

Some Aspects of Medical Education in Russia

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Abstract Some aspects of medical education in Russia are discussed in this report. After the 6-year undergraduate education, a 2-year postgraduate program without a preceding internship is the usual way to become a medical specialist. Besides, the specialist certificates can be obtained after a 1-year internship. Shortages of education, limited availability of foreign professional literature and partial isolation of Russian medicine from the rest of the world contributed to persistence of outdated methods. At the same time, limited access to the international literature has been compensated by domestic editions, which often are scarcely illustrated, contain outdated information, while borrowings from foreign sources sometimes harbor mistranslations leading to a loss or distortion of the original meaning. For elimination of the shortages, more international cooperation is needed, which necessitates more mutual trust. Without profound restructuring, the current system of postgraduate training in Russia can be adapted to the international standards if its components (internship, 2- and 3-year postgraduate programs), would be transformed into consecutive steps. Curricula should be modernized and include more rotation. With time, the above-named components of the postgraduate training can be amalgamated in a unified system.

Keywords: *medical education, postgraduate training, medical literature, Russia*

1. Introduction

The attitude towards academic education has been complex since the early Soviet time. Many young people from different social classes strived for academic - diplomas. The Soviet period brought about an expansion of admission numbers to universities and medical educational institutions; however, sometimes with little regard for the quality of the academic preparation of its entering students [1]. At the same time, former medical faculties were separated from universities; and medical science was separated from the mainstream scientific thought [1], a well known example being the separation of the Medical Faculty from the Moscow University in 1930. The quality of teaching, especially of the fundamental theoretic disciplines, has deteriorated because of this separation. The social status and incomes of educated people (including official incomes or salaries of physicians) had been decreasing in comparison with the rest of the population from the 1950s till the economical reforms of the 1990s, when the incomes became varied. Obviously, it was an aim and a consequence of the policy, whereas the tool was expansion of the educational offerings to achieve more opportunities for socioeconomic advancement, which resulted in an overproduction of specialists, many of whom being able to pass examinations and obtain scientific degrees without much academic knowledge. Besides, there have always been privileged students such as the Party and Komsomol activists, who often passed examinations without preparation. Some of them used their privileges to miss lectures whenever they wanted.

2. Objectives and Methods

The objective of this paper was to overview some aspects of medical education in Russia during the last 4 decades. Apart from the analysis of literature, this paper is based on the observations of the author, who entered the I.M. Sechenov Medical Academy (named Institute at that time) in the year 1973, later practiced at the same and other academic and clinical institutions in Moscow. Neglectful attitude towards academic knowledge was visible even in the most renowned institutions. For example, students were compulsorily sent during semesters to collective farms to harvest potatoes, beetroots and other vegetables. In Moscow I.M. Sechenov Medical Academy it usually occurred during the 3rd year of education, so that many topics in pathology, surgery and internal medicine were lost. The agricultural works lasted up to 2 months, in 1984 even longer. In 1978, a construction brigade (stroyotriad) came back in October (the semester started on the 1st of September). Participation in construction brigades was accepted as a substitute e.g. for the nursing practice in summer. All that lowered the educational level and gave rise to the phenomenon known as *feldsherism*. Some students characterized this phenomenon by the phrases like: "You will learn all you need at your future workplace", which corresponded to the earlier paradigm of the specialist training, before the internship had been introduced in the 1970s [2,3]. The prevailing ethical standards of the students did not inhibit widespread prompting and cribbing on examinations and tests. Attendance of lectures was stimulated by administrative measures, so that some

students came to the lectures to avoid trouble with the dean's office; but many of them neither listened nor wrote down anything, if even present at a lecture. For example, biochemistry was regarded by many students to be useless, while pharmacology was studied by some of them using textbooks for nursing schools; and it was largely believed that nothing more was really necessary. Admittedly, there were exceptions: for example, in I.M. Sechenov Medical Academy, there were 2-3 groups of students, where professors' children predominated; the level of knowledge in such groups was comparatively high. Closer to the graduation, some students became more diligent in studies of their chosen fields.

