

Attitude of fourth year Doctor of Pharmacy students towards pharmacy profession and their career preferences

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ABSTRACT

Objectives: To identify fourth year Doctor of Pharmacy (Pharm.D) students' attitude towards pharmacy profession, their career preferences, and factors involved in this selection.

Materials and Methods: A pre-designed questionnaire was administered to fourth year Doctor of Pharmacy (Pharm.D) students. Information were collected regarding students' attitude about the scope of pharmacy, career preferences, and factors influencing their selection, impact of pharmacy profession on health care system, and post-graduate studies.

Results: Overall response rate was 83.6%. Of total 51 respondents, only 17 (33.3%) students were aware of the scope of pharmacy before admission to pharmacy program. A majority of the students (40, 78.4%) believed that pharmacy education and practice affect the health care system. About half of the students (54.9%) were interested in research, while remaining students were either uninterested (35.3%) or unsure about their decision (9.8%). A substantial number of students (58.8%) were unaware of different post-graduate prospects of pharmacy education. Very limited numbers of students (3, 5.9%) were of the opinion that they will join non-pharmacy career areas upon graduation. Clinical pharmacy was selected as preferred area of work upon graduation by 13 (25.5%) students, industrial pharmacy by 11 (21.6%), hospital pharmacy by 10 (19.6%), and teaching by 8 (15.7%) students. Personal interest was the most important factor (68.6%) involved in the selection of career area, followed by anticipated income (9.8%) and family influence (9.8%).

Conclusion: Fourth year students believed that pharmacy education and practice affect the health care system. Their favorite career areas were clinical pharmacy, industrial pharmacy, and hospital pharmacy. Personal interest was the most important factor involved in this selection. Most of them were interested in pharmacy-related research activities.

Key words: Career, Doctor of Pharmacy (Pharm.D), profession, pharmacy students

INTRODUCTION

Growing appreciation and scope of a specialty affect the students' preferences, learning and academic performance. In pharmacy profession, there are different subspecialties such as hospital pharmacy,

clinical pharmacy, industrial pharmacy, community pharmacy, drug regulations and many others.^[1] Career planning for future helps to accomplish goals in a successful manner. Therefore, pharmacy students should know about such wide range of specialties. They are the future pharmaceutical care providers who will provide services to promote rational use of medications. However, it is often assumed that students do not make preferences until they have been graduated.^[2,3]

Primary role of pharmacists and scope of pharmacy and its practice is greatly evolved. Pharmacists were focused on dispensing and compounding till

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20th century, but now, they work in multi-disciplinary settings to deliver pharmaceutical care.^[4-6] Pharmacists are third largest group of health care professionals. Pharmacists are pivotal part of health care system with patient-oriented services, patient education, and counseling about medication use for an indication, medication adherence, elevating the health, and quality of life of the patient.^[4,6-8]

The career choices and preferred areas of practice have been investigated in different parts of the world. A study, from United States, reported that job environment was the most important factor in deciding career destinations by pharmacy students, whereas career goals upon graduation, predominantly, were to work in retail pharmacies. However, 5 years after graduation, their projected areas of practice were divided between retail and clinical settings.^[9] A Malaysian study found that at public universities, most of the final-year pharmacy students were interested in hospital pharmacy practice as their first career step upon graduation, while community pharmacy was the first choice among student of private universities. Geographical location, salary, and benefits were the most important factors in selecting a career destination.^[10] In Pakistan, little is known about pharmacy students' attitude and preferences. Therefore, this study was designed to identify fourth year Doctor of Pharmacy (Pharm.D) students' attitude towards pharmacy profession, their career preferences, and factors involved in this selection.

MATERIALS AND METHODS

This study was conducted among students of fourth year Doctor of Pharmacy (Pharm.D) at the Department of Pharmacy, University of Peshawar (UoP). UoP is a public-sector university in Khyber Pakhtunkhwa province of Pakistan.

A validated questionnaire was administered to 61 students. Questionnaire items were developed from a detailed review of literature. Different questions were asked regarding demographics, attitude about the scope of pharmacy, career preferences and factors influencing their selection, prescription-related authority, impact of pharmacy profession on health care system, and post-graduate studies. The students were handed over the questionnaires by the study team and were asked to return the completed questionnaires to the first two authors. The Statistical Package for Social Sciences (SPSS) version 17 was used to compile and analyze the data.

RESULTS

Of total 61 questionnaires, 51 were returned at a response rate of 83.6%. Among 51 respondents, 28 (54.9%) were males and 23 (45.1%) were females. Their mean age was 23.1 ± 0.9 years.

