

A Survey of Psychiatrists' Expectations of Clinical Pharmacists in Riyadh, Saudi Arabia

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Key Words

Pharmacists · Psychiatry · Questionnaires · Attitude of health personnel · Interprofessional relations · Saudi Arabia

Abstract

Objectives: To measure psychiatrists' experience and their expectations of the role of clinical pharmacists in Riyadh, Saudi Arabia. **Subjects and Methods:** The psychiatrists' experience and their expectations were collected using a 4-part self-completed questionnaire: (a) demographic information, (b) psychiatrists' current expectations of the roles of pharmacists, (c) psychiatrists' actual experience with pharmacists, and (d) psychiatrists' future expectations of pharmacists' roles. Each part included a set of statements for which respondents were asked to indicate their level of agreement using a 5-point Likert scale. **Results:** Of the 102 questionnaires delivered to the Department of Psychiatry at 7 hospitals, 77 were returned, representing a response rate of 75%. 59 (77%) psychiatrists expected pharmacists to take personal responsibility for resolving any drug-related problems; 62 (81%) expected them to maintain a complete medication profile, and 58 (75%) expected them to educate patients about the safety and appropriate use of their medication. From their current experience with pharmacists, respondents indicated that pharmacists routinely counsel

patients (33, 43%), inform them about the most cost-effective alternative (37, 48%), and discuss with them the therapeutic value of the drugs (37, 48%). 49 (63%) of respondents agreed that in the future, pharmacists should routinely adjust the drug therapy for patients under protocol approved by the physician, and 51 (66%) felt that pharmacists should share legal responsibility for clinical outcomes. **Conclusion:** Psychiatrists in Riyadh had great expectations of clinical pharmacists to take personal responsibility for resolving drug-related problems they discovered and to assist in designing drug therapy treatment plans. The psychiatrists' current experience with pharmacists did not, in some cases, meet their expectations.

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Introduction

Psychiatry in Saudi Arabia has changed significantly since the review published in 1983 by Dubovsky [1] where he referred to Shehar, the only mental hospital serving the population of Saudi Arabia back then. Nowadays, it is estimated that there are 20 psychiatric hospitals in addition to 44 psychiatric clinics in general hospitals [2]. There are no published figures on the prevalence of mental illness in Saudi Arabia; however, recent data indicate that there

are approximately 439,762 outpatients and 17,811 inpatients with behavioral and mental disorders at the Ministry of Health (MoH) hospitals alone [3].

Recently, experts and influential organizations such as the World Health Organization have supported the increased role of pharmacists in the care of mentally ill patients [4]. A systematic review of the literature from 1972 to 2003 on pharmacists' impact in mental illness demonstrated improvements in outcomes, prescribing practices, patient satisfaction, and resource use [5]. Another systematic review showed that pharmacist-delivered community-based services contribute to optimizing the use of medications for mental illness [6]. Furthermore, a recent systematic review found a significant benefit from pharmacist interventions in the improvement of adherence to antidepressant pharmacological treatment [7].

Previous research has indicated that when pharmacists and physicians jointly specify roles and responsibilities, the relationship is more likely to become collaborative [8, 9]. Understanding physicians' expectations of pharmacists, therefore, should improve the collaboration between pharmacists and physicians. Several authors have reported physicians' expectations of pharmacists in community [10–12] and hospital [12–16] settings, but not in the Saudi context.

In view of the limited information on the subject in Saudi Arabia, this research aims to measure physicians' experience with and expectations of clinical pharmacists in Riyadh, Saudi Arabia, with particular interest in psychiatrists. The concept of clinical pharmacy is not new to Saudi Arabia. The teaching of clinically oriented courses to pharmacy students in Saudi Arabia started in the 1980s by the first and only pharmacy college at that time. The same college initiated a clinical pharmacy master degree in the 1990s. Recent estimates indicate that there are approximately 4,400 pharmacists working in governmental and private sectors excluding those working in community pharmacies [3]. However, not all these pharmacists work as clinical pharmacists. To work as clinical pharmacists in Saudi Arabia, you should have a doctor of pharmacy (PharmD) degree, a master in clinical pharmacy, or completed a pharmacy practice residency program.

