



Perceptions, Expectations and Barriers of Physicians towards Working with Clinical Pharmacists in Saudi Arabia

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Authors' contributions

This work was carried out in collaboration between all authors. Authors SA, LA and HAK designed the study, wrote the protocol, and wrote the first draft of the manuscript. Author SA managed the literature searches, authors SA and HAK managed the distribution of the questionnaire. All authors read and approved the final manuscript.

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ABSTRACT

The purpose of this study was to investigate physicians' perceptions and expectations regarding clinical pharmacists working in the healthcare team. In addition, to determining the barriers that impede clinical pharmacists' contributions to the team, from the physician's point. A self-administered questionnaire was delivered to randomly selected physicians in Riyadh hospitals. The survey was pilot-tested on a small group of physicians to improve clarity and limit response bias. A total of 135 physicians were enrolled in this study. In terms of working with clinical pharmacists, 28% and 39% indicated they either never or rarely worked with a clinical pharmacist, respectively, while only 4% and 9% worked with a clinical pharmacist quite often or very often. Respondents agreed that clinical pharmacists were an integral part of the medical team (mean 4.4±0.72) and found them to be helpful in managing drug interactions and side effects, selecting appropriate drug therapies during pregnancy and educating other healthcare workers. Most respondents agreed that the specific responsibilities of a clinical pharmacist were not clearly defined (mean 3.83±0.98). Physicians seemed to be unaware of the potential benefits of having a

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clinical pharmacist on their teams, and some physicians had no prior experience working with clinical pharmacists.

Physicians in Riyadh were receptive to most statements regarding perceptions and expectations of clinical pharmacists. They considered them an integral part of the medical team, with a major role in educating other healthcare workers. The most frequently identified barrier was lack of role definition of clinical pharmacists.

Keywords: Clinical pharmacist; physician; perceptions; expectations; healthcare team; barriers.

1. INTRODUCTION

For centuries, pharmacy has played a major role in the service of patients, and pharmacists have supported these services by providing medications and consultations for physicians and patients. In the historical model, physicians tended to diagnose and then prescribe, while pharmacists compounded and dispensed medications. This model largely still exists currently, although with some notable variations, and undoubtedly serves as the basis for what many physicians and a large segment of the general public expect of pharmacists today. Given that prescribing is still almost exclusively in the physician's domain, the utility of a pharmacist's input regarding managing drug therapy ultimately depends on the physician's willingness to accept it. It is important, therefore, that pharmacists understand what physicians expect of them and how receptive physicians are to the contributions that pharmacists seek to make to patients' pharmaceutical care.

The addition of clinical pharmacist services to the care of inpatients generally results in improved care, with no evidence of harm. Interacting with the health care team on patient rounds, interviewing patients, reconciling medications and providing patient discharge counselling and follow-up all result in improved outcomes. Studies have consistently shown that clinical pharmacists have a significant impact on patient safety in intensive care units and inpatient wards [1-5].

A potential roadblock to accepting and benefiting from a clinical pharmacist's services are the perceptions physicians might have regarding these services and the barriers that obstruct physicians' and clinical pharmacists' interactions. Although the majority of physicians were receptive to an expanded role for clinical pharmacists, most physicians believed that very few pharmacists were performing this service in any meaningful way. Therefore, their expectations of pharmacists were quite limited. In

addition, several investigators have found that physicians are receptive to specific clinical services provided by pharmacists, such as therapeutic drug monitoring, patient counselling and recommendations for therapeutic agents. In several studies, the level of physician acceptance of these services was reported to be related to the degree of exposure physicians have had to pharmacist-provided services. Several other investigators have found that physicians are generally receptive to a wide range of clinical pharmacy services provided in an inpatient setting if they are provided in a consultative or supportive role. Most physicians were found to oppose autonomous decision-making responsibility for pharmacists [6]. Other studies have concluded that, although physicians are receptive to the consultative and educational services provided by pharmacists in an inpatient setting, the receptivity of an individual physician to these services is related to the value the physician attaches to the services and the physician's perception of the pharmacist's competence [7].

