

## **Prospective Career Preferences of Imminent Pharmacist**

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**ABSTRACT:** *The present was conducted with the aim to identify the career preferences and the attributing factors of the career ambitions of fifth professional pharmacy undergraduate students. A previously developed and validated questionnaire was administered to fifth professional pharmacy undergraduate students of different private and government universities of Karachi. The students were asked to complete six sectioned questionnaire to identify the students' career preferences and future career ambitions. Descriptive statistics were used to elucidate participant's characteristics and their response to the questionnaire items. Chi square test was used at 0.05 level of significance to observe influence of gender and institutions on their responses. Out of 550, 458 questionnaires were returned back hence the response rate was 83.27%. Industrial pharmacy (31.44%) and hospital pharmacy (31.22%) were the most desired areas of upcoming pharmacy students to start their career. Getting the opportunity to be the part of healthcare team (83.4%) and utilizing their knowledge (83.84%) were the major reasons for selecting particular area of pharmacy practice. In this study the students showed positive attitude towards the pharmacy profession. Industrial and hospital pharmacy were the most preferred choices of pharmacy students to start their career.*

**KEYWORDS:** *Pharmacy students, career preferences, future career ambitions, Pakistan*

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### **I. INTRODUCTION:**

Primary role of the pharmacist and the scope of pharmacy practice have been evolved to a great extent (Pearson GJ. 2007). Previously pharmacist's responsibilities were limited to the drug preparation and distribution. Nowadays, pharmacists practice in variety of health care settings (Keely JL.2002). In Pakistan the traditional approach of a pharmacist has largely been towards joining a hospital or industrial pharmacy. However, with the advancement in pharmacy practicing areas like other health care professions, fields of pharmacy practice have also been modified and encompass wide range of activities. Since 1990 pharmaceutical care services have largely been adopted in developed countries and pharmacists are working to ensure the patient safety as one of their main responsibilities (Hepler CD. et al.1990 and Worley MM. et al.2007). Pharmacists in the developing countries are serving in different areas to provide pharmaceutical care and primary health care services (Smith F: 2004; Jesson J.2006 and Saira Azhar et al 2009). Therefore Pharm - D program was implemented in Pakistan with the objective of enhancing scope of pharmacy profession towards patient care. As pharmacy is a multidisciplinary profession, different areas of employment like clinical pharmacy, hospital pharmacy, industrial pharmacy, drug regulation, community pharmacy, retail pharmacy etc., give the pharmacy professionals an open field of practice. It is necessary for pharmacy students to be aware of all these specialities for achieving success in future. However, this is a fact that students usually do not make their preferences until they graduated from their institutions (Wright et al 2004 and Al-Haddad M et al 2010).

There are different factors which contribute in joining the pharmacy practicing area for young pharmacists. These factors may include: their passion to serve community and patients, their desire to develop new medicines, their aspiration to conduct pharmaceutical research, their attraction towards financial rewards, their satisfaction towards job security, flexibility of working hours, and availability of any good opportunity regardless of their personal interest. Sometimes influence of any personality (i.e. family member, friend, teacher or relative) also contributes in career initiation (Burlage HM.1963; Pratt R.1965 and Rascati K.1989). Laney et al., 2009 reported that job environment was the most important factor for pharmacy students when they were deciding to start their professional life. It was observed that initially pharmacists' career goals predominantly were to work in retail chain pharmacies in future but on completing graduation, their projected areas of practice were divided between retail and clinical setting (Laney MS et al 2009). Another study on the career choices of US pharmacy students reported that salary, working place, self satisfaction and utilizing their

capabilities to help patients; were found to be influential factors among them (Carter EA 1989; Besier JL 1992 and Carvajal 1999). Willis et al., 2006 reported that students in the United Kingdom entered in pharmacy because it was a science-based field. Other factors included the reputation of the profession, financial reward, personal qualities, experiences, intentions, and values (Willis SC. Et al 2006). Good employment prospects and desire to provide healthcare services were found as motivating factors for the students of pharmacy in Australia (Davy A.2007). Pakistan is a developing country with limited opportunities for pharmacists in urban and rural areas of the country. Here the health care system is not strongly developed and there is a need to put efforts in order to strengthen it (Islam A 2002). Like other developing countries because of the low compensation packages pharmacists do not want to work in rural areas of the country and shortage of pharmacists is a common problem (Geol P 1996). The present study was conducted to identify the factors affecting an upcoming pharmacist's choice towards starting his or her professional life in any field of pharmacy practice. It will also evaluate the current situation of employment trends in pharmaceuticals in Pakistan for Pharm-D graduates.

