

## JOURNAL OF CLINICAL AND DIAGNOSTIC RESEARCH

**How to cite this article:**

POUDEL A, KHANAL S, ALAM K, PALAIAN S. PERCEPTION OF NEPALESE COMMUNITY PHARMACISTS TOWARDS PATIENT COUNSELING AND CONTINUING PHARMACY EDUCATION PROGRAM: A MULTICENTRIC STUDY .Journal of Clinical and Diagnostic Research [serial online] 2009 April[cited: 2009 April 6]; 3:xx.

Available from

[http://www.jcdr.net/back\\_issues.asp?issn=0973-709x&year=2008&month=April &volume=3&issue=2&page=xx&id=381](http://www.jcdr.net/back_issues.asp?issn=0973-709x&year=2008&month=April &volume=3&issue=2&page=xx&id=381)

## ORIGINAL ARTICLE

# Perception Of Nepalese Community Pharmacists Towards Patient Counseling And Continuing Pharmacy Education Program: A Multicentric Study

POUDEL A\*, KHANAL S\*\*, ALAM KADIR\*\*\*, PALAIAN S\*\*\*\*

### ABSTRACT

**Objective:** To study the perception of community pharmacists towards patient counseling and continuing pharmacy education programs.

**Methods:** A semi structured questionnaire was developed by the researchers. The research was carried out in six major cities in Nepal, namely Kathmandu, Pokhara, Biratnagar, Birgunj, Nepalgunj and Bhairahawa. The filled questionnaires were analyzed as per the study objectives.

**Results:** Altogether, 60 community pharmacists were included. Among them, 88.33% (n=53) were male. More than 50 patients visit most of the community pharmacies [36.67% (n=22)] daily. Most of the dispensers [56.67% (n=34)] took 1-5 minutes for dispensing a prescription. In most of the pharmacies [56.67% (n=34)], there were 2-5 dispensers and the qualification of a majority of dispensers were orientation training. Most of them [56.67% (n=34)] believed that counseling was necessary as it was their own duty, but however, 48.33% (n=29) said that it was necessary to increase patient compliance. Our finding suggests that 83.33% (n=50) of retailers were facing some problems during patient counseling. All participants were interested in the continuing pharmacy education program.

**Conclusion:** On the whole, the community pharmacists had a positive response towards patient counseling. Our findings suggest the need for continuing pharmacy education programs in Nepal to strengthen the concept of patient counseling.

**Keywords:** Community pharmacy, Community pharmacist, Patient counseling, Continuing pharmacy education, Nepal

---

\* B. Pharm, Hospital and Clinical Pharmacist,  
\*\* B. Pharm, Hospital and Clinical Pharmacist  
\*\*\* M. Pharm, Lecturer, \*\*\*\* M. Pharm, Assistant  
Professor, Dept of Hospital and Clinical  
Pharmacy, Manipal College of Medical Sciences.  
**Corresponding Author**  
Arjun Poudel, B. Pharm  
Hospital and Clinical Pharmacist  
Drug Information and Pharmacovigilance Center  
Dept of Hospital and Clinical Pharmacy  
Manipal Teaching Hospital, Pokhara, (Nepal).  
E-mail: poudelarjaan@gmail.com  
Phone: +977 61 526420  
Mobile: +977 98460 33006

### Introduction

Across the world, every day, millions of people visit community pharmacies for their health care needs[1]. Pharmacists are placed at the first point of contact in the health care system due to their free accessibility and friendly approach. In contrary to this scenario, many general practitioners do not regard pharmacists as potential members of the health care team[1]. In recent times, much focus was laid on the new roles of the community pharmacists in developed countries like Australia, United States of America and the United Kingdom. The role

of the pharmacist, especially as a health adviser, is highly esteemed and acknowledged by general practitioners in these countries[1].

The need and potential for counseling the patients regarding their drug therapy has been an important part of the pharmacy practice and pharmaceutical care. It has been the responsibility of the pharmacist to counsel the patients before dispensing the medication[2]. Counseling not only enhances compliance, but also reduces complications due to non-compliance to treatment[3]. Pharmacists are trying to move away from a drug-focused approach to a patient oriented approach according to the patient's needs, with the aim of achieving better outcomes from drug therapies[4]. This requires close co-operation between pharmacists and other health care professionals, especially physicians, and requires knowledge and skills extending beyond the product knowledge about medicines[5].