To the best of our knowledge, no formal studies on the practice of clinical pharmacy in Saudi Arabia have been conducted, and little is known about how the profession is accepted by other healthcare providers. What is assumed to be known has mostly been extrapolated from studies conducted in other countries. Much effort has gone toward better understanding the state of the profession. Such studies help to highlight the current strengths and weakness of the practice and aid in identifying areas for improvement. This type of information is very valuable to stakeholders in universities responsible for designing the education and training of future clinical pharmacists. One important pillar in this profession involves the perceptions and expectations that other healthcare workers have of it. For example, understanding what physicians expect a clinical pharmacist to do will help in training clinical pharmacists to reinforce positive perceptions and to reduce negative ones.

Additionally, understanding the barriers that can hinder physicians and pharmacists from collaborating will also assist in providing clinical pharmacists with the necessary skills to overcome these barriers.

The main purposes of this study were to determine the perceptions of physicians towards clinical pharmacists who work on healthcare teams in terms of the potential benefits of clinical pharmacists and the current expectations of physicians and to explore the barriers that impede the clinical pharmacists' contributions from the physician's point of view.

2. MATERIALS AND METHODS

2.1 Ethical Statement

The proposal was first submitted to the IRB for each institution for approval. These included: College of Medicine Research Ethics Committee at King Khalid and King Abdulaziz University Hospitals, IRB at King Fahad Medical City, IRB at King Abdulaziz medical city, Office of Research Affairs at King Faisal Specialist Hospital & Research Centre, IRB at Riyadh Central Hospital. The proposal obtained expedited approval due to the observational nature of the study.

After identifying eligible participants, verbal consent was obtained from each participant. The verbal consent explained the study aims, objectives and potential value.

All participants were treated with respect from the time they were approached, even if they refused enrolment, as well as throughout their participation. The generated data were stored after coding each participant, which ensured confidentiality. Research output data were not traceable to any individual.

2.2 Study Design

This was a descriptive cross-sectional study conducted in several tertiary hospitals in the Riyadh area. The study survey was distributed to all available physicians. A proposal for the study was sent to the university's institutional review board for approval.

2.3 Subjects and Settings

The study survey was distributed to all available physicians working at these hospitals.

2.4 Study Instrument

The survey was designed and developed after reviewing the current literature, which was taken into account to measure the desired outcomes. The survey was distributed to several peers and experts for review, and the final version depended on the consensus of the contributors.

The survey design consisted of four main sections. The first section covered the physicians' demographics and relevant characteristics, including their nationality, place of work, specialty and current position. The second section addressed the physicians' perceptions of a clinical pharmacist working on the healthcare team. The third component emphasized physicians' expectations of pharmacists' professional role. The fourth section of the survey discussed items that could be considered possible barriers facing physicians and pharmacists when they work together. The questions required the respondents to indicate how much they agreed or disagreed with each statement. Every question had five answers scored on a scale as follows: 1= "strongly disagree" through 5= "strongly agree". A copy of the survey is attached in Appendix 1. The survey was pilot-tested on a small group of physicians to improve its clarity and limit response bias. It was revised based on the feedback received.

2.5 Data Collection

A self-administered survey was delivered manually to an appropriate sample of physicians. The number of physicians to be included was calculated based on the total number of physicians identified. The survey was delivered through the secretarial services of the respective departments. The surveys were distributed on different working days of the week to the physicians available on those days. Research assistants with no previous personal relationships with the physicians handed the surveys to the departmental secretaries. If the response rate was low, the next approach was to deliver the surveys by hand directly to the physicians and wait for its completion. Recruited physicians were given the option to refer the survey to a colleague if they believed someone else in their department was better able to answer the questions.

2.6 Data Analysis

The data were entered using SPSS (SPSS, version 16). and the results were assessed by

STATA 11.1. Descriptive statistics (frequencies and percentages) were used to represent the demographic characteristics of participating physicians. Linear regression was used to determine the relationship between physician perception \ expectation and participant demographics such as years of experience, professional role and previous experience with clinical pharmacist. For all analysis, 2 tailed P< 0.05 was considered statistically significant.

3. RESULTS

A total of 135 physicians completed the questionnaire. Most of the physicians who responded were residents and registrars, 31.1% and 28.9%, respectively, which reflected the staff demographics. The majority of respondents were male (71.1%). Most of the physicians worked in either primary care or paediatrics, while physicians who worked in infectious disease and psychiatry constituted only approximately 13% of the respondents. Only approximately 12% of the physicians had over 20 years of medical experience.

