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Study on working of community pharmacies in three major cities of Kerala, India

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ABSTRACT

Community pharmacy is a pharmacy centre established in a community set up which meet the needs of the society for their medicinal products, healthcare items and prescription related matters including medicines most commonly used in homes. The objective of the study was to analyze various facilities and professional services provided by the community pharmacists. A prospective, observational study was carried out in randomly selected community pharmacies in urban areas of 3 major cities of Kerala for a period of 6 months. Out of 189 pharmacies that satisfied inclusion criteria majority of pharmacists were diploma holders (96.8%) who worked for more than 10 hours (79.36%) with a very less salary of less than Rs.8000 (94.18%) per month. Antibiotics were dispensed from pharmacies without prescription (89.9%) and not even a single pharmacy took measures to avoid repeated purchase of medicines including narcotics with a same prescription. Professional services provided by the pharmacists were minimal and none of the pharmacist attended continue education programme. Revision of salary, improvement in working condition and periodic continue education programmes are mandatory to uplift this profession

INTRODUCTION

In the community setting pharmacists should be acknowledged as health care professionals to whom patients can consult for health related problems. Due to easy accessibility and perceived affordability, pharmacists are the first point of contact in the healthcare system in developing and developed countries in addition to remain as the final link between the physician and the patient prior to actual use of drugs. [1,2]. With fewer hospitalizations leading to more and more procedures being performed on as out patient basis as well as continued discoveries of new and complex drug therapy, there is an increasing reliance on community pharmacy to educate and monitor patient therapy. [3]

Unfortunately community pharmacy is not developed in most of the developing countries like India. The community pharmacy is represented by retail pharmacies which are mainly focused on sales or dispensing of medicines rather than acting as facilitators of therapy for patients. Consumers and patients consider a visit to medical store to purchase drugs in much same way they consider a visit to grocery shop to buy food items or even to beverages corporation outlets. General masses are totally ignorant about actual role of pharmacists in healthcare while seeking medical help public think of a doctor or a nurse or even a medical technician but seldom does a pharmacist come to mind. [4, 5]

Professional activities of a community pharmacist

The professional activities include Patient counselling-the professional counselling given by a practicing pharmacist to his or her patient on matters related to the prescribed medication, healthcare and life style with the objective of increasing patient compliance to the prescribed medications and promoting the rational, scientific and prudent use of medications.[6]. Health screening services like blood pressure measurement, total cholesterol measurement, blood glucose, body mass index, weight and height, anticoagulation monitoring, provision of life style advice and dietary advice as well as advice on risk factors for particular diseases like heart disease can be carried out by a well trained community pharmacist[7,8].Community pharmacist can be a source of information and support for people to quit smoking where pharmacist can play a key role in nicotine replacement therapy, an effective cessation pharmacotherapy, available without prescription. Community pharmacist should be vigilant enough to report adverse drug reactions in the proper format. Provision of drug information is a core activity of community pharmacist .A systematic approach to answer queries from healthcare providers or patients should be followed and for the same pharmacist should have written and verbal communication skills and capability to retrieve and interpret data from different sources [6].

Pharmacist in community setting can perform an invaluable

service for patients and their communities by avoiding medication related problems. Errors of omission occurring when information essential to be filled in the prescription is missing may incur minimal risk to patient but commission errors where wrong dose or wrong drug is prescribed for a patient may invite detrimental effects to patients if pharmacists are not vigilant enough to check the prescriptions for appropriateness of the prescription[.9] Community pharmacist should be able to identify unnecessary drugs, high doses, potentially dangerous combinations and bring the same to the notice of the prescriber for required corrections for the best interest of the patients. Many pharmacists run anticoagulation clinics in developed countries. Pharmacists can estimate the International normalized ratio(INR) for the patients on oral anticoagulants and adjust dose wherever necessary and if the situation demands he/she can discuss with the concerned doctor for elevation or reduction of dose [10].The community pharmacist has to ensure that all medicines and other items are stored properly and scientifically in the pharmacy as the pharmacological activity, clinical safety and physical as well as chemical stability of a drug formulation is largely dependent upon its storage[2]

