

## PERCEPTION OF PHARMACY PERSONNEL IN COMMUNITY PHARMACY ABOUT SELLING ANTIBIOTICS WITH OR WITHOUT PRESCRIPTION IN KATHMANDU VALLEY, NEPAL

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### ABSTRACT

The aim of this research was to explore the perception of pharmacy personnel in community pharmacy about sales of antibiotics with or without prescriptions. It focuses to explore on the pharmacy personnel perception of guiding principles for sale of antibiotics, what influences them to follow or not to follow guiding principles, pharmacy personnel's perception on patient expectation and behavior affecting dispensing of antibiotics and pharmacy personnel's perception of antibiotics resistance in Kathmandu valley. Data was collected through 25 in-depth interviews with 5 different groups of pharmacy personnel and 31 observations along with informal conversions in pharmacies in different areas of the Kathmandu Valley. Participants of the study perceived dispensing of drugs on request and need of patient,

diagnosing, prescribing and counseling as their role. Most of the participants in the study were aware of the rule of selling antibiotics in presence of prescription but were not found to follow the rule consistently. Almost all the participants in the study were found to sell antibiotics without prescription. Dispensing of antibiotics was found to be influenced by participant's perceived role, previous medication of patient, participant's assessment of patient's health, participant's knowledge and experiences of dispensing antibiotics to similar symptoms, relationship with customers, seeing pharmacy as a business and patient's expectations and behavior. Participants suggested counseling, providing education and

creating awareness in people, continuing education and providing trainings to pharmacy personnel, monitoring pharmacies, enforcing of rules as a solution for controlling antibiotic resistance. Drug dispensing is a complex process influenced by interrelated factors. Exploration of patient perspectives would add a new dynamic to the outcomes.

**KEYWORDS:** Pharmacy personnel, Community Pharmacy, Perception, Antibiotics, Dispensing.

## INTRODUCTION

Antibiotics perhaps are the most commonly used anti-infective agents. Community pharmacies not only provide drugs but also give advice and prescribe medicines.<sup>[1]</sup> It is reported that many developing countries, more than 80% of all drugs are purchased without prescription.<sup>[2]</sup>

In Nepal community pharmacies are frequently visited by many people who purchase medicine with or without prescriptions. Personnel with orientation training, pharmacist, pharmacy assistant are engaged in drug dispensing. Health assistant and community medical assistant are also working in private and public health sectors in Nepal dispense and treat minor ailments.<sup>[3]</sup>

Drug Act, 1978 (2035) clearly categorized as the drugs to be sold only in presence of prescription from the physicians, Antibiotics are to be dispensed only in presence of prescription of the physician but study suggest a large portion of antibiotics being dispensed without the prescription based on different condition and situations. The sale of antibiotics without prescription, incomplete dose of antibiotics, poly pharmacy are some of the causes of antibiotics resistance which are directly or indirectly associated with pharmacy personnel dispensing antibiotics. This is why we should have a fair idea about the perception of pharmacy personnel regarding antibiotics resistance.

The main objective of this study was to explore the perceptions of pharmacy personnel about selling antibiotics with or without prescription in Kathmandu Nepal. This study also aims at finding out pharmacy personnel's perceptions on antibiotic resistance in Kathmandu.

The problem of selling antibiotics without prescription is found across the globe. Nepal is no different to it. The practice of selling antibiotics without prescription have been documented through quantitative studies in Nepal.<sup>[4]</sup> It is not explored why pharmacy personnel are selling

antibiotics without prescription. I believe understanding their perception belief and experiences or the environment where it is practiced is very necessary to know why they sell antibiotics with or without prescription. This research aims at investigating the dispensing process of antibiotics by pharmacy personnel.

## **MATEERIALS AND METHODS**

This study was conducted in Kathmandu valley, Kathmandu, Bhaktapur and Lalitpur. Community pharmacies were used for study as those are the first point of contact point for people in the community.

