

RESEARCH ARTICLE

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Perception of Prescribers and Pharmacists Regarding Traditional role of Community Pharmacists in Quetta, Pakistan

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Received: 12 October,2019

Accepted: 26 November,2019

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Published by: OZZIE Publishers



Abstract

The purpose of this study was to investigate perception of pharmacist and prescriber regarding traditional role of community pharmacist. Questionnaire based, cross sectional study was conducted which comprised of 428 participants from Quetta, Pakistan. Majority (n=242, 56.5%) of respondents were prescribers while (n=186, 43.5%) were pharmacists with experience of 1 – 4 years (n=174, 40.7%). Overall the majority (n= 386, 90.2%) of the participants had positive perception regarding traditional dispensing and traditional counselling (n=314, 73.4%) role of community pharmacist. Concerning the prescribers, majority (n=200, 82.6%) had positive perception regarding traditional dispensing role and traditional counselling role (n=132, 524.5%) while concerning pharmacists, majority (n=186, 100%) had positive perception regarding the traditional dispensing role and traditional counselling (n=182, 97.8%) role of community pharmacist. This study concluded that both prescribers and pharmacists had positive perception regarding traditional role of community pharmacist, and it is recommended that further studies should be conducted regarding extended and clinical role of community pharmacist.

Key words: Prescriber, perception, community pharmacist, Quetta, Pakistan.

INTRODUCTION

Community pharmacist being part of healthcare team and health care professional plays vital role in closing the gap that is between actual realized value and benefits of medicine and is the important member of comprehensive health care system [1]. Significant patient's care improvement can be achieved when different healthcare professionals collaborate according to their expertise [2].

The community pharmacist advises the patients regarding usage and possible effects of drugs prescribed to them by medical doctors and provides useful information regarding contraindications or medicines not to take with prescribed medication for having potential of causing drug interaction [3]. The community pharmacist is responsible to dispense the medication safely to public in general and to patient in specific and responsible to work under ethical standards [4]. Apart

from just dispensing and supplying medications and consulting with HCPS and patients, the pharmacist also keeps the records of medication, patients and medical related products [3].

The increase in patient health demands, increase in chronic diseases and increase in diversity and complexity regarding role of community pharmacist in health system demands an up to date knowledge, expertise and skills to meet the needs of patient [1].

The role of pharmacist is different in different states of world according to their laws and implementation of laws, in some states pharmacists only have role in preparing and supplying/dispensing of medications and in some states pharmacists have more focused role as sharing their expertise with medical doctors, patients and nurses [5].

The community pharmacists have great responsibilities to ensure the medication rational use and to achieve best possible outcomes perceived from the therapy. All these responsibilities start from supply chain of medicines, proper storage and quality preparation of medicines [6]. Pharmacist is also responsible to detect counterfeit, spurious, wrong labeling and falsified medicines. The community pharmacists are also having the responsibility to ensure that the prescription is proper or not, and to check whether the dosage form and dose regimens are appropriate, instruction regarding medicines usage is clear, any possible interaction like drug-drug or drug-food interactions prevented, ADRs predicted, contraindications and allergies are avoided, unnecessary medicines not prescribed and cost for treatment is considered [1].

The pharmacists also work to assist the patients by providing useful information regarding to their prescribed medications such information includes proper medicines intake and importance of medicines intake timely, correct dose to use, time to use, medications and other foods not to use with current medications, avoidable side effects and what should be expected from treatment [7]. The community pharmacists also evaluate and monitor the medication effectiveness as well as ADRs to check the progress of treatment and prevent patient from ADRs [1].

As the collaboration between prescriber and pharmacist is important so does their perception towards each other role and as no such study was performed to investigate the perception of prescriber and pharmacist that is why to fill the gap this study was performed.

METHODOLOGY

Study Design, Settings and Duration

This study was questionnaire based, cross sectional survey conducted in Bolan Medical Complex Hospital (BMCH), Sandeman Provincial Hospital (SPH) and Community Pharmacies of Quetta, Pakistan from April to August 2019.

Study Questionnaire

For data collection specifically designed questionnaire was used and the questionnaire was developed after extensive literature review and with the help of some previous studies [8] [9] [10] [3]. The questionnaire comprised of 16 questions from 2 domains which were, traditional dispensing and traditional counselling role of community pharmacist apart from demographic characteristics. Each question was with response of 5-point Likert scale (comprised of Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree) to which the respondents were asked to answer as per their agreement level.