## **II. MATERIAL AND METHOD:**

A cross-sectional study was conducted from Feb'2013 till Aug'2013. Fifth professional pharmacy undergraduate students were the study population for the study. A pretested questionnaire previously used in another research was adopted and modified (Wilson K et al 2006). 550 questionnaires were distributed in two private and three public sector universities of Karachi. Out of which 458 questionnaires were returned back hence the response rate was 83.27%. The questionnaires were distributed in class rooms. In addition to the demographic data, questionnaire comprised of seven sections. First, second and third sections explored the student's future working place, their expected salary and expected working hours respectively. Section four covered the potential reasons for selecting particular field of pharmacy as a career. Section five covered the factors that influence future career choice of pharmacy students. Section six compares the pharmacy student's opinion regarding the comparison of the status of pharmacy with other health care professionals. Study approval was taken from each institution's head of department and each student participating in the study was informed about the purpose of the study and their consent was taken verbally. The participants were assured that their personal information and responses will be kept confidential. All of the selected participants were fifth professional pharmacy undergraduate students and were willing to participate in the study. The filled questionnaires were analyzed by Statistical Package for Social Sciences (SPSS 20.0) for further analysis. Descriptive statistics were used to elucidate participant's characteristics and their response to the questionnaire items. Chi square test was used at 0.05 level of significance to observe influence of gender and institutions on their responses.

## **III. RESULT:**

This study comprised of fifth professional under graduate pharmacy student from two private and three public sector universities. The demographic data is shown in Fig 1. In the present study approximately two third of the students were female. 37.11% of the participants were enrolled in private and 62.88 % were enrolled in public sector institutes of Karachi. Expected future working place of the students is shown in Fig.2. Industrial and hospital pharmacy were the major areas of interest of upcoming pharmacist. While some students showed their willingness to join academia or working abroad. Expected future salary package of students is recorded in Fig.3. It showed that 37.11 % of the students wanted to start their career in pharmacy with a salary package of Rs.50, 000 + . The reasons for students' selection of particular field in pharmacy is recorded in Table 1. Getting the opportunity to be the part of healthcare team (83.4%) and using their knowledge (83.84%) were the major reasons for selecting particular area of pharmacy practice. While opportunities to move up a career ladder, Interaction with other pharmacist, variety of work each day and job security were also the important reasons. 49.12 % of the students wanted to work 30-38 hours per week, 33.62% less than 30 hours per week and only 17.24 % wanted to work more than 38 hours per week. Factors that influence students' preferred area of working is explored in Table 2. The students' experience of internship (67.68%) was the most focusing factor that shows a large influence on their selection of particular area of pharmacy. On the other hand hospital and industrial visits also influenced students' selection for a particular field. Student's opinion regarding the status of pharmacy in comparison with other health care professions is shown in Table 3. 78.38% respondents believed that general physicians have higher status than pharmacy. Dentistry (64.62%), ophthalmology (68.34%) and medicine (43.23%) were also considered superior in status than pharmacy profession. To observe the influence of gender and institution on the responses of students towards their career preferences Chi square test was adopted using 0.05 level of significance. Table 4 summarizes the influence of gender and institution on their response.

#### IV. DISCUSSION:

Pharmacists are acknowledged to be the drug custodian therefore every health care team should comprises of pharmacist as an integral part. Pharmacist could play a significant role in order to make certain the rational drug therapy and optimum drug utilization. This would ultimately provide benefit to the patient. As with the evolution of pharmacy profession the recent approach of pharmacy practice has been shifted from drug to patient oriented. Patient counseling, therapeutic drug monitoring, drug utilization review are also the focusing areas of pharmacist responsibilities instead of dispensing and compounding the drug. The present study was conducted with the aim to explored the factors that affect a pharmacist's choice towards starting his or her professional life in either fields of pharmacy practice. Pharmacy students' showed a blend of realistic and improbable expectations for their future career preferences. Majority of the students want to start their career as Industrial (31.44%) and hospital pharmacist (31.22%) because Industrial and hospital pharmacies are the major developed areas of pharmacy in our country. Working abroad (12.88%) and academia (11.35%) were also the choice of some students to start their career in pharmacy. Community pharmacy (1.52%) was the least observed area of choice by the pharmacy students. Another study conducted in Pakistan, notified that students' emphasized on the significant role of pharmacist in improving quality of life and the practice of community pharmacy needs further improvement(Sadia et al 2013).Therefore currently the students were not willing to join community pharmacy as a career because this field is not yet developed in Pakistan. Students' expectation to get a high salary package at an initial stage is implausible approach.

