

## Prithvi Journal of Research and Innovation

[A Peer-Reviewed, Open Access Multidisciplinary Bilingual Journal; Indexed in NepJOL]

ISSN 2705-4888 [Print]; ISSN 2705-4896 [Online]; JPPS Star-Rated Journal

Volume 3; 15 December 2021; pp. 52-60

eJournal Site: <http://ejournals.pncampus.edu.np/ejournals/pjri/>

----- ORIGINAL RESEARCH ARTICLE -----

# Self-Medication Practices in Pokhara: A Study of Knowledge and Purpose among Non-Medical Students

**Chudamani Subedi**

Department of Statistics, Prithvi Narayan Campus, Pokhara

### Article History:

Submitted 01 October 2021

Reviewed 8 December 2021

Accepted 13 December 2021

### Corresponding Author:

Chudamani Subedi

Email: [cmsubedi01@gmail.com](mailto:cmsubedi01@gmail.com)

### Article DOI:

<https://doi.org/10.3126/pjri.v3i1.41632>

### Copyright Information:

Copyright 2021 © Authors of this journal; With permission of the authors, the copyright is transferred to the publisher for the first print and online edition only. This work is licensed under a [Creative Commons Attribution-NonCommercial 4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/).



### Publisher:

Centre for Research and Innovation

Prithvi Narayan Campus

Tribhuvan University

Pokhara, Nepal

[Accredited by UGC, Nepal]

Tel.: +977-61-576837

Email: [research@pncampus.edu.np](mailto:research@pncampus.edu.np)

URL: [www.pncampus.edu.np](http://www.pncampus.edu.np)

### ABSTRACT

This study has tried to assess the self-medication practice among non-medical students. For this purpose, data were collected from 206 Bachelor's and Master's level students by using self-administered questionnaire at Prithvi Narayan Campus, Pokhara. Quick relief from pain is one of the reasons for self-medication, followed by previous experiences of illness, pharmacist's advice, ease and convenience and time saving. The majority of students has been practiced self-medication to treat headache (62.9%), fever (32.7%), gastric acidity (23.9%), cough (27.3%), common cold (34%), dental pain (18.5%) and dandruff (24.4%). Almost two fifth of the respondents (37.37%) had knowledge regarding the composition of drugs and minority (8.74%) that had knowledge about dose, content, therapy duration and reaction of the drug. In addition, the majority of the respondents practiced Antipyretic (38.6%) followed by analgesics (33.4%), general antibiotics (17.7%) and anti-ulcerants (14.1%) without proper consultation with professionals. The findings of the study showed that non-medical students had self-medication practices, depending on their age, gender and academic level. Due to a high level of practice on self-medication, the study recommended that the concerned authority should formulate a set of

rules and implement to prevent such practices in the university, providing adequate facilities for healthcare medical treatment.

**KEYWORDS:** Knowledge, practice, prescription, self-medication, non-medical students

### INTRODUCTION

Self-medication is "the voluntary selection and use of non-prescription drugs to address self-identified diseases or symptoms" (Gutema et al., 2011). Many people use medicine without consulting a doctor. Using medicine without understanding its usage

can lead to community abuse and/or noncompliance with a prescription regimen, which can result in significant adverse drug reactions and a decrease in the quality of care (Atsbeha & Suleyman, 2008).

According to several studies, in poor countries, the usage of self-medication ranged from 12.7 percent to 95 percent (Abshussain et al., 2005). In the case of Nepal, it is 59 percent, 51 percent in Pakistan and 81.3 percent in the youths and 78.5 percent in the old people in Bangladesh (Abshussain et al., 2005). Past studies have found that self-medication was prevalent among medical students in Bangladesh at 65.2 percent, 88.18 percent in Karnataka, India and 76 percent in Karachi (Afolabi, 2008). Relatives, friends, and pharmacists are the main sources of self-medication as they not only supply medications but they also have knowledge on how to use them (Shehnaz et al., 2014).

