

## A Look at Community Pharmacy Practice in Saudi Arabia

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**Abstract:** The aim of present study was to examine the attitude of practicing pharmacists to their profession and identify the areas of improvement. A questionnaire was delivered to 200 community pharmacies randomly selected in Riyadh on their involvement in counseling and non-counseling activities and time consumed; type of advices sought by the patients; utilization of information resources and locally established drug information center services. The key findings of responses show the most common advices sought by patients, counseling on OTC and prescription medications were ranked top task. The information resources are limited, which is a major barrier in effective counseling. It is concluded that the community pharmacist is an important source of information and can play a vital role in promoting patient health care in the community. Thus, pharmacists in the community should be trained in an appropriate fashion to meet such goals.

**Key words:** Community pharmacies, attitude, health care, improvement, Riyadh, Saudi Arabia

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### INTRODUCTION

The community pharmacy in Saudi Arabia, unlike the community pharmacies of other countries, is predominantly a commercial venture, with the community pharmacist playing a limited clinical role in the dispensing of medications. However, community pharmacist can play an important role in patient counseling and should be able to give basic drug information in terms of appropriate drug usage, administration, dosage, side effects, storage and drug-drug and drug-food interactions (Hammerlein *et al.*, 2007). While, a number of studies have been conducted on various aspects of pharmacy practice in both hospitals and community pharmacies in the Kingdom of Saudi Arabia (Al-Shammasi, 1990; Al-Ghamdi, 2001; Ball and Al-Othman, 2007), none of these, however, give a comprehensive picture of this important sector of health service. These studies have not, for example, examined the extent to which, the various drug information resources are utilized by pharmacy professionals.

Furthermore, they fail to give detailed analysis of the range of professional services particularly the counseling activities and the time spent in providing them. Likewise, a few attempts have been focused to assess the attitude of the practicing pharmacist to his profession and thereby identify the areas of improvement (Armstrong *et al.*, 1992; Al-Arifi *et al.*, 2007) hence, the present study is an attempt to fill this information gap by addressing these issues.

### MATERIALS AND METHODS

A pre-tested self-administered questionnaire was personally delivered to 200 community pharmacies (chain and independent) randomly selected in Riyadh city. The contents and objectives of the survey were explained to pharmacists and confidentiality was assured. To minimize bias, pharmacists were allowed to fill the questionnaire at ease, over a period of 3 months (15 May-15 August, 2008) and questionnaires were subsequently collected. The presented data were based on opinions and estimates of the pharmacists participated in the study using a survey instrument, which comprising of 20 questions. The initial questions were designed to obtain demographic data about the responding pharmacists and general information regarding type of advices sought by patients.

The second part sought questions concerning about how the pharmacist engaged in counseling and non-counseling activities and time consumed in these activities.

The next study of the survey addresses questions regarding community pharmacist utilization of various information resources and locally established drug information center services. Pharmacists were also given a list of a well recognized reference books and journals and were asked to indicate, which references were readily available at their practice site. The responses to all questionnaires were coded and statistically analyzed.

**RESULTS**

Responses were received from 186 of the 200 community pharmacies surveyed (93%) and are considered to be satisfactory. All respondents were males. Their age ranged from 27-52 years with a mean average age of 39±6.3 years. Sixty four percent of the pharmacies surveyed had a single pharmacist with 24% having 2 and the remainder 12% having 3 pharmacists per establishment. The study showed that 89% of the respondents had B. Pharm degree, 5% had higher diploma, 4.4% had master degree and one had a Ph. D qualification. Fourteen percent of the respondents had attained an educational function in the preceding 12 months. The survey also showed that 89% of the pharmacies were owned by non-pharmacists and that these establishments were managed by non-Saudi pharmacists.