MATERIAL AND METHODS

A Prospective, non experimental randomized observational study was conducted for a period of six months in randomly selected community pharmacies in the urban areas of three major cities of Kerala which includes Ernakulum, Kozhikode and Trivandrum. A total of 189 pharmacies that satisfied inclusion and exclusion criteria were studied .Inclusion criteria: community pharmacies attached to hospitals, Independent pharmacies, chain pharmacies and society owned pharmacies. Hospital pharmacies were excluded from the study.

Data relevant to the study were obtained and recorded in the specially designed data collection form by interviewing the pharmacist in charge or licence holder or staff in charge of community pharmacy. Details like various facilities, professional services provided by the pharmacies, patient related and pharmacist related details were collected using validated questionnaire and recorded. The questionnaire were validated after getting suggestions from ten competent persons including one drug inspector, two drug controllers and seven faculties handling hospital and community pharmacy subjects for not less than 3 years in different universities in India.

RESULTS

Table 01 Type of pharmacy

S.No.	Type	Number	Percentage
1	Independent pharmacy	177	93.65%
2	Chain pharmacy	03	1.58%
3	Hospital attached community pharmacy	03	1.58%
4	Society owned pharmacy	06	3.17%
5	Total	189	100%

FACILITIES

Table 02 Pharmacist related facilities

	Present	%	Absent	%
Reference books	189	100	0	0
Continuing education programme (CPE)	0	0	189	100
Providing training to fresher's	13	6.87	176	93.12
Comfort rooms	14	7.40	175	92.59

Table 03 Pharmacy related facilities

Pharmacy related	Present	%	Absent	%
Air conditioning	13	6.87	176	93.12
Checking cold storage temperature daily	38	20.10	151	79.89
Alternative power supply for refrigerator	135	71.42	54	28.57
Separate area for storing narcotic drugs	175	92.59	14	7.40
Special precaution for storing &handling of photosensitive drugs	163	86.24	26	13.75
Pharmacies facing to East/West	146	77	43	22.75
Precaution to avoid direct sunlight from East/West	59	40.41	87	59.58

Table 04 Customer related facilities

	Present	%	Absent	%
Waiting area	28	14.81	161	85.18
Drinking water	22	11.64	167	88.35

WORKING CONDITION OF PHARMACIST

Table 05 : Qualification of License holder

Qualification of License holder	Number	Percentage
D.Pharm	183	96.82
B.Pharm	6	3.17
M.Pharm	0	0
Pharm.D	0	0

Table 06 : Qualification of additional technical staff

Qualification	Number	Percentage
D.Pharm	128	94.11
B.Pharm	8	5.89
M.Pharm	0	0
Pharm.D	0	0

