

# What practicing pharmacists think about their role in healthcare: Preliminary findings from Karachi, Pakistan

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**ABSTRACT**

**Objective:** This study is aimed to explore the understanding of pharmacists about their perceived role in the health care system of Pakistan. **Methods:** A 15-item questionnaire, which was devised on the basis of literature survey, was self-administered to a convenience sample of practicing pharmacists in Karachi, Pakistan. The questionnaire constituted components regarding their desired practice setting, expectations concerning their professional function and the opinion on the future of profession. **Results:** The demographic characteristics highlighted male (47.1%) and female (52.9%) to be in equal proportion with more than 65% of the respondents ≤30 years of age (*n* = 67; 65.7%). Majority of the respondents hold bachelor degree in pharmacy (*n* = 82; 80.4%). Majority of the respondents had <5 years experience (*n* = 70; 68.6%). More than 75% of the respondents worked in hospital settings (*n* = 80; 78.4%). Majority of the respondents (*n* = 78; 76.5%) expressed their dissatisfaction towards their role as a pharmacist. Nearly half of the respondents (*n* = 47; 46.1%) visualized themselves as mere dispensers, while around one-fourth of the respondents (*n* = 24; 23.5%) perceived themselves as drug information pharmacist. In the context to their education and training as pharmacists, the opinion seems to be divided as half of the respondents expressed satisfaction (*n* = 46; 45.1%), while the other half showed dissatisfaction (*n* = 49; 48.0%). More than 90% of the respondents agreed to learn new skills a key to achieve career satisfaction. **Conclusion:** The pharmacists expressed dissatisfaction about their perceived status in the healthcare system of Pakistan. In order to intensify the feel of professionalism, reconceptualization of education and training system is advocated.

**Key words:** Karachi, Pakistan, practicing pharmacists

**INTRODUCTION**

Aging population and expensive medicines are hallmarks of any health care system globally.<sup>[1-3]</sup> The contributory role of medicaments in population health

has been an adjunct to escalating pharmaceutical expenditure, which in turn leads to extra burden on the healthcare expenditure.<sup>[4]</sup> Healthcare workforce, which refers to physicians, pharmacists, nurses, and dentists<sup>[5]</sup> is the backbone of respective healthcare system.<sup>[6]</sup> In order to strengthen the health care system the role of pharmacist, in particular, is evolved from a dispenser to a counselor and caregiver.<sup>[7]</sup> Either in developed or developing regions, pharmacists are generally the direct first point of contact with the patients,<sup>[8,9]</sup> thus symbolized as health information custodian expected to give advice ranging from dosage regimen to side-effects, adverse effects, drug-drug

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interactions etc.<sup>[10-12]</sup> The role of pharmacists in the health care system of Pakistan is indistinct. In one of the reviews conducted by Azhar *et al.* it is stated that Pakistani pharmacists are unconvinced about their current specialized role in the healthcare system.<sup>[13]</sup> In the context to that there is a dire need to conduct such sort of study, which explores the views of pharmacists about their present professional position in different healthcare settings. The current study is one such attempt in this regard, which aimed to explore the understanding of practicing pharmacists about their own role in different healthcare settings in Karachi, Pakistan.

### Objective

The objective of the current study is to explore the understanding of pharmacists about their perceived role in the healthcare system of Pakistan.

## METHODS

### Study design

A cross-sectional study was carried out to collect data for this research. A 15-item questionnaire, which was devised on the basis of literature survey, was self-administered to a convenience sample of practicing pharmacists in Karachi, Pakistan. One hundred and twenty-six questionnaires were distributed via personal contacts to different healthcare settings where professionally qualified pharmacists were employed. These healthcare settings comprised of Community Pharmacies, Hospital Pharmacies, and Regulatory Departments at the Government of Pakistan. Professionally qualified pharmacists as retailers, wholesalers, and distributors of medicines were also included in the study.

### Questionnaire design and development

The questionnaire was formed on the basis of guidelines mentioned by Oppenheim for survey research and questionnaire design.<sup>[14]</sup> Pilot test was performed with ten pharmacists. Based on the responses obtained from the pilot test, items that lacked clearness and comprehensiveness were deleted. To ensure face validity, it was sent to five pharmacy academics. Their comments were given due consideration. Final decision on the inclusion of those items that were considered finest representatives of the measuring variables was taken.

The questionnaire constituted components regarding their desired practice setting, expectations concerning their professional function and the opinion on the future of the profession. The questionnaire included

both open-ended and close-ended questions and statements. The study was carried out over a period of 3 months (March 2009-May 2009). In order to evaluate the internal consistency of the response to items, Cronbach's alpha was calculated and therefore found to be 0.65.

