



Role of Pharm D in Health Care System: Representing the Participation of Clinical Pharmacist in Community Services

Authors

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Abstract

Objective: *The aim of survey was conducted by to study and evaluate awareness and participation of clinical pharmacist in health care system*

Method and Material: *The sectional study of conducting structured pharm d questionnaires survey was conducted at HPC educational institute of osmanabad, mainly through Google forms. The questionnaires including course related questions, role related questions and medication therapy including comparative and opinion based question the response were collected and analyzed to assess the opinion of clinical pharmacist in health care system*

Result: *The total number of responses are 1175 participation including medical staff, physican, nurse, pharmacist ,and other health care staff, academicians, they accepted that clinical pharmacist can play vital role in improving medication adherence, a patient medication, patient counselling and adverse drug reaction*

Conclusion: *Our research suggested that clinical pharmacist play major role in health care system espically in Indian through partnering in patient care by improving medication adherence in both government as well as private hospitals*

Keyword: *Pharm D (doctor of pharmacy), HPS (health care practitioners), CP (clinical pharmacist).*

Introduction

Pharmacy in India

Pharmacy is the art practice and profession of preparing preserving compounding and dispensing medical drug. Pharmacy and Pharmaceutical Science is a growing field in India. Even though Clinical Pharmacy (CP) is in its infancy, it is having a great influence on patient care and started being a part of the healthcare system in India. Pharmacy is a connecting bond between the chemical and health sciences to confirm the appropriate safe and effective use of medicines or

drug products and it comes into existence over the experiences and efforts amassed over thousands of years.¹ The history of Pharmacy began long back from the 6th Century, by evidence the Vedic period was till 800 BC and subsequently Brahmanism period till 1000 AD.¹ Arabic or Unani Tibb system of medicine was initiated and boomed in India followed by Muslim ruling, but which was overtaken by the allopathic system of medicine when the British ruled India. Drugs started flowing from Europe in early 19s and started manufacturing in India by 1940.² The first

education regulations outlined in 1953 by The Pharmacy Council of India (PCI) which was established in 1949 under “Ministry of Health” and the same was amended afterwards in 1972, 1981 and 1999.⁹⁽¹²⁾

Doctor of pharmacy or Pharm D

Doctor of Pharmacy (Pharm D) is a professional degree in pharmacy. The Pharm D course lasts six years in total, with five years of classroom instruction and one year of practical training. The only doctorate degree that can be pursued immediately after finishing the 10+2 exams. Furthermore, B Pharm graduates can pursue a Pharm D course by applying for a lateral entry program, i.e., Pharm D course (Post Baccalaureate) Students must complete 10+2 from a recognized institution and qualify for a diploma in pharmacy from a Pharm D college recognized by PCI to be eligible for the course Pharm.D. (Pharmacy Council of India).. To acquire a Pharm.D degree requires 5 years of classroom-based academic study (2 years as a Pharm.D post-baccalaureate), followed by a year of internship or residency training in addition to ongoing practical sessions. It is akin to Doctor of Medicine (MD) for doctors and Doctor of Dental Surgery (DDS) for dentists. Pharm.D course is quite different from the conventional courses such as B. Pharm and M. Pharm. Pharm.D are especially clinically oriented, i.e., patient specific, who conduct patient counseling and inform the patients about dose to be taken, time and route of medication administration, mechanism of how drug shows its actions on the body, its side effects and adverse drug reactions that likely to occur, major causes for the manifestation of the disease, and its possible complications that can occur if left untreated They also emphasize on lifestyle modifications to be adapted by the patient. On the contrary, B. Pharm and M. Pharm courses are industry oriented, i.e., deal with aspects of drug formulation, study of different drug sources, molecular structure of the drugs, steps involved in the synthesis of drugs, methods of synthesizing drugs, analysis of the drug synthesized,

pharmacological actions of the drugs, and so on. The Pharm. D students come out with a “clinical pharmacist” designation and they also have the right to use the “Dr.” designation before their names. The main objectives behind the establishment of the course are to raise the standard of pharmacy profession in India in terms of pharmacy practices, and also making pharmacy degree acceptable in various countries across the world; and to provide patient care in cooperation with patients, prescribers, and other healthcare professionals based on their knowledge of therapeutics and evidence-based data, taking into consideration issues that are relevant to legal, ethical, social, economic, and professional pharmaceutical and clinical sciences that may have an impact on the therapeutic outcomes. The main objective of this survey was to evaluate the awareness and perception of selected educated individuals about Pharm.D course