Subjects and Methods

Sample

The target population of the study was psychiatrists working in government hospitals in Riyadh city, the capital of Saudi Arabia. There are 7 government hospitals with psychiatry services in

Riyadh: 1 specialized psychiatric hospital and 6 psychiatric clinics. Published data indicate that the number of psychiatrists working in Riyadh for MoH hospitals was 68. The number of psychiatrists working in other governmental non-MoH hospitals was 100; however, this number included neurologists [3]. Therefore, to determine the exact number of psychiatrists, we contacted the Departments of Psychiatry in each of the target hospitals.

Data Collection

The data were collected using a self-completed questionnaire in English as English is the main language of communication in Saudi hospitals. The questionnaire was divided into 4 sections. Section 1 collected demographic information including the respondents' type of training (Saudi program, Arabic program, American program, or others) and experience. Sections 2, 3, and 4 included a set of statements to measure respondents' current expectations, actual experience, and future expectations of pharmacists, respectively. The respondents were asked to indicate their level of agreement with each statement using a 5-point Likert scale from strongly disagree to strongly agree. Statements used were developed by Smith et al. [12] and previously used by other investigators [14–16]. The questionnaire was pretested among 5 nonpsychiatrist physicians, for readability and understanding.

Distribution of the Questionnaires

102 questionnaires were hand delivered by one of the authors (J.S.) to the secretary of the Department of Psychiatry in the target hospitals to be passed on to the psychiatrists. The completed questionnaires were collected by hand by the same author. The data collection period was from January to March 2008. We did not use follow-up phone calls or reminder letters to enhance response rate. Formal ethical permission was not required for this study. The covering letter stressed anonymity and confidentiality. The consent to participate was implied by the act of completing and returning the questionnaire.

Statistical Analysis

The data were analyzed using descriptive statistics: frequency, percentage, mean, and standard deviation. Data were entered and analyzed using SPSS version 15 (SPSS Inc., Chicago, Ill., USA).

Results

Of the 102 questionnaires, 77 were returned representing a response rate of 75%. The majority of respondents were specialists trained in an Arabic country working for the MoH hospitals and with an experience of more than 15 years (table 1). 53 (69%) respondents stated that their hospitals provide clinical services.

Current Expectations

The results of psychiatrists' expectations of pharmacists are listed in table 2. 56 (73%) respondents expect pharmacists to be drug therapy experts and 63 (82%) expect them to know the specific indication(s) for the pre-

scribed medications. 62 (81%) respondents expect pharmacists to maintain a complete medication profile, 57 (74%) to help in designing drug therapy treatment plans, 67 (87%) to perform therapeutic drug monitoring for selected drugs, 59 (77%) to take personal responsibility for resolving any drug-related problems, and 67 (87%) to be available during rounds.

Current Experience

Respondents' current experiences with pharmacists are given in table 3. 51 (66%) of the respondents agree that pharmacists are reliable sources of clinical drug information, 50 (65%) think that they should inform doctors if patients have experienced some problem with their medications, and 48 (62%) of the pharmacists are willing to take personal responsibility for resolving drug-related problems they have discovered. 33 (43%) also agree that pharmacists routinely counsel patients and 37 (48%) that they inform doctors of the most cost-effective alternative.

Future Expectations

The results of future expectations are shown in table 4. 49 (63%) of the respondents agree that in the future, pharmacists should routinely adjust the drug therapy for patients under protocol approved by the physician. 51 (66%) respondents agree that pharmacists should share legal responsibility for clinical outcomes.

Discussion

This study examined the psychiatrists' experience with and expectations of clinical pharmacists in Riyadh, Saudi Arabia. The results from this survey do not differ greatly from the surveys of other physicians' expectation of pharmacists to be knowledgeable drug therapy experts [12–16]. 75% of respondents expect clinical pharmacists to educate patients about the safe and appropriate use of their medication and this reflects expectations reported elsewhere [12–17]. Interestingly, a Finish survey on physicians' opinions on community pharmacists' involvement in counseling patients on the use of psychotropic medication found that 75 and 60% of the physicians felt that community pharmacists should provide information about the adverse effects of benzodiazepines and neuroleptics, respectively. However, only 43 and 35% of the physicians felt that community pharmacists should provide information about the purpose of the medication of benzodiazepines and neuroleptics, respectively [18].

