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Letter to the Editor

Medical Elite Migration in Iran: Transforming Brain Drain into Brain Gain

Zeinab Khaledian [1,2], ****Maryam Tajvar*** [1], ***Elham Ehsani-Chimeh*** [3]

1. *Department of Health Management, Policy and Economics, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran*
2. *Department of Health Service Management, Se.C., Islamic Azad University, Semnan, Iran*
3. *National Institute for Health Research, Tehran University of Medical Sciences, Tehran, Iran*

***Corresponding Author:** Email: mtajvar@tums.ac.ir

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Dear Editor-in-Chief

Health professionals training in Iran occurs at 73 "Medical Sciences Universities", under the Ministry of Health and Medical Education. It serves as the official authority for healthcare services and the major body for administering medical sciences education. The World Health Organization (WHO) has recognized Iran's national health system as a regional model, influencing countries such as Saudi Arabia. Despite achievements in medical education and healthcare, Iran's health system faces significant challenges, particularly regarding human resources. A pressing issue is the substantial migration of students, professors, and healthcare workers, which adversely affects healthcare service provision and medical education (1).

The emigration of health professionals, referred to as "medical brain drain", represents a global healthcare crisis characterized by mass migration from low-income to high-income countries. Iran, as a developing country, has experienced a significant exodus of health professionals and trained youth, leading to various short- and long-term consequences. While precise migration rates for Iran's health workforce across job categories are unavailable, studies indicate a notable upward trend. According to WHO reports, Iran ranks seventh in doctor migration, with rates to 35 OECD countries increasing by 40% from 2000 to 2017 (2). Studies on migration intentions among healthcare workers in 2021 and 2023 revealed that 54% and 86% of participants, respectively, expressed a high or very high desire to migrate. In 2023, 62% were willing to accept non-specialized and lower-level jobs abroad (3). The number of Iranian students studying abroad rose from 19,000 in 2003 to 56,000 in 2018. Over the past three years, voluntary migration of educated specialists has resulted in the departure of more than 4,000 doctors and 311,000 postgraduates. A 2023 review study reported that 6.13 out of 10 medical students expressed a desire to migrate (4).

Human capital is a vital source of wealth, particularly in developing countries and a cornerstone of socio-economic, and cultural development. The migration of academic staff and health researchers results in the loss of this capital, creating challenges in research, innovation, and training future professionals necessary for sustainable development (5). This phenomenon undermines the scientific production and economic foundation of origin countries, leading to decreased creativity

and a shift towards sustainable poverty. The departure of experienced clinical staff (doctors, nurses, midwives) and newly graduated students wastes valuable time and financial resources invested in medical education, exacerbates inequalities in workforce distribution, and disrupts service provision, ultimately diminishing quality and effectiveness.

It limits the ability to attract external resources and implement international programs, increasing workload and destabilizing the health system (1, 4). Policymakers and stakeholders have adopted strategies to mitigate this trend, including laws to restrict job migration, tax exemptions for critical health positions, updated policies to attract scientific elites, increased research funding, revised salary and working hour regulations, and enhanced welfare incentives such as housing and relocation support for rural areas. Furthermore, policies encouraging the return of elites are also being developed.

In the current global economy, "brain drain" has transformed into "professionals' mobility," "brain circulation," and "brain gain". The migration of medical elites also creates opportunities. Human resource policies must be refined based on global experiences and evidence. Today, the labor market extends beyond geographical boundaries, with countries competing for skilled labor while employees seek favorable working conditions. Thus, a strategic "optimal workspace-optimal employees" approach should be adopted in management interventions. Comprehensive, multifaceted interventions are needed to address migration trends, while also leveraging changes in care and education models to turn threats into opportunities.

The healthcare sector is rapidly expanding within the global economy, with advanced technologies like the online collaboration platforms, telemedicine, professional social networks, artificial intelligence and machine learning facilitating swift communication among specialists. These enable the sharing of clinical, research, and educational experiences, online patient consultations, and the establishment of effective support networks in medical sciences. Health professionals in developed countries can significantly support developing nations, and it is crucial to find ways for immigrated professionals to assist their countries of origin. Leveraging the budget, infrastructure, and support of the destination country and the international community enhances the ability to produce knowledge, acquire technical skills, and create value.

The limitation of resources and delays in accessing them in countries of origin, turn the presence of elites in developed countries into the valuable opportunity for international cooperation and recovery of lost investments. Technological advancements enable the creation of online, and hybrid educational programs, joint research initiatives, software development, health dashboard design, and the localization of knowledge for targeted health interventions. Cultural initiatives, including festivals, joint scientific relations, and opportunities for Iranian immigrants to visit Iran and share experiences, can also be advantageous. Furthermore, these experts can participate in high-tech training programs, such as diagnostic and surgical intervention training, providing significant educational benefits. Foreign immigrants remit substantial funds annually, which can be reinvested in their countries of origin. Implementing legislation to manage remittance revenues and allocate a portion to research and development of health science infrastructure can yield significant benefits. Successful implementation of these proposals necessitates the commitment of health system managers at both national and international levels.

Conflict of interest

The authors declare that there is no conflict of interests.

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