The pharmacists surveyed, worked 51-77 h week<sup>-1</sup>, with an average of 64±10.87 h. Thirty five percent of the pharmacies surveyed showed a 6 days working week, whereas, the other 65% of the pharmacies in survey worked throughout the week. Regarding patient counseling, an average of 19 customers in whom most of them were males counseled daily. On average a counseling session lasted 7.5±1.6 min, with a total of 2.4 h spent in counseling per pharmacy per working day. The survey also revealed that patient-medical record was not maintained and computer has been utilized by only 12% of the pharmacies surveyed.

On job satisfaction, the survey shows that approximately 40% of the respondents were fully satisfied with their professional lives, whereas, 51 and 9% were some what or not at all satisfied with their job, respectively. The type of consultation sought by patients revealed that the patient's minor health problems, advice about medicines, first-aid, baby's and infant's care, were the most frequently sought advices (Table 1).

The study showed that over 75% of the pharmacists working hours spent in dispensing and stocking with only <25% of the working hours devoted for counseling. However, pharmacists ranked counseling as their favorite activity (Table 2). The non counseling tasks, such as; dispensing prescribed drugs, OTC drugs, stocking and purchasing of drugs, stocking and purchasing non-drug related items and preparing daily accounts, bills, contact physicians and preparing annual budget ranked from 1-8, respectively (Table 3). Professional references available to community pharmacists are listed in Table 4 in which, Martindale was the most frequently used source of drug and health related information. Pharmacopoeias and Goodman and Gillman's test book of pharmacology were the second, with Remington's Pharmaceutical Sciences was the third commonly utilized sources. None of the

Table 1: Type of consultation sought by patients (n = 186)

Type of consultation	Rank*
Minor health problems	1
General medicaments	2
First aid	3
Baby's and infant's care	4
Visiting a doctor	5
Others	6

\*Rank 1 represents the highest score response reported by pharmacists, whereas, rank 6 represents the lowest score response

Table 2: Attitudes of pharmacists towards performance of various activities

Activity	Rank
Counseling patients/clients on OTC* prescription drugs and other health related problems	1
Dispensing of OTC drugs	2
Dispensing of prescribed drugs	3
Stocking and purchasing of drugs	4
Stocking and purchasing non-drug related items	5
Paper work (Preparation of bills, daily accounts and annual budget)	6

Table 3: Non counseling tasks

Task	Rank*
Dispensing of prescribed drugs	1
Dispensing of OTC drugs	2
Stocking and purchasing drugs	3
Stocking and purchasing of non drugs related items	4
Preparing daily accounts	5
Preparing bills for clients upon request	6
Contact Physicians	7
Preparing annual budget	8

\*According to the score response reported by pharmacists where rank 1 represents the highest score where as rank 6 represents the lowest score response

Table 4: Pharmaceutical and medical text-book in pharmacies surveyed (n = 186)

Reference books*	Percent of Pharmacies
Martindale: the extrapharmacopoeia	68.42
United States pharmacopoeia	63.16
British pharmacopoeia	58.77
Goodman and gillmans' the pharmacological Basis of therapeutics	57.02
Remingtons Pharmaceutical Sciences	48.25
Physicians' Desk Reference (PDR)	42.98
Handbook of Poisoning	31.58
Hanstens drug interaction	28.07
Meylers side effects of drugs	25.44
Dispensing for pharmaceutical students	22.81
The merck manual	18.42
A manual of drug interaction	3.16
British National Formulary (BNF)	2.24
<b>First aid manual</b>	
Drug directory, ministry of health	10.53
Current medical diagnosis and treatment	7.90
<u>Clinical pharmacology</u>	7.02

\*Not necessarily the latest edition

pharmacies participating in the study possessed professional journals as part of their literature resources (Table 4). Continuing Education Programs and professional meetings held in the Kingdom were only attained by 3% of the respondents. Only 2% of the pharmacists surveyed indicated that they make use of the drug information centers located in hospitals or in the college of pharmacy.

Table 5: Drug information to physicians in private/public hospitals/clinics

Type of information	Rank*
Drug substitution-generic/brand	1
Drug alternatives	2
Dosing/dosage forms	3
ADRs	4
Drug interactions	5

\*According to the score response reported by pharmacists where rank 1 represents the highest score where as rank 5 represents the lowest score response

Table 5 describes the drug information to Physician in private/public hospitals/clinics. The types of information include drug substitution, drug alternatives, dosing/dosage forms, ADR's and drug interactions, which ranked from 1-5, respectively.