The self-medication practice is more at risk as a result of media exposure and pharmaceutical advertisements (Almasdy et al., 2011). There are reasons such as costly consultations, no access to health care facilities, no confidence in physicians and lack of enforcement of drug regulations are all linked to these practices.

The difficulty in accessing health care services, the failure of the health system, dissatisfaction with care services, restrictions, the level of life and social influence are all mentioned as reasons for self-medication (Heisler et al., 2004). Other factors include medication sales conditions and health insurance coverage. The self-medication behavior varies by demography. There are elements such as gender, age, education, occupation and marital status that have an impact on self-medication practices.

The previous research has found a substantial link between drug usage and gender. Women have a greater tendency to take non-prescribed medications (Soares et al., 2012). However, Alghanim (2011) reported that women are less interested in self-medication than men whereas other research shows no gender differences (Foroutan & Foroutan, 2014).

According to several studies, having insurance and self-medicating go hand in hand. Uninsured persons are more likely to treat their illnesses on their own (Mainous et al., 2005). Foroutan and Foroutan (2014), on the other hand, discover no link between self-medication and the kind of health insurance. The workers are less likely to use opioids without a prescription (Lwan et al., 2013). Foroutan and Foroutan (2014) also found no link between self-medication and profession. According to Afolabi (2008), 52.2 percent of respondents who use self-medication are married. Lwan et al. (2013) found that single people take more over-the-counter medications than married people. Furthermore, no link was observed between marital status and self-medication (Foroutan & Foroutan, 2014). It has been noted that the size of a family influences self-medication behavior. Hassali et al. (2011) discovered a variation in self-medication behavior based on family size; for instance, large families have more self-medication practices because of their high expense of medical consultations.

Self-medication appears to be linked to socioeconomic status. Barsky (1988) found that low-income households cure their own affections, but wealthier families prefer to see a doctor. Self-medication is more prevalent in lower-income families (Awad et al., 2005). On the other hand, they also found no link between self-medication and income and these characteristics are linked to a need for immediate alleviation as well as health condition, sickness severity, emergency, and attitudes and knowledge (Bertoldi et al., 2014).

People are looking for solutions that are simple and do not need a lot of work. According to Afolabi (2008), 58 percent of respondents used self-medication to get relief from a condition. Furthermore, Shailendra (2006) claims that self-medication is used to gain fast relief. Further Bertoldi et al. (2014) mention that people who perceive their

health to be terrible or extremely bad are more likely to self-medicate. Young individuals with poor health conditions are more prone to self-medicate and self-assessed health condition leads to self-medication (Alghanim, 2011).

In a study conducted by various researchers showed that the university students in the Middle East are more likely to engage in self-medicating behavior. This study showed that 98 percent were engaged in self-medication in Palestine (Sawalha, 2008), 70.4 percent in Kuwait, 85.4 percent in New Delhi (Adhikary et al., 2014). Similarly, Karmacharya et al. (2018) showed that 73 percent were involved in Saudi Arabia, 84.0 percent in India and 83.3 percent in India, but Gyawali's (2015) study showed that 81.9 percent were involved in self-medication in Nepal.

The degree of pain and the severity of health problems are used to justify self-medication without seeing a doctor (Pommier et al., 2002). The most common causes of self-medication are light infections (Abay & Amelo 2010). Headaches are common source of self-medication (Shehnaz, 2014). Other causes for self-medication include emergencies (Ghosh et al., 2010). When faced with an emergency, 89 percent of respondents chose self-medication (Gangopadhyay, 2012). In this context, this study has attempted to explore the non-medical students' practices of self-medication at Prithvi Narayan campus of Tribhuvan University.

The study of self-medication practices among non-medical students is important because it provides them with information related to their health and the use of drug. They can understand the adverse effect of self-medication so that they can be able to concentrate on their study. Therefore, this study aims to explore the practice of self-medication by non-medical students of the study area.

