Emigration of Medical Personnel from Tajikistan Abroad: Causes and Consequences
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Abstract
The article examines the brain drain as a process of emigration of qualified specialists from Tajikistan, the reasons for the outflow of Tajik doctors from Tajikistan, the scale and resettlement of Tajik doctors abroad. As well as the consequences of medical emigration for Tajikistan and the author’s recommendation on the preservation and involvement of Tajik doctors in Tajikistan. After gaining independence, the main types of emigration from Tajikistan were labor emigration. But the economic deterioration of Tajikistan is forcing highly qualified citizens of the republic to migrate.

The beginning of the outflow of emigration of highly qualified citizens of Tajikistan is associated with the outbreak of the civil war in the republic, when most of the Russian engineers, doctors, teachers, as well as skilled workers in the industrial sector began to leave the country during the outbreak of the war. During the civil war, Russia and Kazakhstan became the main channels of emigration of highly qualified citizens of Tajikistan.

But in recent years, among the highly qualified citizens of Tajikistan, medical personnel have begun to migrate the most. The main areas of migration of medical personnel from Tajikistan is Russia. Low wages in the country are among the main reasons for the emigration of doctors from Tajikistan.

Although the Government of Tajikistan is interested in the emigration of Tajiks abroad, since half of the country’s GDP is made up of migrant remittances, Tajikistan will receive more negative consequences from the emigration of medical personnel than income, since the health of the population of Tajikistan depends on medical personnel.

The purpose of the article is to identify the factors and scale of emigration of medical personnel from Tajikistan, as well as the consequences of emigration of medical personnel on the socio-economic development of Tajikistan.

Keywords: medical personnel, Tajik migrants, Russia, Tajikistan, highly qualified specialists, brain drain, wages, Central Asia.

Introduction
The first wave of migration from Tajikistan occurred in the early 1990s (Ulmasov, 2012). Then, after the collapse of the USSR, about half a million residents left the republic in a decade. These were mostly Russian-speaking citizens who went to Russia for permanent

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residence. The second wave of emigration began in the mid-2000s and continues to this day (Rakhmonov, 2022).

Now the country is being left by representatives of the titular nation. Some go to the USA and Canada, some move to Europe, but most people choose Russia (Rakhmonov, 2020). Low-skilled citizens migrated mainly from Tajikistan, but internal factors (low wages, civil war, high inflation, information factors, etc.) and external factors (high wages, asylum, the policy of foreign countries to attract qualified citizens, etc.) led to the emigration of highly qualified citizens of Tajikistan.

If in the early years of independence, mainly Russian-speaking specialists left Tajikistan (Kuddusov, 2004), today residents with scientific degrees and promising young people are leaving it. The country is facing a shortage of personnel in education, healthcare, and industry.

Back in 2010, the country adopted the "Concept of attracting foreign compatriots as partners in the development of the Fatherland" (Khoperskaya, 2016), but economic problems do not allow Tajikistan to implement programs for the return of specialists. The country is also undertaking several "return academic mobility" measures. Among them is the presidential scholarship "Durakhshandagon", the participants of which study at foreign universities and research institutes with the condition of returning to Tajikistan.

**Results and discussion**

Brain drain as a process of emigration of qualified specialists from Tajikistan.

In recent years, the "brain drain" or migration of education and health professionals abroad has become an urgent topic in Tajikistan (Olimov, Grote, Gharleghi, 2020). Thousands of talented and educated people have left the country in recent decades. This process is still ongoing, the consequence of which is great moral and intellectual damage that hinders the sustainable development of the country (Rakhmonov, 2022).

The main reason for the brain drain from Tajikistan is considered to be low wages and benefits in the host countries. In addition to extremely low wages, the main causes of brain drain are high unemployment. For example, according to the LFS, the unemployment rate in Tajikistan was 8.4% in 2004, and in 2009, under the influence of the global crisis, it rose to 11.5%\(^3\). For 2020-2022, the average unemployment rate in Tajikistan is 7.7%\(^4\).

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\(^3\) Kuddusov J. The labor market as a mirror of the Tajik economy. // Asia-Plus. [Electronic resource] Available at: https://asiaplus.tj/info/ru/news/tajikistan/economic/20190117/rinok-truda-kak-zerkalo-tadzhikskoi-ekonomiki (Accessed: 15.03.2023)

Emigration of Medical Personnel from Tajikistan Abroad: Causes and Consequences

Figure 1. Statistics of emigration of qualified citizens of Tajikistan for 1991-2019, thousand persons.

