An-Najah Univ. J. Res. (N. Sc), Vol. 17(2), 2003

A Descriptive Study of Community Pharmacy Practice in Palestine: Analysis and Future Look

دراسة وصفية للممارسة المهنية في صيدليات المجتمع في فلسطين: تحليل ونظرة مستقبلية

Nidal Jaradat*, Waleed Sweileh**

**College of Pharmacy, An-Najah National University, Nablus, Palestine.*

E-mail: nidaljaradat@yahoo.com.

***College of Pharmacy, An-Najah National University, Nablus, Palestine.*

E-mail: waleedsweileh@yahoo.com

Received: (19/1/2003), Accepted: (25/5/2003)

Abstract

The purpose of this study is to describe and analyze the community pharmacy practice in Palestine from a clinical and legal aspects. The study was conducted on a random sample of community pharmacies and carried out by pharmacy students of An-Najah University using a 15-item questionnaire. The working hours of community pharmacies is approximately 9 hours daily and the average working people in the pharmacy is 2.8. The average customer turnover is approximately 25.8. Medical representatives and manufacturer brochures are the primary source of drug information for 90% community pharmacists. Over the counter sale of many prescription medications is unregulated. Substitution of prescribed medications is common in 25% of community pharmacies. No official record of prescription is available. The Ministry of health, the Palestinian Pharmaceutical Association and the college of pharmacy at An-Najah University ought to take measures to improve the pharmacy practice and to provide continuing educational opportunities for community pharmacist in Palestine.

ملخص

الهدف من هذه الدراسة هو وصف الممارسة المهنية لصيدليات المجتمع في فلسطين. هذه الدراسة اجريت على عينة عشوائية من صيدليات المجتمع في فلسطين قام بها طلاب الصيدلة في جامعة النجاح باستعمال استبيان يتكون من ١٥ سؤال. معدل ساعات العمل لصيدليات المجتمع حوالي ٩ ساعات ومعدل العاملين في الصيدليات حولي ٢،٨ ومعدل الزبائن حولي ٢٥،٨ يوميا". معظم الصيدليات (٩٠%) يعتبرون مندوبي الدعاية ومنشورات الشركات الدوائيه المصدر الأول للمعلومات الدوائية. الأدوية التي تباع بدون وصفة غير مراقبة ويتم سوء استعمالها كما أن تبديل الأدوية منتشر في ٢٥% من الصيدليات. لا يوجد سجل أو تدوين رسمي للوصفات. على وزارة الصحة ونقابة الصيادلة وكلية الصيدلة في جامعة النجاح اتخاذ اجراءات لتطوير ممارسة المهنة وتزيد الصيادلة بالتعليم المستمر.

Introduction

Until 1993, the Jordanian Pharmacy Practice law was loosely applied to the Pharmacy Practice profession in West bank under the Israeli occupation. After the Oslo accord and the establishment of the Palestinian authority, a Palestinian Pharmacy Practice law, was put into action. The Jordanian and the Palestinian Pharmacy Practice laws require that drug stores and community pharmacies to be owned and supervised by registered and certified pharmacists and that the certificate of the drug store/community pharmacy to be clearly visible(1). Most community pharmacies in Palestine are private and there are no chain pharmacies as the case in USA and Europe. The Palestinian pharmacy law strongly advocates the proper and legal sale of medications, however, in Palestine, as well as in many less developed countries, almost any drug available in the market can be purchased as an over the counter medication.

The number of population in the West bank is 1,873,476 and the annual growth rate is 3.1% according to the 1997 official Palestinian census(2). There are approximately 500 community pharmacies in West bank. This means that there is a good pharmacy provider to population ratio (one community pharmacy serves approximately 4,000 individuals). This makes the competition to be high and sometimes un-ethical. There are three colleges of pharmacy in Palestine. The largest of the three, is the college of pharmacy at An-Najah National University in Nablus where approximately five hundred (500) students are studying at this college. The duration of the pharmacy course is five years and during the summer holidays at the end of the third and fourth years, students train in community pharmacies.

In Palestine, many patients seek medical advice directly from the community pharmacies because they are faster and less expensive than the doctor's clinics. This is even more obvious in urban areas where medical services are less developed. This makes the community pharmacies in a situation to play a major and important role in public and community health issues. Unfortunately, the pharmacy personnel in Palestine have no pharmacy continuing education programs. This makes the pharmacy personnel to be scientifically behind and un-updated on clinical pharmacology and pharmacy practice issues. For example, anti-diarrhea drugs might be sold without emphasis on oral re-hydration salt (ORS) therapy, antibiotics are sold as over – the – counter (OTC) and many non-steroidal anti-inflammatory drugs (NSAIDs) are sometimes dispensed without cautioning.

