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National Report

The Trend of Governmental Support from Post-Graduated Iranian Students in Medical Fields to Study Abroad

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Abstract

Background: To explore the trend and composition of post-graduate Iranian students who received governmental scholarship during the last two decades.

Method: Detailed information about the awarded scholarships and also about the number of post graduate students in clinical and basic sciences in domestic universities were collected from the related offices within the ministry of health and medical education and their trends were triangulated.

Results: A sharp drop was observed in the number of awarded scholarships, from 263 in 1992 to 46 in 2009. In the beginning, almost all of scholarships fully supported students for a whole academic course; while in recent years most of scholarships supported students for a short fellowship or complementary course (more than 80%). Students studied in a wide range of colleges within 30 countries; more than 50% in Europe. Although one third of students studied in UK in the first years, only 4% of students selected this country in recent years. conversely, the number of scholarships to Germany and sweden have increased more than 10 and 3 times during this period. In parallel, the capacity of domestic universities for training of post-graduate students has been expanded dramatically.

Conclusion: Although expanding post-graduate education has been one of the main strategic objectives of the ministry of health and medical education in last two decades, it was obtained using different approaches. By time, more attention was to expanding the capacities of Iranian universities, and choosing less but more targeted students to continue their studies abroad.

Keywords: Scholarship, Abroad, Post- graduate, Iran

Introduction

Production and utilization of knowledge and sciences is one of the main components of the technological and economic development. Due to the importance of the exchange of science especially in the last century, many countries and academic institutions spent much of their efforts to support eligible candidates to continue their studies abroad (1).

Expansion of universities and research centers has had a very sharp acceleration during recent decades in Iran. As the results of this expansion, a significant increase was recorded in the number of post-graduates in different fields. Nowadays, Iran has one of the highest acceleration rates in scientific productions in the world (2). It indicates that it is inevitably necessary to change the education and research system along with the global evolution (3). This achievement requires promotion of international scientific relationships such as student exchange (4).

In the early 1970, Iran supported many students to study abroad much more than the other countries in the region. Initially, Britain and Ireland were the most popular destinations (67%) (4). The

main reasons for choosing these countries were 1) acceptable English skills of Iranian students comparing to the other languages, 2) obtaining easy acceptance from these countries, and 3) restrictions for Iranian students to get acceptance from universities in the USA and Canada (5).

Although support of students to study abroad has many advantages, it absorbs much of resources because of its direct and indirect costs. For instance, only the living and educational expenditures of Iranian students attended in UK during 1995-2001 was about 70 million pounds.

In the same time, some of students faced with dramatic personal of familiar experiences mainly because of cultural differences, troubles in communication, and even political barriers. Also, a group of students might change their plan to return; which is an immense waste of human and financial recourses form the national point of view (4), however the recent evidences indicate that such a phenomenon is not considerable among Iranian students.

One of the main objectives of the Iranian Ministry of health and medical education in the first years of establishment was to increase the number of scholarships; while in recent years, improving the quality of scholarships compatible with real national needs is its main objective (6).

Unfortunately, there is little available published information about the national policy of Iran on this issue. Therefore, in this paper, we reviewed and explored relevant statistics in Iran to show the trends of the number of post-graduated Iranian students.

Methods

We collected our data from different sectors and departments within MOHME. All information was provided by the authorities within the ministry and their validities were confirmed officially.

The number of awarded scholarships by students in medical fields in last 20 years was our main variables. We assessed the trend of this number classified by their fields and destination countries. In the same time, we collected the trend of accepted students in post-graduate programs in domestic universities in medical fields to compare these two trends. All of these personal identifications were masked in advance for privacy issues.

In order to facilitate the analyses, courses were classified as follows:

1) Full post-graduate course in clinical fields in domestic universities or abroad
2) Short fellowship (less than one year training) in clinical fields in abroad
3) Full post graduate scholarship for PhD candidates to studies in domestic universities or abroad
4) Complementary course for PhD candidates in domestic universities to study for a short period of time abroad

Before the analysis, the internal consistency of collected information from different sources was re-checked; any discrepancies were re-evaluated by the authorities. The collected data were compiled using MS-excel. Having checked cross-validities, qualitative and quantitative analysis of the data was done by triangulation of different pieces of information.