This study focuses to explore the perceptions, experiences and practices of pharmacy personnel in relation to antibiotics dispensing, influencing factors to antibiotic dispensing and perceptions on antibiotic resistance. For this qualitative and explorative methods were the most appropriate.

Five different groups of antibiotic dispensers were used as study population. They are pharmacists, pharmacy assistants, trained professionals, (Community medical assistant) CMAs and (Health Assistant) HAs.

In this study, private pharmacies in the community will be used for study. Clustered sampling was done based on concentration of pharmacy at a particular locations. The selection of individual pharmacies was done by purposive or judgmental sampling, Data was collected through observational and informal observation by preparing checklist and in-depth interviews.

Preliminary analysis of data started from the field work. Final analysis and writing process was carried out after proper coding and documentation. The description and analysis were documented in findings chapter.

The study has been carried out in accordance ethical guidelines. There are no any specific benefits to respondents for the participants of the study.

## **RESULTS AND DISCUSSION**

### **Respondents Demographic Distribution**

Observation was done in 31 pharmacies. 27 male and 4 female were taken for observations. Interviews were done in 25 pharmacies selecting one participant from one pharmacy. Out of

25 participants for interviews 17 participants were male and 8 were female. Similarly out of 25 respondents for interview 5 were Pharmacist, 14 were Pharmacy Assistant, 1 were professionals, 2 were CMA's and 3 were Health Assistant. Similarly, out of 31 observations 5 were Pharmacist, 24 were Pharmacy Assistant, 1 trained professionals and 1 Health Assistant.

### **Pharmacy personnel's perception of their role**

22 out of 25 said working in community pharmacy is giving service to patients. 22 respondents believed antibiotics cannot be given just on request and patient health need should be assessed. Most of the respondents engaged themselves in diagnosing the problem or checking up the patient. They said they practice diagnosis if patient do not want to go to doctor. 12 of the respondents said they "write" drugs for patients when requested by patients. Most of the participants said they give advice or do counseling to patients. They felt it is their responsibility and felt they are capable for the job.

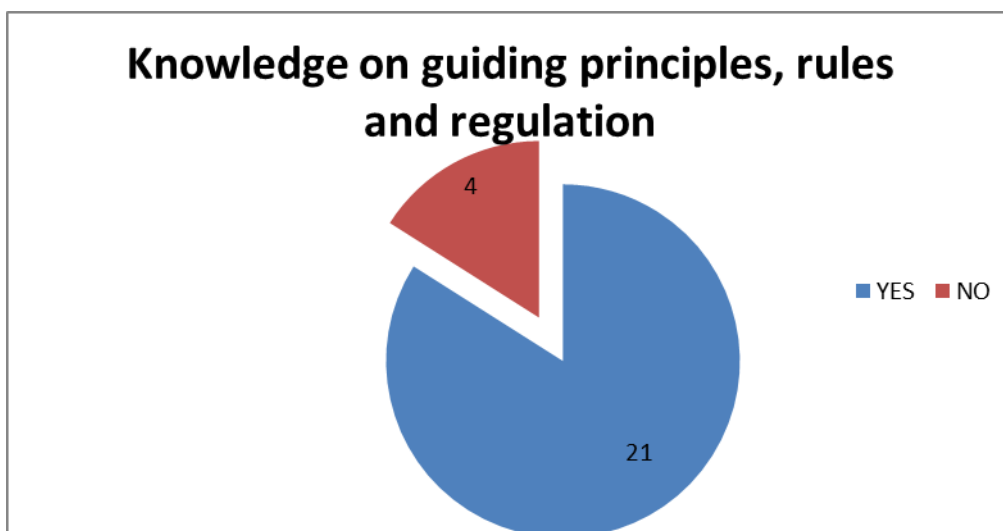
Participants perceived people lack sufficient knowledge and awareness on medicine use and felt that they can contribute to increase awareness for appropriate use of medicines.

16 out of 25 were running their own pharmacy and 9 were on payroll. Their perceived roles have influenced sale of antibiotics which are presented under the finding antibiotic dispensing process, The study showed that Pharmacist group of people are more aware about the sale of antibiotics and perceived not to be sold without prescription followed by Pharmacy Assistant. The remaining group perceived pharmacy as a service followed by method of self employment and responsibility to fulfill the needs of the customers.

