

Original Article

COMMUNITY PHARMACY PRACTICE DURING COVID - 19 PANDEMIC IN POKHARA METROPOLITAN CITY, NEPAL

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DOI: <https://doi.org/10.3126/jmmihs.v7i1.43148>

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ABSTRACT

**Background:** Pharmacist being a member of health care team served as a front-liner to provide health care service in the community as it is the first place visited by most of the people to purchase medicine and receive treatment or advice for minor illness.

**Objectives:** The objectives of this study were to assess the community pharmacy and their practitioners experience during Covid-19 pandemic including barriers to activities, preventive measures adopted and service offered by them in Pokhara metropolitan city.

**Method:** A cross-sectional descriptive study was design using purposive sampling technique and data from 115 community pharmacies inside Pokhara metropolitan city (1-33 wards) were collected using both close-ended and open-ended questionnaires.

**Results:** Majority respondents are young having experience 2-5 years. Assistant pharmacists with Diploma in pharmacy degree were 44 % and more than half of respondents were both owner and pharmacist themselves. Major barriers during Covid-19 pandemics were: shortage of personal protective equipments, panic of the patients, and shortage of products. Only 53% followed preventive measures related to Covid-19 pandemics. This was dangerous and risk factor for infection transmission. Due to the fear of pandemic, most pharmacies are providing limited pharmaceutical service. The patient suspected with Covid -19 was referred to hospital and some patients were just given medicine as per their symptoms with the fear of getting infection.

**Conclusion:** Community pharmacists were not following the preventive measures sufficiently which may cause high chance of community transmission of Covid-19 in Pokhara metropolitan city.

**Keywords:** COVID-19, Pandemics, Community pharmacy, pharmacy practitioners

## INTRODUCTION

Corona virus which was initially known as 2019-nCoV and then it was called severe acute respiratory syndrome corona virus (SARS-COV-2) and later named COVID-19, has been declared by WHO as a global pandemic on 11th march 2020 as it spread rapidly all over the world<sup>1,2,3</sup>.

Community pharmacies and the pharmacist are facing lots of challenges to minimize infection with proper patient care, managing supply chains, preventing stockpiling; provide essential drugs and patient counselling<sup>4,5</sup>. The pandemic period brought lots of obstacles for the world, it was a stressing and challenging period but it has recognized the pharmacist profession as frontline and essential and their important role to provide competent pharmaceutical care and act as a health educator to the general public<sup>4</sup>.

According to Drug Act 2035, section 10 of government of Nepal, , any person who sells and distributes a drug shall register his/ her name and shop or firm name in DDA and obtain a certificate as specified in drug registration regulation 2038, before selling and distributions of drugs. According to drug registration regulation 2038, rule 6, if a person intends to obtain a certificate after having his/her name and shop register pursuant to section 10 of the drug act, such person shall make an application to the department in the format as referred to in schedule-8<sup>6</sup>. In Nepal, community pharmacy is the first place which is visited by most of the people to purchase medicine with or without prescription and receive treatment or advice for their minor illness<sup>7</sup>. COVID-19 outbreak brought different challenges in the community pharmacy practice and the due to social distancing, lockdowns, reduction in manpower and even working hours, the method of providing health care was also changed <sup>6</sup>. The Nepal pharmacy council (NPC), International pharmaceutical federation (FIP) and World health organization (WHO) provided guidance for pharmacist to work in such pandemic. Such

guidelines can help the community pharmacy to reduce the risk to infection and play as a front liner role to provide pharmaceutical care.<sup>2,7</sup>

Community pharmacy and pharmacist have an essential role like caregiver, counsellor and health educator in the community (about their health, disease, medicines and personal hygiene) and provide symptomatic treatment.<sup>3</sup> A strong evidence has been there that pharmacist are the key members of health care team and provide a wide range of health care service in community pharmacy but yet their skill is often not recognized and underutilized. The pandemic period provided recognition to community pharmacy and pharmacist as essential and front-liners despite of lots of challenges and obstacles<sup>4,7</sup>.

When country was placed lockdown, they remained open 7 days a week without any holidays and provided health care service to public in the community. They were continuously working hard to provide necessary medicines, masks and sanitizer despite so much of fear amongst the people<sup>7</sup>. To fight with such pandemic good knowledge, awareness and preparedness is required.

