to be less for social service and more for financial gains (75%) in both groups. 50% of doctor’s children were unaware of the syllabus of first MBBS and 55.6% of non-doctor’s children had the same opinion. High percentages of the entire study group were unaware of the intricacies of learning medicine.

Conclusion: Children of doctors and non-doctors had similar attitude towards medical education.

Key words: Doctors, Non-doctors, Awareness, Medical training.

Introduction

The aspiration and career selection of students depend on the family atmosphere that includes parents’ profession.

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Children of doctors are motivated early in life by observing their parents. It is also the desire of many doctors to see their wards continue to serve the society in the same profession. It is presumed that the children of doctors are better informed about the profession.

A study at South Carolina by Lentz has mentioned that 14% of medical students are children of doctors (Lentz, 1989). US study has found demographics of medical students (Carlisle, 1998). 69.3% of fathers and 48.7% of mothers were professionals or high-level managers and 15.6% students had a physician parent (Dhalla et al., 2002).

The way the future doctors treat their patients depend on the skills and professionalism taught during their medical training (Klein et al., 2003; Hilton, 2005). Proper undergraduate
medical training holds the key in providing universal healthcare for the humanity (Cruess, 2000).

The Royal College of Physicians of London’s Working Party (2005) has stated that doctors should possess the values of humanity, commitment to the profession, benevolence, compassion and consideration to the patients and should be able to work in a team. These qualities can build a good doctor-patient relationship.

A meta analysis mentions that the medical institutions must take up a greater responsibility in imparting professionalism among the future doctors (Cohen, 2006). This requires a proper curriculum design (Rubin, 2009), student selection (Knights, 2006), teaching-learning methods (Baernstein, 2003), role models (Kenny, 2003) and proper assessment of their professionalism (Jha, 2007).

Students selecting the medical career largely depend on the perceived returns from the profession. Children are more likely to get impressed by the parents’ profession than getting attracted to other field. The social status and financial status of the parents also determine the selection of specialty (Dhalla et al., 2002).

It has been shown by previous studies that those who have a better pre existing knowledge about this course would cope well with this rigorous training (Zipp, 2010). Such students will be more oriented, receptive and develop the taught skills (Wheeler, 2015). This can avoid the misconceptions and initial fear about the medical course. There can always be an improvement in teaching learning process by understanding their initial perceptions. The changes in the training process can be planned after feed backs from the students.

Questionnaire based study is the most popular and widely accepted method of any evaluation system. Feedback taken will help the teachers and students in their self evaluation (Hamid, 2010). Responses received by the students’ ratings can be utilized effectively to improvise the course, and to enhance their interest in the subject so that effective medical training can be imparted (Lata, 2008). We sought to find out the attitude and pre existing knowledge of the children of doctors and non-doctors selecting medical profession.

Objectives

To ascertain the attitudes and pre existing knowledge regarding medical curriculum among the children of doctors and non-doctors selecting medical profession.

Methods

Ninety one students of a fresh batch of a private university medical college in Karnataka state, India, who had just joined for their first year medical course, were included in this cross-sectional study. Before framing the questions, the need for the study was discussed with the teaching community and their opinions were considered.

Questionnaire items were developed after consulting the heads of the preclinical departments and validated appropriately. This is in accordance with the Dundee Ready Educational Environment Measure (DREEM) developed at Dundee University is considered as the most preferred method of collecting information of medical students’ perceptions of the medical training (Roff, 2005). It has been validated as a universal diagnostic inventory for assessing the perceptions of undergraduate medical students in different institutions worldwide, with no cultural limitations.

The respondents were asked to read each statement clearly before responding. The responses were graded from most appropriate to least appropriate. The questions dealt were pertaining to: reason for selecting medical profession, curriculum content, learning methods, awareness of personal safety and patient examination. Ethical approval was sought and obtained from ethics committee of the Institute.

The reliability coefficient for each question was calculated using Cronbach’s alpha score. Cronbach’s alpha for the totality of items was 0.81, which indicates high internal consistency.

Cronbach’s alpha values for reason for selecting medical profession, curriculum content, learning methods (experimenting on self, cadaver and human fluids), awareness of personal safety and patient examination were 1, 0.84, 0.67, 0.88, 0.80, 0.74, 0.74 and 0.64 respectively.

The objective of this study was explained and proper instructions were given to the students.
before responding to the questions. The questionnaire was administered during the students’ orientation week. The responses were obtained from only those who consented. (Response rate=98%) 

**Statistics**

SPSS version 16 and Microsoft excel 2007 were used for data analysis. The data was analysed for normal distribution and parametric results were reported. The results were reported as percentages.

**Results**

Of the ninety students who were administered the questionnaire, one student was absent and one student’s response was incomplete, hence excluded from analysis. The mean age of the study group was 19.5 years (SD=1.4) ranges from 18 to 21 years. As shown in Table 1, the group was divided based on profession of the parents into group A (at least one parent is a doctor) and group B (parents in other profession). The questions are tabulated in table 2 and responses summarized in Figures 1 – 2 and Tables 3-4.