Results

Totally 2530 students received scholarships during 1983-2009 from MOHME to continue their studies in 120 different fields in overseas universities (table 1).

Table 1: Number of governmental supports in different educational courses during 1983-2009 to study abroad in medical fields

Level	Number of scholarships
Full post-graduate course in clinical fields	144
Short fellowship (less than one year training) in clinical fields	600
Full post graduate scholarship for PhD candidates	1002
Complementary short course for PhD candidates in domestic universities	651
Total	2530

The number of awarded scholarships varied from 24 in the 1983 to 263 in 1992, which was the highest annual number of scholarships, and decreased to 46 in 2009 (fig 1,2).
Although almost all of these scholarships supported students for a full post graduate academic course in 1983, in 2009 only 17.4% of students received such a governmental support. Post-graduate scholarship in clinical fields was 91.6% and 4.3% in 1983 and 2009 respectively. This percent for full post-graduate clinical courses decreased to zero from 2005. Also in recent years, nobody received any support to study as a medical or master student abroad. On the other hand, in the recent years, more than 80% of scholarships supported students for short fellowships in clinical fields, or complementary courses for PhD candidates who were studied in Iranian universities and colleges (Fig. 1).

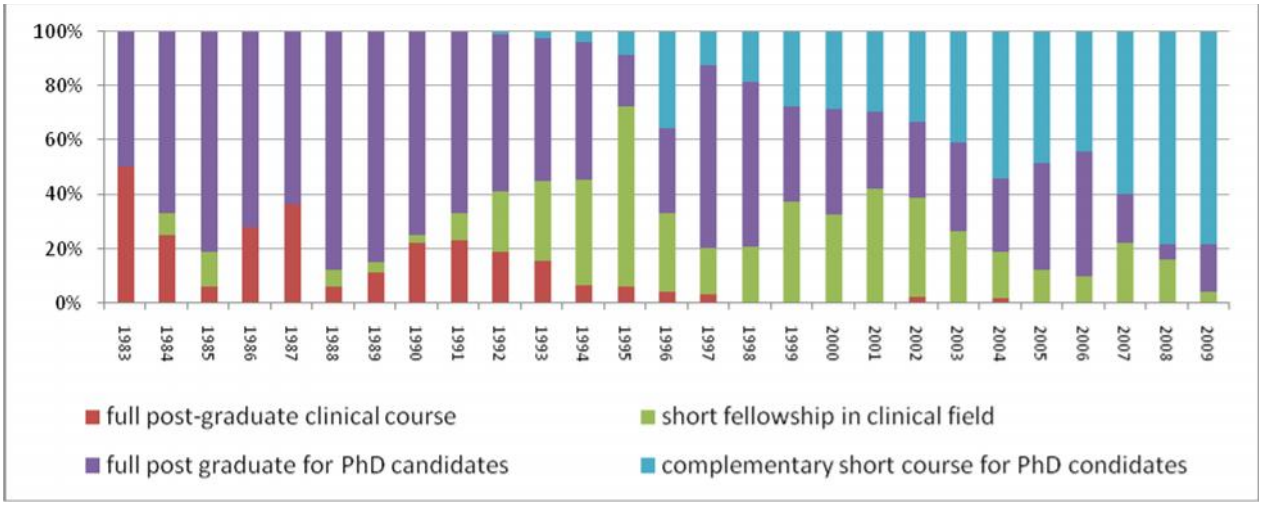

Fig. 1: Trend of scholarships in different levels during 1983-2009 from students to study abroad in medical fields

The maximum numbers of full scholarships for a whole course in abroad were in Physiology (52 students), pharmaceutics (48 students), epidemiology (43 students), and immunology (39 students). In the clinical fields, the maximum number belonged to emergency medicine (19 students).
Students selected a wide range of countries for their studies abroad (30 countries). In average every year students selected 16 countries (ranged from 14 to 19 countries). However, the pattern of countries had significant changes over time. In the beginning, 58.8% of students selected European countries mainly UK (33%). While in recent years the corresponding percents were 76.5% and 4% respectively. However, there are exceptions, for example 1% of students selected Germany in 2001 while this percent was 17% in 2009. Moreover, proportion of scholarships for Northern American Universities (USA and Canada) decreased from 37.8% to 2.8% during that period of time. (Fig. 2).

