PERCEPTIONS AND PRACTICES OF SELF-MEDICATION AMONG THE RESIDENTS OF WESTERN, NEPAL

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ABSTRACT

Background: Self-medication is defined as the "The taking of drugs, herbs or some remedies on personal initiative, or on the advice of another person without consulting a physician for the aliment of self-diagnosed physical illness". Self-medication is practiced throughout the world, including both developing and developed countries. Self-medication includes both risks and benefits.

Objectives: To assess the perceptions and practices of self-medication among the residents of Western, Nepal.

Methods: A cross-sectional study was conducted among 378 respondents aged above 18. Closed ended questionnaire was used as data collection tool. Non-probability purposive sampling method was used for the collection of data.

Results: The prevalence of self-medication practices was found to be 76.8%. Friends/Family members/Relatives 34.20%), Past-own experience (23.9%) and Pharmacist (23.5%) were the major source of information for self-medication practices. The most common type of illness for self-medication were Headache (19.7%), Cough and Cold (19.1%) and fever (18.10%). NSAIDs (32.9%), Cough Syrups (15.0%) and Antibiotics (14.8%) were the mostly used drugs in self-medication practices. The most common reasons for self-medication were previous experience (23.59%), minor illness (19.77%) and quick reliefs (19.1%). More than half of respondents (57.0%) were found to have positive perception towards the self-medication practices. This study showed education status (p=0.033) had significant association with the self-medication practices.

Conclusion: The study focused to assess the perception and practices of self-medication. The prevalence of self-medication was found to be 78.6%. More than half of the residents were found to possess positive perception towards the self-medication practices.

Key words: *Self-medication, Perception, Antibiotics, knowledge*

INTRODUCTION

Self-medication is defined as the "the taking of drugs, herbs or some remedies on personal initiative, or on the advice of another person without consulting a physician for the aliment of self-diagnosed physical

illness".[1] Self-medication includes purchasing medication without a prescription, resubmitting old prescriptions to purchase medication, sharing medication with family or community members, or using leftover medication stored at home.[2]

According to the World Health Organization (WHO), with the ongoing development of people's education and socioeconomic position, self-medication plays a significant role in the healthcare system across the world, particularly in developing nations. However, due to poor medical facilities, a lack of government restrictions and a high population density, it is much more common in Southeast Asia to buy prescription drugs without a prescription.[3] Self-medication is a common practice worldwide and the irrational use of drugs is a cause of concern as people put their lives at risk by self-medication since it can lead to addiction, life-threatening allergic reactions, low dosing of drugs may not alleviate the symptom and also overdosing can cause collateral damage to several organs.[2,4] However, some of the benefits include: a low-cost option for individuals who cannot afford high consultation fees, fast relief from acute medical issues, saving time and money spent on contacting a doctor, and even saving lives in life-threatening situations.[5,6]

People in developing nations are self-medicating without supervision with nonprescription and prescription medications. Despite the fact that the World Health Organization has underlined the importance of properly teaching and controlling self-medication, its use is nevertheless widespread.[10] Self-medication is influenced by various factors, some of which are socio-economic (e.g. level of education, socio-economic status, access to medical information, health awareness, etc.), accessibility to medicines and health facilities, health sector reforms and others.[7] Possible reasons for self-medication may be the lack of time to see a medical Personnel, the inability to make a quick appointment, the relatively far distance to reach nearby hospitals and clinics, the limited time slots to get prompt treatment from a public hospital during peak hours and excessive consultation fees to obtain a doctor's service.[8] It was also noted that prescription-only-medication could easily be obtained without prescriptions for self- medication in developing countries. Almost every pharmacy in Nepal offers a medicine to a consumer without even requiring a legitimate prescription.[9] These elements contribute to the practice of self-medication. Data on the prevalence and variables related with self-medication in Nepal are required to aid in the development of actions to enhance the country's self-use of medications. Paracetamol, analgesics, antacids, oral rehydration solution, cough suppressants, anti-ulcers, and antibiotics are the most often self-medicated medications.[9]

MATERIAL AND METHODS

A descriptive cross-sectional study was conducted among residents of Resunga Municipality Ward no 1of Western Nepal, to assess the Perceptions and Practices of Self-Medication. The sample size of the population was 378. The samples were selected using non-probability purposive sampling from the resident of that municipality. Closed ended questionnaire was used to collect data. The questionnaire consists of three sections in which first section consists of questions related to socio-demographic characteristics, second sections consist of questions related to practice and use of self-medication and third section consists of perception regarding self-medication. Privacy and anonymity were maintained. None of the respondents were forced to participate in this research.

