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## To Study and Compare Perception of Health Care Professionals Regarding the Role of Pharmacist in Health Care System in Pakistan

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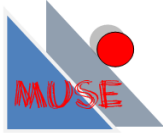
### Abstract

The healthcare team is mainly a triad of Physicians, Pharmacist & Nurses. Objective: The purpose of this paper is to help healthcare professionals understand more clearly the role of pharmacists within a health care team, especially inter-professional communication, pharmacists' responsibilities, and availability issues. A total of 200 samples were selected from 4 hospitals which include 100 samples of doctors and 100 of the nurses. Each sample is basically a questionnaire comprising of 23 questions. A total of two hundred questionnaires were distributed and one hundred and seventy-six questionnaires were returned resulting in the response rate of 88%. Pharmacists are being one of the major healthcare professional groups in the world after physicians and nurses are playing a very significant role in health care system. This understanding is a requirement for better communication and collaboration among the professions and for accomplishing the combined goal of better health care system.

### Keywords

Pharmacist; Healthcare; Quantitative analysis; Pakistan





## 1 Introduction

A health care system is a group of people, resources, organizations or institutions that provide the basic health care services to the targeted population. According to WHO health report, goals of health care systems' are good health for the public, receptiveness to the expectations of the people, and fair means of financial support (WH Report, 2000). A good health system delivers class services to all people, when and where they need them.

The effectiveness of any country's health sector depends upon the budget owed to it. According to the WHO ranking of healthcare systems of its 191 members, France topped the chart with Italy at second number. Pakistan is placed at 122nd position (World Health Report Geneva, 2000). Britain's National Health Service (NHS) was recently judged the "world's best health-care system" by the Washington-based Commonwealth Fund in its latest ranking of 11 rich countries' health provision.

In Pakistan, the setup of health sector consists of Basic Health Units (BHU), Rural Health Centers (RHCs) and the District hospitals. The vast network of health care facilities consists of 5,349 Basic Health Units, 4755 dispensaries, 562 Rural Health Centers (RHCs), 945 hospitals, 903 maternal child health centers (MCHs) and 290 TB Centers (Existing Infrastructure of Healthcare in Pakistan, 2009) but functionally it is being abandoned due to the lack of resources (Health Sector of Pakistan, 2014).

According to the World Health Organization (WHO) health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (WHO, 1964). In terms of modern health care delivery, studies have shown that multidisciplinary knowledge is one of the goals for achieving vital population health (Anderson, 2002). Throughout the year's different healthcare professionals have been doing their duty in their field of expertise yet there has been a greater interest in increasing the collaboration between health care providers. Collaborative Care is when several health providers work together with patients, their families, caregivers and

communities to provide high-quality care. It involves engaging any health provider whose expertise can help improve the patient's health. It has the potential to improve patient care, enhance patient safety and reduce workload issues that cause burnout among healthcare professionals (Makowsky, 2009). Health providers can also benefit through healthier work environments and increased job satisfaction. Health care cannot function without medicines and pharmacists play important roles in achieving desired health and economic outcomes by assuring the proper use of medicines. In many parts of the world, pharmacists have played an important role in the provision of pharmaceutical care services. Moreover, pharmacists can not only make a great contribution to the provision of the primary health care in developed countries but also in developing countries. In addition to that, pharmacists have provided clinical proficiency about selection, handling, preparation, procurement, and utilization of medications in patients (Higby, 1996)

The pharmacy profession is committed to ensuring the safe and effective use of medication and acts as a bridge between health sciences with the basic sciences (Hadzović, 1996). Pharmacist's professional roles and responsibilities have progressed from a focus on medication compounding and dispensing to extended pharmaceutical care services (Worley et al., 2007). Generally, the physician diagnoses and prescribes while the pharmacist compounds and dispenses medicines. However, the pharmacist has gained recognition as an important professional in the multidisciplinary provision of health care. The paradigm shift for pharmacy practice took place in 1990 when Hepler and Strand introduced the concept of "pharmaceutical care" as the responsible provision of drug therapy for the purpose of achieving definite outcomes that improve the patients' quality of life by preventing and resolving drug-related problems (Hepler and Strand, 1990).

The concept of pharmaceutical care can only be reached if doctors, pharmacists, and nurses agree on each other's role because different opinions by pharmacists and doctors regarding the pharmacist's role could decrease the level of their cooperation (Muijers et

al., 2003). A better interaction between physicians and pharmacists has led to more effective, safer and less costly drug therapies. Several studies on pharmacist–physician collaborations have proven that direct patient care i.e. interaction with the patient and observing his condition, is still wholly in the hands of the physician and that pharmacist participation in managing drug therapy is dependent on the physician’s attitude (Morely et al.,1983; Griffin et al.,1986). It is therefore important, that physicians understand and appreciate how pharmacists can contribute directly to the overall provision of patient care. Physicians’ approval of pharmacists’ services also depends on the value physicians attached to the service and the physicians’ perception of the pharmacist’s competency (Thomas, 1991).