### Data analysis

All the data were entered into the Statistical Package for Social Sciences (SPSS Inc. Released 2007. SPSS for Windows, Version 16.0. Chicago, SPSS Inc). Descriptive statistics was performed to evaluate the sociodemographic characteristics of the respondents. In order to see the distribution of data, skewness and kurtosis were evaluated. Moreover, in order to observe the distribution frequency of each variable, data were also examined visually by means of generating histograms.<sup>[15]</sup>

Chi-square was used to see the association between variables. A value of  $P < 0.05$  will be considered significant.

## RESULTS

A total of 110 questionnaires returned, and 8 were found to have missing values in demographics and practice information and, therefore, discarded. A response rate of 87.3% was achieved.

### Demographic characteristics and practice information

Of 102 pharmacists, 48 (47.13%) were male, while 54 (52.9%) respondents were female. Majority of the pharmacists were in the age range 0-30 ( $n = 67$ ; 65.7%). More than three-fourth of the respondents ( $n = 82$ ; 80.4%) earned Bachelor of Pharmacy qualification. Majority of the respondents had an experience of <10 years ( $n = 70$ ; 68.6%). Slightly more than three-fourth of the respondents were employed in hospitals ( $n = 80$ ; 78.5%), whereas only very few were working in community pharmacies ( $n = 10$ ; 11%). A large majority of the respondents worked more than an average of 45 h/week ( $n = 66$ ; 64.7%).

Further details regarding practice information are outlined in Table 1.

### Perceived role

Majority of the respondents expressed their dissatisfaction toward their role as a pharmacist. Slightly fewer than half of the respondents ( $n = 47$ ; 46.1%) visualized themselves as mere dispensers, while nearly one-fourth of the respondents ( $n = 24$ ;

23.5%) perceived them as drug information pharmacist.

### Education and training

In the context to their education and training as pharmacists, the opinion seems to be divided as half of the respondents expressed satisfaction ( $n = 46$ ; 45.1%), while the other half showed dissatisfaction ( $n = 49$ ; 48%). More than 90% of the respondents agreed to learn new skills a key to achieve career goals ( $n = 95$ ; 93.1%) and career satisfaction ( $n = 95$ ; 93.1%). These responses showed significance with respect to practice setting. Hospital pharmacists showed more inclination when compared to other respondents working in different practice settings. The detailed information is given in Table 2.

Interestingly, a large majority of the practicing pharmacists (both from hospital and community settings) showed their ignorance about essential drug list and/or essential drug concept ( $n = 73$ ; 76.5%). Slightly fewer than half of the respondents ( $n = 54$ ; 52.9%) were found to be knowledgeable about rational drug use. Regulatory pharmacists expressed their knowingness about essential drug list and/or essential drug concept as well as rational drug use.

## DISCUSSION

Pharmacists are considered to be major contributors in improving public health by giving advice on medicine use to ensure responsible self-care, promote medication adherence as well as encourage healthy life-styles through appropriate health education strategies.<sup>[16]</sup> In Pakistan, the role of pharmacist whether in the community or hospital needs to be established.<sup>[13]</sup> This exploratory study was designed to seek the opinion of practicing pharmacists about their own role in the health care system. In the current study proportion of respondents from community; pharmacy setting is preferably low. This is in accordance with the previous study by Butt *et al.* (2005) in which only 22% of the respondents were qualified pharmacists in community pharmacies.<sup>[17]</sup> In Pakistan the scenario of professionally qualified pharmacists in community pharmacies is not different from other neighboring countries.<sup>[18]</sup> This is probably due to stringent salary structure<sup>[18]</sup> less motivation to join community settings<sup>[17]</sup> and as well as workforce migration. Pakistan is one of those developing economies which have a very large number of pharmacies than pharmacists in Pakistan and around two-third

**Table 1: Demographic characteristics of pharmacists**

Characteristics	Frequency (%)
Age range	
20-30	67 (65.7)
31-40	22 (21.6)
41-50	13 (12.7)
Gender	
Male	48 (47.1)
Female	54 (52.9)
Basic qualification	
Bachelor of Pharmacy	82 (80.4)
Master of Pharmacy	9 (8.8)
Doctor of Philosophy	2 (2.0)
Doctor of Pharmacy	9 (8.8)
Experience	
1-5	70 (68.6)
6-10	15 (14.7)
>10	17 (16.7)
Average h/week	
1-45	36 (35.3)
>45	66 (64.7)
61-90	20 (9.7)
>90	4 (1.9)
Practice setting	
Hospital	80 (78.5)
Community	11 (10.8)
Regulatory	8 (7.8)
Retail/wholesaler	3 (2.9)