A study conducted on pharmacy students showed that the desire of students to work in health care field, opportunity to earn a high salary, well respected job ,desire to help people and job security were the major reasons that influenced the students' decision in choosing particular field of pharmacy (Rascati K 1989). Similar trend was observed in our study. Students chose the particular field of pharmacy because of getting the opportunity to be the part of healthcare team (83.4%) and using their knowledge and skills (83.84%). Interaction with other pharmacist, variety of work each day and Job security were also considered the important reasons for their career preferences. Another research work conducted in Pakistan also reported that pharmacy students are willing to perform pharmaceutical care during their clerkship and professional career (Najia et al 2012).Therefore, it is concluded that students have positive attitude to work as a building block of health care team.The students' experience of internship, their hospital and industrial visits influenced students' selection for a particular field. It showed that students' exposure for different practicing areas have remarkable influence on their preferred career choice in future. According to an Indian author pharmacy is no more considered as a second choice to medicine (Ashok P.2007) but the concept of preferring medical field over pharmacy is still observed in Pakistan. When evaluating the students' perception towards pharmacy profession in comparison with other health care professions 78.38% respondents believed that general physicians have higher status than pharmacy in Pakistan. While Dentistry and ophthalmology were also considered superior in status than pharmacy profession. Major number of students considered the profession of nursing lower in status than pharmacy. Remarkable difference was observed in the opinion of the students of private and public sector universities regarding the influencing factors and reasons for the selection of a particular field of pharmacy.

#### V CONCLUSION:

The present study established a baseline understanding of the career aspirations, motivations and expectations of students within undergraduate pharmacy students in Karachi. The students showed positive attitude towards the pharmacy profession. Industrial and hospital were the most preferred choice of pharmacy students to start their career. Their internship experience and visit to pharmaceutical industries and hospitals were the most privileged factors that affect their career preferences.

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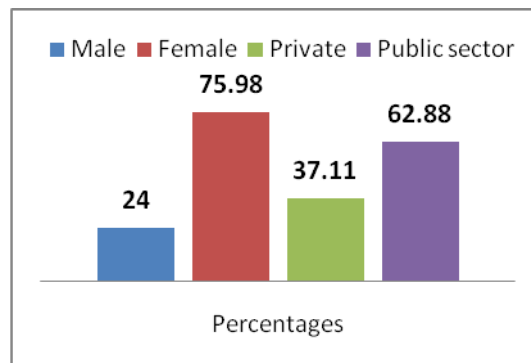