Pharmacists being the third largest healthcare professional group in the world after physicians and nurses are playing a very significant role in health care system in developed countries (Babar, 2006). However; their place is not yet acknowledged in developing countries like Pakistan. There are several reasons for the little recognition given to the pharmacy profession in Pakistan, and this includes less number of pharmacists in the public health sector (Khan, 2009). It has been estimated that around 8102 pharmacists are in Pakistan with 2,836 working in the public sector, 5,023 in private settings and 243 in non-governmental nonprofit organizations (Anonymous, 2007). Of the total, approximately 55 % are involved in the production of pharmaceuticals, 15 % in federal and provincial drug control and hospital pharmacy establishments, another 15 % in the sales and marketing of pharmaceuticals, 10 % in community pharmacy, and 5 % in teaching and research (Azhar et al., 2011). Furthermore, there is no separation of the role of prescribing from that of dispensing in the Pakistani setting (Azhar and Hassali, 2009).

Continuous development in medication use by society and the expansion of the pharmacist’s role in direct patient care continue to generate demand for pharmacist services (Department of Health and Human Services, 2009). At the same time, increased competences for pharmacists’ medication providing roles have been achieved through the

use of advanced technology (e.g. bar code scanning, e-prescribing). PharmD graduates have the knowledge, skills, and capability to optimize therapeutic outcomes and improve the medication use system. As a result, pharmacists have gained recognition as “medication therapy experts” (Owen and Burns, 2010).

Insufficient communication between pharmacists, physicians, and nurses are one of the reasons that affect the patient care. One barrier that has been noted is pharmacists' lack of confidence in their ability to persuade physicians to accept their recommendations (Mitchell, 1990). Another possible cause is an ineffective or needless communication initiated by pharmacists, which makes physicians less willing to listen to pharmacists during future interactions. In addition, physicians do not see pharmacists as readily available drug information specialists because of location and telephone delays (Anonymous, 1983).

The increased inter-professional communication seen in certain situations has produced drug therapy that is safer, more effective, and less costly. Furthermore, multiple studies report that physicians want pharmacists to communicate with them. In one study, physicians recommended that pharmacists notify them first, even before the patient, when possible problems with drug dose, allergy, or interaction arise (Glaser, 1988). In another study of physician opinion, the physicians believed that pharmacists were competent and knowledgeable and thus should be doing more than just dispensing medication (Hirsch et al, 1990). Several studies on Nurse-Pharmacist collaboration concluded that many differences regarding medications can be resolved without causing any harm (Fletcher et al., 2012). According to another study shared learning between pharmacist and nurse resulted in improving their professional working relationship in order to provide good quality care to patients (Horsburgh et al., 2001).

The purpose of this paper is to help healthcare professionals (doctors, nurses pharmacists) understand more clearly the role of pharmacists within a health care team, especially inter-professional communication, pharmacists' responsibilities, and availability issues.

Furthermore, our study explores pharmacists, physicians, and nurses' experiences around working as a team and comparison of associated perceptions and expectations.

## 2 Method and Material

The study was carried out from October through November 2014 in Islamabad. It is fundamentally a cross-sectional and comparative study. The study is related to the healthcare system based survey comprises of hospitals of Islamabad/ Rawalpindi which includes Poly Clinic Hospital, Holy Family hospitals, PIMS and Benazir Bhutto Hospital Rawalpindi and others. The questionnaire was hand delivered to a random sample. A total of 200 samples were selected from these 4 hospitals which include 100 samples of doctors and 100 of the nurses. Each sample is basically a questionnaire comprising of 23 questions.

The study consists of 4 sections; (A) Demographic information, (B) Indicate the level of comfort with pharmacist carrying out their duties, (C) Indicate expectations about pharmacist working in different sectors and (D) indicate experience with a pharmacist. Section B of the questionnaire includes a set of statements about pharmacist role in which the respondents were asked to indicate their level of agreement opting from 3 choices with 1 = Uncomfortable, 2 = Moderately comfortable and 3 = comfortable. Six questions were asked each from section C and D and options were asked using a 5-point Likert scale, where 1 = strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; and 5 = Strongly agree.

The data were computed and analyzed using Statistical Package for Social Sciences (SPSS, version 20) and descriptive analysis was conducted. The results of each item in the questionnaire were reported as percentage and frequencies.

### 3 Result

A total of two hundred questionnaires were distributed and one hundred and seventy-six questionnaires were returned resulting in the response rate of 88%. Details of the physicians' personal information are given in Table 1. There were no associations between physician variables such as age, gender, nationality, year of graduation and their perception of pharmacists.