Table 1. Demographic characteristics of respondents

Characteristics	n	%
Type of hospital		
MOH	45	59
Government non-MOH	32	41
Professional position		
Specialist	39	50
Consultant	17	22
Residence	11	14
Registrar	9	11
Type of training		
Arabic program	46	60
Saudi program	11	14
American program	4	5
Others	14	18
Years of experience		
<5	7	9
5–10	29	38
10–15	16	21
>15	24	31

Psychiatrists appeared receptive to pharmacists' direct patient care roles such as help in designing drug therapy treatment plans, monitor patients' response to drug therapy, and take personal responsibility for resolving drug-related problems they discover. In previous surveys, physicians were less receptive with only 33–61% who expect pharmacists to perform these particular services [12, 14–16]. Several explanations for the more positive expectations reported in our survey are possible. One probable reason is that other surveys investigated pharmacists in general, not necessarily clinically trained pharmacists.

Another probable explanation is that our study focused on psychiatry, an area which is characterized by multiple drug therapy, use of drugs with a broad range of side effects, and likelihood of drug-drug interactions. In a survey of a similarly complex care setting, Fairbanks et al. [13] surveyed 75 physicians and nurses to assess their acceptance of services provided by residency-trained clinical pharmacists based in the emergency department. They found that over 80% of respondents felt that pharmacists should help with the selection of the appropriate antibiotic, advice regarding which is the most appropriate medication, and make medication decisions on the basis of medication pricing or efficacy. The findings from a qualitative Australian study similarly suggest that mental health care providers welcome the participation of pharmacists in mental health teams' meetings and medication review and valued the provision of information

Table 2. Psychiatrists' current expectations of pharmacists

Survey item	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
I expect clinical pharmacists to take personal responsibility for resolving any drug-related problems they discover	20 (26)	39 (51)	–	18 (23)	–
I expect clinical pharmacists to maintain a complete medication profile on my patients (i.e. medication history, allergy history)	15 (20)	47 (61)	3 (4)	12 (15)	–
I expect clinical pharmacists to advise me about more cost-effective alternatives to the drugs I prescribe	19 (28)	37 (48)	6 (7)	10 (13)	5 (6)
I expect clinical pharmacists to be knowledgeable drug therapy experts	17 (22)	39 (51)	9 (12)	12 (16)	–
I expect clinical pharmacists to assist me in designing drug therapy treatment plans for my patients	10 (13)	47 (61)	10 (13)	5 (7)	5 (7)
I expect clinical pharmacists to educate my patients about the safe and appropriate use of their medication	24 (31)	34 (44)	7 (9)	9 (12)	–
I expect clinical pharmacists to monitor my patients' response to drug therapy	4 (5)	37 (48)	16 (20)	19 (25)	–
I expect clinical pharmacists to know the specific indication of each drug I prescribe, even when drugs have more than one approved indication	17 (22)	46 (60)	6 (8)	7 (9)	–
I expect clinical pharmacists to be available to me for consultation during rounds	16 (21)	51 (66)	3 (6)	5 (7)	–
I expect clinical pharmacists to perform therapeutic drug monitoring for my patients for selected drugs	12 (16)	55 (71)	2 (3)	7 (9)	–

Figures are numbers with percentages in parentheses. The total percentage does not add up to 100% because of missing responses.

Table 3. Psychiatrists' current experience with pharmacists

Survey item	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
In my experience, clinical pharmacists are a reliable source of general drug information	54 (70)	–	16 (21)	5 (7)	–
In my experience, clinical pharmacists are a reliable source of clinical drug information	3 (4)	48 (62)	22 (29)	–	–
Clinical pharmacists routinely counsel my patients regarding the safe and appropriate use of their medications	3 (4)	30 (39)	32 (42)	7 (9)	3 (4)
Clinical pharmacists routinely inform me if they discover clinical problems with my prescriptions	2 (3)	46 (60)	12 (16)	5 (7)	8 (10)
Clinical pharmacists routinely inform me about less expensive alternatives to the drugs I prescribe	4 (5)	39 (51)	14 (18)	10 (13)	8 (10)
Clinical pharmacists routinely inform me about more cost-effective alternatives to the drugs I prescribe	37 (48)	–	17 (22)	13 (17)	8 (10)
Clinical pharmacists frequently ask me to clarify for them the drug therapy objectives I have in mind for my patients	3 (4)	34 (44)	13 (17)	11 (14)	13 (17)
Clinical pharmacists frequently let me know that my patients have experienced some problem with their medication	1 (1)	49 (64)	–	17 (22)	8 (10)
In my experience, clinical pharmacists appear willing to take personal responsibility for resolving drug-related problems they discover	1 (1)	47 (61)	15 (20)	5 (6)	7 (9)

Figures are numbers with percentages in parentheses. The total percentage does not add up to 100% because of missing responses.