### **Knowledge on guiding principles, rules and regulation**

22 of the 25 respondents were aware of the rules on selling antibiotics only in presence of prescription while 3 respondents were unaware of any rules and regulations. Those 22 participants said antibiotics should only be sold on doctor's prescription or doctor's suggestions referring to Nepal Drug Act, 1978.

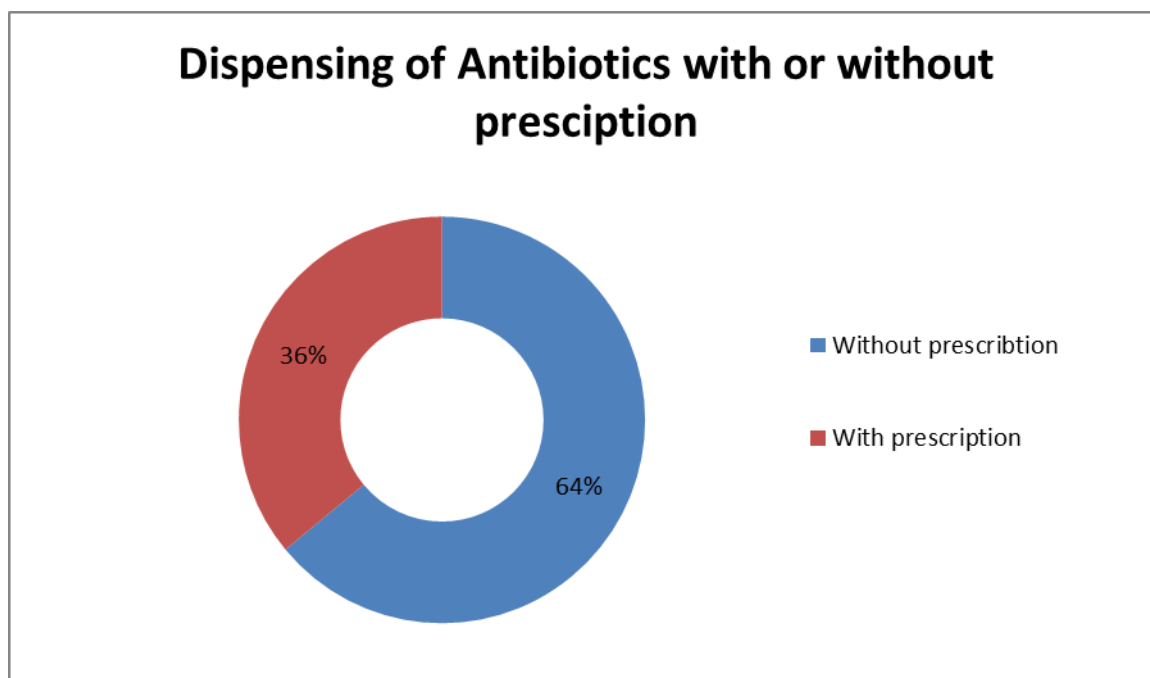
The finding highlighted irrespective of higher education 1 respondents from Pharmacist was not aware about the guiding principles. Trained professional with a decade long experiences also shared same thoughts. The finding reflected that the new generation of people engaged into the field of practice was more aware about the guiding principles rather than people who were engaged in this field since a long time.