Table 1 Demographic Data Analysis

	Profession			
	Doctor		Nurse	
	n	%	n	%
25-30 years	50	29.2%	47	27.5%
31-35 years	15	8.8%	14	8.2%
36-40 years	18	10.5%	15	8.8%
> 40 years	5	2.9%	7	4.1%
Male	46	27.5%	36	21.6%
Female	39	23.4%	46	27.5%
Ali Hospital	2	1.1%	0	0.0%
Ali Medical Center	4	2.3%	10	5.7%
Benazir Bhutto Hospital	11	6.2%	4	2.3%
Bilal Hospital	1	0.6%	0	0.0%
BPH	2	1.1%	0	0.0%
CDA Hospital	1	0.6%	0	0.0%
CMH Rawalpindi	11	6.2%	18	10.2%
DHQ Hospital	2	1.1%	1	0.6%
Fauji Foundation Hospital	2	1.1%	5	2.8%
Holy Family Hospital	21	11.9%	6	3.4%
Kulsoom International Hospital	4	2.3%	7	4.0%
Mahroof International Hospital	2	1.1%	2	1.1%
NIRM	1	0.6%	0	0.0%

OGDCL	1	0.6%	0	0.0%
PIMS	7	4.0%	4	2.3%
Polyclinic Hospital	3	1.7%	10	5.7%
Quaid-e-Azam International Hospital	2	1.1%	2	1.1%
Shifa International Hospital	11	6.2%	19	10.8%
<1 year	12	7.4%	7	4.3%
1-10 years	63	38.7%	63	38.7%
11-20 years	8	4.9%	8	4.9%
>20 years	2	1.2%	0	0.0%

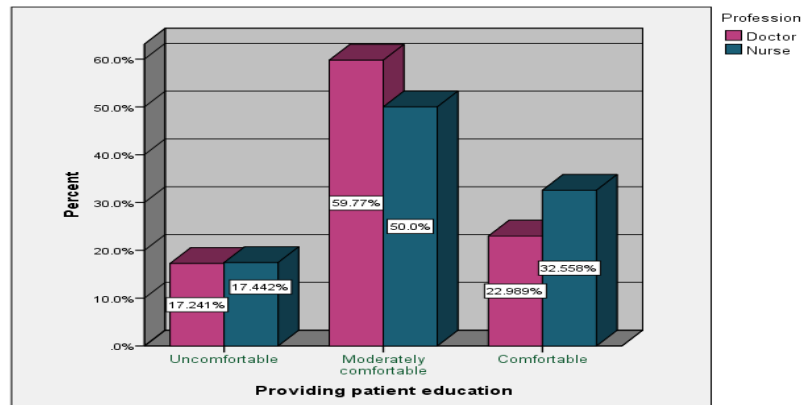
The results of the level of comfort of health care professionals in dealing with pharmacists carrying out specific duties are shown in **¡Error! No se encuentra el origen de la referencia..**

Table 2 Level of comfort of health care providers in dealing with pharmacist

Pharmacist's Role	Uncomfortable		Moderately comfortable		Comfortable	
	n	%	n	%	n	%
Providing patient education	30	17.3%	95	54.9%	48	27.7%
Suggesting use of non-prescription medications	50	29.4%	67	39.4%	53	31.2%
Suggesting use of certain prescription medications to patients	34	20.1%	80	47.3%	55	32.5%
Suggesting use of certain prescription medications to physician and nurses	21	12.3%	74	43.3%	76	44.4%
Treating to minor illnesses	42	24.6%	72	42.1%	57	33.3%
Identifying and preventing prescription errors	28	16.1%	73	42.0%	73	42.0%
Designing and monitoring pharmacotherapeutic regimens	29	16.8%	92	53.2%	52	30.1%
Monitoring outcomes of pharmaco-	24	14.0%	86	50.0%	62	36.0%