Material and Method

This sectional study was conducted by surveying HCPs including medical, nursing pharmacy academician about their perceptions regarding the Pharm.D program and the clinical pharmacy services providing by the CPs in a tertiary care teaching hospital situated in the north India Maharashtra osmanabad The survey was conducted on duration of survey by providing a closed type questionnaire in English which has to be filled by them. Only the HCPs excluding Pharm.D students who are currently studying or practicing the clinical pharmacy activities were included. Researchers were approached the professional with a questionnaire. The questionnaire mainly included questions on specialization courses needed for Pharm.D; their role in improving , medication therapy, dose calculation, adverse drug effects , clinical research ,monitoring patient medication progress, role in otc medication, reduce medication related problem and improving medication adherence complete circle of therapy (including both prescribing the drugs and also fixing the doses), and reducing the

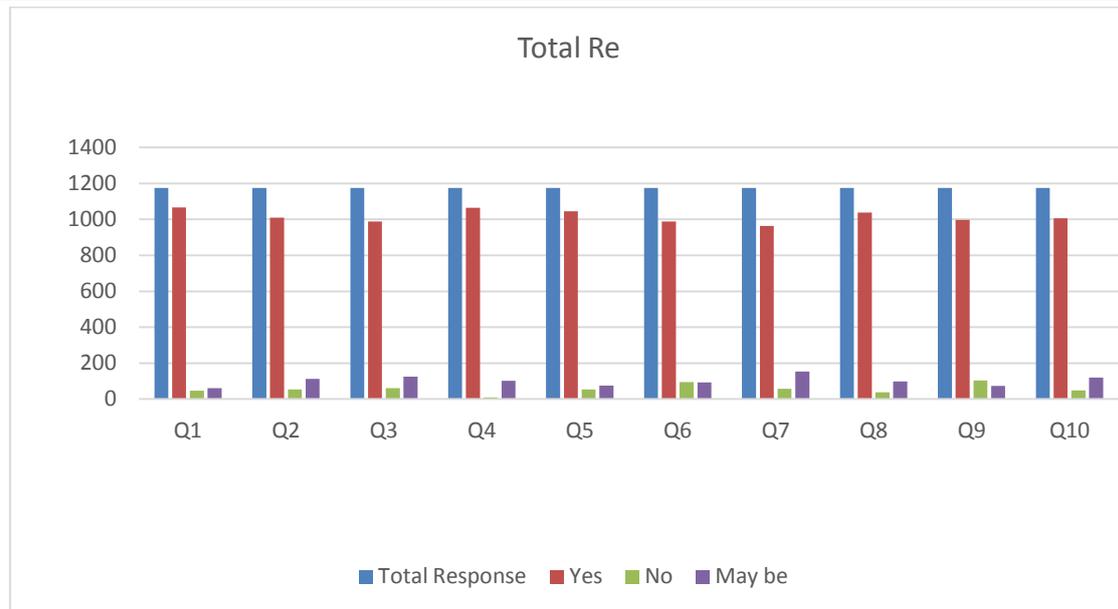
cost of therapy; need of Pharm.D in every hospital, community and hospital pharmacy, pharmaceutical company, pharmacovigilance centers, therapeutic drug monitoring (TDM) centers, and drug information and toxic centers; need to increase the awareness about Pharm. D; ability of the students to play a good role by undertaking government jobs; whether Pharm.D should be given equal respect as physicians; whether the Pharm. D deserve the “Dr.” designation before their name; what the study population suggests the Pharm. D students to OPD after they complete their regular academic course; and ideas to find out major causes if there is failure of Pharm. D in future in India , the survey completion was voluntary, participants were able to decline their participation and did not receive any compensation for completing the survey. The study population was also asked to inscribe the information such as their name/initial, profession, qualification and the designation. A 10-items closed type self-explanatory paper made questionnaire was provided which has to be filled

by the pen or pencil further the same data was transferred to an electronic form (Google form). The questionnaire was framed in such a way to understand their perception regarding the Pharm. D and clinical pharmacy services.