**Table 1: Composition of the study group (n=89)**

<table>
<thead>
<tr>
<th>Parents’ Profession</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Group A</td>
</tr>
<tr>
<td>Doctors</td>
<td>34</td>
</tr>
<tr>
<td>Business</td>
<td>-</td>
</tr>
<tr>
<td>Engineer and Private</td>
<td>-</td>
</tr>
<tr>
<td>Teacher</td>
<td>-</td>
</tr>
<tr>
<td>Government Employee</td>
<td>-</td>
</tr>
<tr>
<td>Farmer</td>
<td>-</td>
</tr>
</tbody>
</table>

**Table 2: Options of questionnaire**

<table>
<thead>
<tr>
<th>Questions</th>
<th>Options</th>
<th>a</th>
<th>b</th>
<th>c</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selecting the profession Parents’ Desire</td>
<td>Social service</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical syllabus- continuation of plus 2</td>
<td>Respect from Society</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experiments on self</td>
<td>Money</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experiments on cadavers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Examining patients</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experiments with human fluids</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning medicine by</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1) Theory Lectures</td>
<td>Theory Lectures,</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2) Practical Demonstration</td>
<td>Practical Demonstration, Examining Patients, Computer assisted Learning</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3) Examining Patients</td>
<td>4) Interactive learning</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>5) Library assisted learning</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**Table 3: Responses of children of Doctors**

<table>
<thead>
<tr>
<th>Reason for selecting the profession</th>
<th>Medical syllabus-continuation of plus 2</th>
<th>Experiments on self</th>
<th>Experiments on cadavers</th>
<th>Examining patients</th>
<th>Experiments with human fluids</th>
<th>Learning Modes</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>25</td>
<td>11</td>
<td>14</td>
<td>5</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>b</td>
<td>0</td>
<td>4</td>
<td>16</td>
<td>0</td>
<td>10</td>
<td>13</td>
</tr>
<tr>
<td>c</td>
<td>5</td>
<td>56</td>
<td>24</td>
<td>10</td>
<td>11</td>
<td>18</td>
</tr>
<tr>
<td>d</td>
<td>69</td>
<td>29</td>
<td>46</td>
<td>85</td>
<td>72</td>
<td>64</td>
</tr>
</tbody>
</table>
Does parents’ profession influence medical students?

Figure 1: Responses of children of Doctors

Table 4: Responses of the children of Non-Doctors

<table>
<thead>
<tr>
<th>Reason for selecting the profession</th>
<th>Medical syllabus-continuation of plus 2</th>
<th>Experiments on self</th>
<th>Experiments on cadavers</th>
<th>Examining patients</th>
<th>Experiments with human fluids</th>
<th>Learning Modes</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>9</td>
<td>9</td>
<td>12</td>
<td>9</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>b</td>
<td>0</td>
<td>12</td>
<td>26</td>
<td>0</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>c</td>
<td>6</td>
<td>47</td>
<td>20</td>
<td>12</td>
<td>9</td>
<td>24</td>
</tr>
<tr>
<td>d</td>
<td>85</td>
<td>32</td>
<td>42</td>
<td>79</td>
<td>70</td>
<td>67</td>
</tr>
</tbody>
</table>

Figure 2: Responses of the children of Non-Doctors
Discussion

This study was aimed at finding out the students' attitude, motivation behind joining the medical course, their knowledge of medical curriculum, mode of learning, precautions involved in examining the patients among the students who have doctor as parents (group A) and others (group B). There appears to be a large change in the attitude and pre-existing knowledge about the medical profession among the newer generation who select this course.

The motivation for selecting this profession seems to be parents’ desire (19.1%), respect from society (5.6%) and financial gains (75.3%). 75% of group A and 75.3% of group B had the later opinion. Social service was not the reason behind choosing this course. Motivation, commitment, personality, attitudes and traits are considered beneficial at medical school for lifelong learning rather than financial gains (McManus et al., 2005).

The ideology behind selecting medical profession as a carrier has changed drastically over a decade (Ferrinho et al., 2018). Even though medical students of African countries have shown high level of commitment to social service (Ferrinho et al., 2010) their counterparts in Guinea-Bissau still have very high salary expectations.

In the selection process for training medical doctors, a set of criteria have been listed which comprises of communication skills, empathy, flexibility, decision making, honesty, reflective manner, insight about stress management, self management, illness and medicine and global performance. These attributes were graded at the time of interview and selected based on their best performance (Kaiser, 2007).

Majority of the students are of the opinion that the first year medical curriculum is not the continuation of the pre-university syllabus. High percentages of the students are unaware of the fact that experimenting on self and on cadavers is a mode of learning medicine. All the students think that patient examination is not a part of first year medical syllabus. Knowledge of experiments with human fluids is low in all these groups.

The mode of learning medical subjects preferred by majority of the students is,

1) By Theory lectures
2) Practical demonstration
3) Examining patients
4) Interactive learning

Less than 30% of the students are of the view that computer and library assisted learning should be a modality of medical education. Computer and internet usage for medical knowledge and research is increasing among undergraduate and postgraduates as they advance in their course (Unnikrishnan et al., 2008). Use of computer assisted medical education has got the advantage of demonstrating the procedures, understanding the physiological processes occurring in the human body and concept of evidence based learning (Sharma et al., 2006). Though it is presumed that children of doctors’ are better informed about the medical profession than others, in this study it appears that both groups have similar perceptions.

Conclusion

The awareness about medical profession is similar in both students from doctors’ family and non-doctors’. The requirements and qualities should be explained to the students before joining the course itself so that an effective medical training can be imparted.

References


Does parents’ profession influence medical students?