Source: compiled based on “Asia-Plus” data.

From 1991 to 2010, 266 thousand specialists in various fields, especially in health and education, left the country (Fig. 1). The reasons for the high level of emigration of qualified citizens of Tajikistan during the period 1991-2010 are primarily related to the civil war in the country, which lasted from 1991 to 2003, and with its consequence.

In 1991-2010, 17 thousand educational workers, 25 thousand healthcare professionals, 162 thousand industrial workers, 40 thousand transport and communications workers, 22 thousand specialists in the field of science and scientific services, culture and art left the country and the number of workers in these fields decreased by the same amount (Fig. 1).

In 2013-2019, about 25 thousand qualified citizens of Tajikistan left the country, more than 60% of whom are young people and specialists in science, education, and health (Fig. 1).

The departure of talented personnel from Tajikistan leads to further destruction of the potential of institutions in the field of education and health, and therefore it is advisable to adopt constructive plans and programs (Abdulloev, 2013).

The reasons of the outflow of Tajik doctors from Tajikistan

Tajikistan has become one of the countries with a high level of outflow of highly qualified specialists abroad (Mirov, 2020). According to the German organization GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit), the indicator of migration and "brain drain" in the country on a ten-point scale is 6.1. This figure includes not only the migration of low-skilled workers, but also the outflow of valuable specialists abroad.

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Among the highly qualified citizens of Tajikistan, in recent years, health care workers have begun to leave Tajikistan most often. Among the main reasons for the emigration of a doctor is considered:

1. Low wages.

Unworthy wages are perhaps one of the main problems in Tajik medicine, doctors' salaries remain the lowest in the country. For example, in 2018, the salary of a young doctor working in a hospital at one rate was 593 somoni (slightly more than $60). In health centers, the rate is slightly higher, it was 730 somoni (about $80)⁷. The salary of a doctor of the highest category in a hospital is 810 somoni (about $90), and in health centers or first aid centers – 998 somoni ($105)⁸.

The problem of meager salaries of doctors is added by the lack of housing conditions and at least partial benefits. Mostly, it is difficult for young specialists. Their salaries are not enough to provide for their family.

Among the Central Asian countries, the lowest salaries of doctors are in Tajikistan (Fig. 2). Salaries of doctors in Tajikistan are 6.5 times lower than in Kazakhstan, and almost 2 times lower than in Kyrgyzstan (Fig. 2).

![Figure 2. Salaries of doctors in Central Asian countries for 2023, US dollars.](https://databank.worldbank.org/)


The lack of decent earnings forces doctors to look for alternative ways to earn income, they do not have enough time for patients and self-development, which, of course, affects the quality of their work.

2. Underfunding and corruption.

From year to year, the figures of budget spending on the health sector are increasing. So, in 2021, a little more than 2.3 billion somoni were allocated to this area, in 2020-1.8 billion somoni. In 2022, this amount amounted to more than 2.8 billion⁹.

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⁷ The leaving of doctors from Tajikistan has becomes a national disaster. [Electronic resource] Available at: https://dzen.ru/a/W2ku1r0hYwCoDTpL (Accessed: 11.08.2023)

⁸ The leaving of doctors from Tajikistan has becomes a national disaster. [Electronic resource] Available at: https://dzen.ru/a/W2ku1r0hYwCoDTpL (Accessed: 11.08.2023)

However, given inflation and the depreciation of money, the increase in spending on the industry is only a nominal indicator. The sphere remains underfunded and privatized.

Over the past few years, the health budget has barely stretched by 1.8–2% of GDP, while most of the funds are spent on salaries for medical staff\(^{10}\). According to this indicator, Tajikistan ranks last among the countries of Central Asia (Umaraliev, Khetagurova, Bryukhanova, 2015). Accordingly, everything related to treatment is covered by the population itself.

Due to low funding, doctors' offices are not equipped with the appropriate equipment, there are no consumables, necessary drugs, and medicines. Creating normal working conditions for oneself, including repairing offices, remains a headache for doctors themselves.

Insufficient financing of the healthcare sector has long turned this area into an informal system of unaccounted-for corrupt payments when doctors turn into "corrupt officials" and patients into "criminals" by making illegal payments. People buy "free" certificates, "put them in their pocket" for the services rendered and pay for the good location of the medical staff.

In addition, Tajikistan still lacks a program of mandatory free medical care and insurance coverage for the poorest and most vulnerable segments of the population, as well as for all other categories of the population.