The data was entered, coded, analyzed and interpreted by using IBM SPSS-16, MS Excel and analyzed. Frequency distribution and cross tabulations of the variables was done. Chi-square test was applied to identify the association of selected demographic variables.

RESULTS

Total number of 378 responses were participants for this study. Table I shows the distribution of the respondents according to their sociodemographic characteristics. Around 51.1% respondents belong to age group less than 35 years while 48.9% belong to age group more than 35 years. Among the respondents more than half (51.1%) were female and less than half (48.9%) were male. Majority of the respondents (72.8%) were Brahman/Chettri, (18.0%) were Janajati and (9.2%) were others. Around (61.1%) of respondents were married and (38.9%) were never married. 354 (93.7%) of respondents were literate, while 24 (6.3%) were illiterate, where 30.7% had less than an SLC education, 43.4% had an intermediate educational level, and 21.5% had a bachelor's degree or above. Majority of respondents (74.9%) had nuclear family type and (25%) had joint family type.

Table I: Socio-demographic characteristics

Variables	Category	Frequency (n=378)	Percentage
Age (completed years)	Less than 35 years	193	51.1
	More than 35 years	185	48.9
Sex	Male	185	48.9
	Female	193	51.1
Ethnicity	Brahman/Chettri	275	72.8
	Janajati	68	18.0
	Others[a]	35	9.2
Marital status	Unmarried	147	38.9
	Married	231	61.1
Literacy status	Illiterate	24	6.3
	Literate	354	93.7
Education level (n=354)	Below SLC	114	32.2
	Intermediate	164	46.3
	Bachelor level and above	76	21.5
Family type	Nuclear Family	283	74.9
	Joint Family	95	25.1
Yearly income	Sufficient for less than 6 months	34	9
	Sufficient for more than 6 months	344	91

a=Dalit, Madhesi

The practice of self-medication was shown on Table II. More than three fourth (78.50%) of the respondents had ever practiced self-medication. More than half (51.5%) of the respondents practiced self-medication 1-2 times within last six months while (17.8%) of the respondents practiced self-medication more than 5 times within last six months.

Similarly, more than half of the respondents (59.30%) consume allopathic system of medicine while less than half of respondents (40.70%) of respondents consume Ayurvedic/Herbal system of medicine when self-medicated. Likewise, more than half of the respondents (52.20%) completed the course of action when self-medicated while less than half of respondents (47.80%) didn't complete the course of action when self-medicated. 87.50% of respondents have the habit of checking the expiry date before purchasing the medicines while 12.5% of respondents don't check the expiry date before purchasing the medicines. Similarly, 86.6% of respondents haven't faced side effects after self-medication while 13.40% have faced side effects after self-medication.

Table II: Practice of the self-medication

Statements	Responses	Frequency (n=378)	Percentage
Have you ever practiced self-medication?	Yes	297	78.60
	No	81	21.42
What was the type of medicine that you consumed? *(respondents=297)	Allopathic	240	59.30
	Ayurvedic/Herbal	165	40.70
How many times you have practiced self-medication in the past 6 months? (respondents=297)	1-2 times	153	51.5
	3-5 times	91	30.7
	< 5 times	53	17.8
Did you complete the course of action when self-medicated? (respondents=297)	Yes	142	47.80
	No	155	52.20
Do you have the habit of checking expiry date of medicine before purchasing? (respondents=297)	Yes	260	87.50
	No	37	12.50
Have you ever faced any side effects after self-medication? (respondents=297)	Yes	40	13.40
	NO	257	86.6

(=multiple responses)*

The source of information for practicing self-medication practices were shown on Table III. Majority of the respondents (34.20%) got information from Family members/Relatives/Friends, (23.90%) from previous experience, (23.50%) from Pharmacist, (9.10%) from Advertisement/media and (5.80%) form previous prescriptions for similar diseases.

