ORIGINAL ARTICLE

https://doi.org/10.3126/njms.v9i2.72389

Community-based Study on Self-medication Practices and their Determinants at Kahun Danda, Pokhara

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Received: December 22, 2023 **Accepted: February 10, 2024** **Published: July 31, 2024**

Cite this paper: Manandhar V, Upadhyaya B, Bhusal K, Duwadi K, Adhikari R, Wagle P, Sapkota U. Community-based Study on Self-medication Practices and their Determinants at Kahun Danda, Pokhara . *Nepal Journal of Medical Sciences*, 2024;9(2):18:11-19 https://doi.org/10.3126/njms.v9i2.72389

ABSTRACT

Introduction: Taking any allopathic or alternative medicine without the doctors' prescriptions, re-using old prescriptions to acquire medicine, sharing medicines with friends or family and taking leftover medications to alleviate symptoms is termed self-medication. There can be chances of inappropriate use, serious adverse effects and delay in seeking medical care as a result. This study was conducted to assess the prevalence of self-medication practices in Kahun Danda of Pokhara, Nepal.

Methods: A cross-sectional study was conducted among 105 residents of Kahun Danda, using a semi-structured questionnaire. One participant from each household selected for family health study was chosen as respondent (Convenience sampling). Data collection was started after getting ethical approval from Institutional Review Committee of Manipal College of Medical Sciences (Reference number MCOMS/IRC/541/GA). The collected data was entered in Ms Excel 2010 and exported to SPSS version 21.0 for data analysis. Frequencies with proportions were calculated for categorical variables, while mean with standard deviation were calculated for continuous variables. A chi-square test was applied to find the association between self-medication practices and different independent variables, taking p-value less than 0.05 as statistically significant at 95% confidence interval.

Results: Self-medication practice was found in 79 (75.24%) participants, with cough and cold, headache and fever being the most common indications. Age of the participants was found to have statistically significant association with self-medication practice (p-value 0.02), with all participants above 40 years of age found to have practiced self-medication. Perception of suffering from minor ailments (54, 68.40%) was the main reason behind choosing self-medication over a visit to a health facility.

Conclusions: Self-medication practice was found to be very high among the residents of Kahun Danda, with antipyretics being the most used medication. All participants above 40 years of age were involved in self-medication practices and most of them perceived their ailments to be of minor nature.

Keywords: *Community; Cross-sectional study; Nepal; Self-medication.*

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INTRODUCTION

Self-medication can be defined as using medication by individuals to treat self-recognized symptoms based on their preferences or recommendations of a non-professional, instead of visiting a physician for consultation for their medical needs.[1,2] Along with acquiring medicines without prescriptions, it can also include using alternative medicines, re-using old prescriptions, using leftover medicines and sharing medicines with family members.[1,3]

Some opine that self-medication for minor ailments may benefit both patient and physician.[4,5] Nevertheless, this practice risks improper prescription use and potential side effects, with a delay in seeking appropriate medical care.[4-7] Self-medication with antibiotics is also one of the prominent reasons for growing antibiotic resistance.[8]

This study aimed to assess the prevalence of self-medication practices and its determinants in adult population of Kahun Danda, the field posting site of MBBS students of Manipal College of Medical Sciences (MCOMS), Pokhara, Nepal.

METHODS

A descriptive, cross-sectional study was conducted in Kahun Danda, a study site for MBBS students of MCOMS from January 2023 to September 2023. The study area of Kahun Danda is situated in ward number 11 of Pokhara Metropolitan City, about 15 minutes by bus from Manipal Teaching Hospital. Ethical approval for the study was taken from the Institutional Review Committee of MCOMS, Pokhara (Reference number MCOMS/IRC/541/GA). Permission for conducting the study was also taken from the respective ward office.

The data was collected by MBBS students during their family health visits in Kahun Danda. The students were oriented regarding the study and questionnaire prior to the visits. Convenience sampling was used to select 105 households during the field postings. From these selected households, one adult family member of age 18 years or more, who was the first person of contact after entering the house, was selected as the respondent. Study participants were enrolled after taking written informed consent. If any family members were health workers, those households were excluded from the study. A preformed semi-structured questionnaire was used for data collection using a face-to-face interview method.