3. **Bureaucracy and administrative burden.**

Another, no less acute problem in Tajik medicine remains excessive bureaucracy and additional workload of doctors. In addition to their direct duties to treat people, doctors are busy with daily reporting, constant inspections, and social workload, and sometimes with clean-up days.

And this is not counting the fact that other duties are imposed on the family doctor: personal responsibility for the patient, night shifts, and during the pandemic, also immunoprophylactic measures, phone calls and house-to-house rounds.

In contrast to the excessive workload of doctors, the activities of nurses, on the contrary, are quite limited. If abroad, for example, they represent a real driving force, then in Tajikistan, nurses are mainly engaged in filling out paperwork and other routine work.

**The scale and settlement of Tajik doctors abroad**

Every year, a part of the population of Tajikistan leaves for labor migration around the world (Safarova, 2020). But in recent years, migrations of highly qualified citizens of Tajikistan have begun, mainly medical specialists (Olimov, 2020).

In 2020, the number of doctors in the Republic of Tajikistan amounted to about 21 thousand people (Fig. 3). The provision of doctors per 10 thousand population is 22. The number of secondary medical personnel amounted to 60 thousand people. The provision of secondary medical personnel per 10,000 population is 63 (Fig. 3).

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\(^{10}\) What are the challenges facing Tajik medicine. [Electronic resource] Available at: https://e-cis.info/news/566/112024/ (Accessed: 17.06.2023)
The number of dismissed doctors in Tajikistan is growing annually (Figure 4). According to the Ministry of Health of Tajikistan, in 2015-2021, an average of 1,288 doctors were dismissed from their jobs annually (Figure 4). The big peak occurred in 2021, when the number of dismissed doctors in Tajikistan amounted to 1,656 people.

Note: The Ministry of Health of Tajikistan refers to the “dismissal" of doctors, including emigration, retirement, death and change of place of work.

In 2021, of the total number of dismissed doctors, about 41% (674 people) of them left Tajikistan and went abroad (Figures 4, 5).
In 2021, the emigration of doctors from Tajikistan increased 4 times compared to 2020. According to the Ministry of Health of Tajikistan, in 2021, about 65% of the total number of emigrated doctors were experienced doctors. The share of young doctors during the same period was 35% (Fig. 6).

Russia is the main areas of emigration of doctors from Tajikistan. The main channel of emigration of Tajik doctors in Russia is emigration within the framework of the program of voluntary resettlement of compatriots. Large queues of those who want to move to Russia line up daily at the building of the representative office of the Federal Migration Service of the Russian Federation in Dushanbe.
According to Roszdravnadzor, in 2022, more than 1.1 thousand Tajik citizens applied for certification of medical and pharmaceutical diplomas. This confirms that Russia remains the main migration destination for Tajik doctors.

Consequences of medical emigration for Tajikistan

The consequences of medical emigration can be considered the worst emigration of all specialties in the world since the health of the country's population depends on medical specialists (Ryazantsev, Rakhamonov, 2023). The migration of qualified medical personnel has a certain impact on the effectiveness of the national health system, expressed mainly in the shortage of doctors of certain specialties and the regional shortage of medical personnel, mainly in rural settlements.

Among the main consequences of the emigration of Tajik doctors for Tajikistan are:

1. Economic consequences

The consequences of the emigration of highly qualified citizens have greatly affected the economy of Tajikistan (Rakhamonov, Ledeneva, Akramov, 2023). Calculations based on the UN methodology show that when one specialist leaves the country, the state is damaged in the amount of 300 thousand dollars (Lebedeva, 2014). So, it turns out that from the departure of 266 thousand specialists (Fig. 1), Tajikistan suffered damage in the amount of 79 billion 800 million dollars. It has a negative impact directly based on improving the knowledge and skills, intelligence, and future education of the country's citizens. The main share of the brain drain is in the field of medicine, and tens of thousands of Tajik doctors are now working in Russia and using the benefits of this country.

The outflow of specialists causes direct and indirect damage to the country's budget (Murakami, Yamada, Sioson, 2021). Direct losses are calculated by the amount that the state has spent on training people. In addition, the budget is deprived of potential taxes. According to economist Behrouz Himo, "The state is also losing resources from attracting more expensive foreign specialists and citizens traveling abroad to receive paid services that could be available to them inside the country". Indirect budget losses amount to tens of thousands of US dollars for each qualified specialist who leaves.