Pharmacy is the health profession that has the responsibility for ensuring the safe, effective and rational use of medicines. As such it plays a vital part in the delivery of health care world-wide. However, there remain wide variations in the practice of pharmacy, not only between countries but also within countries. Nevertheless, in recent years there has been significant convergence, driven by a number of key factors. These include World Health Organization declarations concerning the role of pharmacists, changes in the political climate of many countries, and the pursuit by pharmacists themselves of the goals of medicines management and pharmaceutical care. Many studies were carried out both internationally and in different countries that describe pharmacy practice, the role of pharmacist in the health system and the pharmacy education(3). Many publications described the pharmacy practice in specific countries as in Britain, Russia, Japan, Slovakia and Potugal, French Antilles and Luthania (4-10). Some publications addressed the challenges facing the pharmacy profession especially the future education(11-13). In another publication, the authors suggested that the pharmacy profession can serve as a model for health informationist professionals(14).

The purpose of this study is to describe the clinical and legal aspects of pharmacy practices in Palestine and to make future suggestions and recommendations to the Ministry of Health (MOH), the Palestinian Pharmaceutical Association (PPA) and to the college of Pharmacy at An-Najah University to improve the pharmacy practices in Palestine.

Method and Design

One hundred and eleven 22.2% (111) out of approximately 500 community pharmacies in the West bank participated in the study. The community pharmacies participating in the study were located in Qalqilia (8%), Nablus (23%), Jenin (11%), Tulkaram (13%), Ramallah (11%), Hebron (4%), Jerusalem (3%) and the rest (27%) were distributed in villages and camps especially in the northern area of Palestine. The study included community pharmacies from all districts in West bank. The study was based on field interviews using a 15 item-questionnaire that include short answers and open answers. The questionnaire included questions regarding working hours, number of working personnel, drug information resources, factors affecting drug selection, prescription turnover, problems facing the pharmacists during work, substitution of foreign prescribed medicines with locally manufactured ones and finally the most commonly encountered type of questions addressed by patients to community pharmacists. Fourth and fifth grade pharmacy students at An-Najah National University in Nablus carried out the interviews. The questionnaire included questions about working hours, number of working people in the pharmacy, over-the-counter sale, herbal medications, sources of drug information, computerization, problems related to pharmacy practice and finally patient communication.

Results

The average working hours for community pharmacies in Palestine is nine[9] hours daily with a range of 2 to 14 hours depending on the location of the community pharmacy and the security situation. The average number of workers in community pharmacies was 2.8 with at least one certified pharmacist and one certified pharmacy technician. Approximately 25% of the pharmacies sell herbal products. Most pharmacies (~ 90%) consider medical representatives and pharmaceutical companies brochures as their primary source of drug information. Actually, more than 60% of them had their last pharmacy course at least 10 years ago. Most pharmacies (> 90%) do not keep the prescriptions or record them in a computer pharmacy database. However, prescriptions containing benzodiazepines or other controlled drugs are recorded and preserved for health inspectors. Over the counter sale is common and un-regulated. For example potent topical steroids and antibiotic are sold over-the-counter. Furthermore, 99% of refills of cardiac, endocrine and neurological prescription drugs are made routinely without reference or consent of the prescribing physician. Non-prescription dermatological compounding is also common and is usually asked for and encouraged by the patients. The customers' turnover rate in each pharmacy was 25.6 patients per day. More than 70% of those customers were seeking OTC or self-medications or refills and less than 30% of the customers were seeking prescription dispensing. This low prescription turnover rate is due to the abundance of charitable and public clinics that sell and distribute medications at low cost. The approximate average time spent with each customer in community pharmacies in Palestine is three minutes and thus approximately (1.25/9 = 14%) of the time in the community pharmacies is spent in professional activity and the rest of the time (~ 85%) is spent in nonprofessional and business activities. In contrast, community pharmacists in USA spend their time as follows (48% dispensing, 31% consultation, 15% business management and 6% drug use management) [15]. More than (99.9%) of the community pharmacies dispense amoxicillin and cephalexin as over the counter medication. More than 83% of community pharmacists think of price and margin of profit upon selection of any OTC or drug product. Furthermore, substitution of foreign prescribed drugs with local pharmaceutical equivalents is a common practice in approximately 25% of community pharmacies. Dispensing sub-therapeutic quantities of antibiotics is also a common practice in most community pharmacies. Finally, 57% of community pharmacies believe that the pharmacy practice law in Palestine is loose and incomprehensive and that continuing education is necessary. A summary of the results is shown in table one (table 1).