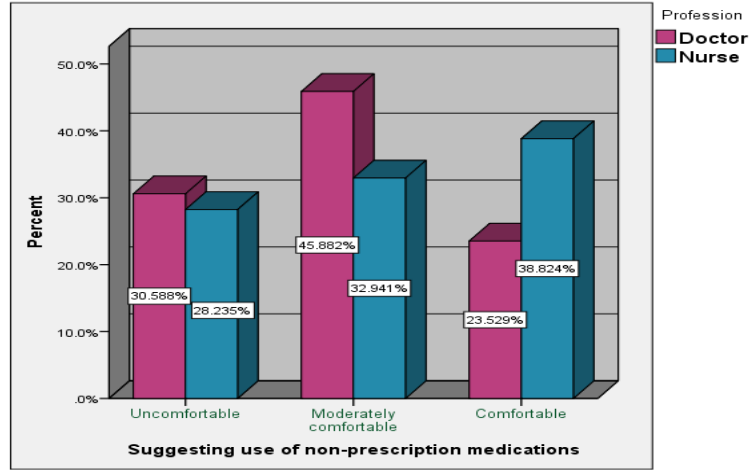


therapeutic regimens and plans



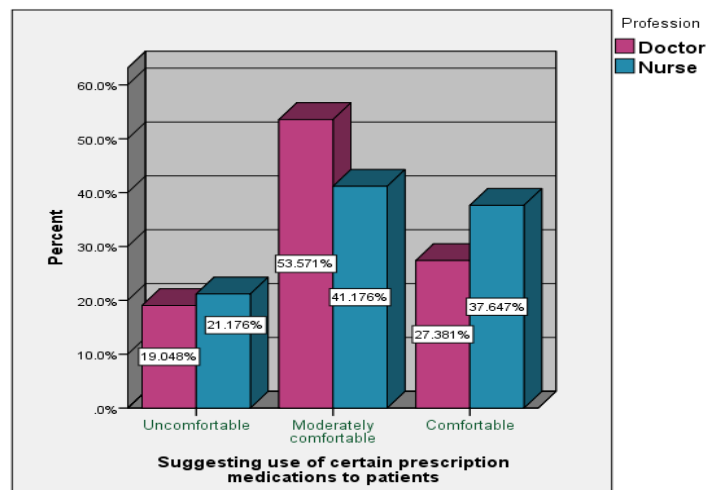
**Figure 1** Level of comfort with providing patient education

According to the results, 17% Doctors were uncomfortable regarding pharmacists role in providing patient education. 59% showed a moderate level of comfort while 22% felt comfortable with  $\pm 5\%$  confidence interval. Nurses also showed the same results with 17% as uncomfortable, 50% moderately comfortable while rest of the 32% was comfortable with  $\pm 5\%$  confidence interval as shown in Figure 1.



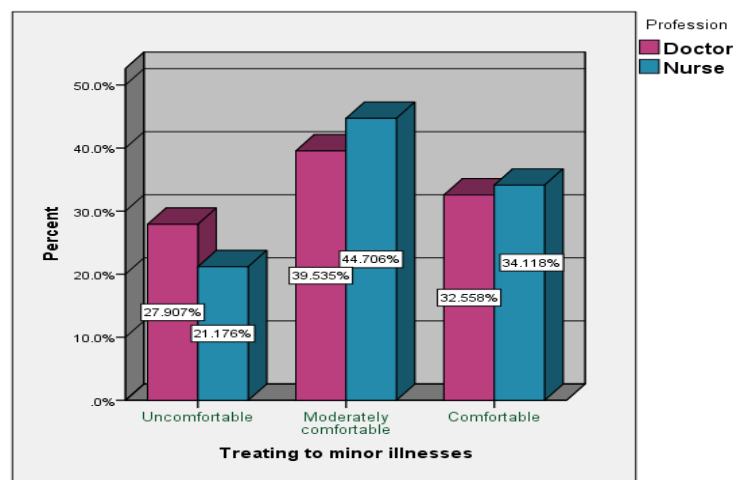
**Figure 2** Level of comfort with suggesting use of non-prescription medications

Regarding suggesting the use of non-prescriptions medications, 30% doctors were uncomfortable, 45% were moderately comfortable and 23% were comfortable with  $\pm 5\%$  confidence interval. In the case of nurses, 28% were uncomfortable and 32% and 38% were moderately comfortable and comfortable respectively with  $\pm 5\%$  confidence interval as shown in Figure 2.



**Figure 3** Level of comfort with pharmacists' suggestion of prescription medications

19% doctors were uncomfortable with pharmacists suggesting prescription medicines to patients, 53% were moderately comfortable and 27% were comfortable with  $\pm 5\%$  confidence interval. In nurses the ratio was 21%, 41% and 37% respectively with  $\pm 5\%$  confidence interval as shown in Figure 3.



**Figure 4** Level of comfort with treating minor illnesses

Suggesting prescriptions medicines to other healthcare professionals was perceived in case of doctors as 16%, 44% and 39% and in case of nurses 8%, 42% and 49% as uncomfortable, moderately comfortable and comfortable respectively with  $\pm 5\%$  confidence interval. The pharmacist can treat minor illnesses and in this respect 39% doctors and 44% nurses showed a moderate level of comfort. 29% doctors and 21% nurses were uncomfortable with this notion while 32% doctors and 34% nurses were comfortable with  $\pm 5\%$  confidence interval (Figure 4) Pharmacists' role as monitoring the outcomes for pharmacotherapeutic plans is acknowledged with doctors showing 47% and nurses showing 52% moderate comfortability with  $\pm 5\%$  confidence interval. 36 % doctors and 35% nurses were comfortable giving us nearly equal results.

Expectations of healthcare professionals about pharmacists working in different sectors are summarized in **¡Error! No se encuentra el origen de la referencia..**

Table 3 Expectations about pharmacists working in different sectors

Expectations	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	n	%	n	%	n	%	n	%	n	%
A	1	9.2	2	14.9	4	23.0	7	40.8	2	12.1
	6	%	6	%	0	%	1	%	1	%
B	2	1.1	1	10.9	2	12.1	9	54.6	3	21.3
		%	9	%	1	%	5	%	7	%
C	7	4.1	2	14.5	3	20.3	7	41.9	3	19.2
		%	5	%	5	%	2	%	3	%
D	6	3.5	1	9.4%	2	16.5	7	46.5	4	24.1
		%	6		8	%	9	%	1	%
E	6	3.4	1	10.3	3	20.1	7	42.5	4	23.6
		%	8	%	5	%	4	%	1	%
F	1	8.1	3	19.8	4	23.8	5	32.0	2	16.3
	4	%	4	%	1	%	5	%	8	%

A = To take personal responsibility for resolving any drug-related problems they discover involving patients.