The collected data was entered in Microsoft Excel 2010, cleaned, coded and then exported to Statistical Package for Social Sciences (SPSS) version 21.0, for data analysis. Frequencies and proportions were calculated for categorical variables, while mean and standard deviation were calculated for continuous data. A chi-square test was done to find an association between self-medication practices and different independent variables taking p-value of less than 0.05 as statistically significant at a confidence interval of 95%.

RESULTS

The mean age of 105 participants involved in our study was 42.01 years with a standard deviation of 15.85 years. Among all the participants, 65.70% were females, 59.00% were of the age group 18 to 40 years and 98 (93.30%) were Hindu by religion (Table 1).

Table 1: Socio-demographic characteristics of the study population (n=105)

Variables	Categories	Frequency	Percentage
Age (in years)	18-40	62	59.00
	41-60	28	26.70
	> 60	15	14.30
Gender	Female	69	65.70
	Male	36	34.30
Marital status	Currently married	97	92.40
	Currently single	8	7.60
Education	Illiterate/Informal	27	25.70
	Basic level	20	19.00
	Secondary level	44	41.90
	Bachelors and above	14	13.30
Occupation	Self-employed	44	41.90
	Homemaker	39	37.10
	Unemployed	14	13.30
	Service	8	7.60

When asked about their health in the last six months, 17 (16.20%) participants replied that they had no health issues. Among the total participants, 79 (75.24%) gave a history of self-medication practice without visiting any health facility, six participants (5.70%) visited health facility for their health problems, while three participants (2.85%) said that their symptoms alleviated after a few days' rest.

Among the 79 participants who had practiced self-medication, 50 participants (63.29%) complained of cough and cold, followed by headache (62.02%) and fever (58.23%) (Table 2).

Table 2: Indications for self-medication among the study participants (n=79)*

Indications	Frequency	Percentage
Cough and cold	50	63.29
Headache	49	62.02
Fever	46	58.23
Body ache	34	43.04
Stomach ache	19	24.05
Sore throat	18	22.78
Loose stool	8	10.13
Dental pain	6	7.59

*multiple response

Antipyretics (44, 55.70%) were the most common medicine used for self-medication, followed by NSAIDS (24, 30.38%) (Table 3).

Table 3: Medicines used for self-medication by the study participants (n=79)*

Medicines	Frequency	Percentage
Antipyretics	44	55.70
NSAIDS	24	30.38
PPI/Antacids	14	17.72
Antitussives	11	13.92
Antibiotics	9	11.39
Multivitamins	7	8.86
Anti-diarrheals	6	7.59
Anti-allergens	5	6.33
Anti-emetics	4	5.06
Don't know	9	11.39

*multiple response

Most of the participants (51, 64.60%) replied that the local pharmacists advised them regarding the use of medicines, while 19 (24.10%) used the medicines based on their own prior knowledge or experience of taking them. Six participants (8.00%) took medicines based on previous prescriptions, and three (3.8%) followed their friends or family members' advice on taking medicine.

Most of the participants (67, 84.80%) bought their medicines from the local pharmacy, four (5.10%) took leftover medicines present at their homes and three (3.80%) got medicines from their friends or neighbors. Five participants (6.30%) took home remedies for their symptoms.

On being asked for their reason for not visiting any health facility for check-ups, 54 (68.40%) participants replied that they had suffered only minor ailments with no need to visit any health facility. According to 24 (30.40%) participants, they did not have enough time to go for a check-up, while 10 (12.7%) participants replied that they were taking medicines from previous experience. The rest pointed out distance from health facility (8, 10.10%) and financial constraints (5, 6.30%) as the reasons. One (1.27%) participant blamed the delayed service in hospitals for not visiting, while one (1.27%) said that they had more belief in their local pharmacists.

While all participants above 40 years of age were found to practice self-medication, the proportion of participants between 18 and 40 years of age (42, 53.16%) involved in self-medication practices was found to be higher. Only age was found to have statistical significance with self-medication practice (p-value 0.02), while gender, marital status, education, occupation and provision of health insurance were not found to have association with self-medication practice (Table 4).