## **METHODOLOGY**

In this study, a descriptive research cross-sectional design has been adopted to conduct this research on the self-medication practices among non-medical students of Prithvi Narayan Campus, Pokhara. The study area consists of five different faculties (science and technology, management, humanities, law and education) with about 13,000 students who have enrolled at bachelor and masters' level. Out of these students, data were collected from 206 students (at 7% margin of error and 5% level of significance) by using pre-tested self-administered questionnaire. The online survey method was adopted due to the COVID-19 pandemic lockdown. To collect data, the Google form of structured questionnaire was developed and sent to the students through MS Teams. The informed consent was taken from each interviewee before active participation in the online survey and participant confidentiality was assured by using code numbers in each questionnaire instead of their personal names. Similarly, participants were isolated from other research participants during information gathering, then the random data were received to meet the desired sample size, i.e. 206. Hence, the random sampling technique was adopted to select the sample for this study. Descriptive statistics was used, i.e. frequency and bivariate analysis were carried out for this research.

## **RESULTS AND DISCUSSION**

Based on the information collected from 206 respondents, this study has presented the following results.

### **Socio-demographic characteristics**

Among 206 participants, all reported self-medication practices. The majority of the respondents (55.5%) were from the age group of 20-25 years. The males (60.5%) were predominant than the females (39.5%). More than half (50.3%) of the respondents

were from the rural area. Further, the majority of the respondents (82.6%) were unmarried followed by married (17.4%). Similarly, more than four fifths (82%) of the respondents was from Bachelor Level studying groups of various faculties. The commonest caste/ethnicity group encountered in the survey was Brahmin (61.4%). The other common groups were Janajati (18.3%), Chhetri (13.4%), Dalit (9.5%) and other (2.5%).

**Table 1***Socio-demographic Characteristic of Participants (n=206)*

<b>Variables</b>	<b>Frequency</b>	<b>Percentage</b>
<b><u>Age(Years)</u></b>		
Below 20	43	23.6
20-25	101	55.5
25-30	22	12.1
30-35	10	5.5
Above 35	6	3.3
<b><u>Caste/Ethnicity</u></b>		
Brahmin	124	61.4
Chhetri	27	13.4
Janajati	37	18.3
Dalit	9	4.5
Other	5	2.5
<b><u>Religion</u></b>		
Hindu	180	91.4
Muslim	2	1
Christian	15	7.6
<b><u>Place of Residence</u></b>		
Rural	100	50.3
Urban	99	49.7
<b><u>Education</u></b>		
Master	36	18
Bachelor	164	82
<b><u>Marital Status</u></b>		
Married	35	17.4
Unmarried	166	82.6
<b><u>Gender</u></b>		
Male	121	60.5
Female	79	39.5
<b><u>Family Income per year(NRS)</u></b>		
Below 3 lakhs	83	42.6
3-6 lakhs	59	30.6
6-9 lakhs	33	16.9
above 9 lakhs	20	10.3

Source: Field survey, 2021

**Purpose of Self-Medication**

The illnesses included in this study were headache (62.9%), fever (32.7%), gastric acidity (23.9%), cough (27.3%), common cold (34%), dental pain (18.5%) and dandruff (24.4%). The study of Ren et al. (2016) found 72 percent of patients who suffered from cold, cough and headache in the United States and chose to self-medicate

whenever they had problems of health.

**Table 2**  
*Purpose of Practice of Self-Medication*

Indications for Practicing self-medication	Frequency*	Percentage
Headache	129	62.9
Dandruff	50	24.4
Hairfall	39	19.0
Migration	25	12.2
Eye-infection	31	15.1
Common Cold	70	34
Ear problem	17	8.3
Mouth ulcer	13	6.3
Dental pain	38	18.5
Cough	56	27.3
Tonsil	31	15.1
Acidity	49	23.9
Asthama	7	3.4
Diarrhea	38	18.5
Skin problem	14	6.8
Fever	67	32.7
Muscle problem	23	11.2
Wounds	37	18
Urination problem	9	4.4
Impotency	4	2
Menstrual problem	17	8.3
Birth control	13	6.3

\*Based on multiple responses

Source: Field survey, 2021

### Reasons for Self-Medication Practice

As reported by the students, Table 3 showed that the reasons for self-medication included their past experience (25.9%) and minor illness (35.5%), followed by time saving (19.5%), seeking quick relief (29.36%), ease and personal convenience (21%).