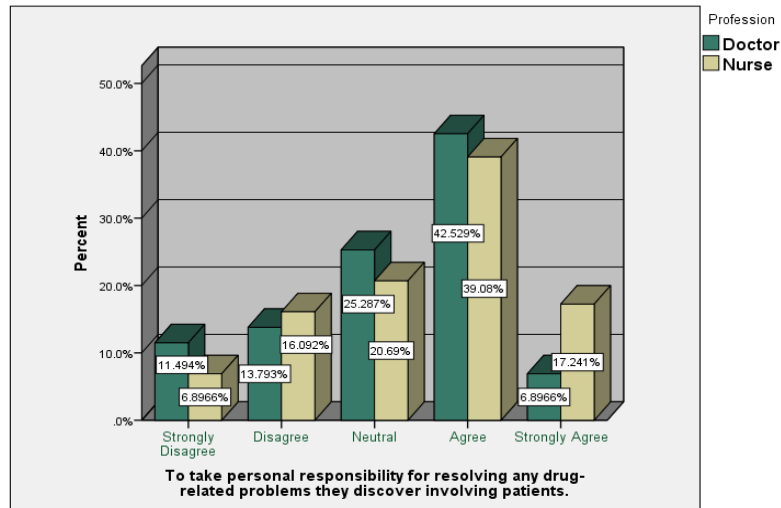
B = To be knowledgeable drug therapy experts

C = To assist in designing drug therapy treatment plans for patients

D = To educate patients about the safe and appropriate use of their medication

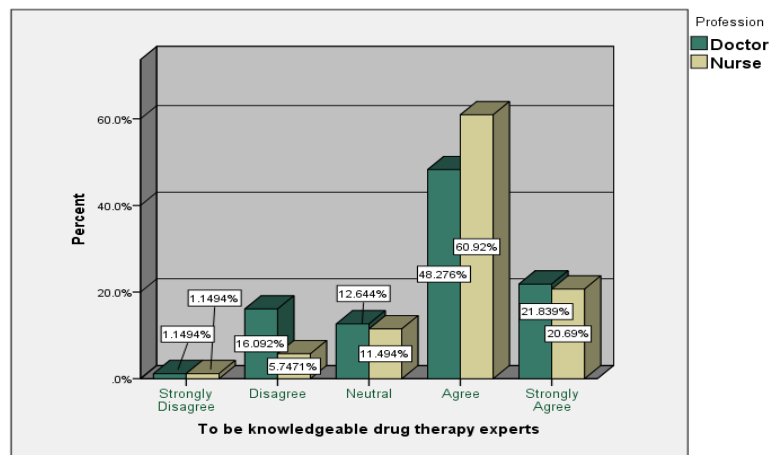
E = To monitor patients' response to drug therapy and give report if a patient encounter any Drug-related problem

F = To assist patients in selecting appropriate non-prescription medications



**Figure 5** Expectations regarding pharmacists' responsibility for resolving drug related problems

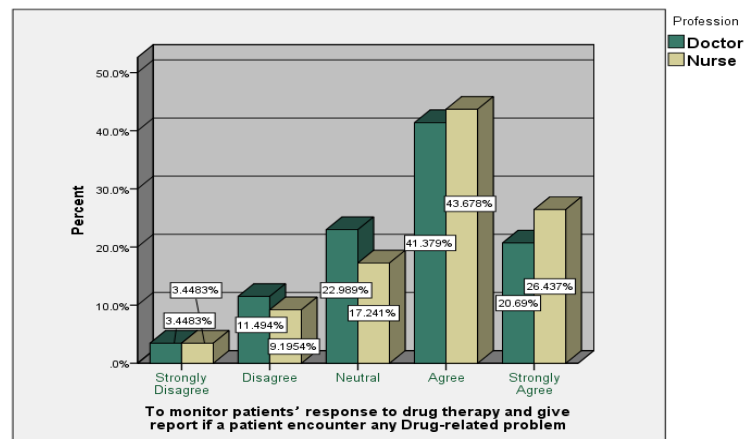
42% doctors and 39% nurses expect pharmacists to take personal responsibility regarding any drug related problem that occur involving the patient with  $\pm 5\%$  confidence interval as shown in Figure 5.



**Figure 6** Expectations about pharmacists as drug therapy expert

According to this study 61% nurses and 48% doctors believe pharmacists to be knowledgeable drug therapy experts. 12% doctors and 11% nurses gave a neutral opinion in this regard with  $\pm 5\%$  confidence interval as elaborated in Figure 6.