**Table 2: Opinion of pharmacist with respect to their training and education**

Items	Responses (n (%))		P value		
	Yes	No	Age	Gender	Practice setting
Are you satisfied with your training?*	46 (45.1)	49 (48.0)	0.589	0.325	0.821
Whether education has enabled you to work independently?	47 (46.1)	55 (53.9)	0.750	0.123	0.345
Whether learning new skills are a key to achieve career goals?	95 (93.1)	7 (6.9)	0.325	0.145	0.025
Whether learning new skills are a key to career satisfaction?	95 (93.1)	7 (6.9)	0.590	0.134	0.028
Do you feel competent enough to be a patient educator?	63 (62.0)	39 (38.0)	0.812	0.567	0.021
Do you feel trained enough to do more than filling prescription?	43 (42.4)	59 (58.6)	0.135	0.456	0.001
Do you feel the need to provide point of care testing?	90 (88.0)	12 (12.0)	0.245	0.190	0.003
Do you feel competent enough to counsel the patient?*	43 (42.4)	55 (53.9)	0.132	0.124	0.001

\*Missing values in that item

of the pharmacy workforce comprise of pharmacy technicians rather than professionally qualified pharmacists.<sup>[19]</sup> In the current study, the ratio of male to female community pharmacists is more or less the same, which is contrary to the previous studies done in community pharmacies in Pakistan.<sup>[17,20]</sup> In the current study, a very large percentage of community pharmacists merely identified themselves as drug dispenser. It is imperative on the part of the government to provide funds to freshly graduated pharmacists for opening community pharmacies. This, in turn, will improve the status of pharmacist as “indispensable healthcare professional” in the eyes of the public when compared to hospital or industrial pharmacists. Moreover, the recent concept of retail pharmacy chains in Pakistan is a welcome move. Although the evolution of retail pharmacy chains is a slow process in Pakistan, still facility like computerization of prescription order processing generally at retail pharmacy chains may provide the possibility to the pharmacists to expand their role from dispensing to reviewing medication profiling, counseling, offering cost-effective alternatives, and even, also store management.

Pharmacists are generally employed by the government also to maintain check and balance on the regulatory framework for providing efficient safeguard for medicines-consuming public. In terms of their role as a decision maker, all the regulatory pharmacists expressed satisfaction towards their managerial positions. This is line with the review by Azhar *et al.* which stated that the role of Pakistani pharmacist is more focused toward management rather than customer or patient oriented.<sup>[13]</sup>

There are few tertiary care facilities like Aga Khan Hospital, and Liaquat National Hospital, Karachi, which provide state of art hospital pharmacy services to patients, comparable to any US hospital. Although there is the transformation of traditional supervisory role from dispensing to bed-side critical care pharmacist in few hospitals in Pakistan,<sup>[21]</sup> a study published cited strong concern of Pakistani hospital pharmacists about their professional identity,<sup>[22]</sup> which clearly reveals that the situation of hospital pharmacist in Pakistan needs due attention. The establishment of clinical pharmacy services in Aga Khan University Hospital in intensive care unit sets the precedence for other competitor hospitals to attract more pharmacists toward hospital care services rather than pharmaceutical industries.<sup>[21]</sup> Interestingly, the current study highlighted that all the respondents from community pharmacy and

regulatory settings agreed that the profession of pharmacy needs more recognition as pharmacists are “professional experts” on medicine-related issues. More or less, similar suggestions were given by Aslam *et al.*<sup>[23]</sup> in the backdrop of community pharmacy practice in Pakistan.

In the current study, an appreciable number of pharmacists expressed their desire to learn new skills. This is in concordance with the study done by McDonough and Bennett in which pharmacy preceptors realized that pharmacists should be given opportunities to learn new skills such as communication.<sup>[24]</sup>

## CONCLUSION

The pharmacists expressed dissatisfaction about their perceived role in the healthcare system of Pakistan. In order to intensify the feel of professionalism, reconceptualization of education and training system is advocated.

### Limitations of the study

Like any other study, this study draws attention to some of the unavoidable constraints of research approach that have been adopted.

The current study is unable to address the opinions of academic and industrial pharmacists about their perceived role in the healthcare system of Pakistan. Moreover, the current study was executed in only one city of Pakistan with a small sample size and, therefore, the generalization to other regions of Pakistan is not possible.

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