Result

A total of number responses 1175 were collected from various hospitals. Out of the total number of responses, the number of responses received from physician, B. pharm, M .Pharm faculty member and other staff Out of the total responses received, number disagreed and (agreed that Indian syllabus, teaching procedure, and hospital training in institutions are enough to produce a perfect Pharm. D. Respondents of agreed, whereas suggested that specialization courses are required for Pharm. D in India only after the Pharm.D program gets well established in the country, and disagreed that there is a need of specialization courses for Pharm. D. Complete details on course-related questions are summarized in

Questions	Total	Yes	No	May be
do you know what is pharm d	1175	1067	47	64
Do you an clinical pharmacist can make an appropriate recommendation to patient therapy	1175	1009	54	112
Can clinical pharmacist should manage the patient medication, dose calculation and drug prescribed?	1175	989	61	125
Do you think clinical pharmacist have knowledge of pharma-care, drug knowledge?	1175	1064	9	102
Do you think error clinical pharmacist can provide better services in clinical research/better advisor in Industry?	1175	1046	54	75
Are community pharmacist capble in monitering patient progress with medication and making revelent recommendation to change ?	1175	989	94	92
Do you think community pharmacist can play an vital role in controlling the no. of medication desensed in OTC?	1175	963	58	154
Can clinical pharmacist treat & detect interaction to reduce medication related problems?	1175	1038	38	99
Can clinical pharmacist provide knowlage to patient in improving medication adherence ?	1175	997	104	74
Can clinical pharmacist review medication and reduce medication error?	1175	1007	48	120



Discussion

This survey conducted by a pharm d graduate student to evaluate the awareness and perception about Pharm. D course among educated individuals. Although majority of the people responded in a positive way about Pharm d course, some people opposed the existence and survival of this course. The reason for varying opinions regarding the course Pharm. D was the lack of awareness about Pharm D course in India, that many respondents did not agree to the statement “Indian Pharm.D can work as efficiently as the western Pharm.D,” mainly because it is much theoretical and lacks practical knowledge. The root cause for this is the inability of the Indian institutions to provide better practice facilities to the students at hospitals, and might also be due to insufficiency of the tertiary care hospitals or due to lack of interest from the college management or collaboration problems .This clearly shows that improvisation of the standards of the course is required for its survival and existence. Many suggested that the only way to overcome this hurdle is through imparting strict rules by both PCI and the colleges providing the course. The students should also be made to understand their responsibilities and importance of their service so that they strive hard to produce better care for the patients. Most of the respondents gave a positive feedback agreeing that there is a need of

specialization courses for Pharm.D in India, in order to provide better medication therapy and appropriate services after this pandemic condition to the needy patients; but few disagreed to the statement because they felt that if the basic course itself is not going to have a good boom, then what is the need for a specialization course. Hence, they think that the specialization courses should be introduced only after the achievement of proper establishment of the basic course. They also opined that it is a highly difficult task for PCI to introduce specialization courses immediately after setting up a new course. But most of the students are likely toward having the specializations. Majority of the respondents felt that Pharm.D are gives more better treatment then physician in improving medication adherence through patient counseling because of many reasons: (i) physicians having insufficient time to counsel the patient, (ii) unfamiliarity of few physicians with the native/local language, (iii) inability of patients to understand the terminologies used by physicians, (iv) fear of patients in asking the physician to clarify doubts regarding their disease condition or about the drugs being prescribed, and (v) misunderstanding or improper understanding of patients’ mentality by physicians due to lack of time. However, some of the respondents felt that Pharm.D cannot be more vital than physicians.

