What Has Shaken the Determination of Medical Students to Become a Doctor?

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The scarcity of doctors is common in underdeveloped countries as well as in some developing and developed countries including Japan, Germany, Australia, Korea, and even the United States of America, indicating that this scarcity has become a global issue. Causes vary from country to country. In China, the causes of this shortage are complicated. Due to increasing violence in recent years against medical staff that endangers the personal safety of medical practitioners, the number of Chinese medical school applicants has decreased greatly. Furthermore, the proportion of students who abandon the health sector is very high. Of roughly 500,000 medical graduate students in all programs, only a small proportion of them chose to enter professional practice in 2012. The high attrition rate of professional practice after graduation has significantly contributed to the scarcity of doctors in China.¹

What are the causes of such attrition? Some argue that the mismatch between medical education and job opportunity is the major cause. It is likely that the mismatch between regional supply and opportunistic demand is an important factor, but change in medical students’ career ambitions may be an even more important cause. It is generally believed that most medical students choose to attend medical colleges because they have a genuine interest in practicing medicine, but the high rate of attrition from medical schools suggests that a change in career aspirations may occur during medical school itself.

To fully understand the precise reasons as to why there is a high rate of attrition of medical students from the health industry, we conducted a cross-sectional questionnaire survey among students in the 8-year program for medicine at Peking University Health Science Center in July 2014. A total of 297 medical students participated in the study, among which, only 32.5% of the students chose “interest” as the major motivation for studying medicine.

We once believed that interest is the major motivation in applying to medical school, but the survey shows that the primary motivation is job security as well as better availability of medical service for family members. Applying to medical school is a result of parental than a student’s own will, which is principally based on parental knowledge of the medical profession. Moreover, Chinese high school students lack social practice before choosing the specialty in university; most students will work immediately after graduation with few opportunities for consideration of career alternatives. The drawbacks of this approach to career choice can be seen in the survey as the major hindering factors for the willingness to become a doctor are lack of interest and heavy burden of instruction for students in Grade 1–3.

Even so, the proportion of students who regret studying medicine is quite low in years 1–2 which is the stage for learning basic courses, fluctuating around 14%. However, it soars to 30–40% when entering the Grade 4, the stage of...
clinical practice. As for final year students nearly at the end of clinical practice, roughly, half are unwilling to continue studying medicine ($P = 0.019$). Thus, the 4th and 8th years of medical school can be considered two turning points for employment tendency. Which factors lead to the reduced willingness to work in medicine at these two points?

The top three reasons for the reluctance to continue studying medicine include high occupational risk (69.1%), less income than expected (39.2%), and lack of interest (33.0%). The high occupational risk becomes the top cause from Grade 4. This phenomenon also shows that more medical students lose their willingness to study medicine after exposure to clinical work, and the major cause is high occupational risk, which is just contrary to the impression that doctor is with high job security. This may be the reason why 4th year becomes the first turning point. In their 8th year, medical students are similar to residents in terms of their work, and 86.7% of them consider doctor as a high-risk work. Besides, the second top cause is “low social status”, and the percentage reaches 53.3%. These two factors together might make the year 8 as the second turning point.

The situation might be improved in two key ways. The first potential solution is to introduce a new manner that is more efficient in selecting students who have more motivation in the medicine study. That is the switching from “motivation by selection” to “selection by motivation”.[2] The American model that a bachelor degree is required for medical school applicants might be a potential option. The proportion of medical students who abandon the sector may be reduced, and high-quality talent with strong willingness to be doctor may rejoin and invigorate the health sector. Greater experience within social practice in high school will likely benefit career selection.

The second potential solution is to continue deepening health-care reform in China so as to secure job safety, improve the social status and work environment. As is shown by the survey, most medical students believe that policy change is a must to make the situation better and show their confidence in the reform as well as the choice for health sector.[3]

And what is the third solution? Similar situation appears in the shortage of general practitioners (GPs) noted in many countries around the world, while the students’ desire might be the most important factor. Results from a cross-sectional, correlational study among teaching GPs of University of Bern and the 4th year medical students indicate that medical students’ perception of their GP teachers’ job satisfaction positively affects their wish to become GPs, and their satisfaction with their internships adds to this.[4]

Back to our survey, 38.2% and 36.8% of students chose their supervisor and supervising doctor during the rotation as those who have influenced their choice, which provides a similar perspective to that of students of University of Bern. Therefore, the improvement in the work environment of in-service physicians, especially those in medical school’s teaching hospital, might be helpful in keeping medical students committed to health.

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There are no conflicts of interest.

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