A majority of the respondents were junior physicians with 0-5 years of experience. Saudi nationals comprised 78% of the respondents. The highest percentage of respondents worked in a main university hospital (28%); 17% and 14% worked in hospitals that belonged to two of the major medical cities.

In terms of experience working with clinical pharmacists, 28% and 39% of respondents indicated that they either never or rarely worked

with a clinical pharmacist, respectively, while only 4% and 9% of respondents worked with a clinical pharmacist quite often or very often.

The results regarding physicians' perceptions of clinical pharmacists working on the healthcare team are described in Table 1.

Physicians' expectations of pharmacists and the Barriers that can hinder clinical pharmacists' contributions are shown in Table 2 and 3 respectively

Physicians' demographics such as professional role, years of experience and previous work with clinical pharmacists have no effect on their perception and expectation (Tables 4 and 5).

4. DISCUSSION

In this study, it was observed that physicians have a high perception of clinical pharmacist's role in the healthcare team. Most participants think that clinical pharmacists are an integral part of the medical team. Moreover, most think that they would be more helpful if they were located in the ward or clinic where they can also check prescription orders. While participants felt less strongly about the role of the pharmacist as patient educator and of their role in enhancing physicians' ability to deliver effective and appropriate care to patients. These two points both are related to the clinical pharmacist role as educators, which seem to be poorly expressed in this sample.

Table 1. Physicians' perceptions of clinical pharmacists on the healthcare team

Current perceptions of clinical pharmacists	Mean	Standard deviation
Clinical pharmacists would be more helpful if they were located in the ward/clinic as opposed to having to call the pharmacy.	4.13	0.94
Clinical pharmacists would be more helpful if they checked orders before they were performed.	4.03	0.96
Having a clinical pharmacist on ward rounds or in the clinic can enhance physicians' ability to deliver safe and good quality care to patients.	4.00	0.93
Having a clinical pharmacist on ward rounds or in the clinic can enhance physicians' ability to deliver effective and appropriate care to patients.	3.99	1.09
Clinical pharmacists are valuable as patient educators.	3.91	0.87
Clinical pharmacists are an integral part of the medical team.	4.4	0.72

Table 2. Physicians' expectations of pharmacists

Physicians' expectations of pharmacists	Mean	Standard deviation
Selecting appropriate general dosing regimens.	3.97	1.02
Providing advice on modified dosing for special disease states (e.g., renal, hepatic).	4.21	0.89
Providing drug therapy recommendations.	3.94	0.96
Providing consultation regarding alternative medication choices.	4.17	0.94
Providing consultation regarding medication interactions.	4.38	0.82
Providing consultation regarding medication use during pregnancy.	4.27	0.83
Providing consultation regarding adverse effects.	4.24	0.86
Advising on the availability of medications.	4.11	0.90
Making medication decisions based on medication pricing.	3.45	1.11
Resolving drug therapy-related problems.	4.05	.82
Providing clinical drug information.	4.22	0.79
Assessing patients' contraindications to therapy.	4.03	0.85
Monitoring outcomes of drug therapy and treatment plans.	3.75	0.98
Conducting mandatory reviews for high-risk medications / patients.	4.09	0.95
Participating in research activities.	4.22	0.81
Educating other healthcare workers.	4.81	0.84

Table 3. Barriers that can hinder clinical pharmacists' contributions to the healthcare team

Barriers that can hinder clinical pharmacists' contributions	Mean	Standard deviation
The specific responsibilities of a clinical pharmacist are not clearly defined.	3.83	0.98
Physicians are unaware of the benefits of having a clinical pharmacist on their team.	3.57	1.07
Physicians are unable to judge the knowledge and skill level of the clinical pharmacist.	3.4	1.05
Physicians have low trust in the clinical pharmacist's abilities.	2.75	1.08
Physicians have inadequate communication skills to interact with the clinical pharmacist.	2.94	1.15
Clinical pharmacists have inadequate communication skills to interact with physicians.	3.06	1.09
Physicians have no prior experience working with a clinical pharmacist.	3.57	1.02
Physicians believe that clinical pharmacists cannot be clinicians.	3.28	1.12
There is no continuity in the services provided by the clinical pharmacist due to other non-clinical roles.	3.34	0.95
Clinical pharmacists are not accessible when needed.	3.23	1.06

Table 4. Linear regression to determine the effect of participants' demographic factors on mean perception score