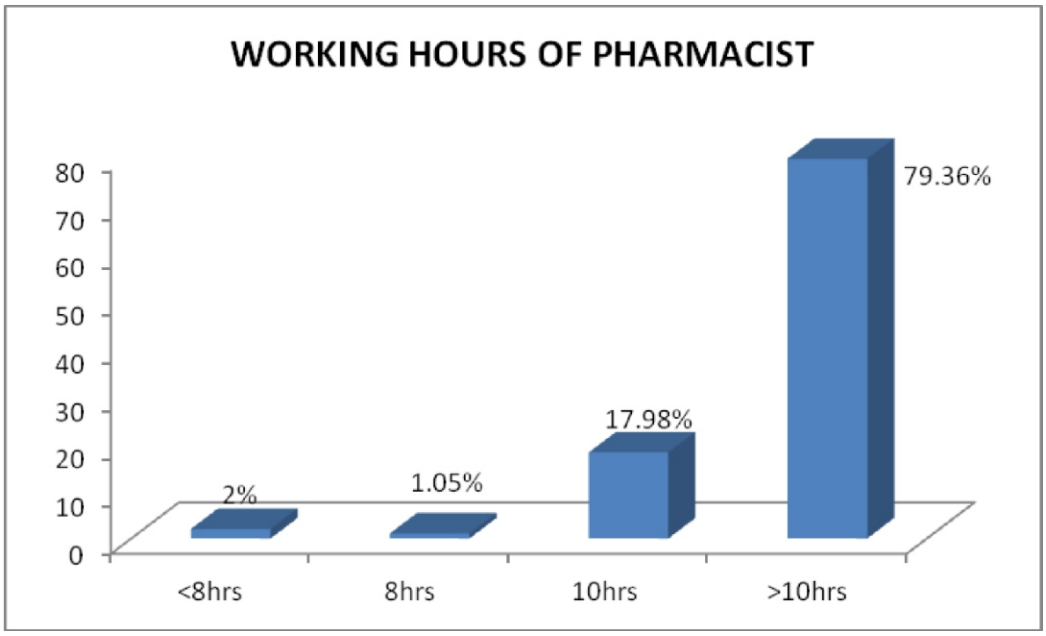

Figure 01 : Working hours of pharmacist

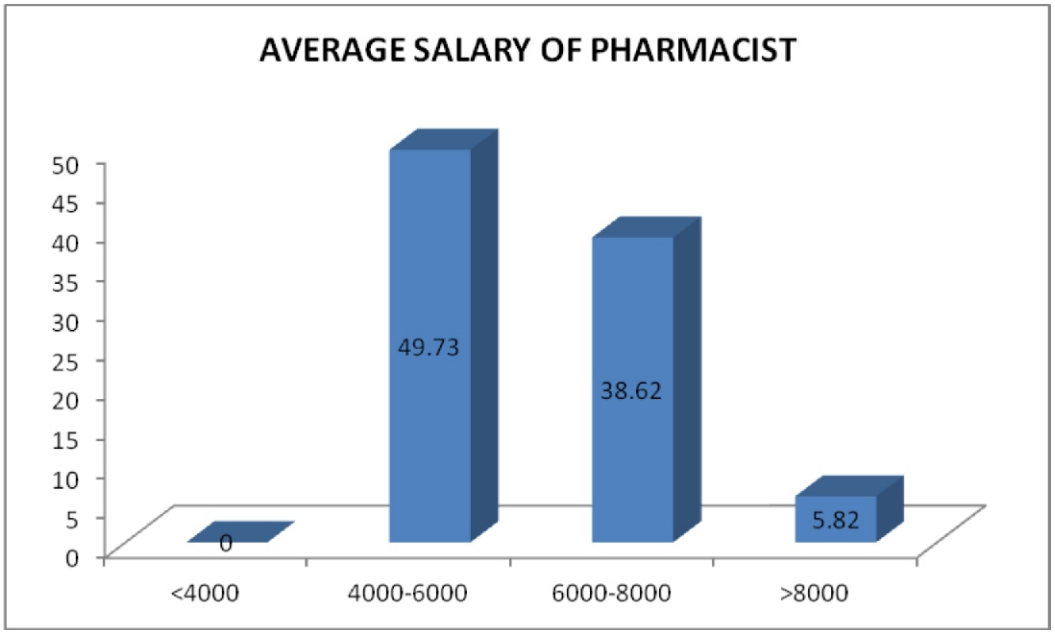

Figure 02 : Average salary of pharmacist

4 PROFESSIONAL SERVICES

Table 07 : Dispensing of drugs.