## **MATERIALS AND METHOD**

A Cross-sectional Descriptive study was designed. The data collection sites were community pharmacies in metropolitan city of Pokhara (1- 33 wards). We used closed ended and open-ended Questionnaires for data collection. We follow the list of registered pharmacy outlets per ward wise obtained from Nepal chemists and druggist association (NCDA), Gandaki branch. The total sample size was 115.

Ethical approval: Approved from IRC of Manmohan Memorial Institute of Health Sciences.

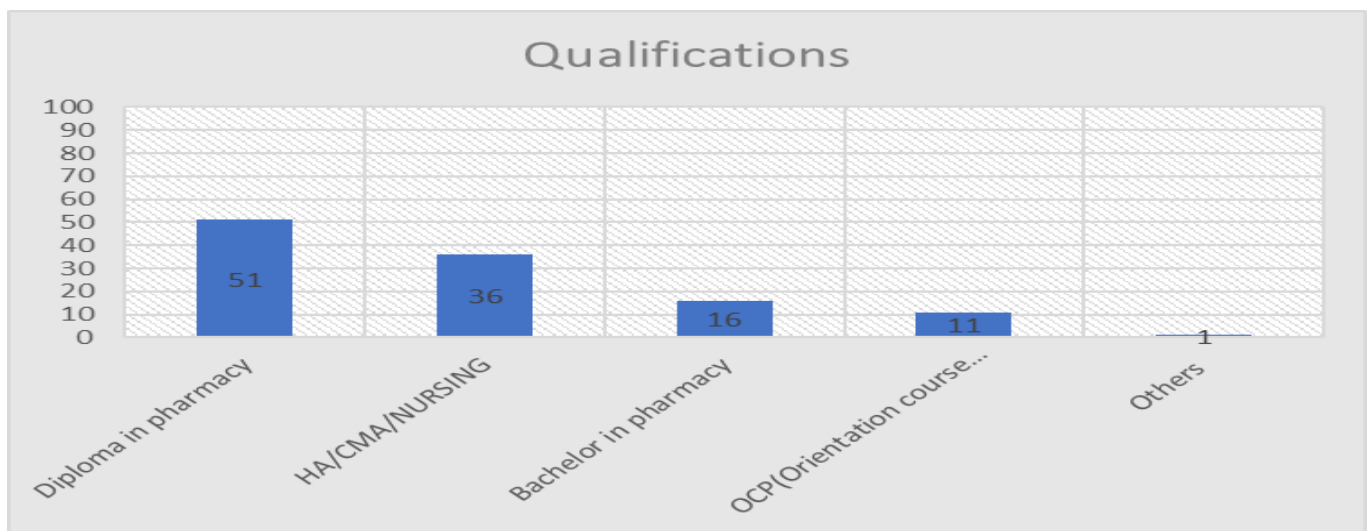
Informed Consent: Written informed consent was obtained from all pharmacies before the data collection.

Data Analysis: Data analysis was done using SPSS version 16; a statistical software. All Yes/No questions were coded as 1 and 0, while other multivariate was coded as per their

importance in practice. Sum, mean, and frequency of different categories were computed and results were analysed by using bar diagrams and pie charts through Ms Excel.

### RESULTS AND DISCUSSION

Out of 115 community pharmacies, 77 (67%) were operated by mail pharmacist, 64(55.70%) were owner as well as pharmacist, 51 (44.30 %) persons were holding Diploma pharmacy and registered as Pharmacy Assistant in Nepal pharmacy Council. A previous study conducted in Kathmandu among 81 community pharmacies showed similar result, majority of practitioners were male (n=52, 64.20%) and most had qualifications D Pharmacy (45.70%)<sup>3</sup>. Another previous study conducted found that most pharmacy is operated by professional person who conducted 45 hours to 3-month training.<sup>8</sup> In India, Sri Lanka and Vietnam pharmacists even rent their licence for community pharmacy owner<sup>9</sup>. Regarding the barrier to activities in the pharmacy during Covid-19, the result of my study shows that the main barrier faced was shortage of personal protective equipment's (PPE, Like mask, gloves, sanitizer in the pharmacy) 96(83.5%), Patient's pandemic related panic 82 (71.3%) and shortage of products from pharmaceutical wholesalers 80 (69.6%). The previous study done in 8 districts of province-two shows that they also faced same problem shortage of PPE (they did not even have mask and gloves) for first few months, so they had to provide medicine through windows listening to symptoms. Both practitioners and people had fear of pandemics about transmission of infection<sup>10</sup>.