Table (1): summary of the results regarding the community pharmacy practices in Palestine.

Item	Results
Range of working hours	2 – 14 hours
Average of working hours	9 hours (2 – 14 hours daily)
Average number of workers	2.8 per community pharmacy (1 – 4)
Major source of drug information	Brochures and medical representatives are the major source for more than 90% of community pharmacies
Prescription record	No prescription record
Herbal drugs	25% of community pharmacies sell herbal drugs.
OTC versus prescription sale	70% OTC. 30% Prescription sale
Average time spent with the customer	3 minutes
Time spent in non-professional activities	85% of the time in community pharmacies is spent in non-professional activities
Major factor affecting OTC selection	Price and margin of profit.
Substitution of prescribed medications.	Common in 25% of community pharmacies.
Attitude to current pharmacy practice law.	57% of Community Pharmacist Consider it loose and incomprehensive.

Discussion

The survey shows that the pharmacy practice in Palestine is very commercial and business - oriented. This kind of pharmacy practice has also been reported in other less developed countries like India and Pakistan [(16)]. Actually, community pharmacies in Palestine are considered shops where drugs and beauty products are bought and sold. The possible reasons for the deterioration of community pharmacy practice in Palestine are briefly summarized in the following list:

1. The lack of knowledge and research on pharmacy practice and pharmacy care in Palestine. To our knowledge, this is the first official publication that addresses the situation of pharmacy practice in Palestine.
2. Un-programmed numbers of pharmacy graduates. There is no national future policy on the numbers and specializations of pharmacy sciences that are needed to meet the Palestinian needs.
3. The lack of law enforcement and the tendency of many community pharmacies to gain profit by many means.
4. The lack of specializations among pharmacy graduates. Most pharmacy graduates tend to go to private community pharmacy business. Very few pharmacy graduates go to pharmaceutical industry or formulation technology or other fields of pharmacy.
5. The inability of community pharmacists to play an active role as a drug information provider for medical community. This greatly reduced the scientific stature of community pharmacists.
6. The un-ethical business competition among community pharmacists disrupted the trust relation among pharmacist-pharmacist, pharmacist-patient and pharmacist – physicians.
7. The lack of public awareness on the role of community pharmacists as a drug educator and health provider.
8. The poor and unscientific relation between community pharmacies and local manufacturing pharmaceuticals made the relation to be business and profit only.
9. The weak role of the Palestinian pharmaceutical association in shaping the future of community pharmacy.
10. The poor Palestinian economy and the large number of people who are under poverty line made the community pharmacies unable to expand and develop. Furthermore, the customers tend to negotiate and bargain about drug prices. Unfortunately, this behavior is sometimes encouraged by community pharmacists.

Unfortunately, most community pharmacies are not up-dated in clinical pharmacy and pharmacology issues and thus they are unable to provide accurate drug information and advice on common health problems. The existing Pharmacy law must consider regular license renewal. This renewal must be based on continuing education and number of credits earned by the pharmacist through certified web based pharmacy continuing education. The MOH ought to provide community pharmacies with an official OTC products list and monitor the sale of non-OTC products. Furthermore, the MOH should provide incentives for community pharmacies to improve their quality of service. For example, the introduction of pharmacy computer programs for patient and drug data entry is of great importance. The improvement of pharmacy practice should be accompanied with improvement in other health professions. For example, physicians must improve their prescription writing practices and need to develop better patient communication and education. The authors would like to list the following suggestions to improve the community pharmacy practice in Palestine:

1. Development of pharmacy education in Palestine and introduction of pharmacy specialization that are needed in Palestine. For example, pharmacists with specialization in small scale formulation and pharmacists with specialization in modern cosmetics and pharmacists with specialization in herbals and medicinal plants are needed.
2. Automation of Pharmacy systems. Introduction of computers and internet service to community pharmacies. Such system must be centralized. This central computer network could be monitored by the pharmaceutical association to be used for both providing drug and data information to pharmacists and receive information or questions from community pharmacists.
3. The community pharmacies must keep and maintain patient drug profile in computer systems. The pharmacists need to develop a better patient follow up.
4. The Palestinian national authority must develop a national plan regarding the number of pharmacy graduates needed for the coming ten years or so. Also, the Ministry of Health (MOH) must organize and plan the needed number of community pharmacies in Palestine.
5. Introduction of pharmacy practice and pharmacy care courses into the pharmacy curriculum. A pharmacy practice department is needed to follow up with community pharmacies and to conduct research on pharmacy practice field.
6. The Pharmaceutical association and the Colleges of Pharmacy in Palestine must start issuing a refereed journal on pharmacy in Palestine. Also, they must provide pharmacies with international pharmacy journals on monthly basis.
7. Establishing a pharmacy continuing education center. This center is supposed to provide community pharmacies with pharmacy courses in all fields.