Dispensing of narcotic drugs & other controlled medication without prescription	YES 0	percentage 0	NO 189	Percentage 100
Dispensing of antibiotics without prescription	170	89.94	19	10.05
Precaution to avoid repeated purchase on prescription	0	0	189	100
Dispensing of drugs for old prescriptions	163	86.24	26	13.75
Providing of special instructions while dispensing of medicines stored in the refrigerator	189	100	0	0
Dispensing of veterinary medicine	11	5.82	178	94.17
Dispensing of alternative medicine	14	7.40	175	92.59

Table 08 : Patient services related

Patient counselling	Yes 10	Percentage 5.29	No 179	Percen 94.70
Health screening	11	5.82	178	94.17
Smoking cessation	0	0	189	100
Drug information	16	8.46	173	91.53
ADR reporting	0	0	189	100

Table 09 : Dispensing of OTC Drugs

Dispensing of OTC drugs more than prescription drugs	number	percentage
Yes	169	89.41
No	20	10.58
Selection of OTC drugs are based on		
Medical representatives influence	189	100
Patients conditions	0	0
Cost	0	0
Manufacturer	0	0
Previous experience	0	0

DISCUSSION

Facilities provided by the Pharmacy was divided into pharmacist related, pharmacy related and customer related. Pharmacist related facilities include reference books, continuing education program, providing training to fresher, comfort rooms. All the pharmacies had reference book but only CIMS. Schedule N of drugs and cosmetics Act specifies that the Pharmacy shall be provided with the following books for further reference for the Pharmacist. The Indian Pharmacopeia, National Formulary of India, The Drugs & Cosmetics Act 1940, The pharmacy Act, 1948. The Narcotic Drugs & Psychotropic substances act. Comfort rooms are essential for the staff as they are working for long hours. Only 7.40% of pharmacies provided comfort rooms.

The percentage of air-conditioned pharmacy was only 6.87%. As the prevailing temperature increases the air-conditioned, facility can ensure proper storage condition specified for the drugs All pharmacies had cold storage area which is necessary for the proper storage of cold chain drugs like Insulin, vaccine etc. A separate area is needed for storing of Narcotic drugs & other controlled drugs because of a chance to misuse these drugs. So these drugs should be kept in a separate area under lock & key. Pharmacist must take the full responsibility of these drugs. In our study 92.59% of the pharmacies had separate section for storage of narcotic drugs. These were under lock & key. About 86.24% of pharmacies took special precautions for the storage & handling of photosensitive drugs and the rest of 13.75% pharmacies did not take any special precaution.

Pharmacies facing East/West should take adequate precautions to protect the drugs from direct sunlight by shielding the areas of pharmacy which is exposed to sunlight. It is found that 77 % of pharmacies studied face towards East/west. Out of these only 40.41% had taken precaution to avoid direct sunlight from East/ West. Patient related facilities include availability of waiting area and drinking water for patients..Only 14.81% of pharmacies provided waiting area for patients. Patients coming to the pharmacies suffering with minor diseases may be tired. So provision for waiting area may be helpful to them. Provision of drinking water to take the first dose of medicines in the pharmacy is essential. But in this study only 11.64% of pharmacies were providing drinking water.

When qualification of license holders in the pharmacy (Table05) analysed 96.82% of pharmacists were Diploma holders in Pharmacy & only 3.17% were with B.Pharm qualification. In a study conducted by N.R Jaiswal etal[11] it was found that 85% of pharmacists were Diploma holders & about 15% of the Pharmacist were B.Pharm holders in the urban areas of Ahemdabad nagar districts of Maharashtra. Table 06 shows the qualification of additional technical staff in the Pharmacy. 94.11% of the technical staff were with D.Pharm qualification & only 5.89% were with B.Pharm qualification. There were no technical staff either with M.Pharm or Pharm.D qualification. Majority of the pharmacists (79.36%) worked for more than 10hrs 17.98% of the pharmacist worked for 10hrs and 1.05% of the pharmacists worked for 8hrs.Only 1.8% of Pharmacist worked less than 8 hrs. 49.73% of the pharmacists were paid a salary between RS.4000-6000/- .Only 5.82% of the pharmacists were paid an amount greater than RS.8000.Pharmacists are integral part of healthcare system but they are one among the least paid professionals.