**Fig-1: Qualification of dispenser at a community pharmacy**

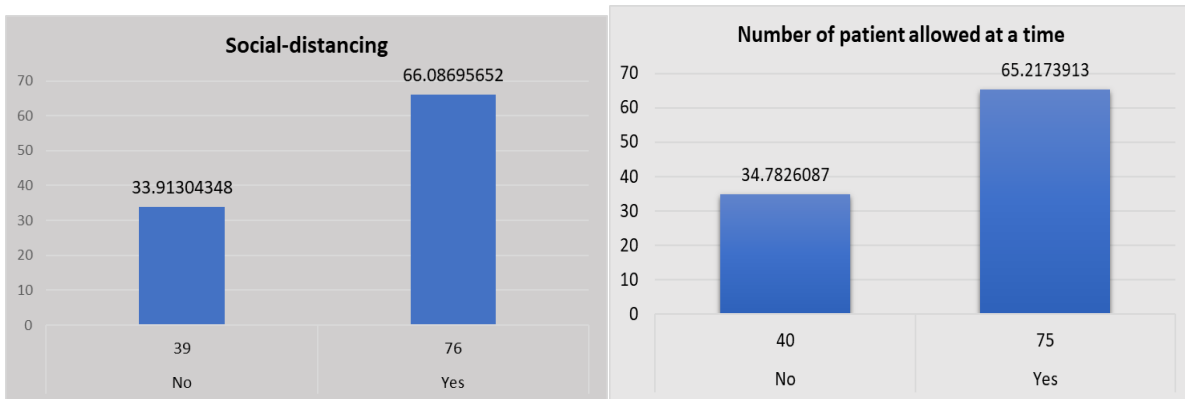


**Fig No-2: Medicine item available**

**Fig No-3: Average patient per day**

Similarly, the study done in Zambia among 300 community pharmacists they also had faced shortage of PPE 85% and only 60% of pharmacists were prepared to participate in frontline fight against virus<sup>11</sup>.

Furthermore, the previous study out of 264 pharmacies in Kosovo community pharmacies, the main barrier was price increase by pharmaceutical wholesalers (208,78.8%), patients pandemic related panic 202(76.5%) and unnecessary excessive buying of products 190 (72%)<sup>2</sup>.

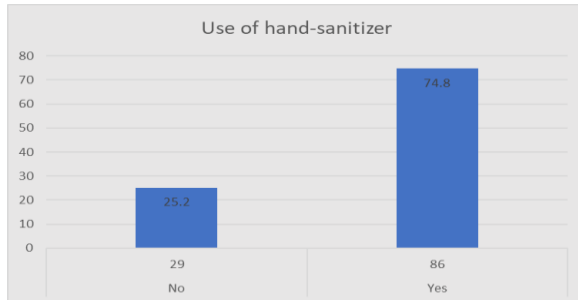


**Fig No-4: Social distancing**

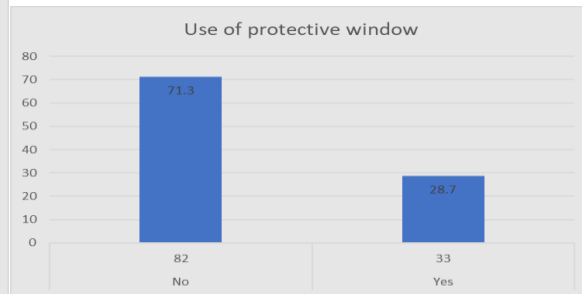
**Fig No-5: Number of patients allowed at a time**

Social distancing two meters was maintained only in 76(66 %) pharmacies and 75(65.22%) pharmacies allowed only one patient in the pharmacy at a time but rest 40(34.78%) pharmacy

allowed a large number of patients in the pharmacy at a time creating crowded and risk of infection transmission. Among the 115 pharmacies, 86(74.78%) pharmacies instructed their patients to enter the pharmacy strictly after hand sanitizing and even kept hand-sanitizer for the patient at the door of pharmacy premises and rest 29 (25.21%) pharmacies did not instruct their patients to use hand sanitizer before entering into the pharmacy.