Table III: Source of information for self-medication practices

Statements	Responses	Frequency N=297	Percentage
What/Who was the source of information when you self-medicated? *	Family members/Relatives/Friends	236	34.2
	Past own Experience	165	23.9
	Pharmacist	162	23.5
	Media/ Advertisement	63	9.1
	Previous Prescription for Similar diseases	40	5.8

*=*multiple responses*

Among the 297 respondents, the indication for self-medication practice was shown on Table IV in which common problem like headache (19.70%), Cough and cold (19.10%), fever (18.10%), gastritis/acidity (15.20%), aches & pains (12.50%), Diarrhea/Vomiting (5.60) were the common illness for practicing the self-medication.

Table IV: Indications for self-medication practices

Statements	Responses	Frequency (Respondents=297)	Percentage
In what health conditions did you practice self-medication? *	Headache	229	19.70
	Cough & Cold	222	19.10
	Fever	210	18.10
	Gastritis/Acidity	176	15.20
	Aches & Pains	145	12.50
	Diarrhea/Vomiting	65	5.60
	Others[#]	114	9.8

*=*multiple responses, #=skin diseases, menstrual problems, allergy,*

The indication and self-medication practices were shown on Table V in which NSAIDs (32.90%), Cough Suppressants (15.00%), Antibiotics (14.80%), Antacids (13.70%), Oral rehydration salts (7.40%) were the most used medicines.

Table V: Drugs used for self-medication practices

Statements	Responses	Frequency	Percentage
What were the common drugs used in those health conditions? *	NSAIDs	380	32.9
	Cough Suppressants	173	15.0
	Antibiotics	171	14.80
	Antacids	158	13.70
	Oral Rehydration Salt	86	7.40
	Antihistamines	48	4.20
	Vitamins	43	3.70
	Others[b]	96	8.3

*=*multiple responses, b=anthelminthics, antiemetics, local herbs, birth control pills*

Most of the people practices self-medication for their common problems Table VI show that 29.7% got the self-medication due to previous experience, 19.77% for minor illness, 19.10% for quick reliefs, 11.23% thought not necessary to go to doctors for common illnesses, 7.30% due to suggestions from family/friends, 4.6% due to unavailability of health services were the reasons for the self-medication practices.

Table VI: Reasons for the self-medication Practices

Statements	Responses	Frequency N=297	Percentage
Reasons for practicing self-medication*	Previous Experience	210	23.59
	Minor illness	176	19.77
	For quick reliefs	170	19.10
	Not necessary to go to doctors for common illness	100	11.23
	Suggestions from Family/Friends	65	7.30
	Unavailability of health service	41	4.6
	Previous Prescription	38	4.26
	Others#	90	10.5

*#= couldn't manage time for doctor's consultation, couldn't afford fees, had left over medicines at home, Long delays, *=multiple responses*

The perception towards the self-medication were shown on Table VII from which overall perception score was calculated. The score ranges from 0-45 while the obtained minimum score was 5 and the maximum score was 30 The median score obtained was 19 and perception score was categorized as less than nineteen as a negative perception and more than nineteen as a positive perception towards self-medication practices.

The summary of perception towards self-medication practices were shown on Table VIII, which indicates that more than half of respondents (57.4%) had positive perception towards the self-medication practices while less than half (42.6%) had negative perception towards the self-medication practices.