With respect to pharmacist's role in assisting in designing drug therapy 6% doctors disagree strongly, 18% disagree, 20% are neutral, 39% agree and 14% strongly agree. 1% of nurses disagree strongly, 10% disagree, 20% are neutral, 44% agree and 23% strongly agree. The results are with  $\pm 5\%$  confidence interval.



**Figure 7 Expectations regarding the monitoring of patients' response to drug therapy**

Pharmacists are to provide patient education regarding safe medication. 3% doctors disagree strongly, 15% disagree, 17% are neutral, 44% agree and 18% strongly agree. 3% nurses disagree strongly, 3% disagree, 15% are neutral, 48% agree and 24% strongly agree. The results are with  $\pm 5\%$  confidence interval.

Pharmacists' role as monitoring the outcomes for pharmacotherapeutic plans and reporting any problem that the patient acquires during the course of therapy is known as 3% doctors disagree strongly, 11% disagree, 22% are neutral, 41% agree and 20% strongly agree. 3% nurses disagree strongly, 9% disagree, 11% gave neutral opinion, 43%

agree and 26% strongly agree. The results are with  $\pm 5\%$  confidence interval as shown in Figure 7.

Different opinions on pharmacist assistance in selecting the medication are; 7% doctors disagree strongly, 21% disagree, 31% are neutral, 27% agree and 12% strongly agree. 9% nurses disagree strongly, 18% disagree, 16% are neutral, 36% agree and 19% strongly agree. The results are with  $\pm 5\%$  confidence interval.

Table 4 Experience of health care professionals with pharmacists

Experienc e	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	n	%	n	%	n	%	n	%	n	%
A	8	4.7	2	13.4	3	17.4	8	51.2	2	13.4
		%	3	%	0	%	8	%	3	%
B	1	0.6	2	15.6	2	16.8	9	52.0	2	15.0
		%	7	%	9	%	0	%	6	%
C	1	8.9	3	20.7	4	24.3	4	28.4	3	17.8
	5	%	5	%	1	%	8	%	0	%
D	9	5.4	2	12.0	3	19.2	7	43.7	3	19.8
		%	0	%	2	%	3	%	3	%
E	1	6.0	2	13.7	3	19.6	7	41.7	3	19.0
	0	%	3	%	3	%	0	%	2	%
F	7	4.2	1	7.7%	2	14.9	8	47.6	4	25.6
		%	3	%	5	%	0	%	3	%

A = In my experience, pharmacists are a reliable source of general drug information (i.e., specific facts about drugs which can be found in standard references)

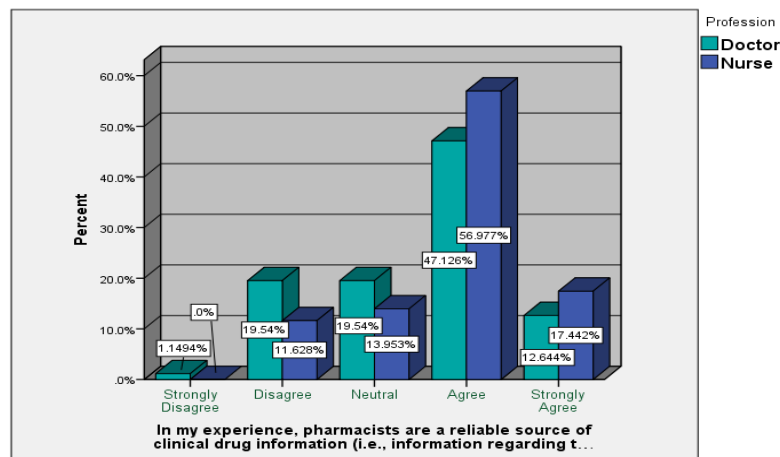
B = In my experience, pharmacists are a reliable source of clinical drug information (i.e., information regarding the clinical use of drugs in specific situations)

C = Pharmacists routinely counsel patients regarding the safe and appropriate use of their medications

D = Pharmacists routinely inform if they discover clinical problems with prescriptions'

E = Pharmacists routinely inform about more cost-effective alternatives to the drugs prescribed

F = I am willing to in-corporate the pharmacotherapy for the patient with consultation of the pharmacist