**Fig No-6: Use of hand sanitizer**



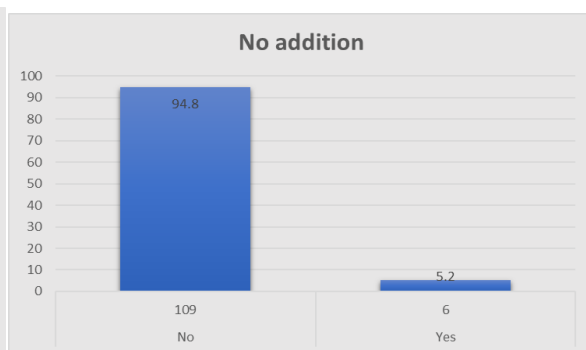
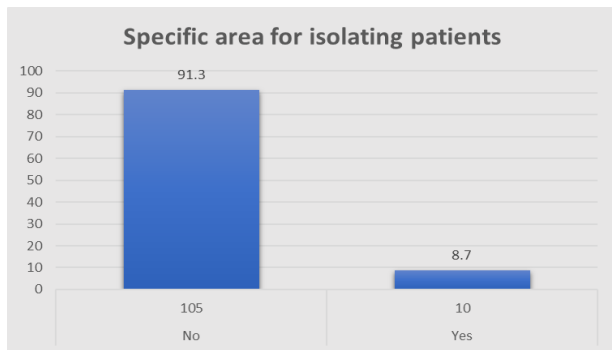
**Fig No-7: Use of protective window**

Among the 115 pharmacies, 86(74.78%) pharmacies instructed their patients to enter the pharmacy strictly after hand sanitizing and even kept hand-sanitizer for the patient at the door of pharmacy premises and rest 29(25.21%) pharmacies did not instruct their patients to use hand sanitizer before entering into the pharmacy. Only 10(8.69%) pharmacies have specific area for isolating patients suspected with Covid-19 and rest 105(91.3%) pharmacies had no such area and they treated suspected patients without isolating them in the period of pandemics.

Regarding the preventive measures being applied by community pharmacies during Covid-19 outbreak; this study shows that only 70 (61%) out of 115 pharmacies followed preventive measures related to Covid-19 pandemics. This indicates preventive measures are not followed sufficiently by all the pharmacies. Only 10 pharmacies had specific area for isolating patient suspected to Covid-19, some pharmacies used personal protective equipment but could not maintain 2-meter distance so as to treat the patient and provide pharmaceutical service. Only 33 pharmacies had protective window placed at the OTC counter.

The previous study among 393 community pharmacies of Pakistan shows that only 57.3% (225) followed good practice like wearing face mask (91.6%) and washing hands (90%). Similar to our study, this study shows that pharmacists having high qualifications had better

attitude towards Covid-19 than other educational level<sup>7</sup>. Similar study done among 264 pharmacies in Kosovo community showed that most pharmacist followed preventive measures like using protective gloves (97%, 257), using hand disinfectants (96.2%, 254), wearing surgical mask (81.1%, 214)



**Fig No-8: Isolating area for Covid-19 patients**

**Fig No-9: No any modification or addition in infrastructures**

Preventive measures were followed more by pharmacists with more experience and who are both owners and pharmacists of the community pharmacie<sup>2</sup> Among the 115 pharmacies,74(64%) pharmacies provided adequate information and counselling to the patients and rest 41(36%) pharmacies only dispensed medicines to the patients with the fear of getting infected in the period of pandemic. The previous study in Nepal of 8 districts in province 2 shows that for few months they only provided medicine through window by listening to symptoms and most cases were referred to hospitals<sup>10</sup>. Among 115 community pharmacy, top 5 medications that were frequently dispensed by community pharmacist during Covid-19 outbreak is phenylephrine + acetaminophen (69.60%), Paracetamol (68.70%), Vitamins B, C,D,E (59.10%), Azithromycin (57.40%) and Pantoprazole (47.80%).

Out of 115 community pharmacies, categorizing Covid-19 focus medicine zinc 28(24.30%), Vitamin C 21(18.26%), Vitamin D 16(13.90%) and calcium 14 (12.20%) were dispensed.

This study showed that mostly Zinc and vitamin C was frequently dispensed as supplement. The study done in Lebanon also showed similar result Vitamin C (more than 90%), Zinc

(70%), Multivitamins (50%) and Vitamin D (less than 20%) are mostly dispensed by community pharmacists as a supplement to boost the immune system in Covid pandemic<sup>13</sup>.