Table 4: Association between socio-demographic characteristics of the participants and their self-medication practices (n=105)

Variables	Categories	Self-medication		p-value
		Yes (%)	No (%)	
Age (in years)	18-40	42 (82.40)	9 (17.60)	**0.02**
	41-60	27 (100.00)	0 (0.00)	
	> 60	10 (100.00)	0 (0.00)	
Gender	Male	25 (83.30)	5 (16.70)	0.26
	Female	54 (93.10)	4 (6.90)	
Education	Illiterate/Informal	21 (91.30)	2 (8.70)	0.92
	Basic level	14 (93.30)	1 (6.70)	
	Secondary level	33 (86.60)	5 (13.20)	
	Bachelors and above	11 (91.70)	1 (8.30)	
Occupation	Homemaker	31 (96.90)	1 (3.10)	0.15
	Self-employed	31 (81.60)	7 (18.40)	
	Service	7 (100.00)	0 (0.00)	
	Unemployed	10 (90.00)	1 (9.10)	
Health insurance	Present	31 (83.80)	6 (16.20)	0.16
	Absent	48 (94.10)	3 (5.90)	

DISCUSSION

Studies regarding self-medication practices are very limited in Nepal. Studies conducted in different areas of Nepal have reported different prevalence rates of self-medication, ranging from 38% to 78%.[9-16] In our study, the prevalence of self-medication among 105 residents of Kahun Danda was found to be 75.24%, which was similar to studies conducted in Kathmandu, Dharan, Dhankuta, and Resunga municipality of Western Nepal.[13-16] However, our study used a six-month recall period, which differs from the three and twelve-month periods used in these studies.

As compared to earlier studies done in rural Nepal, the self-medication practice was found substantially greater in our study.[10-12] Likewise, compared to the prevalence of 38.20% in a study done in 2020 in Nepal, our prevalence is very high, but this difference can be attributed to the fact that their study was conducted among patients visiting health camps, who most probably had better health-seeking behaviors.[9]

Similar variations (29% to 88%) in self-medication practices were also seen in studies conducted in different parts of India, Bangladesh (60.20%), Syria (67.30%), Saudi Arabia (35.40%) and Eritrea (79.20%) in Africa.[17-26] This could be due to the

variations in socio-cultural, religious and economic differences across different parts of the globe.

Among the total participants with self-medication practices, most (53.16%) were of the age group 18-40 years, and this association was found to be statistically significant. This was similar to previous studies which showed higher prevalence of self-medication among younger and economically active age group.[9,16,17,20,23-25] People in this age group are usually occupied in their studies or jobs during office hours, which are usually the times when out-patient departments in health facilities are open for the public. Due to the inability to use health facilities outside of their working hours, they could have followed the easy option of self-medication, unless they perceived their health condition to be severe.

Self-medication practices were seen to be present more among female participants (68.40%) in our study, even though no statistical significance was found. This is similar to studies conducted in Dhankuta and Dharan of Nepal and in India.[14,16,17,22] As the study was conducted during the field postings of fifth-semester MBBS students during office hours, most of our respondents (65.70%) were females. This, along with the fact that females tend to experience more symptoms related to their reproductive health, while still being unable to find any time for hospital visit due to their household chores, could be the reasons for higher proportions of female participants with self-medication practices.

In our study, cough and cold (63.30%), headache (62.00%) and fever (58.20%) were the top three indications of self-medication, followed by body ache, stomachache and sore throat. Studies done in Dhankuta and Kathmandu showed similar results, with cough and cold being the most common indicators of self-medication.[14,15] However, other studies done in Nepal showed headache to be the most common symptom.[10,12,13,16] Our study is consistent with studies done in India, Syria and Eritrea also determined cough and cold, headache, fever and body ache to be the commonest causes for self-medication.[17,18,20,22,24,26]

To ease the symptoms, participants in our study mostly took antipyretics (55.70%), mostly Paracetamol, followed by NSAIDS (30.40%). Other studies done in Nepal also showed similar results with Paracetamol and NSAIDS being the most frequent medicines to be taken.[9-14] Accordingly, similar results were shown by studies done in India.[17,19,22] Antibiotics were taken by 11.40% of our participants, which was slightly lower than that seen in previous studies.[12,13] People’s perception that antibiotics are stronger medicines and could cause side effects may be one of the reasons of this lower use of antibiotics. Studies conducted in Morang district of Nepal found much less practice of antibiotic consumption without any prescriptions.[11] Antibiotic consumption was found to be present in much higher proportions in India, Lebanon and Africa.[18,21,26,27] This shows that government is unable to strictly enforce the practice of dispensing medicines, especially antibiotics, without doctors' prescriptions.