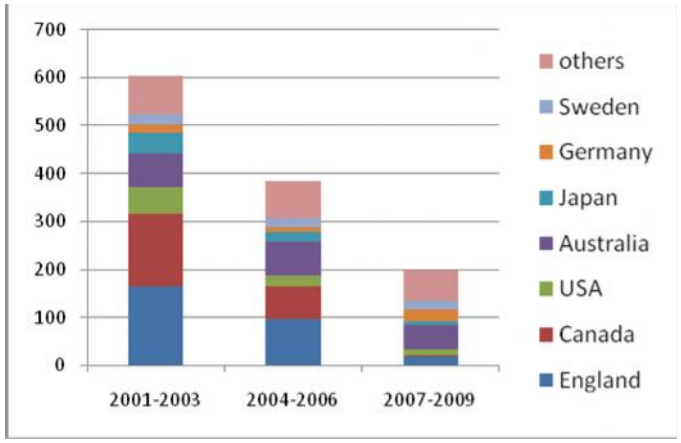

Fig. 2: Trend of scholarships classified by destination countries between 2001 and 2009 in medical fields

During this period of time, a group of students requested to swap their supporting scholarships from study abroad to studying in Iranian universities. This number was 6 between 2001 and 2003, while it was 19 in recent five years.

The capacity of Iranian universities for training post-graduate students in clinical and non-clinical courses was increasing considerably. In 2001, their capacities were 5753 and 660 in clinical and non-clinical fields respectively, while in 2009, the corresponding numbers increased to 10741 and 2900 respectively (Fig 3).

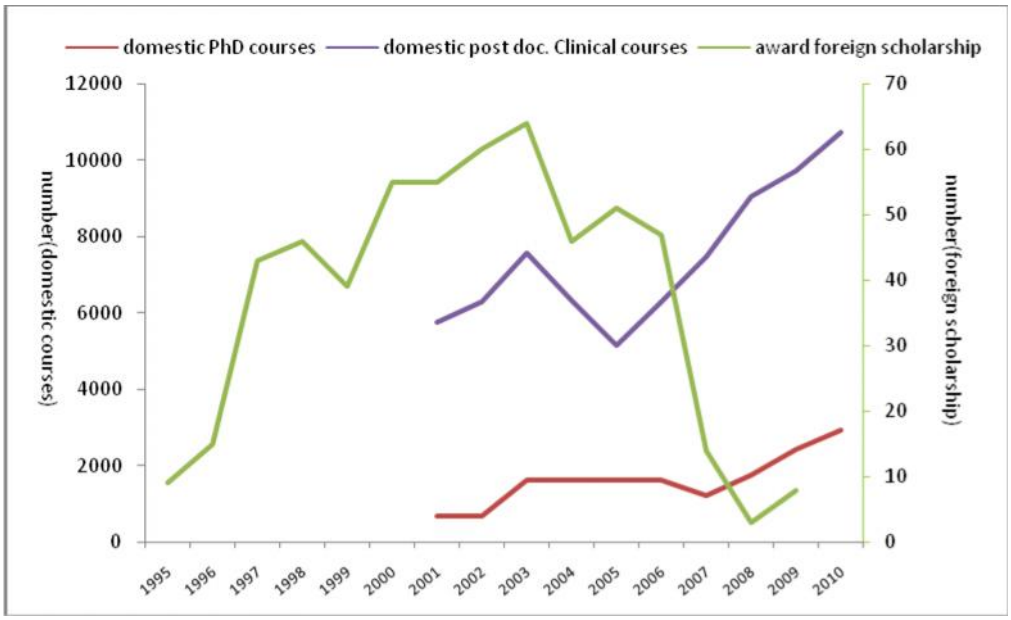

Fig. 3: The number of students in clinical and non-clinical post-graduate courses supported by MOHME in domestic (left axis) and overseas(right axis) universities

Discussion

Governmantal supports from students to study abroad is one of the main influencing factors for the scientific progress. In this regard, the selection of eligible candidates for the most needed fields is fundamental. In the same time, attention to the expantion of domestic capacties for training post-gratuate students is also important.