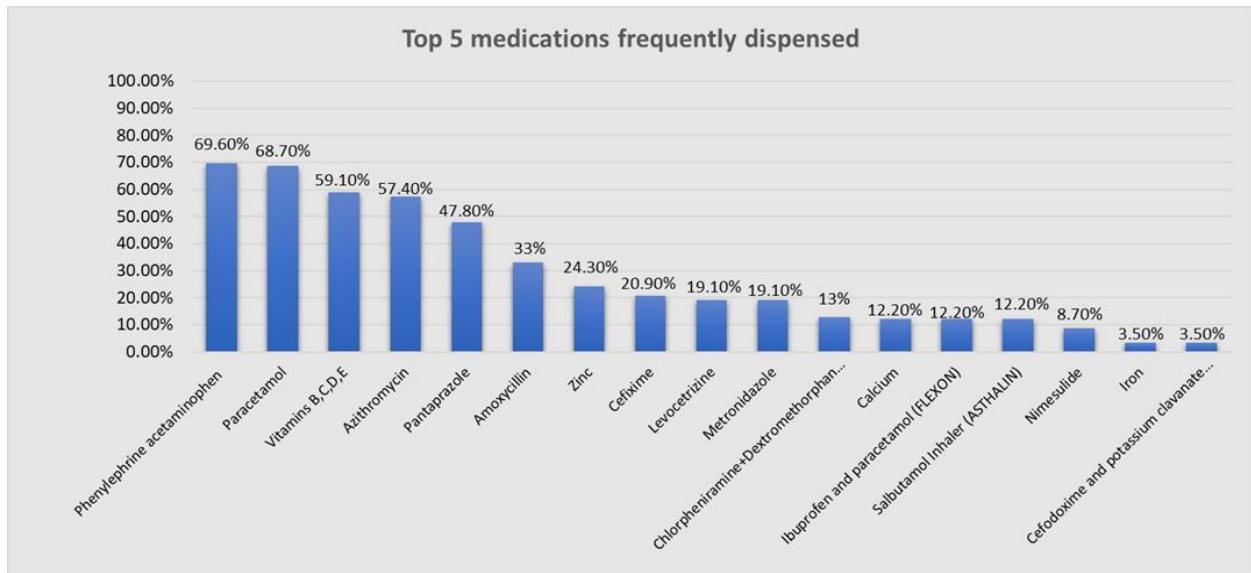


Fig-10: Top 5 medicines dispensed during the survey period

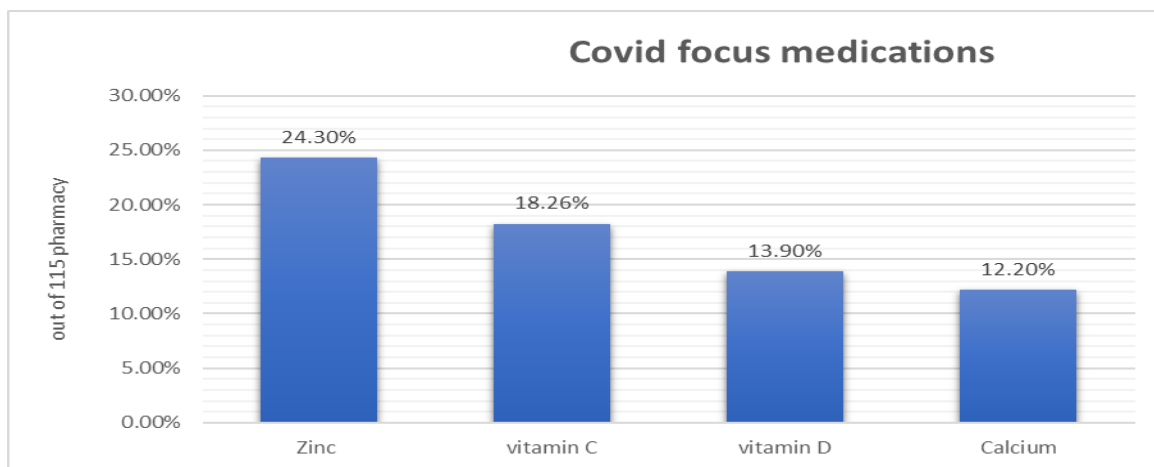


Fig-10: Covid-19 focused medicines dispensed during the survey period

## CONCLUSION

Community pharmacies were suffering not only from the shortage of essential medicines but also from the PPE during Covid-19 pandemic in Pokhara Municipality. Lack of protective measures and social distancing pose the threat of community transmission of infection.



**Limitation of study:**

This study was carried out with small sample size and limited to Pokhara metropolitan city (1-33 wards). So it cannot be generalized for whole country.

**Conflict of interest:** Authors have no any conflict of interest.

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