Validity/Reliability of Questionnaire

Content and face validity were done by distributing the questionnaire to experts of Faculty of Pharmacy and the experts were asked for their views on worth, simplicity and significance. The experts were also asked about the questions they want to remove from the questionnaire. For content validity the experts were asked to list the questions in order of importance and relevance. For reliability Cronbach alpha test

was applied, and the Cronbach alpha value of questionnaire was highly acceptable i.e. 0.889 [11].

Study Population:

The prescribers and pharmacists working in BMCH, SPH, community pharmacies and pharmaceutical firms were the study population.

Sample Size

To calculate the sample size for this study the Rao Soft calculator for sample size was used [12]. 95% confidence interval, 5% margin of error and 50% Response distribution was selected to estimate the sample size, which resulted in total sample size of 385. A drop out of 15% was added, a total of 450 Questionnaires were distributed and 428 were returned and added in the study.

Sample Technique

Non probability simple convenience sampling technique was used in this study because no exact database information was available regarding number of prescribers and pharmacists.

Inclusion/Exclusion Criteria

All the prescribers and pharmacists working in BMCH, SPH, Community Pharmacies and Pharmaceutical firms and willing to participate in study were included and all those participants who were not willing or not responded were excluded from study.

Ethical Consideration

The approval was taken from ethical committee of university of Balochistan, and consent, stating that the participation is voluntary, and participants can leave at any stage and their information will be kept confidential, was signed from participants before filling of questionnaire.

Statistical Analysis

To compute and analyze the data statistical package for social sciences version 21 were used (SPSS, V21). The descriptive statistics were applied, and results were computed as frequency and percentages. To test the association and significance among the variables Chi-square test was performed ($P < 0.05$).

RESULT

Demographic Characteristics

Demographics characteristics are illustrated in table 1. Majority of respondents, (n=139, 32.5%), were having age ranges between 36 – 49 years with male dominance (n=223, 52.1%). Majority (n=242, 56.5%) of respondents were prescribers while (n=186, 43.5%) were pharmacists. Doctor of Pharmacy (Pharm-D) was the highest qualification among majority of pharmacists (n=151, 35.3%) while the highest qualification among prescribers were FCPS (n=98, 22.9%). Specialty of majority (n=106, 24.8) of the respondents were community pharmacists with experience of 1 – 4 years (n=174, 40.7). Majority (n=151, 35.3%) of the respondents were working at Bolan Medical Complex Hospital and (n=107, 25%) of respondents were working as community pharmacists.

Table 1: Demographic Characteristics of Participants

Description	Frequency	Percentage (%)
Age Group (Years)		
26 - 30	132	30.8
31 - 35	125	29.2
36 - 40	139	32.5
41 - 45	27	6.3
46 and above	5	1.2
Gender		
Male	223	52.1
Female	205	47.9
Occupation		
Prescriber	242	56.5
Pharmacist	186	43.5
Highest Qualification		
FCPS	98	22.9
Pharm-D	151	35.3
MBBS	62	14.5
BDS	75	17.5
M-Phil	35	8.2
MCPS	7	1.6
Specialty		
Hospital Pharmacist	56	13.1
Community Pharmacist	106	24.8
Medicine	86	20.1
Dentistry	96	22.4
Pediatrics	19	4.4
Gynecologist	41	9.6
Marketing Pharmacist	24	5.6
Experience (Years)		
1-4	174	40.7
5-8	134	31.3
9-12	78	18.2
13-16	34	7.9
17-20	5	1.2
21-24	3	0.7
Institute		
Bolan Medical Complex Hospital	151	35.3
Sandeman Provincial Hospital	146	34.1
Community Pharmacy	107	25.0
Pharmaceutical Company	24	5.6
Current Position		
House Officer	33	7.7
Assistant Professor	20	4.7
Associate Professor	10	2.3
Registrar	23	5.4
Post-Graduate	37	8.6
Community Pharmacist	107	25.0
Medical Representative	24	5.6
Hospital Pharmacist	55	12.9
Dental Surgeon	69	16.1
Medical Officer	50	11.7

Traditional Dispensing Role of Community Pharmacist

Traditional dispensing role of community pharmacists is illustrated in Table 2. Majority (n=218, 50.9%) of participants strongly agreed that drugs should not be dispensed without Pharmacist while majority agreed on roles of community pharmacists that are availability of medicines (n=262, 61.2%), make/ prepare drug list used in community setting (n=281, 65.7%), purchase and stock drug used in community setting

(n= 163, 38.1%), technical component of dispensing including counting, preparing and measuring of medicines/ dose (n=135, 31.5%), labelling of medicines (n=237, 55.4%), dispense medicines services throughout the day (n=118, 27.6%), maintain manual record of all patients/ prescriptions (n=212, 49.5%) and maintain computer record/ profile of all patients/ prescriptions (n=188, 43.9%).