Despite the beneficial role of community pharmacists, not much research focusing on their roles and responsibilities have been conducted in developing countries like Nepal. According to a study conducted in Nepal, self medication and non-doctor prescription were the common drug use problems there [6]. In the same scenario, people without academic qualifications in field of pharmacy were allowed to run pharmacies and dispense medicines in Nepal [7]. A study conducted in the capital city of Nepal demonstrated that unauthorized dispensing is clearly problematic, although the legislation in Nepal approves a medical prescription for the purchase of antibiotics[8]. Drug retailers do not have adequate understanding about the disease process in question, in order to justify their sale of those antibiotics. More exhaustive efforts to educate drug retailers on their role in dispensing, along with increased enforcement of existing regulations, must be followed in Nepal [8]. Therefore, there is a greater need to advocate and conduct

research concerning long term health promotion and public education through the profession of pharmacy [9]. In order to improve the professional roles of pharmacists in Nepal, there is a need for training the community pharmacists towards patient counseling. Evaluating the current perception of the community pharmacists can be useful to initiate appropriate interventions. Hence, the present study was undertaken with the following objectives.

### Objectives

The objectives of the study were

1. To study the demographic details of the community pharmacists
2. To study the sources of drug information used by the community pharmacists
3. To explore the community pharmacist's perceptions towards patient counseling and to identify the major barriers for effective counseling
4. To evaluate the community pharmacist's perception towards continuing pharmacy education programs.

### Material and Methods

#### Questionnaire

A semi-structured questionnaire was formulated by the researchers (Appendix-1) [Table/Fig 1] as per the study objectives.

#### Data Collection

A prospective study was conducted between 15th January 2008 to 15th March 2008 (two months) in six major cities of Nepal (Biratanagar from the eastern region, Birgunj and Kathmandu from the central region, Bhairahawa and Pokhara from the western region and Nepalgunj from the mid-western region of Nepal). 10 randomly selected community pharmacies from each city were included in the study. Community pharmacists from the randomly selected pharmacies were interviewed with the formulated questionnaire.

(Table/Fig 1)

**Appendix 1****Questionnaire to evaluate the perceptions of the community pharmacists towards patient counseling and continuing pharmacy education**

1. On an average how many people come to your pharmacy in a day?
 

<input type="checkbox"/> 10 to 20	<input type="checkbox"/> 20 to 25
<input type="checkbox"/> 35 to 50	<input type="checkbox"/> more than 50
2. On an average, how much time do you take to dispense a prescription?
 

<input type="checkbox"/> Less than 1 minute	<input type="checkbox"/> 1 to 5 minutes
<input type="checkbox"/> 5 to 10 minute	<input type="checkbox"/> more
3. Do you think a pharmacist is required in a pharmacy?
 

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------

 Why?
 

.....
4. What is the qualification of the owner of your pharmacy?
 

<input type="checkbox"/> D. Pharm	<input type="checkbox"/> B. Pharm
<input type="checkbox"/> Orientation	<input type="checkbox"/> Other Qualification
5. What is the total number of pharmacists in your pharmacy?
 

<input type="checkbox"/> 1	<input type="checkbox"/> 2-5
<input type="checkbox"/> 5- 10	<input type="checkbox"/> >10
6. What is the basic qualification of the employees of the pharmacy?
 

Number of pharmacists	Number of Pharmacists
<input type="checkbox"/> D. Pharm (.....)	<input type="checkbox"/> B. Pharm (.....)
<input type="checkbox"/> M. Pharm (.....)	<input type="checkbox"/> Others (.....)
7. What is the working hours of your pharmacy?
 

.....
8. Do you think you get professional respect from the public?
 

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------
9. What are the reference books available in your pharmacy?
 

<input type="checkbox"/> .....	<input type="checkbox"/> .....
<input type="checkbox"/> .....	<input type="checkbox"/> .....
10. Do you give advice to your patients regarding medicines?
 

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------
11. Do you think giving advice to the patients is important? Why?
 

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------

 If yes,
 

<input type="checkbox"/> To improve compliance	<input type="checkbox"/> Duty
<input type="checkbox"/> To have professional satisfaction	<input type="checkbox"/> To improve sales
<input type="checkbox"/> Strategy to overcome competition	<input type="checkbox"/> Other .....
12. What do you talk to the patients regarding medicines?
 

<input type="checkbox"/> Dose	<input type="checkbox"/> Duration
<input type="checkbox"/> Administration time	<input type="checkbox"/> Storage aspects
<input type="checkbox"/> Side effects	<input type="checkbox"/> Others
13. Are the patients interested in knowing about their medicines?
 

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------
14. What questions does the patient usually ask?
 