### DISCUSSION

The present study highlights, a number of relevant issues to the general practice of pharmacy in the Kingdom of Saudi Arabia. First, it reveals that pharmacist in-charge of a community pharmacy is very likely a non-Saudi male with an average age of 39 years. He works about 64 h week<sup>-1</sup> with an average of 9.14 h day<sup>-1</sup>. Counseling patient about prescribed and non-prescribed drugs and general health care accounted for 26.25% of his working day with an average length of about 7.5 min per customer. This implies a counseling rate of 19 episodes per day.

Second, the study also showed that approximately 65% of the respondents worked in a complete professional isolation during day time through the entire week. This situation may inhibit the professional progress due to the lack or meager time devoted for interchange of idea and knowledge with colleagues and health care professionals. In addition, attending other professional activities such as continuing education programs, scientific symposia and seminars will be extremely difficult under these circumstances. Third, most of the pharmacists were generally satisfied with their jobs, yet 9% stated that they were not satisfied with their professional situations. Although, it seems difficult to find a definite explanation for this level of dissatisfaction due to limitation with these data regarding job satisfaction, it is reasonable that working for long hours in complete professional isolation in addition to other contributing factors that adversely affect job satisfaction such as low salaries and limited social life may be involved (Ralph and Langenbach, 1987; Shann and Hassell, 2006).

As professionals, most of the respondents ranked counseling patients about OTC and prescription medications as their most favorite activity against the non counseling tasks. On the other hand, the majority of respondents stated that their patients most commonly sought advice about self limiting health problems. Hence,

only a small proportion of patients were referred to doctors since the majority were actually treated by the pharmacist themselves. This low referral rate reflected the underlying tendency of patients to seek advice from the pharmacist if they consider their particular condition to be a minor illness, which may be managed by relieving the symptoms. These results contradict the findings reported in other studies (Hammond *et al.*, 2004), which found patients continuing to attend their General Physicians (GPs), despite of the increased involvement of community pharmacists in managing minor illness.

The present study revealed that none of the pharmacies surveyed maintained medical records of patients. With the aid of such records, the pharmacist would undoubtedly have been able to provide a much better service in communicating drug information to his/her patients. It is also evident from the survey that pharmacies had a relatively limited source of information resources. Hence, this finding confirms the results of drug information resources in Kuwait (Ball and Al-Othman, 2007). The author reported a poor quality and outdated drug information resources prevailing in private community pharmacies in Kuwait. These narrow ranges of resources were unlike those reported in developed countries (Gora-Harper, 1995; Shumway *et al.*, 1996).

Although, it is evident from this survey that information resources held in pharmacies were inadequately surveyed, it is clear that the pharmacists tend to use these limited range of literature resources frequently. However, this does not indicate that they are used effectively in patient counseling. Furthermore, the use of such narrow range of resources may reflect the fact that questions asked by the health professionals cannot be sufficiently answered from these resources. It also may reflect the pharmacists' lack of awareness of how to use other resources especially those pertaining to patients' counseling. A better understanding of drug information needs and effective utilization of the presently established drug information centers will greatly improve the efficacy and efficiency of pharmacy practice in the community. However, this will require the direction and coordination of a national regulatory body such as the Ministry of Health as well as assistance from established drug information centers within the Kingdom. Furthermore, a minimal professional and educational standard of practice and licensure for community pharmacists practicing in the Kingdom should be implemented.

### CONCLUSION

It would seem likely that some pharmacists are more skilled than others in patient counseling. They were

actually not identified as a group in this survey or examined for reasons of their counseling as such questions will be dealt with in another study. Finally, the community pharmacist is an important source of information and can play a vital role in promoting patient health care in the community. Thus, pharmacists in the community should be trained in an appropriate fashion to meet such goals.

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