Table 2: Traditional Dispensing Role of Community Pharmacist

Description	Strongly Disagree F (%)	Disagree F (%)	Neutral F (%)	Agree F (%)	Strongly Agree F (%)
Availability of medicines (Both prescribed and OTC)	2 (0.5)	45 (10.5)	37 (8.6)	262 (61.2)	82 (19.2)
Make/ prepare drug list used in community setting	----	11 (2.6)	43 (10.0)	281 (65.7)	93 (21.7)
Purchase and stock drug used in community setting	----	35 (8.2)	68 (15.9)	163 (38.1)	162 (37.9)
Technical component of dispensing including counting, preparing and measuring of medicines/ dose	----	11 (2.6)	58 (13.6)	135 (31.5)	224 (52.3)
Labelling of medicines	----	8 (1.9)	41 (9.6)	237 (55.4)	142 (33.2)
Dispense medicines services throughout the day (Minimum 16 hours)	5 (1.2)	83 (19.4)	45 (10.5)	118 (27.6)	177 (41.4)
No drug dispensing without pharmacist	----	82 (19.2)	19 (4.4)	109 (25.5)	218 (50.9)
Maintain manual record of all patients/ prescriptions	1 (0.2)	25 (5.8)	22 (5.1)	212 (49.5)	168 (39.3)
Maintain computer record/ profile of all patients/ prescriptions	30 (7)	41 (9.6)	23 (5.4)	188 (43.9)	146 (34.1)

Traditional Counselling Role of Community Pharmacist

Traditional dispensing role of community pharmacists is illustrated in Table 3. Majority of the participants agreed that the community pharmacist's role is counselling the patients for medications (n=234, 54.7%), counselling patients for risk/benefit of prescription (n=197, 46%), counselling regarding ADR/ side effects of the prescription (n=203, 47.4%) and educate patients for drug misuse/ abuse (198, 46.3%). Majority

(n=114, 26.6%) of the participants disagreed on the community pharmacist's role that they can educate patients for other diseases while majority of the participants neither agreed nor disagreed regarding the community pharmacist's role that they can educate patients for his/ her current disease condition (n=126, 29.4%) and educate patients for family planning (n=123, 28.7%).

Table 3: Traditional Counselling Role of Community Pharmacist

Description	Strongly Disagree F (%)	Disagree F (%)	Neutral F (%)	Agree F (%)	Strongly Agree F (%)
Counselling patients for prescription/ OTC medicines	----	9 (2.1)	64 (15)	234 (54.7)	121 (28.3)
Counselling patients for risk/ benefit of prescription/ OTC medicines	10 (2.3)	67 (15.7)	46 (10.7)	197 (46)	108 (25.2)
Counselling regarding ADR/ side effects of the prescription/ OTC medicines	8 (1.9)	34 (7.9)	40 (9.3)	203 (47.4)	143 (33.4)
Educate patients for his/ her current disease condition	8 (1.9)	81 (18.9)	126 (29.4)	102 (23.8)	111 (25.9)
Educate patients for other diseases	67 (15.7)	114 (26.6)	102 (23.8)	72 (16.8)	73 (17.1)
Educate patients for family planning	----	150 (35)	123 (28.7)	81 (18.9)	74 (17.3)
Educate patients for drug misuse/ abuse	31 (7.2)	5 (1.2)	45 (10.5)	198 (46.3)	149 (34.8)

Perception of Participants

Perception of participants are illustrated in Table 4. Majority of the participants had positive perception regarding traditional dispensing (n= 386, 90.2%), traditional counselling n=314, 73.4%) role of community pharmacist.

Table 4: Perception of Participants

Description	Positive Perception F (%)	Negative Perception F (%)
Traditional Dispensing	386 (90.2)	42 (9.8)
Traditional Counselling	314 (73.4)	114 (26.6)
Overall Score	424 (78.3)	4 (21.7)

Comparison of Demographic Characteristics with Role of Community Pharmacist (Traditional Dispensing Role)

Occupation, highest qualification, experience, current working position and specialty were significantly associated ($P < 0.05$) with perception regarding traditional dispensing role of community pharmacist.