Table 1 shows knowledge and attitude of the students of fourth year Pharm.D regarding the scope of pharmacy. Only 17 (33.3%) students were aware of the scope of pharmacy before admission to Pharm.D. A majority of the students (40, 78.4%) believed that pharmacy education and practice affect the health care system. A slight more than half of the students (29, 56.9%) stated that a pharmacist is not authorized to write prescriptions.

About half of the students (54.9%) were interested in research, while remaining students were either uninterested (35.3%) or unsure about their decision (9.8%) [Table 2]. A substantial number of students (58.8%) were unaware of different post-graduate prospects of pharmacy education.

Most of the respondents (34, 66.7%) stated that they were discouraged by their senior pharmacist colleagues regarding future career selection [Table 3]. Very limited numbers of students (3, 5.9%) were of the opinion that they will join non-pharmacy career areas upon graduation.

Table 1: Knowledge and attitude of pharmacy students regarding the scope of pharmacy

Statement	Response: n (%)		
	Yes	No	Don't know
Before undertaking pharmacy, were you aware of its scope?	17 (33.3)	23 (45.1)	11 (21.6)
Does pharmacy education and practice affect the health care system?	40 (78.4)	10 (19.6)	1 (2.0)
Is a pharmacist authorized to write prescription upon completion of Doctor of Pharmacy (Pharm.D.)?	22 (43.1)	29 (56.9)	0 (0)

Table 2: Students' knowledge and preferences about post-graduate opportunities

Statement	Response: n (%)		
	Yes	No	Not decided yet
Do you wish to undertake research in the field of pharmacy?	28 (54.9)	5 (9.8)	18 (35.3)
Are you aware of the different post-graduate prospects of pharmacy education?	21 (41.2)	30 (58.8)	-

Clinical pharmacy was selected as preferred area of work upon graduation by 13 (25.5%) students, industrial pharmacy by 11 (21.6%), hospital pharmacy by 10 (19.6%), and teaching by 8 (15.7%) students [Table 4]. Personal interest was the most important factor (35, 68.6%) involved in the selection of career area, followed by anticipated income (5, 9.8%) and family influence (5, 9.8%).

DISCUSSION

Most of the students were unaware of the scope of pharmacy before admission to Pharm.D. In Pakistan, almost all students prefer to get admission in medical colleges after passing their intermediate examinations.^[11] Therefore, almost all of them know about the scope and importance of medical profession at matric or intermediate level. Before admission to pharmacy program, usually they remain unaware about its scope. A majority of the students believed that pharmacy education and practice affect the health care system. It is a proven fact that pharmaceutical care is an integral component of any healthcare process.^[12] An established pharmacy system is necessary in any

country and region for safe, appropriate, and effective use of medications.^[13-15]

In this study, different career areas (clinical pharmacy, industrial pharmacy, and hospital pharmacy) were selected at similar ratios, and personal interest was the most important factor involved in this selection. In a study from the United States, chain community pharmacy (33.1%), hospital pharmacy (27.6%), and independent community pharmacy (12.4%) were reported to be the most preferred areas to work.^[16] In a Malaysian study, hospital pharmacy and community pharmacy were the preferred options among students.^[10]

Although many students were unaware about post-graduate prospects of pharmacy education, still substantial numbers of students were interested in research while some were unsure about their decision. It has been reported that relatively few pharmacy graduates pursue research-related post-graduate paths. Moreover, uncertainty has been found among pharmacy students about research-related careers.^[17]

CONCLUSION

Fourth year students believed that pharmacy education and practice affect the health care system. Their favorite career areas were clinical pharmacy, industrial pharmacy, and hospital pharmacy. Personal interest was the most important factor involved in this selection. Most of them were interested in pharmacy-related research activities.

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Table 3: Responses of students to some other career-related questions

Statement	Response: n (%)		
	Yes	No	Not sure
Do you wish to undertake non-pharmacy career area upon graduation?	3 (5.9)	36 (70.6)	12 (23.5)
What is the behavior of senior pharmacist colleagues regarding future career selection?	Encouraging 11 (21.6)	Discouraging 34 (66.7)	Neutral 6 (11.8)

Table 4: Preferred areas of work upon graduation and influencing factors

Variable	n (%)
Preference	
Clinical pharmacy	13 (25.5)
Industrial pharmacy	11 (21.6)
Hospital pharmacy	10 (19.6)
Teaching	8 (15.7)
Retail/community pharmacy	3 (5.9)
Drug regulation	2 (3.9)
Other	4 (7.8)
Influencing factors	
Personal interest	35 (68.6)
Anticipated income	5 (9.8)
Family influence	5 (9.8)
Reputation	4 (7.8)
Other	2 (3.9)

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