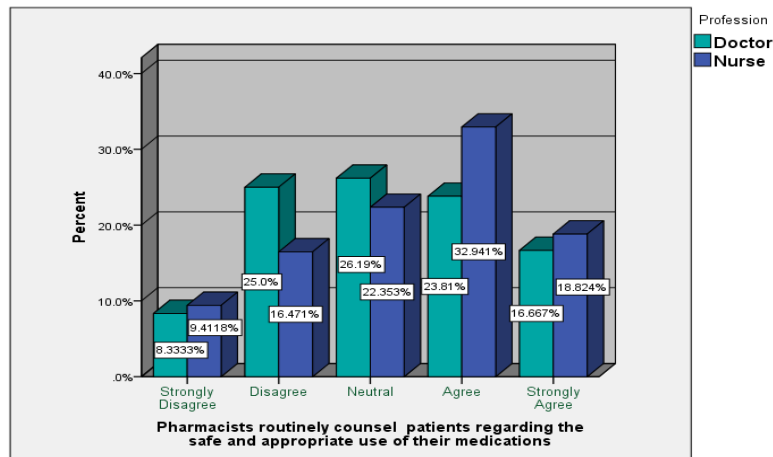


**Figure 8 Pharmacist: A reliable source of drug information**

In case of pharmacists as general drug information source 6% doctors disagree strongly, 15% disagree, 19% are neutral, 47% agree and 10% strongly agree. 2% of nurses disagree strongly, 11% disagree, 15% are neutral, 54% agree and 16% strongly agree. The results are with  $\pm 5\%$  confidence interval.

47 % doctors and 56% nurses agree that the pharmacists are reliable source of information regarding clinical scenarios while 19% doctors and 11% nurses disagree with this. The results are with  $\pm 5\%$  confidence interval as described in Figure 8.

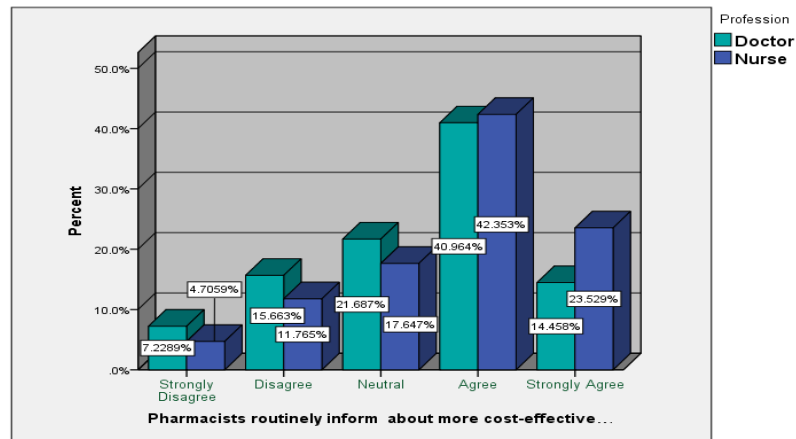




**Figure 9** Counseling the patient

23% doctors agree that pharmacists routinely counsel patients with respect to safe and appropriate use of medications. Almost same percent of doctors i.e. 25% disagree with this point thus giving us uncertain results in this respect. On the other hand 32% of nurses agree with pharmacists' counseling as shown in Figure 9. The results are with  $\pm 5\%$  confidence interval.

Pharmacists routinely inform about any clinical problem regarding prescription. 4% doctors disagree strongly, 19% disagree, 19% are neutral, 38% agree and 18% strongly agree. 5% of nurses disagree strongly, 4% disagree, 19% are neutral, 48% agree and 21% strongly agree. The results are with  $\pm 5\%$  confidence interval.



**Figure 10** Pharmacists' role in cost effective treatment

42% nurses followed by 40% doctors believe that pharmacists routinely inform about cost effective treatment by giving an alternative to the prescribed medications. 15% doctors disagree and 14% strongly agree. 21% of nurses gave a neutral opinion with 23% agreeing strongly. The results are with  $\pm 5\%$  confidence interval as shown in Figure 10.

A successful healthcare system is possible only in the case if the healthcare professionals work in corporation with each other. According to this survey somewhat positive results have been achieved with 51% doctors and 43% of nurses willing to work in coordination with the pharmacist for the better pharmacotherapy for the patient. 6% of the doctors and 9% nurses disagree while 18% doctors and 32% nurses strongly agree. The results are with  $\pm 5\%$  confidence interval.

#### 4 Discussion

Health care system of every country complies with the policies of the government of that particular country. If we talk about the health care system of Pakistan is basically categorized into several health care units DHQH (district headquarter hospital) working on district level there at least one hospital on district level it may also be increased to 2 or

3. Then there is one hospital on tehsil level covering all the areas of that particular tehsil called as THQH (Tehsil headquarter hospital). Every tehsil is governing several day care centers and small dispensaries on union council level.

Health care system of Pakistan also constitutes several private hospitals giving people health care services these hospitals may be working under some trust established for the welfare of people or may be established by the people for the sake of earning. Some of the professionals also established their own setup in the form of the clinic and providing people health care.

Health care system of Pakistan is built of three basic pillars Physician, Nurses, Pharmacist. Physician working in different hospitals have a well-defined role and therefore they feel the least difficulty after their degree. Same is the case with the nursing field they also have a well-established role in the health care system of the Pakistan. But pharmacist is the only pillar of health care profession whose role is still not defined in any field either he is working as a clinical pharmacist, hospital pharmacist or the community pharmacist.

If we talk about the policies of our government for the promotion of pharmacy profession we hardly find any work done in this perspective. Although pharmacy professional were the first time graduated late in the sixties. The pharmacy profession is progressing at snail's pace which must be boosted a little in order to publish this profession in our society.