<input type="checkbox"/> Cost	<input type="checkbox"/> Administration time
<input type="checkbox"/> Dose	<input type="checkbox"/> Side effects
<input type="checkbox"/> Storage aspects	<input type="checkbox"/> Disease
<input type="checkbox"/> Duration	<input type="checkbox"/> Others
15. Are you interested in counseling the patients?
 

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------
16. What do you think are the problems in counseling the patients?
 

<input type="checkbox"/> Lack of time	<input type="checkbox"/> Lack of knowledge
<input type="checkbox"/> Lack of interest of the patients	<input type="checkbox"/> Others
17. How can you overcome these problems?
 

<input type="checkbox"/> By increasing the number of pharmacists
<input type="checkbox"/> By providing separate space for counseling
<input type="checkbox"/> By procuring adequate books
<input type="checkbox"/> By providing extra money for counseling
<input type="checkbox"/> By attending Continuing Education Programs
<input type="checkbox"/> Others .....
18. Do you think continuing education programs are helpful in improving your knowledge about medicines?
 

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------
19. Are you interested in attending continuing education programs?
 

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------
20. If you are interested, what areas are you interested to learn more?
 

<input type="checkbox"/> Common diseases	<input type="checkbox"/> Common drugs
<input type="checkbox"/> Life styles	<input type="checkbox"/> Others

**Data Analysis**

The filled questionnaires were analyzed as per the study objectives using Microsoft Excel version 2003. The SPSS version 9.0 was used to carry out the descriptive statistics.

**Results**

Altogether, 60 community pharmacists were included in this study. Among them, 88.33% (n=53) were males and 11.66% (n=7) were females.

**Number of patients visiting community pharmacies (n=60)**

Everyday, more than 50 patients visited 36.6% (n=22) of the community pharmacies, followed by 35-50 patients [26.6% (n=16)], 20-25 patients [20% (n=12)] and 10 -20 patients [16.6% (n=10)] to fill their prescriptions.

**Dispensing time in community pharmacies (n=60)**

More than half [56.6% (n=34)] of the dispensers took 1-5 minutes for dispensing a prescription, followed by 5-10 minutes [31.6% (n=19)]. Ten percentage (n=6) of them took more than 10 minutes, and 1% of them took less than 1 minute. In most of the pharmacies [56.67% (n=32)], there were 2-5 dispensers, followed by a single pharmacist in 33.33% (n=20) of pharmacies and only 13.33% (n=8) of pharmacies had more than 5 dispensers.

**Qualification of the owners of community pharmacies (n=60)**

The qualifications of the owners of the pharmacy were orientation training [83.33% (n=50)], followed by D. Pharm [8.33% (n=5)], B.Pharm [3.33% (n=2)] and other qualifications [5% (n=3)].

**Qualification of dispensers of community pharmacies (n=118)**

As like the qualification of owners of the pharmacies, the qualifications of a majority of dispensers were orientation training [61% (n=72)] followed by other qualifications [30% (n=35)]. Six percentage (n=7) of the dispensers were D. Pharm holders and only 3% (n=4) had a B. Pharm degree.

**Common sources of drug information available in the community pharmacies (n=108)**

The commonest sources of drug information were, the Current Index of Medical Specialties (CIMS), a commonly used drug index from the neighboring country India [52% (n=56)], followed by Indian Drug Review [(IDR) 8.33% (n=9)] and Monthly Index of Medical Specialties (MIMS) [6.48% (n=7)].

**The purpose of giving medication counseling (n=110)**

There are different feelings among the dispensers regarding the counseling. Nearly one third [31% (n=34)] of them considered counseling as their duty. The views expressed by them regarding the purpose of counseling are given in [Table/Fig 2].

(Table/Fig 2) Purpose of giving medication counseling (n=110)

Purpose of giving advice	Number	Percentage
To improve compliance	29	26.36
To improve sales	25	22.73
To have professional satisfaction	13	11.82
Strategy to overcome competition	5	4.55
Counseling is pharmacist duty	34	30.91
Other	4	3.64

Note: One community pharmacist might have provided more than one purpose for giving medication counseling

**Problem faced during patient counseling (n=77)**

Fifty four percent (n=41) of community pharmacists felt that lack of time was the major problem or barrier faced during patient counseling, followed by lack of knowledge 28% (n=21), and lack of patient interest 8% (n=6). Eight percentage (n=6) of them felt that they do not face any problems during patient counseling. Four percentage (n=3) had other problems.

**Strategies suggested by dispensers to overcome the barriers (n=90)**

The various strategies suggested by the dispenser to overcome the experienced barriers, are given in [Table/Fig 3].