**Table 3**  
*Reasons of Participants for Self-Medication Practice*

Reasons	Frequency	Percentage
Hospital far from home	27	13.2
High fees of doctor	25	12.2
Save time	40	19.5
Knowledge from old prescription	53	25.9
I had medicines of my family member with some disease	30	14.6
Pharmacist advice	55	26.8
For quick relief	60	29.3
Previous experience	55	26.8
To reduce cost of treatment	26	12.7
Ease and convenience	43	21.0

Source: Field survey, 2021

Table 3 showed that the students have a false belief that they have adequate knowledge of self-medication. They have also a false belief that minor health problems with non-severe symptoms may not have serious consequences if they self-medicate, thinking that self-medicating may provide quick relief from minor diseases and health related pain. This study shows that quick relief was the main reason for using self-medication while previous experience and pharmacists' advice were also the main reasons for self-medication. The study of Balamurugani and Ganesh (2011) found that there are reasons such as lack of time (41.5%), minor illness (10.5%) and quick relief (10%) for the use of self-medication.

#### Type of Drug Group That Commonly Used

Table 4 demonstrated that analgesics (33.4%), anti-ulcerants (14.1%), anti-pyretics (38.6%), anti-biotic (17.7%), antihistamines/sedatives (5.5%) and anti-cold (27%) are some of the medications that are used by the respondents by themselves.

**Table 4**

*Frequencies of Drug Classes Commonly Used for Self-Medication*

Drug class	Frequency	Percentage
Anti-cold tablets	84	27.0
Analgesics	104	33.4
Gastro-intestinal/medicines	44	14.1
Antipyretics	120	38.6
Sedatives	17	5.5
Contraceptives (pills)	25	8.5
Topical preparations	17	5.5
General antibiotics	55	17.7
Anti-allergic	13	4.2
Anti-helminthic	23	7.4

Source: Field survey, 2021

#### Knowledge about the Medication

The respondents' level of knowledge of the medicines indicated that 37.37% just understood the drugs composition while 13.10% had no idea what it was. However, the majority of respondents were aware of the drugs composition, content and dose as well as the drug reaction. This study coincides with a study conducted in India by Balamurugani and Ganesh (2011), which revealed a very high percentage of lack of knowledge about self-medication and its implications (93.5%).

**Table 5**

*Knowledge about the Medication (n=206)*

Level of knowledge about the medication	Number (Agree)	Percentage
Content	77	37.37
Content and Dose	52	25.24
Content, Dose and duration of therapy	32	15.54
Content, Dose, duration of therapy and adverse drug reaction of the drug	18	8.74
No knowledge	27	13.10

Source: Field survey, 2021

### Attitude on Self-Medication Practices

An average number of respondents were agreed with true on hospital intervention, drug resistance complicate illness, cause addiction and harmful effect on pregnancy 56.3%, 40.4%, 41.1%, 29.2% and 52.9% respectively. In addition, almost the same quantity of respondents had no knowledge about the effect due to self-medication practice.

