



Glimpse of Pharmacy Education in Pakistan and Current Challenges to Pharmacy Education

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Discussion of modern medicine is incomplete without acknowledging the contribution of the **Muslim scientists**. In 707 AD; **Caliph Walid Ibn-e-Abdul-Malik** in Damascus was the first to form a hospital. Similarly the credit of the world oldest apothecary shops and pharmacy schools also goes to the **Muslim scientist**¹.

Latter in 9th century AD the pharmacy has acquired the shape of a profession in civilized world of Baghdad. This preliminary form of pharmacy spread latter to Egypt, China and Europe. With the passage of time new methods for the chemical analysis and for the manufacturing of the products were designed². Finally in 1821, first organized professional school of pharmacy was established in U.S at Philadelphia.

History of pharmacy in Sub-Continent and Pakistan:

Pharmacy is the perhaps the oldest know profession in the Subcontinent, before the partition of Subcontinent (i.e India, Pakistan) traditional and herbal medicines were in practice during the time of *Mugal Emperors*.

Apothecary shops were abundant where apothecaries (*Hakims*) practice and prescribe herbal drugs and foods (*Modern Nutraceuticals concepts*) to treat/cure minor and major ailments.

However, talking particularly in context of developing a proper pharmacy profession, The foundation in Subcontinent was laid in **1870s** the Madras medical college where the first initiative was taken to train students to gain skills in pharmacy practice². In 1881 a formal training of compounders / dispensers was started in Bengal (Current Bangladesh) and the first pharmacy professional Bachelor of program was started in 1937 at Banaras Hindu University. In a discussion to explore the history of pharmacy profession in Pakistan, in 1948 University of Punjab was the first institution to develop a pharmacy department in Pakistan immediately after the independence. The first pharmacy degree program started in Pakistan was a three-year bachelor program, which was extended to four years in 1978-1979³.

The initial focus of this program was to fulfill the need of the couple of pharmaceutical units established at that time. By the year 2000 not more than ten public universities were offering Bachelor of Pharmacy (B.Pharm) program and the annual number of graduates were not that sufficient to fulfill the need of pharmaceutical industry. But latter due to the establishment of the private universities or in other words the commercialization of education the annual number of the pharmacist becomes doubled by the year 2003. Moreover, during this time massive funds were granted to Higher education commission of Pakistan in order to establish faculties and to revise the curriculum according to the international standards.

In the vague to fulfill the international standards, the four years B.Pharm Program was upgraded to five years Doctor of Pharmacy (Pharm-D) program. The main focus of this program was to incorporate the role of pharmacist in patient care which hardly to see in any public and private hospital (*excluding very few like Shoukat Khanum Memorial Hospital and Agha Khan University Hospital*).

In other words it would not be wrong to say that this up-gradation to Pharm-D program was just to fulfill the global needs the level of implementation and job prospect for future pharmacist was not kept in consideration.

Challenge to Pharmacy Education in Pakistan

Sifting past of pharmacy education in Pakistan, it was seen that the main focus of the pharmacy education sector was to produce the graduate to fulfill the needs of pharmaceutical industry only. At that time merely one or hardly two pharmacist were found in few private hospital in Pakistan, particularly speaking in term of government hospital the picture was even miserable, firstly there was no post for the pharmacist in the hospital and if there was any that was occupied by a medical doctor as medical store in-charge. However, in 2002 a shift towards the Pharm-D program was noticed and it was made necessary to upgrade Bachelor of Pharmacy (B.Pharm) to Pharm-D. This shift was more than a ray of hope for the pharmacist to play their role

in patient oriented care just like the Canadian and American clinical pharmacists. But even after eight years; in 2010 clinical pharmacists are still struggling for their rights to practice in the hospital as an essential part of the patient care team. While discussing the progress of Pharm-D, it will be an injustice not to discuss about the B.pharm graduates. The existence of dual professional degrees has certain challenges in the job sectors for the pharmacists. With the up-gradation of B.Pharm program to Pharm-D, the advertising trends by the pharmaceutical industry in Pakistan are changed.

The minimum qualification requirement for the post of production officer, quality control officers and marketing officer/ medical sale representative by the most of the pharmaceutical industries is changed from B.Pharm to Pharm-D. It is possible that in near future those applying to the pharmaceutical industry for these jobs with B.Pharm degree will get a **NO**, because the human resource departments will give preference to Pharm-Ds.

In other words one can say that the up-gradation of the B.Pharm to Pharm-D has also changed the view of the pharmaceutical sector about the pharmacy education in Pakistan. It is possible that majority of the national pharmaceuticals firms will follow the same trend which will raise challenges for the B.Pharms to work in the industry. In other words one can assume that Pharm-D professional will be incorporated to play their role in pharmaceutical product manufacturing, marketing or distribution instead of the patient oriented care. In spite of the fact this issue is still in the neglected issues in the pharmacy education. This issue is not the problem in Pakistani context but the neighboring nations like India and Bangladesh are also facing the same situation. It is strongly needed to take some immediate initiative to ensure the job security of the B.Pharm Graduates that were especially prepared for the pharmaceutical sector and they have the relevant experience as well. To compensate this problem condensed / crash Pharm-D course is offered to the B.Pharm Graduates and they will be

awarded with the certificate that will prove their educational equivalence to Pharm-D.

But again this certificate will be merely a tag for them because the condensed course has focus on the clinical aspects that are oriented to the direct patient care not to the pharmaceutical industry. At the moment most of the nations are in the race to upgrade their B.Pharms to Pharm-Ds because they aim to produce the professional that are expert in drugs, which will help them in making an affective environment for the patient care.

But the historical/Traditional role of pharmacist in pharmaceutical industry is totally neglected; **Pharmacy Council Pakistan** and **Higher Education Commission** of Pakistan can grab this opportunity to plan some initiatives to create awareness in the pharmaceutical sector about the scope and job description of Pharm-D pharmacist.

In addition a **Pathway Program** can be adopted which focus solely on pharmaceutical technology instead of clinical

aspects of pharmacy practice. The first three years will focus on the basic medical science as they are in the current Pharm-D curriculum and after three years students are given an option to choose their favorite i.e clinical pharmacy or pharmaceutical technology.

In other words a five year professional program, i.e Doctor of Pharmaceutical technology will be an ideal approach to fulfill the need of the pharmaceutical industry in Pakistan.

Though no one has taken this initiative at the global level, this thought through this perspective will act as a base for the educational think tanks in the higher education curriculum development committee of Pakistan to develop such programs in order to provide specialized professionals for both development of clinical pharmacy and for the propagation of the traditional role of pharmacist in Pakistani pharmaceutical sector.

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