(Table/Fig 3) Strategies suggested by dispensers to overcome the barriers (n=90)

Strategies	Number	Percentage
Increasing the number of pharmacists	34	37.78
Providing separate area for counseling	15	16.67
By procuring adequate books	12	13.33
By charging extra money for counseling	2	2.22
By attending CPE programs	24	26.67
Others	3	3.33

Note: One community pharmacist might have had suggested more than one strategy to overcome the barriers.

**Frequently asked questions by the patients (n=210)**

Patients asked several questions to the pharmacists while counseling. The details on frequently asked questions are given in [Table/Fig 4].

(Table/Fig 4) Frequently asked questions by the patients (n=210)

S. No	Frequently asked question by the patients	Number	Percentage
1	Cost	46	21.90
2	Administration time	30	14.29
3	Dose	41	19.52
4	Side effects	19	9.05
5	Storage aspects	10	4.76
6	Disease	21	10.00
7	Duration of Therapy	41	19.52
8	Others	2	0.95

Note: One patient might have asked more than one question regarding their medication.

**The dispenser’s interest in the CPE program (n=116)**

All the participants (community pharmacists or respondents) were interested in the Continuing pharmacy education (CPE) program and all of them felt that Continuing pharmacy education program would help in improving their knowledge. Furthermore, more number of dispensers were interested in the CPE program on common drugs [46% (n=53)], followed by the CPE program on diseases [35% (n=41)], the CPE program on lifestyle [13% (n=15)] and others [6% (n=7)].

**Discussion**

Surveys have found that community pharmacies are very often the first and only source of health care outside the home. In Nepal, the Department of Drug Administration (DDA), the national drug controlling authority under the Ministry of Health and Population in the year 1981, established a 45-hr course for drug retailers, which emphasized practical training as well as formal teaching on pharmacology, ethics, storage of drugs, and legal issues[10]. For running a community pharmacy, the DDA has allowed pharmacists, assistant pharmacists or persons who had taken a 45-hr course or training, as capable for running a pharmacy [11]. In our study, the qualifications of the majority [61% (n=72)] of dispensers and pharmacy owners were found to be orientation training. The reason

might be the less number of pharmacists and assistant pharmacists available in the country [12]. Several studies have suggested that private drug sellers generally have little formal education or professional training [13], [14].

Our study found that on an average 50 patients visit most of the community pharmacies per day. Most of the dispensers took 1-5 minutes for dispensing a prescription. The drug utilization study in Nepal has suggested that the average dispensing time in the public sector is 86.1 seconds [15].

The major source of drug information available at community pharmacies was the Current Index of Medical Specialties (CIMS) [52% (n=56)]. Use of the British National Formulary (BNF) and the American Hospital Formulary Service (AHFS), were also found in some of the pharmacies. Most of dispensers in this study feel that providing counseling to the patient is the duty of the pharmacist. Many professional organizations like the Society of Hospital Pharmacists Australia (SHPA) and The American Society of Health-System Pharmacists (ASHP), have also mentioned that patient counseling is the responsibility of pharmacists [16],[17] The concept of patient counseling by pharmacists is new in Nepal. However, the Manipal Teaching Hospital (MTH) in Western Nepal had established a counseling center during the beginning of March 2004. The preliminary evaluation of the services provided by the center concluded that the medication counseling center can play a definite role in enhancing the patient's understanding about medications and the disease pattern, which in turn may improve patient compliance [18]. Moreover, the newly drafted National Good Pharmacy Practice Guidelines also suggest that the pharmacist should provide counseling [19].

Lack of time was the major problem faced by the most of the dispensers, which was mainly due to the lack of manpower.

However, a study conducted by Mishra et al. found language to be the major barrier for better counseling [18]. As lack of time was the major problem faced by a majority of dispensers the solution suggested by them to overcome the barriers, was to increase the number of pharmacists. According to the dispensers, frequently asked questions by the patients were related to costs, doses and duration of the medication. The query related to cost was the most expected one, as the per capita income of the Nepalese population is very less. Similarly, the query related to dose and duration of the medication was also common, because it was always confusing when more than one drug was prescribed.

All participants were interested in the Continuing pharmacy education (CPE) program and felt that the Continuing pharmacy education program would help in improving their knowledge. One of the studies on the effect of a continuous community pharmacy practice also suggested that the program was beneficial for all students and participating pharmacists [20]. Community pharmacists participated in patient counseling more frequently than institutional pharmacists, while institutional pharmacists participated in drug monitoring more frequently than community pharmacists. Community pharmacists had more direct access to patients and so the counseling was effective [21].