In our study, the local pharmacists (64.60%) were the most common source of information on self-medication, followed by the participants' own prior knowledge of the

condition and treatment (24.10%). Accordingly, most of the participants purchased their medicines from the local pharmacists (84.80%), while 5.10% of the participants who took leftover medicines present in their homes. These results were in concordance to many studies conducted in Nepal, India and Bangladesh.[9,11,15-17,19,23] This may be due to the easy availability of medicines without the need for doctors' prescriptions from the local pharmacies and the tendency of people to believe the local pharmacists more easily. However, study done in Western Nepal determined family members, friends and relatives (34.20%) as the most common source of information for self-medication, followed by previous experience of the participant (23.90%).[13]

Self-medication practices were found in 39.20% of the participants with health insurance. Given that they had already paid their premiums, this percentage should be much lower, as they had the option of utilizing health facilities without any financial burden. Study done in Syria found a prevalence of self-medication practices to be 67.30%, even though public health services are available free of cost.[24] This could suggest that the main factor behind self-medication practices is not financial.

Similar to several past studies, most of our participants did not visit a doctor because they perceived their illness to be mild (68.40%) and did not need a visit to the health facility.[10,11,15,18,20,22-25] However, lack of time, convenience and ease of access were regarded as the most common reasons given by previous studies.[12,16] Surprisingly, about 10% of our participants replied that distance was a factor for their choosing self-medication over visiting a hospital, even when the study area is situated at a distance of less than 15 minutes by bus from a tertiary hospital in Pokhara. The limited availability of public transportation in the area could be one of the reasons for this answer.

This study was conducted in the field posting area of MBBS students, which was in close proximity to the teaching hospital. Also due to the data collection hours, higher proportion of female respondents was involved. Due to these reasons, the results cannot be generalized to the entire Nepalese population. Chances of recall bias should also be considered as we have taken the data for the preceding six months. Moreover, results were based on self-reported data, and chances of over or under-reporting should not be neglected.

CONCLUSIONS

The prevalence of self-medication was found to be high among residents of Kahun Danda. Antipyretics were the most self-medicated drug with all participants above 40 years of age involved in self-medication. The perception of suffering from minor ailments, time, distance and financial constraints were the main reasons for not choosing to visit health facilities.