**Table 6**

*Attitude towards Self-Medication Practice among Non-Medical Students*

Statement	True	Not True	Do not know
Self-medication can delay one to seek for hospital intervention	108(56.3)	6)	56 (29.2)
Self-medication can lead to resistance	78 (40.4)	3)	70 (36.3)
Self-medication can complicate illness	79 (41.1)	6)	62 (32.3)
Self-medication can cause addiction	56 (29.2)	6)	58 (30.2)
Self-medication can come harmful effect on pregnancy	101 (52.9)	)	73 (38.2)

Source: Field survey, 2021

### CONCLUSION

In conclusion, the findings of the study demonstrated that a few respondents had knowledge regarding the composition of drugs and a few had knowledge about the dose, content, therapy duration and adverse reaction of the drug. Analgesics, antipyretics, antibiotics and sedatives were prescribed to a few students without adequate follow-up or lab tests. Apart from allopathic medications, herbal remedies were frequently found to be in self-medication practices. Headaches and respiratory disorders such as the common cold and cough, and diarrhea are the most frequent ailments for which individuals self-medicate. Analgesics, particularly paracetamol and ibuprofen as well as skin ointments were also found to be in self-medication practices. Public awareness camping and dissemination of information by doctors, pharmacists and college is to be planned to influence and change attitudes and behaviors. The study recommended that there should be a drug consultation service system that should provide the users with drug related consultations. In doing so, it is possible to reduce the adverse drug reaction due to self-medication practices.

### ACKNOWLEDGEMENTS

*My sincere thanks go to the Centre for Research and Innovation (CRI), Prithvi Narayan Campus, Pokhara for providing a research grant to conduct this study. I would like to express my gratitude to all the respondents of the study without whom the study would not have been possible.*

### REFERENCES

- Abahussain E., Matowe, L., & Nichollas, P. (2005). Self-reported medication uses among adolescent in Kuwait. *Medical Principles and Practice, 14*, 161-164.
- Abay S., & Amelo, W. (2010). Assessment of self-medication practices among medical, pharmacy, and health science students in Gondar University, Ethiopia. *Journal of Young Pharmacists, 2*(3), 306-310.
- Adhikary, M., Tiwari, P., Singh, S., & Karoo, C. (2014). Study of self-medication practices and its determinant among college students of Delhi University North

- Campus, New Delhi, India. *International Journal of Medical Science and Public Health*, 3(4), 406. <https://doi.org/10.5455/ijmsph.2014.260120146>
- Afolabi A. (2008). Factors influencing the pattern of self-medication in an adult Nigerian population. *Annals of African Medicine*, 7(3), 120-127.
- Alghanim S. (2011). Self-medication practices among patients in a public health care system. *Eastern Mediterranean health Journal*, 17(5), 409-416.
- Alshawi, A.F., Ali, A.F., Enad, M.M., & Salih, J.A. (2018). Self-medication among medical students in Anbar and Fallujah Universities-Iraq. *Journal of the Faculty of Medicine Baghdad*, 60(3), 156-159. <https://doi.org/10.32007/med.1936/jfacmedbagdad.v60i3.7>
- Awad A., Eltaved, I., Matowe, L., & Thalib, L. (2005). Self-medication with antibiotics and antimalarial in the community of Khartoum State, Sudan. *Journal of Pharmaceutical Sciences*, 8, 326-331.
- Atsbeha, B. W., & Suleyman, S. A. (2008). Medication knowledge, attitude and practice (Kap) among university of Gondar freshman students, north western Ethiopia. *Pharmacologyonline*, 1, 4-12.
- Balamurugani, E., & Ganesh, K. (2011). Prevalence and pattern of self-medication use in coastal regions of South India. *British Journal of Medical Practitioners*, 4(3), 428.
- Barsky, A. (1988). The paradox of health. *The New England Journal of Medicine*, 318, 414-418.
- Foroutan, B., & Foroutan, R. (2014). Household storage of medicines and self-medication practices in south-east Islamic Republic of Iran. *Eastern Mediterranean Health Journal*, 20(9), 547-553.
- Gangopadhyay S. (2012). Motivation of self-medication: a behavioral analysis. *International Journal of Management Research and Review*, 2(13), 132-142.
- Ghosh, S., Vikas, V., Gupta, A., & Chaudhary, R. (2010). Evaluation of the practice of self-medication among college students in west Uttar Pradesh. *International Journal of Pharma Professional's Research*, 1(1), 14-18.
- Gutema, G. B., Gadisa, D. A. Kridanemariam, A. A., Berhe, D. F., Berhe, A. H., & Hadera, M. G. (2011). Self-medication practices among health sciences students: The case of Mekelle University. *Journal of Applied Pharmaceutical Science*, 1(10), 183.
- Gyawali, S. (2015). Knowledge, attitude and practice of self-medication among basic science under-graduate medical students in a medical school in western Nepal. *Journal of Clinical and Diagnostic Research*, 9(12), FC17-FC22. <https://doi.org/10.7860/JCDR/2015/16553.6988>
- Hassali, M., Shafie, A., Al-Qazaz, H., Tambyappa, J., Palaian, S., & Hariraj, V. (2011). Self-medication practices among adult population attending community pharmacies in Malaysia: an exploratory study. *International Journal of Clinical Pharmacy*, 33(5), 794-799.
- Heisler, M. M., Langa, K., Eby, E., Fendrick, A., Kabeto, M., & Piette, J. (2004). The health effects of restricting prescription medication use because of cost. *Medical Care*, 42, 626-634.
- Karmacharya, A., Uprety, B. N., Pathiyil, R. & Gyawali, S. (2018). Knowledge and practice of self-medication among undergraduate medical students. *Journal of Lumbini Medical College*, 6(1), 21-26. <https://doi.org/10.22502/jlmc.v6il.174>
- Kumar, N., Kanchan, T., Unnikrishnan, B., Rekha, T., Mithra, P., Kulkarni, V., Papanna, M. K., Holla, R., & Uppal, S. (2013). Perceptions and practices of self-