Table 5: Comparison of Demographic Characteristics with Role of Community Pharmacist (Traditional Dispensing Role)

Description	Positive F (%)	Negative F (%)	P-Test
Occupation			
Traditional Dispensing			
Prescriber	200 (82.6)	42 (17.4)	0.001
Pharmacist	186 (100)	----	
Highest Qualification			
Traditional Dispensing			
FCPS	77 (18.0)	21 (4.9)	0.001
Pharm-D	151 (35.3)	----	
MBBS	48 (11.2)	14 (3.3)	
BDS	68 (15.9)	7 (1.6)	
M-Phil	35 (8.2)	----	
MCPS	7 (1.6)	----	
Specialty			
Traditional Dispensing			
Hospital Pharmacist	54 (12.6)	2 (0.5)	0.001
Community Pharmacist	104 (24.3)	2 (0.5)	
Medicine	1 (0.2)	85 (19.9)	
Dentistry	42 (9.8)	54 (12.6)	
Pediatrics	6 (1.4)	13 (3.0)	
Gynecologist	24 (5.6)	17 (4.0)	
Marketing Pharmacist	24 (5.6)	----	
Experience			
Traditional Dispensing			
1-4 Years	162 (37.9)	12 (2.8)	0.001
5-8 Years	125 (29.2)	9 (2.1)	
9-12 Years	68 (15.9)	10 (2.3)	
13-16 Years	23 (5.4)	11 (2.6)	
17-20 years	5 (1.2)	----	
21-24 years	3 (0.7)	----	
Current Working Position			
Traditional Dispensing			
House Officer	26 (6.1)	7 (1.6)	0.001
Assistant Professor	15 (3.5)	5 (1.2)	
Associate Professor	7 (1.6)	3 (0.7)	
Registrar	20 (4.7)	3 (0.7)	
Post Graduate	28 (6.5)	9 (2.1)	
Community Pharmacist	107 (25.0)	----	
Medical Representative	24 (5.6)	----	
Hospital Pharmacist	55 (12.9)	----	
Dental Surgeon	66 (15.4)	3 (0.7)	
Medical Officer	38 (8.9)	12 (2.8)	

Comparison of Demographic Characteristics with Role of Community Pharmacist (Traditional Counselling Role)

Occupation, highest qualification, experience, current working position and specialty were significantly associated (P<0.05) with perception regarding traditional counselling role of community pharmacist.

Table 6: Comparison of Demographic Characteristics with Role of Community Pharmacist (Traditional Counselling Role)

Description	Positive F (%)	Negative F (%)	P-Test
Occupation			
Traditional Counselling			
Prescriber	132 (54.5)	110 (45.5)	0.001
Pharmacist	182 (97.8)	4 (2.2)	
Highest Qualification			
Traditional Counselling			
FCPS	37 (8.6)	61 (14.3)	0.001
Pharm-D	147 (34.3)	4 (0.9)	
MBBS	23 (5.4)	39 (9.1)	
BDS	65 (15.2)	10 (2.3)	
M-Phil	35 (8.2)	----	
MCPS	7 (1.6)	----	
Specialty			
Traditional Counselling			
Hospital Pharmacist	56 (13.1)	----	0.001
Community Pharmacist	106 (24.8)	----	
Medicine	33 (7.7)	53 (12.4)	
Dentistry	80 (18.7)	16 (3.7)	
Pediatrics	15 (3.5)	4 (0.9)	
Gynecologist	4 (0.9)	37 (8.6)	
Marketing Pharmacist	20 (4.7)	4 (0.9)	
Experience			
Traditional Counselling			
1-4 Years	143 (33.4)	31 (7.2)	0.005
5-8 Years	95 (22.2)	39 (9.1)	
9-12 Years	50 (11.7)	28 (6.5)	
13-16 Years	23 (5.4)	11 (2.6)	
17-20 years	2 (0.5)	3 (0.7)	
21-24 years	1 (0.2)	2 (0.5)	
Current Working Position			
Traditional Counselling			
House Officer	20 (4.7)	13 (3.0)	0.001
Assistant Professor	10 (2.3)	10 (2.3)	
Associate Professor	----	10 (2.3)	
Registrar	12 (2.8)	11 (2.6)	
Post-Graduate	17 (4.0)	20 (4.7)	
Community Pharmacist	107 (25.0)	----	
Medical Representative	20 (4.7)	4 (0.9)	
Hospital Pharmacist	55 (12.9)	----	
Dental Surgeon	61 (14.3)	8 (1.9)	
Medical Officer	12 (2.8)	38 (8.9)	

relationships with other health professionals and primary healthcare.