Fig.1 Demographic information

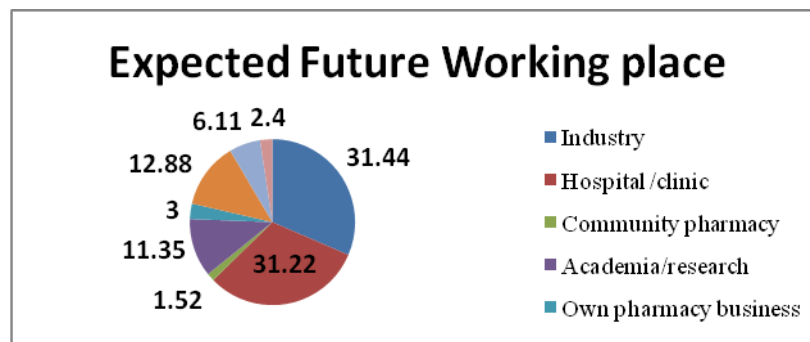


Fig. 2 Expected future working place

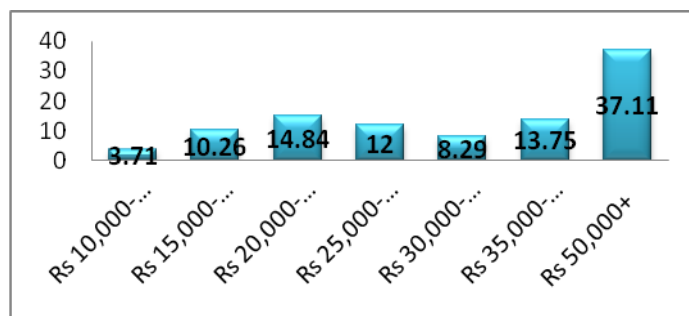


Fig.3 Expected salary package of students

Table 1 Reasons for selecting particular field of pharmacy

S.No	Reason	Yes	No	Don't Know
1	Good job opportunities because of shortage of pharmacist	224 (48.9)	152 (33.18)	81 (17.68)
2	Opportunities to interact with other pharmacist	306 (66.81)	87 (18.99)	65 (14.19)
3	Opportunities to be a part of healthcare team	382 (83.4)	39 (8.51)	37 (8.07)
4	Working under pressure	142 (31)	244 (53.27)	72 (15.72)
5	Working long hours	172 (37.55)	192 (41.92)	89 (19.43)
6	Having variety of work each day	304 (66.37)	92 (20.08)	61 (13.31)
7	Having direct contact with patients	269 (58.73)	129 (28.16)	60 (13.1)
8	Opportunities to move up a career ladder	352 (76.85)	46 (10.04)	60 (13.1)
9	Having a secure job	285 (62.22)	100 (21.83)	73 (15.93)
10	Opportunity to use knowledge	384 (83.84)	41 (8.95)	33 (7.20)
11	Working somewhere that is understaffed	156 (34.06)	199 (43.44)	103 (22.48)

Table 2 Factors influencing the students' career preferences

S.No	Factor	Large influence	Small influence	No influence
1	Course contents	270 (58.95)	144 (31.44)	43 (9.38)
2	Faculty member	245 (53.49)	147 (32.09)	66 (14.41)
3	Pharmacy practice lectures	260 (56.76)	133 (29.03)	65 (14.19)
4	Hospital pharmacy visit	277 (60.48)	109 (23.79)	71 (15.50)
5	Industrial pharmacy visit	255 (55.67)	133 (29.03)	70 (15.28)
6	Fellow students career choice	142 (31.0)	200 (43.66)	116 (25.32)
7	Experience of Internship	310 (67.68)	78 (17.03)	70 (15.28)
8	Interaction with practicing pharmacists	267 (58.29)	139 (30.34)	52 (11.35)
9	Jobs and recruitment section of the Pharmaceutical Journal	227 (49.56)	141 (30.78)	88 (19.21)

Table 3: Student's perception towards the status of pharmacy with other health care professions

S.No	Profession	Higher status than pharmacy	Same status than pharmacy	Lower status than pharmacy	Don't know
1	General physician	359 (78.38)	40 (8.73)	48 (10.48)	11 (2.40)
2	Dentistry	296 (64.62)	81 (17.68)	65 (14.19)	16 (3.49)
3	Health service manager	153 (33.40)	144 (31.44)	113 (24.67)	48 (10.48)
4	Medicine	198 (43.23)	187 (40.82)	54 (11.79)	19 (4.14)
5	Nursing	50 (10.91)	49 (10.69)	330 (72.05)	29 (6.33)
6	Occupational Therapy	67 (14.62)	101 (22.05)	214 (46.72)	76 (16.59)
7	Ophthalmologist	313 (68.34)	48 (10.48)	76 (16.59)	21 (4.58)
8	Physiotherapist	99 (21.61)	118 (25.76)	220 (48.03)	21 (4.58)
9	Medical technologist	67 (14.62)	105 (22.92)	264 (57.64)	22 (4.80)
10	Radiology	87 (18.99)	87 (18.99)	240 (52.40)	44 (9.60)

Table 4: Statistically significant association of gender and institution with their responses

S.No	Opinion	$\chi$	Sig.*
1	Gender Vs Opportunities to interact with other pharmacist	15.303	< 0.0001
2	Gender Vs Faculty member	9.204	0.01
3	Gender Vs Pharmacy practice lectures	7.912	0.019
4	Gender Vs Hospital pharmacy visit	10.515	0.015
5	Gender Vs Industrial pharmacy visit	7.38	0.025
6	Gender Vs Experience of Internship	14.834	0.001
7	Gender Vs Interaction with other practicing pharmacist	22.347	< 0.0001
8	Gender Vs Jobs and recruitment section of the pharmaceutical journal	12.998	0.005
9	Institution Vs Good job opportunities because of a shortage of pharmacist	17.248	0.001
10	Institution Vs Opportunities to interact with other pharmacists	6.428	0.04
11	Institution Vs Opportunities to be part of a healthcare team	28.991	< 0.0001
12	Institution Vs working under pressure	8.236	0.016
13	Institution Vs Working long hours	13.706	0.003
14	Institution Vs Having direct contact with patients	9.374	0.009
15	Institution Vs Opportunities to move up a career ladder	18.66	< 0.0001
16	Institution Vs Having a secure job	12.331	0.002
17	Institution Vs Working somewhere that is understaffed	13.017	0.001
18	Institution Vs Having the opportunity to use my specialist knowledge	13.664	0.001
19	Institution Vs Faculty member	11.083	0.004
20	Institution Vs Industrial pharmacy visit	18.377	< 0.0001
21	Institution Vs Fellow students career choices	8.935	0.011
22	Institution Vs Jobs and recruitment section of the Pharmaceutical Journal	10.155	0.017