8. The pharmacy practice law in Palestine must be developed to upgrade and develop pharmacists. For example, taking pharmacy continuing education courses must be mandatory. Each pharmacist need to take certain credits every year in order to be eligible to practice pharmacy.

Pharmacists in general are not fully integrated into the primary health care team in Palestine and their skills could be better used to help patients with their long term medicines. Community pharmacists are well placed to help patients who have cardiovascular or endocrine diseases or who are at risk of this: they have an opportunity to identify at-risk patients, they can identify under treated patients or patients with poly-pharmacy at the point of dispensing, and they can provide education and advice on lifestyle and diet. They can also be involved in smoking cessation services. Practice based pharmacists can improve patient care through medication review clinics.

The authors contacted the Ministry of Health regarding research on the practicing and drug utilization rationale in Palestine. Furthermore, the authors, suggested on the An-Najh a University to establish a pharmaco-epidemiology research center to monitor pharmacy practices and drug utilization safety and therapeutic rational in Palestine. Furthermore, the authors also contacted some members of the Palestinian pharmaceutical associations regarding the pharmacy practice law and possible improvement points to that suggested law. Furthermore, the authors suggest to move to the Doctor of Pharmacy degree instead of the B.Sc. degree in the colleges of pharmacy in Palestine. To the best of the author's knowledge, this is the first documented research on community pharmacy practice in Palestine and we strongly recommend the policy makers in the academics and in the MOH to meet the real challenges of the new millennium by up-grading the whole pharmacy system in Palestine.

References

1) Ministry of Health, "Palestinian Pharmacy Law", (suggested manuscript), **34**, (1997), 6
2) Demographic Distribution in Palestine, Palestinian Central Bureau of Statistics, "Health Statistics", Main Findings, **24**, (1997).
3) Anderson, S., "The state of the world's pharmacy: a portrait of the pharmacy profession", *J Interprof Care*, **16(4)**, Nov (2002) 391-404
4) Crellin, JK., "Revisiting counter practice amid pharmacy and medical reform in nineteenth-century Britain", *Publ Am Inst Hist Pharm.*, **19**, (2001), 57-71
5. Indritz, ME., "Observations of pharmacy practice in the Dmitrov Raion, Russia, *J Am Pharm Assoc (Wash)*, Jul-Aug (2002), **42(4)**, 547-51.

6) Rui Pita, J., [The pharmacy in Portugal (1772-1836)]: Rev History Pharmacy (Paris), **45(317)**, (1998), 51-8
7) Kucerova, M., "An overview of the development of pharmacy education in Slovakia", Cesk Farm, **41(4-5)**, Jul (1992), 123-6
8) Nagai, T., "Pharmacy, pharmacists and society--pharmaceutical science and practice with philosophy", Yakugaku Zasshi Mar, **123(3)**, (2003), 143-50
9) Gudiene, V., Kripaityte A., "Professional associations of pharmacists in Lithuania: history and directions of activity Medicina (Kaunas)", **38(12)**, (2002), 1230-4
10) Taffin, D., "Pharmacy in the French Antilles in the 19th century: recognition of a profession, Rev Hist Pharm (Paris), **40(299)**, (1993), 472-80
11) Tyler, VE., "A history of pharmacy: future opportunities", Pharm. Hist., **35(4)**, (1993), 163-8
12) Burton, S., Anderson, C., "Using the Internet to develop an international learning community of pharmacists", Pharm World Sci, **24(5)**, Oct (2002), 172-4
13) Cooksey, JA., Knapp, KK., Walton, SM., Cultice, JM., "Challenges to the pharmacist profession from escalating pharmaceutical demand" Health Aff (Millwood), **21(5)**, Sep-Oct (2002), 182-8
14) Gary, D., Byrd, Ph.D., M.A.L.S., AHIP, "Director[1] Can the profession of pharmacy serve as a model for health informationist professionals?" *J Med Libr Assoc*, **90(1)**, January (2002), 68-75
15) http://www.mlanet.org/am/am2002/e-present/siebert-pharm.ppt.
16) Vinay, K., Nichter, M., "Pharmacies, Self-medication, and Pharmaceutical Marketing in Bombay, India", Soci. Sci. Med., **47,** (1988), 779-794.