

Indian Pharm.D: Should it be pursued?

Dear Sir,

The degree of Pharm.D started in 2008^[1] in India with the intent of expanding the scope of pharmacy curriculum to meet the healthcare demands. Currently, there are 130 pharmacy colleges offering Pharm.D in India and majority (60) of them are located in the southern state of Andhra Pradesh.^[1] Almost all the Pharm.D offering colleges are private institutions and universities. The demand of Pharm.D in India is emerging and the cost of a management seat varies from 600,000 to 1,500,000 INR. The field of clinical pharmacy is yet in its developmental stages and pharmacists with M.Pharm in Pharmacy Practice face obstacles in seeking employment as clinical pharmacists in hospitals since clinical pharmacy is not recognized nationwide.^[2] Pharmacists are often recognized as compounders or dispensers in India. A Pharm.D aspirant assumes that after completion of Pharm.D, he/she can diagnose and treat patients. However in practice, Pharm.D students are not getting efficient exposure to clinical care due to scarcity of qualified faculty,^[2-4] lack of partnerships

and coordination between hospitals and pharmacy colleges and lack of regulatory framework,^[2] thereby producing inexperienced Pharm.D graduates.^[2,3] In summary, the potential of Indian Pharm.D students cannot be realized in India as well as abroad in spite of clearing the Foreign Pharmacy Graduate Equivalency Examination and NAPLEX.^[2,5] One of the solutions may lie in updating the existing infrastructure of Pharm.D programs by fostering research collaborations with experts from the developed countries such as the US, Australia and the UK where clinical pharmacy and role of pharmacists are very well-established. Many of the Indian faculty training Indian Pharm.D students have specialization in Pharmaceutics and not in Pharmacy practice and outcomes research, like in the US.

Employing teachers who have earned their Pharm.Ds or PhDs in pharmacy practice and outcomes research in US universities could ensure that they can provide proper training to the Indian Pharm.D students in pharmacy practice similar to the US.^[5,6] The Indian universities should design a curriculum that can help the Indian Pharm.D students to adapt the skills acquired from the instructors educated in the western world to the Indian setting. Developing and implementing a suitable curriculum is an important factor that determines the success of a professional

program.^[7] There is absence of qualified faculty who can develop a suitable Pharm.D curriculum for the limited available resources in different institutions in India.^[2,3] This makes it quite challenging for pharmacists to practice clinical pharmacy similar to developed countries. Many schools in India, to frame their curriculum, tend to follow the updates and the curriculum posted by the Accreditation Council for Pharmacy Education and American College of Clinical Pharmacy websites.^[7,8] The curriculum tend to be directly copied from the websites of the educational organizations in the developed countries or are revised and updated without a proper understanding of the synchronization between the curriculum content and the learning objectives, availability of proper facilities in the regional institutions, presence of practice friendly healthcare settings and fulfillment of national standards for that particular educational field.^[6,7] A curriculum that has course content distributed according to the available time limits and including reference books that majority of the students can comprehend can assure that the students follow the curriculum and implement the theoretical skills acquired practically as well.

Timely evaluations of the faculty and the students can provide evidence about the performance of the Pharm.D program. Students are evaluated on the basis of their examinations, projects and clerkships in the Pharm.D program.^[6-8] Performing plagiarism checks in assignments submitted electronically and supplementing Pharm.D group projects with viva, oral, and poster presentations for individual students can provide valuable information about the students' research knowledge.^[7] Individual grading of clerkships in pharmacy practice areas, apart from the coursework, can inform the graders or instructors about the acquired practical skills during the course of the program. Just as teachers are provided with an opportunity to grade students, students should also be given the opportunity to evaluate teachers.^[6-8] This provides a scope for improvement for the instructors to work on their knowledge based or communication based skills. Based on the feedback provided by students, the senior administrators in the academic institutions can conduct training seminars for newly recruited faculty and hence that they can in turn adopt problem based learning in their classes to benefit their students.

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