According to Ravshan Abdullayev, Director of the Dushanbe representative office of the Eurasia Foundation: "A good specialist costs at least 500 thousand dollars, taking into account the investments that were made from the moment of his birth until he received a high qualification. A professional is looking for opportunities to realize his human capital".

Currently, about $10,000 is spent from the state treasury to train one specialist who has been studying for six years at a budget place at Ibn Sino State Medical University. It takes at least 15 years for a doctor to gain enough experience and develop as a specialist.

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14 Rybin A. The departure of doctors from Tajikistan has turned into a national disaster. [Electronic resource] Available at: https://fergananews.com/article.php?id=10105 (Accessed: 30.09.2023)
But even these deadlines are not met by many people – doctors flee abroad at the first opportunity. To Russia, first of all.

2. There is a shortage of doctors throughout Tajikistan.

According to the Department of Health of Sughd region, as of April 1, 2018, there were 740 doctors in 36 specialties in northern Tajikistan. First of all, we are talking about family doctors, anesthesiologists, infectious diseases specialists, psychiatrists, narcologists and epidemiologists. According to the standards, one family doctor is assigned to 1,500 people, and for every 700-800 citizens, one middle-level medical worker. However, there are not enough staff, so in reality one family doctor serves 7-8 thousand people. The shortage of family doctors is especially acute in rural and mountainous areas.

Figure 7. Statistics of the shortage of doctors and nurses in Tajikistan for 2023, persons.

Source: compiled by the authors based on data of “Asia-Plus”

In 2023, according to the Minister of Health and Social Protection of the Population of Tajikistan, the country lacks about 2,000 doctors and 400 nurses (Fig. 6). Most of all, there are not enough doctors in the Khatlon and Sughd regions of Tajikistan, where about 65% of the country’s population lives in these areas.

Mass departure of health workers for labor migration occurs, especially from the regions of the republic, where there is already an acute shortage of them (Fig. 6). In 2022, according to the Ministry of Health of Tajikistan, there were 2,960 doctors and 1,340 nurses in the country.

15 There are not enough doctors and nurses in Tajikistan. [Electronic resource] Available at: https://tj.sputniknews.ru/20230809/tajikistan-nekhvatka-vrachi-medsestry-1058721918.html (Accessed: 16.05.2023)
16 The salary of most workers in Tajikistan was less than $100. [Electronic resource] Available at: https://fergana.agency/news/104394/ (Accessed: 13.07.2023)
17 "To the hospital 40 km away.” Residents of the Tajik hinterlands do not have access to medicine. [Electronic resource] Available at: https://centralasia.media/news:1549878 (Accessed: 07.09.2023)
3. Medical error is the reason of the decline in the quality of medicine in Tajikistan. Recently, cases have become more frequent in Tajikistan when medical errors and unprofessionalism of medical workers lead to the death of people. For example, in early 2023, for the first time in Tajikistan, in Khujand, a woman gave birth to six children at once. But the day after their birth, the babies died, according to the Ministry of Health, technical errors were made during childbirth. Another case that became public occurred in Isfara. An entire family was poisoned, including two young children. Doctors at the local hospital were unable to make a diagnosis for three months, because of which one of the family members died.

These are only recent cases and those that have become public due to their publicity on social networks.

The following indicators also show what is happening to Tajik healthcare due to the lack of qualified medical workers. According to the Prosecutor’s Office of the Sughd region of Tajikistan, over 240 infants under the age of 1 died in three months of 2017, three women died during pregnancy and childbirth. In 2016 and 3 months of 2017, 3 criminal cases were initiated against doctors involved in the death of a woman in labor or a newborn child.

According to the World Health Organization (WHO), an average of 65 maternal deaths and 43 deaths among children under the age of 5 occur annually in Tajikistan for every 100,000 births. Moreover, the maternal mortality rate has not changed since the 1992-1997 Civil War ended in the country. During the war, more than 300 maternal deaths occurred per 100,000 births per year (Ahmed, 1994). It is clear that during the war the state could not seriously improve these indicators, the country was on the verge of a humanitarian catastrophe. But the war ended more than 20 years ago.

Recommendation of authors on the preservation and involvement of Tajik doctors to Tajikistan

To bring and preserve the research of physicians in the first article of the ruler of Tajikistan:

1. To increase the salaries of medical workers, where doctors’ salaries are scanty in Tajikistan compared to other Central Asian countries.