Table VII: Responses of perception towards self-medication

Statements	Responses(frequency)				
	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
It is important to use a medicine at home as soon as when you get sick.	123 (32.5%)	140 (37.0%)	30 (7.9%)	73 (19.3%)	12 (3.2%)
Given a medicine at home is a good practice of preventing development of disease.	108 (28.6%)	149 (39.4%)	53 (14.0%)	56 (14.8%)	12 (3.2%)
Do you agree medicine can cases serious adverse effect up to life threating?	127 (33.6%)	169 (44.7%)	54 (14.3%)	24 (6.3%)	4 (1.1%)
Using medications at home is a way important step in keeping you healthy.	117 (27.5%)	197 (52.1%)	41 (10.8%)	34 (9.0%)	3 (0.8%)
If you do not complete the full course of antibiotic there is the chance of drug resistance.	66 (17.5%)	172 (45.5%)	113 (29.9%)	19 (5.0%)	8 (2.1%)
Using medications at home saves time and money rather than consulting a doctor for minor illness.	117 (31.0%)	137 (36.2%)	50 (13.2%)	63 (16.7%)	11 (2.9%)
Do you agree that it's okay to share prescription drugs for the same illness with others?	32 (8.5%)	75 (19.8%)	56 (14.8%)	127 (33.6%)	88 (23.3%)
Do you agree it's better to consult doctor than take medication for symptomatic relief?	104 (27.5%)	224 (59.3%)	27 (7.1%)	20 (5.3%)	3 (0.8%)

Table VIII: Summary of perception towards self-medication practices

Perception towards self-medication (Median score=19)	Frequency	Percentage
Positive Perception (≥19)	217	57.4%
Negative Perception (< 19)	161	42.6%

The association of respondents on practice of self-medication with the selected demographic variables were shown on Table IX, in which Age (p=0.096), Sex(p=0.554), Relationship status(p=0.247), Ethnicity(p=0.587) and Type of family(p=0.292) had no significant association with self-medication practices while educational status (p=0.033) had significant association with self-medication practices.

Table IX :Association of the selected demographic variables with the respondents practice of self-medication

Variables	Category	Practice of self-medication		P-value
		Yes (%)	No (%)	
Age (Completed years)	Less than 35 yrs	145(75.1)	48(24.9)	0.096
	More than 35 yrs	152(82.2)	33(17.8)	
Sex	Male	143(77.3)	42(22.7)	0.554
	Female	154(79.8)	39(20.2)	
Relationship Status	Unmarried	111(75.5)	36(24.5)	0.247
	Married	186(80.6)	45(19.5)	
Education Status	Illiterate	23(95.8)	1(4.2)	0.033*
	Literate	274(77.4)	80(22.6)	
Ethnicity	Brahman/Chettri	218(79.3)	57(20.7)	0.587
	Others[a]	79(76.7)	24(23.3)	
Type of family	Nuclear Family	226(79.9)	57(20.1)	0.292
	Joint Family	71(74.7)	24(25.3)	
Yearly income	Sufficient for less than 6 months	26(76.5)	8(23.5)	0.754
	Sufficient for greater than 6 months	271(78.8)	73(21.2)	

*a=janajati, dalit,Madhesi *= statistically significant*

DISCUSSION

In this study, out of total study participants 78.60% of respondents practice self-medication. The Study conducted in coastal south India showed similar result (78.6%) of practice of self-medication.[2] The study conducted in Pokhara valley showed 38.2% of respondents practiced some form of self-medication within last six months[9], while this study indicates that more than half of respondents (51.5%) practiced self-medication 1-2 times within last six months preceding the study. High prevalence of self-medication in this study might be due to the study was conducted within the pandemic period.

Female were more likely to practice self-medication than male which is in agreement with the studies conducted in Southwestern Nigeria[17], Ethopia[18]. The possible reason might be that female face more medical problems than male.

In this study, common sources of information for practicing self-medication were friends/family/relatives (34.2%) followed by past own experience (23.9%). However, study conducted in Mekelle, Ethopia showed that pharmacist followed by other health professionals were the source of information for practicing self-medication.[19] Similarly, the study conducted in Pakistan, advertisements/media were the common source of information for practicing the self-medications.[20] The difference in results may be due to different socio-cultural backgrounds residing in different region.

The most common illness for which respondents preferred self-medication were headache followed by cough and cold, fever, gastritis & acidity which is similar to the responses of the study conducted in Saudi Arabia[21], Karachi[22], Delhi[23]and Western Nepal[24].