Predictor factors		Coefficient	%95CI	P
Professional role*	Consultant	-0.409	-0.966,0.148	0.149
	Registrar	-0.401	-0.89,-0.09	0.11
	Resident	-0.210	-0.613,0.191	0.302
Years of experience *	0-5	-0.198	-0.806,0.409	0.52
	6-10	-0.008	-0.652,0.636	0.98
	11-15	-0.019	-0.691,0.852	0.954
	More than 20	-0.193	-0.835,0.499	0.553
Previous experience with clinical pharmacist	Never	-0.726	-1.28,-0.169	0.011
	Rarely	-0.735	-1.27,-0.200	0.008
	Often	-0.147	-0.710,0.416	0.606
	very often	0.117	-0.725,0.961	0.783

*some subcategories were omitted due to collinearity

Table 5. Linear regression to determine the effect of participants' demographic factors on mean expectation score

Predictor factors		Coefficient	%95CI	P
Professional role*	Consultant	0.129	-0.343,0.603	0.587
	Registrar	0.008	-0.410,0.427	0.967
	Resident	-0.006	-0.348,0.134	0.968
	Intern			
Years of experience*	0-5	0.035	-0.48,0.551	0.892
	6-10	0.023	-0.523,0.570	0.932
	11-15	-0.220	-0.790,0.350	0.446
	More than 20	0.166	-0.378,0.711	0.547
Previous experience with clinical pharmacist	Never	-0.028	-0.501,0.444	0.904
	Rarely	-0.018	-0.473,0.436	0.937
	Often	-0.012	-0.490,0.465	0.959
	very often	0.005	-0.710,0.721	0.988

* some subcategories were omitted due to collinearity

The clinical pharmacist may have given their educator role lower importance due to the multiple responsibilities they have or due to their believe that this is not an important role for the pharmacist.

In term of expectations, physicians expected the pharmacist to have an integral role in educating other healthcare providers and in research activities. Participants also expected clinical pharmacist to provide the full spectrum of drug therapy management in addition to resolving drug therapy problems. Participants had a slightly lower expectation from clinical pharmacist in the area of therapy monitoring and in issues regarding medication pricing.

When considering the barriers, Most participants agreed that the specific responsibilities of a clinical pharmacist are not clearly defined and that most had no prior experience working with a clinical pharmacist consequently they are unaware of the benefits of having a clinical pharmacist on their team and are unable to judge the knowledge and skill level of the clinical pharmacist. This in part maybe related to the healthcare system structure, which does not provide clinical pharmacy services as a basic service in the healthcare system where the participants worked. The lack of experience with clinical pharmacist can be a considerable barrier for the physician to measure the contribution a clinical pharmacist can provide to the complete patient care experience.

Another important issue is that participants think there is no continuity in the services provided by the clinical pharmacist due to other non-clinical roles and Clinical pharmacists are not accessible

when needed. This again can be due to the healthcare system structure, which does not provide this service in all departments and wards on a continual basis. It can be also due to the clinical pharmacists themselves who are unable to participate effectively in their teams due to lack of experience or lack of confidence or due to taking on multiple responsibilities that conflict with clinical work.

The current study reveals that physicians' demographics such as years of experience and their role in the department did not affect the perception and expectation. These results were consistent with similar studies conducted in Kuwait, Qatar and Egypt [8,9,10]. However, previous research performed in Jordan showed a significant association between physician nationality (P<0.05), years since obtaining the medical qualification(P<0.05) and the country from which the qualification was earned (P<0.05) [11]. Furthermore, a study conducted by Awad et al. [12] reveals that Sudanese physicians' perception toward clinical pharmacist were substantially affected by the frequency of interaction with pharmacist (P<0.05).

Researchers in New York City found that most physicians favoured patient counselling by pharmacists but were opposed to pharmacists writing prescriptions, even limited prescriptions specified under a protocol. They also found little support among physicians for the provisioning of health-screening services by pharmacists [13].