Although some of the private organizations have hired pharmacist they (pharmacist) have lemmatized themselves to the pharmacy and are not available on the bedside for the continuous monitoring of the patient medication. There are hardly some hospitals in which pharmacist are available on the bedside for the evaluation of patient medication.

So we conducted this work to re-evaluate of the opinion of other health care professionals regarding the positioning of the pharmacist in health care setups because still other health care professionals still consider pharmacist as the dispenser.

The demographic data includes age and gender of the selected health care professional (nurse and doctor), working place (name of hospital) and practical experience (in years).

The assistance or the guidance provided by the pharmacist to a patient in a hospital in collaboration with nurses and doctors is to educate the patient regarding the proper use of the medicine in order to evoke his/her role in the public. 17% Doctors were uncomfortable regarding pharmacists role in providing patient education. 59% showed a moderate level of comfort while 22% felt comfortable. Nurses also showed the same results with 17% as uncomfortable, 50% moderately comfortable while rest of the 32% was comfortable.

This was because of the lack of the direct contact of a pharmacist with the patient.

OTC drugs are very often used by the people in our society so; this need can also be fulfilled if the availability of pharmacist is ensured to the expense of the people. Awareness of OTC drugs must be launched by the pharmacist.

Proper use of the medication by the patient is also very necessary to get him better in the shortest enlisted time. Example proper distances while the use of inhaler by asthmatic is very necessary and should be taught. Again in some of the hospital pharmacist were available to educate the people and in some, they were absent so that is why we obtained 31.2% are comfortable only and many were in the opinion of moderate comfortable

The prescription is needed to be evaluated before the medicine is dispensed to the patient. So that the chances of error be minimized. Expert in medicine can sort errors in a better way than any other. Cumulatively 42% of the professionals do admit about the expertise of the pharmacist. The only little number was not agreeing because of the lack of awareness.

Drug regimen should be designed by considering pharmacoeconomics and pharmacovigilance perspective of the patient and should save the record of the given medicine to facilitate for the next time when patient visits. Deficit regarding this point was a lack of data sorting devices and again the lack of pharmacist in the setup. Doctors still don't want to give this authority to pharmacist therefore on 30.1 comply with the level comfortable regarding designing of the drug regime.

The pharmacy profession is all about expertise in the field of medicine than these duties are obligatory for the pharmacist. Resolving any drug-related problems they discover involving patient if the patient complains about any drug-related problem to the physician he should tell him to consult a pharmacist. The physician will only send him to the pharmacist if he recognizes his designation of the pharmacist which is still lacking in our health care system. 41% as whole agree with resolving of drug related issues by the pharmacist.

If we talk about the private setups in Pakistan pharmacist are playing their role clinical setting and are serving as the source of knowledge regarding the drug therapy prescribed to the patient. They are also sharing the responsibility for the designing of the drug regime selected by the doctor. Now after the selection of the drug regime proper use of the drug should also be ensured by the pharmacist working. All health care professionals do admit this designation of the pharmacist where he is available.

In government hospitals presence of pharmacist should be ensured. The maximum level of disagrees regarding the roles was from the government hospitals.

Pharmacovigilance and pharmacokinetics are the two foremost duties of the pharmacist regarding the continuation of the medicine until relieved and selection of the appropriate brands which suits to the economic conditions of the patient. Because many brands are available in the market multinational and the local ones, if the generic is prescribed this issue of the selection of the brand according to the patient economic condition, would be solved.

So that is why drug regime should be designed in collaboration with a pharmacist. Many health care professionals comply with us regarding the expertise of pharmacist in medicine many of them filled agree and strongly agree on the box that was aware of the responsibilities of a pharmacist and did spend their time with him.

Many of them were neutral and disagreeing with us specifically in the government institutes. When we visited hospitals many of the doctors refused to fill the questionnaire and we came across one more experience a nurse serving in the government hospital wrote a statement on the questionnaire when she was filling "I am here but where is pharmacist".

The government of Pakistan should work upon the basic and third pillar of the health care profession in order to improve the health of society. Advanced countries have improved their health because they did specify the role of the pharmacist and designated his status in the health care system. Ministry of health should pay special attention in this regard so that we may start moving on the road map of the countries like U.S having strong clinical setup. Ministry should create vacancies in the government hospitals for the clinical and hospital pharmacist. Pharmacy Council should also revise the curriculum and should pay special attention to the institutes running degree program in pharmacy that either they are fulfilling the criteria of teaching in all aspects.

## 5 Conclusion

Health care system of Pakistan needs to be revalidated in comparison to the advanced countries to raise the status of health. This can only be done if every single member of the health care contributes its role physician, pharmacist or nurses at their end. Pharmacist working in different health care systems should work at their best in order raise the level of their field in healthcare system of Pakistan.

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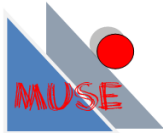
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