The prime reason would be the admirable value that has already set in the minds of the patients toward the physicians. Indians show immense respect toward physicians and feel comfortable and safe when they are with the physicians than with the pharmacists. By this survey, the opinion of majority of the respondents to have Pharm.D who will take care of complete therapy was very clear. The main basis for this opinion of the study population is that they believe Pharm.D are expert in the issue in medication therapy and dose calculation and physicians are experts in diagnosing the disease. In fact, many said that if Pharm.D are given the right to take care over complete therapy, then they will be helpful in reducing the cost of the therapy medication related problem. Some respondents who think it is inappropriate to handover complete therapy to the Pharm.D did not agree that Pharm.D can help to reduce the cost of therapy, because according to them when the Pharm.D do not have the right to prescribe the medications, how can they be helpful in reducing the cost of therapy. So, the basic point is that the respondents who desire Pharm.D to take care of complete therapy also have an opinion that they will be helpful in reducing the cost of therapy by means of rational drug usage or so on. But very few respondents thought it is practically impossible to reduce the cost of therapy even if the Pharm.D are given the right to take care of complete therapy, because they cannot avoid any drug or multidrug therapy that is essential for the recovery of patients although it is costlier. Respondents had a view that Pharm.D are incapable of TDM, but can play a significant role in pharmacovigilance (drug safety), drug information and toxic centers, etc., They did not support the statement "Pharm.D are vital in TDM because it should be performed by the physician or by the pharmacist in the presence of the physician, although the parameters to be monitored are suggested by the pharmacist himself." Instead, in the case of pharmacovigilance, and drug and poison information centers, Pharm.D are highly essential

and are of top priority. Most of the respondents honor Pharm.D equally as they do the physicians because they knew the fact that to acquire a high quality of care for patients, there should be an equal involvement of both the physicians and the pharmacists; i.e., both have equal and significant role. So they show similar respect toward Pharm.D and physicians. A very minute percentage of the study population disagreed to show equal respect toward physicians and pharmacists because they always felt that the physicians are the supreme leaders in total healthcare system and they are to be honored with a high level of respect when compared to other healthcare professionals. A highly controversial conflict arose when there was an official declaration that the Pharm.D are to be designated with "Dr." degree before their name. Although most of the physicians and other people of the society had no problem with that declaration, the conflict was started by the students of other courses of the healthcare profession, especially B. Pharm and M. Pharm. They think Pharm.D is not a correct qualification that deserves the "Dr." designation. The major reason behind this is that the students of B. Pharm and M. Pharm are designated with "Dr." degree only after they finish their Doctor of Philosophy (PhD), which requires a total study period of almost ≥ 10 years. Nevertheless, PCI is requested to use the prefix "Dr." before the name of the candidate while awarding the Pharm.D degree under regulation 18 of the Pharm.D. Regulations, 2008. The study population has clearly shown the need of having Pharm.D in every hospital irrespective of the organizations. The respondents proved the significance of Pharm.D in the healthcare system and thus Pharm.D are required in every government or private or multispecialty hospital, or a critical care unit. A portion of respondents approached with a view of having Pharm.D only in the private hospitals because the number of drugs prescribed here is much more when compared to the standard therapy for a particular disease, and the cost of the drugs prescribed is

also high. So, in order to control this, they suggested having Pharm.D in private hospitals. Another small portion of respondents suggested the presence of Pharm.D in the government hospitals as significant, in order to advise on the most updated forms of medicines available and thus help to improve the care offered to patients and to improve the health-related quality of life of patients. This survey emphasizes on the opinion of educated people regarding having Pharm.D in both government and private hospitals to take care of complete therapy, to decrease the cost of therapy, and to improve medication adherence. It also states that there is a dire need to increase awareness about Pharm.D course in India and to have Pharm.D in every pharmaceutical company and research laboratory to ensure safety and efficiency. Thus, Indian syllabus, teaching procedure, and hospital training at the institutions must be improved in order to meet the Western standards; specialization courses should be introduced; and better emerging opportunities should be provided to assure the success and bright future for Pharm.D in India.

Conclusion

Our research suggested that clinical pharmacist play major role in health care system to improving medication adherence, patient counselling espically in indian through partnering in patient care, with hospitals and clinics to assist in the direct care of patient along with the maintaining records of medication for patients, also manage pharmacy care and plans in both government as well as private hospitals

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