**Fig 1: Knowledge on guiding principles, rules and regulation.**

### **Antibiotic dispensing process**

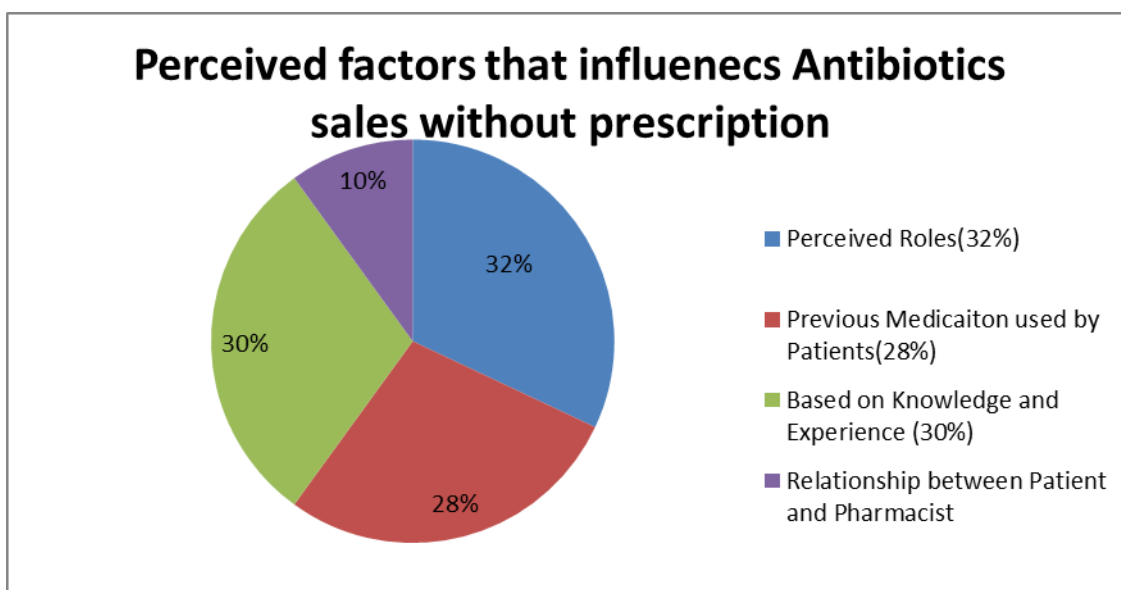
All participants believed that practice of sale of antibiotics in Kathmandu is with and without prescription. Almost all participants said they give antibiotics without prescription in a given condition. All the respondents from Professional group having good years of experiences were dispensing antibiotics more without prescription as compared to other group of respondents. As this group of people are more confident and comfortable to dispense antibiotics without prescription based on their knowledge and experience.



**Fig 2: Dispensing of Antibiotics with or without prescription.**

### Perceived factors that influence sales of antibiotics without prescription

Different factors were found to affect sale of antibiotics without prescription. These factors are their perceived role, previous drug use from patients, knowledge and experiences of pharmacy personnel, relationship between pharmacy personnel and customers. Participants perceived giving antibiotics upon request and need of patient, diagnosing and prescribing of drugs and counseling as their role. Counseling and advice was perceived by most of the respondents as their responsibility.



**Fig 3: Perceived factors that influences Antibiotics sales without prescription.**

### Pharmacy as a business

Many expressed dilemma between his perceived professional ethics and business ethics. Participants mostly felt dilemma between business and service. All participants said it is their business because they have invested their money in it. They said antibiotics are sold to earn money. Many of the participants (96%) felt compulsion at giving antibiotics without prescription because pharmacy is their business.

### Participant's perceptions on patient expectations and behavior of buying antibiotics

Participants in the study shared their opinion and experiences on patient expectations and drug buying behavior. 18 out of 25 respondents said patients want to take antibiotic should anything happen to them. They said people have perception that antibiotic will cure any disease. 22 out of 25 said people have perception of recovering fast with antibiotics and want to use antibiotics in any case.

### Perception of Antibiotic resistance

22 out of 25 respondents believed antibiotic resistance is on the rise while 3 out of 25 respondents were not aware of antibiotic resistance. Respondents from Pharmacist and Pharmacy Assistant showed their acquaintance with the concept of antibiotic resistance. None of trained professionals have cleared idea about antibiotics resistance. 3 out of 21 respondents were not having sound knowledge about antibiotic resistance.