3. Results

After the 6-year undergraduate medical education, to become a specialist in any field of medicine, a 2-year postgraduate program (named *ordinatura*) without a preceding internship is the usual way [1,4,5]. A seldom-used alternative is a 3-year program that includes research for a candidate's thesis (named *aspirantura*). Now as before, certificates of medical specialists can be obtained also after a 1-year internship [6]. Insufficient quality of training was pointed out in some publications, where it was stressed e.g. that the young medical specialists should practice 2-3 years additionally in large centers under a supervision of seniors before starting to practice independently [7], which in fact means a prolongation of the postgraduate training. According to a recent survey, 73.1% of the residents (named *ordinators*) had entered the 2-year postgraduate program immediately after the basic medical education and only 15 % - after the internship (the rest – after a period of practice or an interruption) [8]. The postgraduate students are on average not overworked; some of them come not every day and leave before noon, one of the reasons thereof being part-time occupations discussed below. The postgraduate students on the 3-year program (*aspirants*) are concentrated mainly on their scientific work, which is often performed in a formal way. Admittedly, it is possible to achieve a good level of knowledge by means of self-education, but gaps in education are hardly avoidable under the existing conditions. The rotation system is elaborated insufficiently; and many fields of theory and practice are left out.

The specialist certificates were introduced in the late 1990s. Before that, it was usual to become a medical specialist after a target internship (1 year) or a course of primary specialization of several months' duration [9]. Doctors with this kind of postgraduate training have later obtained the specialist certificates. Many of them are efficient and experienced physicians although lacking a comprehensive postgraduate training [10]. It should be mentioned that the 6th year of the basic medical education, also named *subordinatura*, is in fact an undergraduate specialization usually in one of three main directions (internal medicine, surgery, obstetrics/gynecology) but possible also in other fields e.g. pathology. The curriculum of the 6th year contains several basic courses, but they are sometimes taught in a formal and superficial way; and the students' attention is concentrated on their chosen fields. The 6th year of the basic medical education (undergraduate, 1 year) plus internship (postgraduate, 1

year), has been the widespread mode of the specialist training [2,3,11].

Constructive comparisons with the postgraduate training systems in foreign countries were seldom in Russian professional literature probably in accordance with a directive that "we must have our own ways". Some editions dedicated to the postgraduate training discuss only the continuing medical education [12] commented below. Indirect interference with science is a feature of modern politics [13], which pertains also to the education. However, comparisons with foreign postgraduate training systems have appeared in the last years [14,15], earlier in Ukraine [16]. For example, the postgraduate training for medical specialists in anesthesiology and intensive care was discussed in [6]: today it is possible to obtain a specialist certificate for this field after an internship (1 year) or a 2-year program (*ordinatura*). The authors argue that 3 years of postgraduate training would be necessary: internship plus *ordinatura* [6].

After a completion of the postgraduate training, continuing medical education is prescribed. Every 5 years, improvement courses about one month long must be completed by medical specialists to maintain their status and also in connection with the system of categories [1,4]. Some of such courses are rather formal and are irregularly attended by many physicians. There are 3 categories: the highest, the 1st and the 2nd. A medical specialist may apply for the 2nd category after 3 years of practice in the corresponding branch of medicine; for the 1st - after 7 years, and for the highest - after 10 years. In exceptional cases, a category can be awarded also earlier, after a recommendation of the hospital administration and a reviewer. The category means a surplus to the salary, which is of importance especially for physicians at governmental institutions. The procedure of awarding a category is time-consuming: an official instruction states that it can take up to 2 months; there is a large list of documents to be submitted. The most laborious part of the application is a report about the last 3 years of practice. The report must contain a professional history of the applicant, information about the hospital and department, description of the equipment and methods used. Furthermore, in the diagnostic branches such as pathology or radiology, it must contain quantities of examinations performed during the last 3 years, analysis of incidence of different diseases and tendencies of their dynamics, of diagnostic difficulties and discrepancies between the clinical and pathological (or radiological) diagnoses. A similar section with numerical data and their evaluation must be present also in the reports from other fields of medicine. Understandably, medical specialists have not much free time, and analysis of real figures has hardly ever been performed. Instead, more or less realistic estimates are written into the tables. Such practice contributes to the nonchalant attitude towards manipulations with statistics, which can be found also in scientific reports [17]. In conclusion, the awarding of categories is a formal procedure, the outcome of which depends mainly from support of the hospital administration. Some busy doctors find no time for these formalities, suffering pecuniary losses as a result. On the author's opinion, the categories poorly correlate with qualification of physicians and should be abolished to reduce the red tape.