Physicians expect pharmacists to provide patient medication counselling, but pharmacists are not providing this service to the extent assumed by physicians. Another study reported that there

was strong acceptance of pharmacists by physicians in group practice settings in which pharmacists participated in collaborative patient care. Physicians' attitudes toward expanded roles for pharmacists have been reflected from time to time in the medical literature. Several such reflections have openly questioned pharmacists' competence to provide direct patient care services, including patient education and drug therapy recommendations. Although such comments may be viewed as isolated opinions, they cannot be entirely discounted [7]. Fairbanks investigated the role of clinical pharmacists in the emergency department (ED) with the aim of assessing staff perceptions toward clinical pharmacists working in the ED. A 26-item survey was given to a random sample of medical and nursing staff in an academic medical centre ED. In response to the survey, 99% of respondents felt that having a clinical pharmacist improved quality of care, and 96% of respondents felt that clinical pharmacists were an integral part of the team. The staff felt that clinical pharmacists should be available for consults, to attend resuscitations and to check orders. This study found that doctors and nurses overwhelmingly favoured the presence of clinical pharmacists in the ED. Staff acceptance was not identified as a barrier to clinical pharmacy services in the ED [14].

Physician perceptions and expectations regarding the role of pharmacists have also been studied in Middle Eastern countries. Matowe concluded that physicians in Kuwait were comfortable with pharmacists providing a broad range of services but were somewhat less comfortable with pharmacists providing direct patient care. Physicians considered pharmacists to be knowledgeable drug therapy experts but regarded them as not routinely providing a broad range of higher-level pharmacy services [8].

Tahaineh found that physicians in Jordanian hospitals were more likely to accept or recognize traditional pharmacy services than newer clinical services; however, they accepted and recognized pharmacists' roles in patient education and counselling. Pharmacists need to be proactive in offering pharmacy-care services beyond their traditional boundaries but should do so in concert with efforts to build trust and collaborative relationships with physicians. Jordan's Ministry of Health may consider increasing the number of clinical pharmacists appointed in hospitals to stimulate the provision of clinical pharmacy services [11].

In Sudan, a similar study performed by Awad concluded that physicians were receptive to most statements regarding expectations of pharmacists, suggesting that many elements of patient-centred pharmaceutical care could be introduced with the cooperation of physicians. A key to extending the role of pharmacists in Sudanese teaching hospitals should involve making pharmacists more accessible to doctors and patients, ideally supported by an organized program of continuing professional development [12].

Pharmacists and physicians are also restricted by certain barriers from the physician's perspective. These barriers manifest as communication obstacles between pharmacists and physicians. Moreover, a lack of accessibility and low awareness are also considered important identifiable barriers [15].

In a historical review of the relationship between pharmacists and physicians, Gowen (1992) noted that, although conflict has existed between the two professions throughout the centuries, considerable progress toward harmony has been made. He attributed this progress, in part, to the increasing dependence of physicians on pharmacists for drug-related information [16].

These studies and commentaries suggest that physicians' attitudes toward and acceptance of pharmacists' clinical services have gradually improved over the past 30 years, that physician acceptance of pharmacists' clinical services is related to the level of exposure physicians have had to those services and that physicians are generally receptive to consultative and educational services provided by pharmacists but are opposed to pharmacists having independent decision-making authority [7].

5. CONCLUSION

Physicians in Saudi Arabia were receptive to most statements regarding perceptions and expectations of clinical pharmacists, and they considered clinical pharmacists an integral part of the medical team with a major role in educating other healthcare workers. However, physicians were less comfortable with pharmacists as patient educators.

Two of the most frequently identified barriers were that the specific responsibilities of clinical pharmacists are not clearly defined and that physicians are not aware of the potential benefits

of having clinical pharmacy services in their setting or have never experienced working with a clinical pharmacist.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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APPENDIX- 1

A Study of the Perceptions, Expectations and Barriers of Physicians toward Working with Clinical Pharmacists in Saudi Arabia

Dear Physician,

Clinical Pharmacy is a relatively new area in Saudi Arabia that has been debated widely in the past few years, and the clinical pharmacist, being part of the health care team, deals with different members of the team, especially physicians. We are researchers at the King Saud University currently conducting a research investigating the perception, expectations of physicians in Saudi Arabia about the Clinical Pharmacist. We also want to determine the barriers that hinder the interaction between pharmacists and physicians. Kindly fill in the following questionnaire and return it back to our research assistant. Your input is highly appreciated.

Thank You.

The Researchers.
LamyAlnaim, PharmD, Pgct
HadeelAlkofidie, MSc
SajaAlMazrou, BSc

Part I

In each question, please tick one box only.