- medication among medical students in coastal south India. *PLoS ONE*, 8(8). <https://doi.org/10.1371/journal.pone.0072247>
- Lwan, U., Abubakar, I., Jibo, A., & Rufai, A. (2013). Pattern, awareness and perceptions of health hazards associated with self-medication among adult residents of Kano Metropolis, Northwestern Nigeria. *Indian Journal of Community Medicine*, 38(3), 144-151.
- Mainous A., Cheng A., Garr R., Tilley B., Everett, C., & McKee, M. (2005). Non prescribed antimicrobial drugs in Latino community, South Carolina. *Emerging Infectious Diseases*, 11, 883.
- Mitra, A. K., Imtiaz, A., Al Ibrahim, Y. A., Bulbanat, M. B., Al Mutairi, M. F., & Al Musaleem, S. F. (2019). Factors influencing knowledge and practice of self-medication among college students of health and non-health professions. *IMC Journal of Medical Science*, 12(2), 57-68. <https://doi.org/10.3329/imejms.v12i2.39662>
- Pommier, J., Deschamps, J., Romero, M., Zubarew, T., Billot, L., Crema, D., & Mouchtouris, A. (2002). Attitudes a l'egard des soinsformels et informels: comparaisond'adolescentsfrançais et chiliens. *Sante Publiqwue*, 4(14), 371-387.
- Ren, J., Kan, H., & Duan, G. (2016). Present situation, problems, countermeasures and suggestion of self-medication. *China Pharma*, 27, 4888-4890.
- Sawalha, A. F. (2008). A descriptive study of self-medication practices among Palestinian medical and non-medical university students. *Research in Social and Administrative Pharmacy*, 4(2), 164-172. <https://doi.org/10.1016/J.SAPHARM.2007-04-004>
- Shailendra, S., James, H., Khaja, K., Otoom, S., Reginald, P., & Sequeira, R. (2006). Evaluation of the Knowledge, Attitude and Practice of Self-medication among First-Year Medical Students. *Medical Principles and Practice*, 15: 270-275.
- Shehnaz, S., Agarwal, A., & Khan, N. (2014). Systematic review of self-medication practices among adolescents. *Journal of Adolescent Health*, 467-483.
- Soares, M., Correa da Solva, M., & Muccillo-Baisch, A. (2012). Self-medication in university students from the city of Rio-Grande, Brazil. *BMC Public Health*, 12, 339.