None of the pharmacies in this study dispensed narcotic drugs & other controlled medicines without prescription. But no pharmacy took necessary precaution to avoid repeated purchase of even narcotics with same prescription. This may lead to drug addiction & misuse of drug by patients. Strict measures should be taken to prevent this. 86.24% of the pharmacies dispensed drugs for old prescription. Majority of the pharmacies (89.94%) in this study dispensed antibiotics without prescription which is illegal. In addition over the counter (OTC) sale of antibiotics will lead to development of antibiotic resistance. In a study conducted by M. Damesh etal [12] about over-the-counter sales of antibiotics from community Pharmacies in Abu Dhabi found that about 68.4% of the antibiotics were sold Over-the-counter without Prescription.

Table 08 represents the patient services provided by the pharmacist. Only 5.29% of the pharmacies provided patient counselling. The Omnibus Budget Reconciliation Act 1990(OBRA 90) of USA mandates counsel the patients about their prescriptions[13] A quantitative study by N.M.Hamoudi [14] et al in UAE showed that the 92% of the pharmacists agreed that patient counselling is their professional responsibility. About 82% of pharmacists agreed that counselling will increase their sales & enhance the reputation of their pharmacies .A study conducted in India by R.Adepu et al[15]showed that 80% of the pharmacists agreed that, patient counselling is their professional obligation. He also described about the major barriers for offering patient counselling like Pharmacist's inadequate knowledge & confidence (78%), no professional fee (56%), poor response from patients (82%).

The percentage of pharmacies that provided health screening services was found to be only 5.82%.In this study only 8.46% of pharmacies provided drug information and none of the pharmacies provided smoking cessation services. In a study conducted by Hazel K Sinclair [16] revealed that trained community pharmacists, providing a counselling & record keeping support programme for their customers, may have a positive effects on smoking cessation. A systematic approach to promote smoking cessation is by the usage of 5A's and 5R'smethods.These methods can be structured as Asking about smoking to all suspected patients visiting the community pharmacy and Advising them to quit. The community pharmacist should assess the willingness to quit and if present assist in quitting along with making proper arrangement for the follow ups .The patients should be counselled in such a way to make aware of relevance of smoking cessation as far as their health is concerned by explaining about the risks of smoking and highlighting the rewards to their health if quit smoking. An ultra short lived decision never leads to quit smoking so the road blocks related to smoking cessation should be explained to the patients and motivate repeatedly during every visit. Community pharmacist should take the smoking cessation as a professional responsibility to the society and provide a smoke free atmosphere in the pharmacy. [17,18]

Adverse drug reaction (ADR) reporting, a professional responsibility of community pharmacists to ensure better treatment out come was not being carried out by any of the pharmacies studied All pharmacies selected OTC drugs based on medical representative's influence only. In a study conducted in Istanbul by Omurtag. G.etal [19] it was found that 41% of the drugs sold were over-the-counter. In our study the rates of non-prescribed drug sales were higher than those of prescribed drugs.

CONCLUSION

Community pharmacists being a wider team working in public health require renaissance to meet the changing needs of

modern community. Professional services like patient counselling, health screening services, drug information, adverse drug reaction monitoring in addition to dispensing drugs professionally and storing them in appropriate manner can implement pharmacist's identity in the society as a professional. Even though there are highly qualified and efficient pharmacists are available in our country they are seldom working in community pharmacy which may be due to poor salary package and unhealthy working conditions prevailing in this field. Revision of salary, improvement in working condition and proper training of pharmacists through continue education programme can slowly replace the non-technical staff.

None of the pharmacists in this study attended continue education programme which is the responsibility of individual pharmacists for systematic maintenance, development and broadening of knowledge, skills and attitudes, to ensure continuing competence as a professional, throughout their careers. Continue education programmes should be planned and implemented at the earliest to make pharmacists a competent professional like in developed countries as more and more drugs are being introduced annually and there exist some revolutionary changes in drug targeting, novel drug delivery systems as technology evolves.

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