1. What is your role in your respective Department?

- Consultant Assistant consultant/Registrar Resident Intern

2. What is your gender?

- Male Female

3. In what specialization do you work?

- Intensive care Infectious disease Cardiology Hematology/Oncology
 Nephrology Neurology Pulmonary Psychiatry
 Pediatrics Primary care Others:_____

4. How many years of experience do you have in that area?

- 0-5 years 6-10 years 11-15 years 16-20 years More than 20 years

5-What is your nationality? saudi_____

6-In which Hospital do you work?

- KKHU KAUH KFMC SFH
 RKH KAMC KFSHRC Others:-----

7-In which country did you obtain the following medical qualifications/Training:

	MBBS	Residency	Fellowship	Other:_____
country				

8-have you had experience working with a clinical pharmacist as part of your medical training?

- Never Rarely Often Very often always

9- Which of the following do you think is most important in maximizing the clinical pharmacist's contribution to patient care? Tick all that apply

<input type="checkbox"/> Attend medical rounds	<input type="checkbox"/> Being available for consultation	<input type="checkbox"/> Patient education
<input type="checkbox"/> Order Review	<input type="checkbox"/> Staff education	<input type="checkbox"/> Attend clinic

10-How well has the clinical pharmacist met your needs in terms of patient care?

- Very adequately adequately acceptably poorly Not at all

Part II

For these statements please select the answer that best reflects how much you do agree with the statement regarding your perceptions of a clinical pharmacist working within a healthcare team

	Your current perceptions of a clinical pharmacist	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	I perceive a clinical pharmacist would be more helpful when they are located in the Ward/Clinic as opposed to having to					

	call the pharmacy					
2	I perceive it would be helpful if a clinical pharmacist checks orders before they are carried out.					
3	I perceive that the presence of a Clinical pharmacist during ward rounds or clinic can enhance my ability to deliver safe and good quality care to patients.					
4	I perceive that the presence of a Clinical pharmacist in ward rounds or clinics can enhance my ability to deliver effective and appropriate care to patients					
5	I perceive that the Clinical pharmacist as a valuable patients' educator					
6	I perceive that the Clinical pharmacist is an integral part of the medical team					

Part III

For these questions please select the answer that best reflects how much you do agree with the Following statement.

I expect that the clinical pharmacist's input to be valuable in:

	Situation where the clinical pharmacist's input is valuable	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	Selecting appropriate general dosing regimen.					
2	Providing advice on special disease state modified dosing (e.g. renal, hepatic)					
3	Providing drug therapy recommendations.					
4	Providing consultation regarding alternative medication choices.					
5	Providing consultation regarding medication interactions.					
6	Providing consultation regarding medication use in pregnancy.					
7	Providing consultation regarding adverse effects.					
8	Advising on availability of medication.					
9	Making medication decisions based on medication pricing.					
10	Resolving drug-therapy related problems.					
11	Providing clinical drug information.					
12	Assessing patient's contraindications to therapy.					
13	Monitoring outcomes of drug therapy and treatment plans.					
14	Conducting a mandatory review for high risk medication/ patients.					
15	Participating in research activities.					
16	Teaching other healthcare workers.					

Part IV

For these questions please select the answer that best reflects how much you do agree with the statement regarding barriers that can hinder a clinical pharmacist's role with the healthcare team.

	Barriers that can hinder a clinical pharmacist's role	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	The specific responsibilities of a clinical pharmacist are not clearly defined.					
2	Physicians are unaware of the benefits of having a clinical pharmacist on their team					
3	Physicians are unable to judge the knowledge and level of skills of the clinical pharmacist					
4	Physicians have low trust in the clinical pharmacist's abilities.					
5	Physicians have inadequate communication skills needed for interaction with the clinical pharmacist					
6	Clinical pharmacists have inadequate communication skills needed for interaction with physicians.					
7	Physicians have no prior experience of working with a clinical pharmacist					
8	Physicians believe that clinical pharmacists cannot be clinicians					
9	There is no continuity in the services provided by the clinical pharmacist due to other non-clinical roles.					
10	Clinical Pharmacists are not accessible when needed					

Part V

Please complete the following questions

1. **What other expectations of a clinical pharmacist do you have that have not been mentioned above?**
2. **What additional barriers do you believe exist that that can hinder a clinical pharmacist's role with the healthcare team?**
3. **Overall, how do you think the practice of clinical pharmacist can be improved to meet physicians' needs?**
4. **Any Additional comments:**

Thank you very much for completing this questionnaire.

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