Table 4. Psychiatrists' future expectations of clinical pharmacists

Survey item	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
In the future, I would like clinical pharmacists to routinely adjust the drug therapy for some of my patients using protocols that I have approved	10 (13)	39 (50)	13 (17)	–	5 (7)
In the future, I would like clinical pharmacists to be on-call to my patients for questions about their medications	12 (17)	24 (31)	13 (17)	19 (25)	–
Clinical pharmacists in the future should monitor and document my patients' response to drug therapy	14 (18)	43 (56)	4 (5)	5 (7)	1 (1)
Clinical pharmacist in the future should bear a greater financial responsibility for patients' drug therapy outcomes	7 (9)	28 (36)	21 (27)	8 (10)	4 (5)
Clinical pharmacists in the future should bear a greater share of legal responsibility for the outcomes of drug therapy	20 (26)	31 (40)	10 (13)	5 (7)	1 (1)

Figures are numbers with percentages in parentheses. The total percentage does not add up to 100% because of missing responses.

about medications by pharmacists to clients, caregivers, and families [19].

As with previous surveys [12, 14–16], this study found that pharmacists appear not to be measuring up to psychiatrists' expectations in many domains that included uncertainty of clinical pharmacists routinely counseling patients regarding the safe and appropriate use of their medication, and communicating patients' experiences with their medication. One possible explanation of the mismatch between expectation and current experience is the shortage of clinical pharmacists, as only 69% respondents stated that their hospitals provide clinical services. Hopefully, shortage of pharmacists will not be a problem in the future as the number of pharmacy colleges in Saudi Arabia has increased from 3 to 20 over the last 6 years and the majority of these colleges offer a PharmD degree. Another probable explanation could be pharmacists' perceived attitudes and barriers to providing pharmaceutical care to mental health patients. Pharmacists have positive attitudes toward both mental illness and the providing of pharmaceutical care to mentally ill patients [20, 21]; however, lack of adequate education in mental health issues have been reported as an important barrier to the provision of pharmaceutical care [22]. Surveys of the psychiatric pharmacy curriculum in the USA and Europe showed that the psychiatry-related topics are taught as part of a therapeutics-based course and a fewer number of colleges offer internship in psychiatry [23, 24]. This is somewhat similar to the current practice in Saudi Arabia. The teaching of psychiatry-related topics should ensure the pharmacy graduates

have the knowledge, skills, and capacity to deliver a wider range of patient-oriented services. In the USA, a residency requirement has been proposed as a prerequisite for all pharmacists providing direct patient care [25], although others argue that all PharmD graduates should be able to provide a certain level of direct patient care, without completing a residency [26]. There is, however, agreement that residency programs should be offered for complex levels of direct patient care in all practice settings [26]. The Saudi Commission for Health Specialties offers 1 advanced practice specialty [27] while the US Board of Pharmaceutical Specialties recognizes 6 advanced practice specialties: psychiatry, oncology, nutritional support, nuclear therapy, ambulatory care, and pharmacotherapy [28]. Thus, we suggest that the Saudi Commission for Health Specialties introduce more specialty board certifications for complex levels including psychiatry to meet the workforce needs for specialty-trained pharmacists.

The study has several limitations: the use of a self-completed questionnaire means that the results depend on the respondents' interpretation of the questionnaire items; the possibility of a social response bias that could tempt the respondents to give a socially desirable response rather than what they think or believe. Assurance of confidentiality may have helped to reduce the social desirability bias. Second, the external validity of the findings may be questioned as we do not know of the differences in demographic characteristics between responders and nonresponders. The response to this study was voluntary; it is therefore possible that only psychiatrists

who were interested in pharmacists' services likely filled in the questionnaire. Nevertheless, the responding psychiatrists represent different hospitals and different professional positions with a variety of experience and training. Third, our data came from a representative sample of psychiatrists of one city of Saudi Arabia, limiting generalizability to the entire country.

Conclusion

Our survey suggests that psychiatrists are receptive to many elements of patient-centered pharmaceutical services. However, respondents' current experience with pharmacists does not, in some cases, meet their expectations. Pharmacists need to close the gap between services they currently provide and psychiatrists' expectations. The pharmacy education and training program should be tailored to provide pharmacists with the necessary skills required to provide these services.

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