### DISCUSSION

Participants in the study perceived giving antibiotics on request and need of patients, diagnosing, prescribing and advising patients as their role. Dispensing of drugs prescribed by doctors to patients and giving advice on appropriate drug use to patients has been recognized as pharmacy personnel's fundamental role for a long time.<sup>[5]</sup>

The study showed pharmacy personnel's direct involvement in patient health care, not only in drug dispensing. The concept of changes in roles from emphasis on drug products and preparations towards more disease and patient oriented approach has been discussed.<sup>[6]</sup> It has been argued that pharmacy personnel can take the responsibility of prescribing.<sup>[5]</sup> Different factors can influence changing the roles of pharmacists.

Most of the respondents were aware of the rules for selling antibiotics in presence of prescription but the practical application of rules has not been consistent. Participants believed sale of antibiotics without prescription is common and different factors have affected them. Nepal Drug Act, 1978 clearly says the drugs categorized as to be sold only in presence of prescription should only be sold in presence of prescription from doctors. Findings of this study showed that pharmacy personnel are working beyond the legal mandate. The study done in New Zealand showed that pharmacist would sell antibiotics without prescription if the practice is common.<sup>[7]</sup> Health assistants and CMAs can treat patients with minor illnesses and prescribe few selected medicines<sup>[4]</sup> in health posts and sub health posts. As informed by study participants, amoxicillin, tetracycline and cotrimoxazole (combination of sulphamethoxazole and trimethoprim) are the antibiotics supplied by government in a sub health post. However if a CMA wanted to run a pharmacy, s/he cannot prescribe the antibiotics and dispense antibiotics according to Nepal Drug Act, 1978.

Participants perceived patients past medication, pharmacy personnel's knowledge and experiences, pharmacy person's relationship with customers. Different studies showed that selling antibiotics without prescription have been common practice around the world.<sup>[1]</sup>

The number of pharmacies has been increased dramatically over the two decades in Nepal. Findings of the study showed that all participants in the study said pharmacy is their business. Pharmacy personnel are selling antibiotics without prescription because of sales and to garner profit. Chappell and Barnes<sup>[8]</sup> explained professional ethics and business ethics of pharmacy and said pharmacy is one of the few occupations which has a unique combination of professional and commercial elements. Study shows there is dilemma between business and service among respondents. Pharmacy was viewed by all participants as business and expected consequences of loss if antibiotic is not given on request.

Participants also perceived patient's expectations and behavior affecting antibiotic sale and antibiotic resistance. Participants viewed antibiotic resistance in Kathmandu a big rising problem, gave reasons for resistance and suggested possible solutions for sale of antibiotics in presence of prescription and for antibiotic resistance. Participants expressed their fear of not having any antibiotics to treat illnesses in the near future. WHO in its report says we are entering to a post antibiotic era where a common illness can kill patients. A study done in a private hospital of Kathmandu showed high prevalence of multidrug resistance (MDR) in bacterial pathogens. Participants suggested some solutions for controlling antibiotic resistance and to increase the use of antibiotics in presence of prescription.

Respondents also said that it was their responsibilities to ensure safe efficacious and rational use of antibiotics. Following ideas were identifies during the process.

- o Proper counseling
- o Selling antibiotics only in presence of prescription
- o Providing education about drugs in school and colleges
- o Creating awareness among people
- o Training for pharmacy personnel
- o Monitoring of pharmacies
- o Effective implementation of rules and regulations

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## CONCLUSION AND RECOMMENDATION

This study aimed at exploring the perceptions of pharmacy personnel in community pharmacy about selling antibiotics with or without prescription. The study fulfills the objectives of the study. The study has been able to explore the pharmacy personnel's perceptions on rules. The study has also explored the influencing factors that affected the following of rules. It is able to study the pharmacy personnel's perceptions of patient, expectations and behavior affecting antibiotic dispensing. Finally, this study also explored pharmacy personnel's perception of antibiotic resistance in Kathmandu.

This study only focused on perceptions of pharmacy personnel about selling antibiotics. It did not include patient as participants. Study on prescribing behavior of doctors is another area of research. Pharmaceutical companies have always been an integral part of health system. This is another area of further research.

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