DISCUSSION

Pharmacist play an important role in the Healthcare system by utilizing it diverse skills in various domains within the Pharmacy and Healthcare system. Community pharmacists are public healthcare providers. They dispense medicines or, when ordered, sell them without prescription. In addition to ensure dispensing of quality products, their professional services include patient counselling at time of prescription filling. They

The prescribers had positive perception regarding traditional roles of dispensing and counselling of community pharmacists that they cover counselling of patients at the time of dispensing of prescription and supply traditional medicines and dispense them accordingly. This is similar to study conducted in Jordan where author showed that prescribers were having positive perception and were broadly recognizing the traditional role of community pharmacists including educating the patients [13] and according to the study conducted in New Zealand 60% of prescribers had positive perception regarding dispensing role of community pharmacists [14]. The study conducted in

Macau concluded that the both pharmacists and prescribers agreed on medication dispensing role pharmacist [15]. Another study showed that community pharmacists continually in the provision of patient counselling and health education services for patients at community level [16]

Current study results explained regarding the counselling role of community pharmacists. That may include various domains within the counselling like pharmacist-provided medication counselling is important for improving medication use, preventing medication errors and ensuring that the desired outcomes can be achieved. Pharmacists in public health services include smoking cessation counselling too. Current study had showed prescribers and pharmacists both agreed on counselling roles this is consistent with study conducted in New Zealand concluding Eight-five percent of prescribers and pharmacists agreed on counselling role of community pharmacists [14]. This Study concluded that the prescribers and pharmacists agreed on counselling role of community pharmacists while according to study conducted in Jordan 92% of the pharmacists and 59% of prescribers agreed on counselling role of community pharmacists [13].

The patient education is prime consideration with the sphere of community pharmacist. Patient education is important factor in determining the patient-oriented role of community pharmacist to educate the patient on lifestyle modifications, and monitoring medication adherence which ultimately lessen the disease burden on an individual and on community. This study concluded that both pharmacists and prescribers had positive perception regarding the role of community pharmacist as patient education similar to study conducted in Macau concluded that both pharmacists and prescribers had positive perception regarding educating the patient role [15]. Study conducted in Tehran concluded that 60.3% of prescribers had positive perception regarding educating the patient role of community pharmacist [17]. A study conducted in United States concluded that 65.1% of prescribers had positive perception regarding educating the patients [18].

Pharmacists recognize the importance of documenting patient care. As a rule of thumb Community. Pharmacists are the health professionals most accessible to the public. The study finding showed that the pharmacists and prescribers agreed that the community pharmacists have role in maintaining the record of patients and prescriptions, the study conducted in New Zealand also resulted in agreement of prescribers and pharmacists regarding community pharmacist's role of maintaining record [14]. Same results were found with the study conducted Macau having same results [15].

This study resulted that the prescribers were agreed regarding community pharmacist's role in maintaining the profile of patients and similar results were obtained from study conducted in California [19]. According to this study 61.2% of participants agreed that the community pharmacists had role in availability of medicines and according to study conducted in Punjab, Pakistan 83.3% of prescribers showed similar agreement [20].

This study concluded that prescribers had positive perception regarding traditional counselling of role of community pharmacists and according to study conducted in Karnataka, India 67% of prescribers showed positive perception [21]

similar to study conducted in Macau concluded positive perception regarding traditional counselling role of community pharmacist [15]. The study conducted in Macau resulted in pharmacist's positive perception regarding counselling (90%) and providing medication related information to patients (85%) [22]. Similarly, a study conducted in Tehran concluded that 90% prescribers had positive perception regarding community pharmacist's information providing role [17].

This study resulted in positive perception from prescribers and pharmacists regarding OTC medication counselling to patients similar study conducted in Macau concluded positive perception regarding counselling of OTC medication to patient by community pharmacist [15]. Study conducted in United States concluded that 63.4% of prescribers had positive perception regarding OTC medication information providing role [18].

CONCLUSION:

This study concluded that the pharmacists and prescribers had positive perception regarding traditional role of community pharmacists that is dispensing, and counselling role and further studies should be conducted to assess extended role of community pharmacists.

Declaration:

Authors declare no conflict of interest for this study.

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Cite article as: Saood M, Haq NU, Nasim A, Shah Y, Tahir M. Perception of Prescribers and Pharmacists Regarding Traditional role of Community Pharmacists in Quetta, Pakistan. *Res Pharm Health Sci*. 2019;5(4):197-204. doi: <https://doi.org/10.32463/RPHS.2019.v05i04.02>.