

Research

Public health and patient care aspects in Indian pharmacy curriculum: A comparison between DPharm, BPharm, and PharmD programs

Siva Prasada Reddy Maddirala Venkata, MPharm, RPh^{a,b,*}, Peter Kielgast, PhD^b, Ubaidulla Udhumasha, MPharm, PhD^c, Marja Airaksinen, PhD, MSc (Pharm)^a

^a Clinical Pharmacy Unit, Division of Pharmacology and Pharmacotherapy, University of Helsinki, Helsinki, Finland

^b Taastrup Pharmacy, Taastrup, Denmark

^c Department of Pharmaceutics, C. L. Baid Metha College of Pharmacy, Chennai, India

Abstract

Background: There are about one million registered pharmacists practicing in both community and hospital pharmacies in India. Since the public health services do not cater to the entire population, pharmacies can play a major role in the health care system in India.

Objective: The aim of this study was to compare the Indian pharmacy curriculum of DPharm, BPharm, and PharmD programs to see overall differences with a focus on the amount of time devoted for public health, patient care, and pharmacy practice aspects.

Study design: The DPharm and PharmD curricula were included as prescribed by the Pharmacy Council of India (PCI), and the BPharm curriculum was derived from the All India Council for Technical Education (AICTE). Duration of the selected curriculum programs is given in number of hours in four core areas according to the Accreditation Council for Pharmacy Education (ACPE) criteria, which is used for comparison.

Results and conclusion: The results indicate that DPharm and BPharm are industry focused, and only the PharmD is focused on clinical pharmacy and patient-oriented services. DPharm holders are the mainstays of pharmacy practice in India, but their degree least contains patient care and public health aspects. There is a gap in curriculum, particularly at DPharm level. This needs to be addressed in future studies and curriculum development actions, as well as in pharmacists' continuing education and professional development programs.

© 2014 Elsevier Inc. All rights reserved.

Keywords: Pharmacy curriculum; Pharmacy education; Curriculum comparison; India; Patient care; Public health

Introduction

Pharmacies are convenient for most people to get to, and there is no need for an appointment to see the pharmacist. This makes pharmacies a natural first port of call¹ as health

care providers in society. Worldwide, pharmacists are potentially a vital link in the health care chain. Since the public health services do not cater to the entire population, pharmacies and private health providers can play a major role in the health care system in India. Having such a large presence, unfortunately, pharmacists both in public as well as in the private sectors remain largely an untapped resource in India.^{2–4} Major public health programs are covered under the Ministry of Health and Family Welfare, Government of India. Public health services in this study means active

* Corresponding author: Siva Prasada Reddy Maddirala Venkata, MPharm, RPh, Taastrup Pharmacy, Taastrup Hovedgade 60, Taastrup DK-2630, Denmark.

E-mail: prassu117@yahoo.com

participation of pharmacists in major health programs run by the government. In India, the major public health programs are HIV/AIDS prevention and control, tuberculosis control, leprosy and vector borne disease control, mental health, deafness and blindness control, pulse polio, universal immunization, health care of elderly, and tobacco control. In this study, the public health program refers to one or more of these programs.

The colonial period (1750–1947) brought the new western system of medicine and paved the way for pharmacy houses to emerge in India. Though pharmacy was practiced for ages in India, it is recognized as a profession only since the 18th century.^{5,6} Pharmacy education in India, at the certificate level, was started in 1842 in Goa by the Portuguese⁷ and as a university level program at the Banaras Hindu University as BPharm course in 1937.⁸ The courses were provided for studies in pharmaceutical chemistry, pharmacy, pharmacognosy, and pharmaceutical economics, which prepared graduates to work as specialists in quality control and standardization of drugs for pharmaceutical companies^{9,10} but not for patient care in pharmacy practice.⁶ As per the report of the health survey and planning committee of the Government of India, 1961, the course for graduate pharmacists (BPharm) was designed to train smaller numbers of individuals who will be engaged in manufacturing concerns, analytical laboratories, and educational medical institutions,¹¹ which continued to have the same contents.

The pharmacy practice scenario and especially community pharmacy practice during the pre-independence era was highly unregulated, and there were no restrictions on the practice of pharmacy in India.¹² After the independence, the Pharmacy Act 1948 was enacted for the regulation of the profession and practice of pharmacy in India.

Aim of the study

The aim of this study was to compare the Indian pharmacy curricula of Diploma in Pharmacy (DPharm), Bachelor of Pharmacy (BPharm), and PharmD to see the overall differences with a focus on the amount of time devoted for pharmaceutical policies and public health, patient care, and pharmacy practice aspects in the programs.

Regulation of pharmacy education in India

Pharmacy education in India is regulated by two statutory bodies: the Pharmacy Council of India (PCI) and the All India Council for Technical Education (AICTE). The PCI, a statutory body, was constituted under Section 3 of the Pharmacy Act 1948 to regulate the pharmacy education and profession in India. Important functions and duties of the PCI are (i) to prescribe minimum standard of education required for qualifying as a pharmacist; (ii) to ensure uniform implementation of

the educational standards throughout the country; (iii) to frame education regulations prescribing the conditions to be fulfilled by the institutions seeking approval of the PCI for imparting education in pharmacy; (iv) to inspect pharmacy institutions/colleges to verify availability of prescribed norms for example number of teaching and non-teaching staff, their qualifications and salaries, and laboratory requirements including instruments available, etc.; (v) to approve the course of study and examination for pharmacists, (vi) to maintain Central Register of Pharmacists; and (vii) to approve qualifications granted outside the territories to which the Pharmacy Act extends, i.e., the approval of foreign qualifications.¹³ The AICTE was established under the AICTE Act 1987. The AICTE is primarily responsible for planning, formulating, and maintaining norms and standards in technical education,¹⁴ which includes pharmacy. Pharmacy education at all levels, excluding PharmD is regulated by the AICTE. All institutions running DPharm, BPharm, and MPharm must have an approval from the AICTE to run the courses.¹⁵

Regulation of pharmacist registration in India

Minimum qualification for registration and practice of pharmacy in India is a passing score in one or more of the following¹⁶:

- (i) DPharm, from an institution approved under Section 12 of the Pharmacy Act, followed by 500 hours of practical training in the following:
 - Hospitals/dispensaries run by Central/State Government (or)
 - A pharmacy, chemist, and druggist licensed under the Drugs and Cosmetics Rules, 1945 (or)
 - Drugs manufacturing unit licensed under the Drugs and Cosmetics Act, 1940 and Rules.
- (ii) BPharm, a four-year degree program from an institution approved by the PCI under Section 12 of the Pharmacy Act.
- (iii) PharmD, a six-year full time doctorate program as per the PharmD Regulations 2008, framed under Section 10 of the Pharmacy Act 1948.

Production overview

The pharmacy education system in India, starting with entry level to various programs, is illustrated in [Figure 1](#). An overview on types of pharmacy programs that allows practice of pharmacy in India, number of approved colleges offering these programs, and number of students intake approved per year is described in [Table 1](#).¹⁷ India has provisions for over 100,000 pharmacy admissions each year, which includes DPharm, BPharm, and PharmD.¹⁷ There are about one million registered pharmacists in India working in various facets of pharmacy.¹⁸

Download English Version:

<https://daneshyari.com/en/article/353024>

Download Persian Version:

<https://daneshyari.com/article/353024>

[Daneshyari.com](https://daneshyari.com)