The maximum number of supports for studying abroad awarded scolarships between 1992 and 2002; but it decreased considerabley more than 80% until 2009. Overall, the number of non-clinical supports was considerably greater than that in clinical ones. Moreover, the proportion of full supports for the whole course was much higher two decades ago comparing to that in recent years; in reverse, short fellowship and complementary courses have had an increasing trend.

In addition, the capacities of Iranian unversities and colleages have been expanded significantly in recent decades in both clinical and non-clinical fields.

Just after the revolution, the shortage of expertees and humancapacities in Iran was obvious. In the same time, the country aimed to establish strong domestic universities to speed up the growth of national research and scientific products (7), particulalry with a new attention to remote areas and marginalized subgroups.. In this way, most of the needs were addressed by supporting eligible candidates to find a place in universties abroad to obtain requried knowledge and skills. This shortage was so appalling, in which forced the government to support even students to study

medicine or masters in early 80s. In addition, the new government did not have any solutions except to continue some of the pre-revolution policies in short-term to minimize the impact of any fast changes.

Although a wide range of courses (around 120 fields) were supported by the govermnet in medical sciences in recent decades, most of students were concentrated in less than 20 fields which were the most needed ones such as cellular and molecular biology, research methodology and public health sciences.

However, after a transitional phase, a sharp drop in the awarded scholarships for studies in overseas countries occurred, parallel with a remarkable increase in the capacity of domestic universities and research institutions for training post-gratuate students(8). Moreover, considering the establishment of research based education system in more than 100 research centers around the country in recent years, it is expected that this increase would be more prominent in near future.

It should be noted that this growth was pushed towards the needs of the country, although still unmet needs exsists.

More reduction in the govermental support for education in clinical courses compare to non-clinical ones especially complete and long scholarship was partially due to more limitations for obtaining acceptance in clinical fields; most of countries have restricted regulations for medical staff, therefore Iranian students have to pass different steps before receiving premission to work in clinical settings. Moreover, because of the nature of clinical practice, more advance language skills are needed for an effective communication with patients, which is another barrier for most of Iranian students. (5-6). It should be mentioned that Iranian students who studied in clinical fields showed less tendency to come back (4), which might be another reason for the system to support less students to continue their studies in clinical courses. While these students within Iranian hospitals provide services during their studies; therefore, they can efficiently improve the quality of cares even before graduation.

On the other hand, the government increased the awarded scholarships to support students in basic sciences in recent years. Recent very fast progress of sciences in the world generates many new fields for studies and research (9-10). In addition, new models for training PhD condidates is implemented in academic setting (11), although still thought course base is the dominent model in Iran (12); from 2009, research based PhD training model is also accepted by the higher educational system of Iran (13). Because of the fast expantion of the basic sciences and a real need to obtain more expriences about different training models (12,14), the system increased its supports from PhD students to countine their studies abroad.

No considerable variety was observed in the number of destination countries over time, but their pattern varried significantly . In past, Britain, Canada, Australia and the USA were the main destinations for Iranian students, mainly because of their formal languages which was English. However, gradually students and the system chose more different countries such as Germany, Sweden. Political barriers were the main reason for the deseasing trend of Iranian students in UK and the USA. It should be mentioned that the scientific production of Iranian students in different parts of the world were more or less comparable, but the return rate of students from north American countries was lower than the other parts of the world (5).

Based on the above explanations, it seems that the main factors causing above changes are as follows:

1. Expansion of domestic capacities with successful reforms and qualitative upgrading of post graduate education (2,8).
2. Revising rules and regulations of higher education system in Iran
3. More attention to research in long-term national plan
4. Creating different training schemes within Iranian universities(13)
5. Political barries and conflicts of Iranian students abroad (6)
6. Natinal goal for less dependency to other countries mainly developed ones (7)

In conclusion, although the improvement of the quality and quantity of post-graduate education has been one of the main strategic objectives of MOHME, based on the national long-term development plan, different approaches in last two decades were taken. By time, more attention to the expanding of the capacities of domestic universities and research centers, and choosing less but more targeted students to continue their studies abroad are the main changes. However, more precise management and supervision is recommended to set a balance between the scope of education inside and outside of Iran based on the real needs in order to avoid wasting the national resoruses and exchanging knowledge in the most efficient way.

Ethical considerations

Ethical issues (Including plagiarism, Informed Consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc) have been completely observed by the authors.

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The authors declare that there is no conflict of interest.

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