CONFLICT OF INTEREST

None

SOURCES OF FUNDING

None

REFERENCES

1. World Health Organization. Guidelines for the regulatory assessment of medicinal products for use in self-medication. 2000. [Full Text]
2. World Health Organization. The Role of the pharmacist in self-care and self-medication: report of the 4th WHO Consultative Group on the Role of the Pharmacist, The Hague, The Netherlands, 26-28 August 1998. [Full Text]
3. Loyola Filho AI de, Lima-Costa MF, Uchôa E. Bambuí Project: a qualitative approach to self-medication. Cad Saude Publica. 2004;20(6):1661–9. [DOI]
4. Hughes CM, McElnay JC, Fleming GF. Benefits and risks of self-medication. Drug Saf. 2001;24(14):1027–37. [DOI]
5. Ali Sherazi B, Mahmood KT, Amin F, Zaka M, Riaz M, Ahmed J. Prevalence and measure of self-medication: A review. J Pharm Sci Res. 2012;4:1774–8. [Full Text]
6. Panda A, Pradhan S, Mohapatra G, Mohapatra J. Drug-related problems associated with self-medication and medication guided by prescription: A pharmacy-based survey. Indian J Pharmacol. 2016;48(5):515. [DOI]
7. Ruiz M. Risks of self-medication practices. Curr Drug Saf. 2010;5(4):315–23. [DOI]
8. Ramay BM, Lambour P, Cerón A. Comparing antibiotic self-medication in two socio-economic groups in Guatemala City: a descriptive cross-sectional study. BMC Pharmacol Toxicol. 2015;16(1). [DOI]
9. Paudel S, Aryal B. Exploration of self-medication practice in Pokhara valley of Nepal. BMC Public Health. 2020;20(1). [DOI]
10. Shankar PR, Partha P, Shenoy N. Self-medication and non-doctor prescription practices in Pokhara valley, Western Nepal: a questionnaire-based study. BMC Fam Pract. 2002;3(1). [DOI]
11. Poudyal A, Nepal S. Self-medication practice and associated socio-demographic variables among adult in Morang district of Miklajung rural municipality. Int J Community Med Public Health. 2021;8(2):570. [DOI]
12. Parajuli SB, Mishra A, Kc H, Bhattarai P, Karki S, Pandit R, et al. Self-medication practices in surrounding communities of Birat Medical College and Teaching Hospital of eastern Nepal. J Coll Med Sci-Nepal. 2019;15(1):45–52. [DOI]
13. Adhikari P. Perceptions and practices of self-medication among the residents of Western, Nepal. J Manmohan Meml Inst Health Sci. 2023;8(2):127–37. [DOI]
14. Yadav BK, Shrestha G, Bhattarai B, Dhami A, Rai D, Pokharel P. Prevalence of Self-medication and its Associated Factors in a Hilly Community of Eastern Nepal: A Cross-sectional Study from Dhankuta. Research in Pharmacy and Health Sciences. 2021;6:148–53. [Full Text]
15. Ghimire P, Pant P, Khatiwada S, Ranjit S, Malla S, Pandey S. Self-medication practice in Kathmandu Metropolitan City: A cross-sectional study. SAGE Open Med. 2023;11:205031212311589. [DOI]

16. Chapagain K, Rauniyar GP. Self-medication practices among the Peri-urban households of two communities of Dharan sub-metropolitan city of eastern Nepal: A descriptive cross-sectional study. JNMA J Nepal Med Assoc. 2020;58(228). [DOI]
17. Rathod P, Sharma S, Ukey U, et al. Prevalence, pattern, and reasons for self-medication: A community-based cross-sectional study from central India. Cureus. 2020;58(228):569–73. [DOI]
18. Patil SB. Self-medication practice and perceptions among undergraduate medical students: A cross-sectional study. J Clin Diagn Res. 2023;15(1). [DOI]
19. Patel A, Banerjee A, Kaletwad A. Factors associated with prelacteal feeding and timely initiation of breastfeeding in hospital-delivered infants in India. J Hum Lact. 2013;29(4):572–8. [DOI]
20. Marak A, Borah M, Bhattacharyya H, Talukdar K. A cross-sectional study on self-medication practices among the rural population of Meghalaya. Int J Med Sci Public Health. 2016;5(6):1134. [DOI]
21. Limaye D, Limaye V, Fortwengel G, Krause G. Self-medication practices in urban and rural areas of western India: a cross-sectional study. Int J Community Med Public Health. 2018;5(7):2672. [DOI]
22. Chari HS, Kadeangadi DM, Mallapur MD. Practice of self-medication among urban households –a community based cross sectional study. 2015;6(2). [Full Text]
23. Moonajilin MS, Mamun MA, Rahman ME, et al. Prevalence and drivers of self-medication practices among Savar residents in Bangladesh: A cross-sectional study. Risk Manag Healthc Policy. 2020;13:743–52. [DOI]
24. Abdelwahed RNK, Jassem M, Alyousbashi A. Self-medication practices, prevalence and associated factors among Syrian adult patients: a cross-sectional study. Research Square. 2022. [DOI]
25. Alghanim SA. Self-medication practice among patients in a public health care system. East Mediterr Health J. 2011;17(05):409–16. [DOI]
26. Araia ZZ, Gebregziabher NK, Mesfun AB. Self-medication practice and associated factors among students of Asmara College of Health Sciences, Eritrea: a cross-sectional study. J Pharm Policy Pract. 2019;12(1). [DOI]
27. Jamhour A, El-Kheir A, Salameh P, Hanna PA, Mansour H. Antibiotic knowledge and self-medication practices in a developing country: A cross-sectional study. Am J Infect Control. 2017;45(4):384–8. [DOI]