4. Discussion

All phases of medical education are additionally complicated by the limited access to the international literature and generally insufficient quality of domestic editions [18,19]. Admittedly, some scientific and educational institutions have online access to certain foreign journals; but practical physicians usually have not, being as a result sometimes misled by advertizing or due to their cooperation with pharmaceutical or other firms. Hopefully it will be changed in the near future with the start of the online information system for medicine. Logins for this system are planned to be distributed through the management of medical institutions, which is questionable because patients would be factored out, thus remaining easy victims of unserious advertizing.

The consequences for medical practice of the shortages of medical education and literature were discussed in [19,20,21]. In medical research, scientific misconduct has been not uncommon [17,22,23,24,25]. Largely forgotten are the rules of scientific polemics. Insufficient theoretic knowledge causes, on one hand, excessive conservatism [26] and, on the other hand, easy acceptance of methods not corroborated by evidence-based research. In consequence of the authoritative management style, professionals often accept working in any condition without making an effort to set things in order, keeping the interest of the patient in mind [27]. Moreover, since the late 1980s, many former functionaries were introduced into educational, scientific and medical institutions. They used "manliness" [28] as a tool of social competence, which has been indirectly used also for stigmatization of intelligentsia. Being not accustomed to hard and meticulous work, some of them have been embroiled in research of poor quality. As a result, under the conditions of the pressure to publish, incongruous works were sometimes produced, e.g. [29,30]; some more were discussed in [22]. The image of "true men", propagandized in Russia, is manly indeed, but gregarious and not independent. The men of this kind know who are above them and who are below them, forming a hierarchy. Under the existing conditions, they do not get used to think and act independently, which is one of the reasons why scientific misconduct and plagiarism are tolerated: some leaders practice it while others maintain their loyalty. The fact that medical researchers and practitioners must be independent in their decisions, based on best scientific evidence and consensus, is insufficiently understood. Moreover, hard and meticulous work e.g. in a laboratory is considered unworthy of a true man [31,32], while scientific misconduct, plagiarism and other deviations are manly enough. Therefore, academic education, health care, and public assistance often remain out of the forefront. It is not surprising that apart from some beggars, there are almost no people in wheelchairs in Moscow streets, which are not adapted to the traffic of the wheelchairs.

Another topic that must be discussed in connection with the medical education is the salaries of postgraduate trainees, which are currently scarce. On the contrary, some of the ordinators and aspirants pay for their education. As a result, many of them combine the training with part-time occupations. According to a recent survey, 78.5% of ordinators (on the 2-year postgraduate program) and 78.8% of aspirants (on the 3-year program) combined

their training with a part-time occupation, which in 1/3 of cases was non-medical [8]. Moreover, 9.6% of the ordinators and 6.4% of the aspirants combined their training with the jobs of representatives in pharmaceutical firms [8], which creates conflicts of interest interfering with optimal medical practice. These figures about part-time occupations, especially non-medical ones, are probably underestimations because of the tendency to conceal such things. It should be mentioned that surveys and questionnaires as the research methods are largely discredited in today's Russia.

5. Conclusions

Shortages of medical education, limited availability of foreign professional literature and partial isolation of Russian medicine from the rest of the world have contributed to persistence of outdated methods and approaches in everyday practice [19,21], being one of the causes of the relatively short life expectancy [20,33]. At the same time, limited access to the international literature has been compensated by domestic editions, e.g. [33], containing references to doubtful and potentially misleading publications. Some domestic editions are poorly, if at all, illustrated, contain outdated information, while borrowings from foreign sources harbor mistranslations leading to a loss or distortion of the original meaning [18]. For elimination of the shortages described in this paper, more cooperation with the international scientific community is needed, which necessitates more mutual trust. Without profound restructuring, the current system of postgraduate training in Russia can be adapted to the international standards if its components (1-, 2- and 3-year programs), would be transformed into consecutive steps, as it is shown by the diagrams in [35]. The total postgraduate training time would thus amount to 6 years, include preparation of a thesis and examinations to be awarded a degree equivalent to M.D. and a specialist certificate. Physicians not interested in research could prepare a thesis in a form of a literature review: insufficient consideration of the international literature is one of the main shortages of Russian medicine. Curricula including rotation should be modernized and adjusted to the corresponding fields of medicine. With time, the above-mentioned components of the postgraduate training can be amalgamated in a unified system. In conclusion, the medical postgraduate training in Russia should be prolonged, intensified and better organized. At the same time, salaries of the trainees should be enhanced to enable them to dedicate all their time to the medical profession and to abstain from part-time occupations.

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