2. To increase the financing of the medical field. Financing of medicine in Tajikistan remains at an extremely low level. For example, in the spring of 2017, Minister of Health Nasim Olimzoda admitted that $10.3 is allocated per cancer patient per year. However, in the same year in Bobojdongafurov district, only 5,000 somoni ($552, less than $1 per person) were allocated from the budget for 642 patients with

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21 Muhammadrajab M. Sogd is sounding the alarm: 240 cases of infant mortality in three months. [Electronic resource] Available at: https://rus.ozodi.org/a/28465668.html (Accessed: 09.09.2023)


23 Rybin A. The departure of doctors from Tajikistan has turned into a national disaster. [Electronic resource] Available at: https://fergananews.com/article.php?id=10105 (Accessed: 30.09.2023)
oncology, and a similar situation developed in other cities and districts of Sughd region. According to the minister, there were eight mammographs in the country at that time\(^{24}\).

Due to the lack of funding in Tajikistan, the cost of repairing medical facilities is steadily decreasing. The minister himself admits that there are not enough funds for the training of medical workers. According to 2017 data, the level of total expenditures on the health sector amounted to 2.2% of GDP\(^{25}\).

3. It is necessary that medical workers are provided with several benefits, including
"the allocation of additional household plots and land near residential buildings, as well as benefits for paying for utilities."

According to the head of the Ministry of Health: "The shortage of medical personnel can be solved by new personnel. This year, more than 2 thousand graduates of the medical university should start working, and almost 3.5 thousand graduates will receive nursing diplomas this year”.\(^{26}\) However, in our opinion, no matter how many universities graduate doctors annually, it will not be easy to keep them in the country until good conditions and decent salaries are created.

**Findings**

In our opinion, no matter how many universities in Tajikistan annually graduate young doctors, it will not be easy to keep them in the country until decent conditions for their work are created.

In 2020, the number of doctors in the Republic of Tajikistan amounted to about 21 thousand people. The provision of doctors per 10 thousand people is 22. The number of secondary medical personnel amounted to 60 thousand people. The provision of secondary medical personnel per 10,000 people is 63.

According to the Ministry of Health of Tajikistan, in 2023, 373 nurses and 1.9 thousand doctors are missing in the republic. About 72% of the shortage of doctors is in the Sughd and Khatlon regions of Tajikistan.

The main reason for the emigration of Tajik doctors is low wages in Tajikistan and benefits in the host countries. The lack of decent earnings forces doctors to look for alternative ways to earn income, they do not have enough time for patients and self-development, which, of course, affects the quality of their work.

Russia is the main areas of emigration of doctors from Tajikistan. The main channel of emigration of Tajik doctors in Russia is emigration within the framework of the program of voluntary resettlement of compatriots.

Based on our research, we can conclude that with the outflow of medical workers, the shortage of medical workers throughout Tajikistan will increase, as well as the quality of medicine in the republic decreases, which will lead to an increase in the number of deaths in Tajikistan.

\(^{24}\) The leaving of doctors from Tajikistan has become a national disaster. [Electronic resource] Available at: https://dzen.ru/a/W2kuIrOhYwCoDTpL (Accessed: 11.08.2023)


Conclusion

In recent years, the leakage of doctors or migration of healthcare professionals abroad has become an urgent topic in Tajikistan (Rakhmonov, 2022). Thousands of talented and educated people have left the country in recent decades. This process is still ongoing, the consequence of which is great moral and intellectual damage that hinders the sustainable development of the country.

The main reason for the emigration of doctors from Tajikistan is low wages and benefits in the host countries. The problem of meager salaries of doctors is added by the lack of housing conditions and at least partial benefits. Mostly, it is difficult for young specialists. Their salaries are not enough to provide for their family. In addition to extremely low wages, the main reasons for the "leakage of doctors" are the high unemployment rate.

The consequences of the emigration of Tajik doctors have greatly affected the socio-economic development of Tajikistan. According to our calculations, in 2015-2021, the loss of medical personnel caused damage to Tajikistan in the amount of 2 billion 706 million US dollars. There is also a growing shortage of medical personnel in all regions of Tajikistan. Only in the Khatlon and Sughd regions of Tajikistan in 2023, the shortage of medical personnel is more than 1.4 thousand people. In particular, the shortage of medical personnel has affected the quality of medicine in the republic, respectively, due to medical errors in Tajikistan, the mortality rate is growing. The government of Tajikistan needs to stop the outflow of medical personnel soon, otherwise, as research shows, the consequences of emigration of doctors will be huge for Tajikistan.

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