## Conclusion

Our study found that community pharmacists in Nepal meet a larger number of patients and are interested in patient counseling. Their education level is low and thus, there is a need for CPE programs for them in order to upgrade their knowledge. They are at present, equipped with a limited number of drug information sources needed to provide patient counseling. There is a need for research in this area, involving more number of community pharmacists, so as to extrapolate our findings.

## Limitations

Though the study was successful in evaluating the perception of the Nepalese community pharmacists on patient counseling and CPE programs, it had a few limitations. The total numbers of pharmacists studied were low and hence, our findings may not reflect the perception of the entire community of pharmacists in Nepal.

## References

- [1]. Adepu R and Nagavi BG. General practitioners' perception about the extended roles of community pharmacists in the state of Karnataka: A study. *Indian J. Pharm. Sci.* 2006; 68: 36-40.
- [2]. Popovich NG. Ambulatory patient care. In: Gennaro AR editor Remington: The science and practice of pharmacy, Vol.2. Mack Publishing Company, Pennsylvania, 19th Ed, 1995; 1695-1719.
- [3]. Palaian S, Prabhu M, Shankar PR. Patient counseling by pharmacists: a focus on chronic illness. *Pak J Pharm Sci.* 2006; 19: 65-72.
- [4]. De Young M. Reflections on guidelines and theories for pharmacist-patient interactions. *J Pharm Teaching* 1996; 5:59-81.
- [5]. Kansanaho H, Pietila K and Airaksinen M. Can a long-term continuing education course in patient counseling promote a change in the practice of Finnish community pharmacists? *Int J Pharm Pract* 2003; 11:153-60.
- [6]. Shankar PR, Partha P and Shenoy N. Self-medication and non-doctor prescription practices in Pokhara valley, Western Nepal: a questionnaire-based study *BMC Fam Pract* 2002; 3: 1-7.
- [7]. Drug Act of Nepal. Available online on <http://www.dda.gov.np/drugact.php> 1978. (Accessed on May 19, 2008).
- [8]. Wachter DA, Joshi MP, Rimal B. Antibiotic dispensing by drug retailers in Kathmandu, Nepal. *Trop Med Int Health.* 1999; 4: 782-8.
- [9]. Hanan B, Sokar-todd B and Einarson TR. Community pharmacy practice research: a systematic review of the past 32 years. *Canadian Pharm. J.* 2003; 136: 26- 38.
- [10]. Kafle KK et al. Drug retailer training: experiences from Nepal. *Soc Sci Med.* 1992; 35: 1015-25.
- [11]. Department of Drug Administration 1979 (DDA). New pharmacy registration. Available on [http://www.dda.gov.np/pharmacy%20\\_regi](http://www.dda.gov.np/pharmacy%20_regi) stration/karyabidhipasal2063R.pdf (accessed on June 14, 2008).
- [12]. Nepal Pharmacy Council (NPC). Pharmacist registered with Nepal Pharmacy Council. *NPC News Letter* 2007; 2; 6-8.
- [13]. Ferguson AE. Commercial pharmaceutical medicine and medicalization a case study from El Salvador in *Cult. Med. Psychiat.* 1981; 5; 105-34.
- [14]. Wolffers I. Drug information and sales practices in some pharmacies of Colombo, Sri Lanka. *Soc Sci Med* 1987; 25: 319-21.
- [15]. Kafle KK. INRUD drug use indicators in Nepal: practice patterns in health posts in four districts. *INRUD news* 1992; 3: 15.
- [16]. Dooley M, Lyall H, Galbraith K et al (1996). SHPA Standards of practice for Clinical Pharmacy. In SHPA practice standards and definitions: 2-11
- [17]. ASHP guidelines on pharmacist-conducted patient education and counseling. *Am J Health-Sys Pharm* 1997; 54: 431-34
- [18]. Mishra P, Subish P, Upadhyay DK, Bista S, et al. Medication counseling center in a teaching hospital. *J Nepal Med Assoc* 2005; 44: 129-34.
- [19]. Good Pharmacy Practice Guidelines (GPP) (November 2005 draft). Developed by Nepal Pharmacy Council, Kathmandu, Nepal, Available online on [http://www.dda.gov.np/guidelines/national\\_gpp.pdf](http://www.dda.gov.np/guidelines/national_gpp.pdf) (Accessed on May 19, 2008).
- [20]. Thomas SG, Beck DE and Janer A. Effect of a continuous community pharmacy practice experience on student attitudes, motivation, and communication skills. *Am J Pharm Educ* 1997; 61: 125-31.
- [21]. Schommer JC and Cable GL. Current status of pharmaceutical care practice: strategies for education. *Am J Pharm Educ* 1996; 60: 36-42.