In this study NSAIDs (32.9%) were commonly used medicines followed by cough suppressants, antibiotics were the commonly used medication during self-medication practices. The study conducted in Gondar university Ethiopia[7], Italy[25] showed similar results while study conducted in Nigeria showed that Vitamin-C, multivitamins were the commonly used medicines.[26]

Previous experience (23.59%) followed by minor illness (19.77%), quick-reliefs (19.10%) were the common reasons for practicing self-medication practices in this study. The study conducted in Ethopia were similar with the results obtained in this study.[27] Likewise, the study conducted in Addis Ababa community showed mildness of illness and previous knowledge about the drug influencing the practice of self-medication.[28]

In this study, 57.4% of the respondents had positive perception towards the self-medication practices which is comparable with the study conducted by Shah k. et al[3] which showed 47.4% had positive perception towards self-medication practices. The possible reason for higher prevalence might be due to variation in socio-cultural backgrounds.

Association study on practice of Self-Medication and selected demographical variables reveals that practice of self-medication was statistically significant with education status whereas statistically insignificant with gender, age, sex, relationship status, type of family, ethnicity and yearly income. Some similar findings were reported in the study among Nigerian population in which the practice of self-medication was statistically significant with the education status.[29]

CONCLUSION

The study focused to assess the perception and practices of self-medication in which prevalence of self-medication was found to be 78.6%. More than half of the residents were found to possess positive perception towards the self-medication practices. Higher prevalence is a critical problem because they are the ones who contribute to the population's overall health. This study also highlights the need for continuous research in the field of self-medication practice in community level to prevent irrational use of medicine.

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REFERENCES

1. Bennadi D. (2013). Self-medication: A current challenge. Journal of basic and clinical pharmacy, 5(1), 19–23.
2. 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), e72247.
3. Shah, K., Halder, S., & Haider, S. S. (2021). Assessment of knowledge, perception, and awareness about self-medication practices among university students in Nepal. Heliyon, 7(1), e05976.
4. Seam, M., Bhatta, R., Saha, B. L., Das, A., Hossain, M. M., Uddin, S., Karmakar, P., Choudhuri, M., & Sattar, M. M. (2018). Assessing the Perceptions and Practice of Self-Medication among Bangladeshi Undergraduate Pharmacy Students. Pharmacy (Basel, Switzerland), 6(1), 6.

5. Karmacharya, A., Uprety, B. N., Pathiyil, R. S., & Gyawali, S. (2018). Knowledge and practice of self-medication among undergraduate medical students. Journal of Lumbini Medical College, 6(1), 21-26.
6. Alshahrani, S. M., Alavudeen, S. S., Alakhali, K. M., Al-Worafi, Y. M., Bahamdan, A. K., & Vigneshwaran, E. (2019). Self-Medication Among King Khalid University Students, Saudi Arabia. Risk management and healthcare policy, 12, 243–249.
7. Abay, S. M., & Amelo, W. (2010). Assessment of self-medication practices among medical, pharmacy, and health science students in gondar university, ethiopia. Journal of young pharmacists : JYP, 2(3), 306–310.
8. Gualano, M. R., Bert, F., Passi, S., Stillo, M., Galis, V., Manzoli, L., & Siliquini, R. (2015). Use of self-medication among adolescents: a systematic review and meta-analysis. European journal of public health, 25(3), 444–450.
9. Paudel, S., & Aryal, B. (2020). Exploration of self-medication practice in Pokhara valley of Nepal. BMC public health, 20(1), 714.
10. Gaheyr D, Fredrik.(2019)Knowledge, perception, and practices of self-medication among households in children under five years in Borama district, Somaliland. UMU Journal of medicine. 22,1-5
11. Selvaraj, K., Kumar, S. G., & Ramalingam, A. (2014). Prevalence of self-medication practices and its associated factors in Urban Puducherry, India. Perspectives in clinical research, 5(1), 32–36.
12. Afridi, M. I., Rasool, G., Tabassum, R., Shaheen, M., Siddiqullah, & Shujauddin, M. (2015). Prevalence and pattern of self-medication in Karachi: A community survey. Pakistan journal of medical sciences, 31(5), 1241–1245.
13. Mudenda, S., Witika, B. A., Sadiq, M. J., Banda, M., Mfune, R. L., Daka, V., ... & Mufwambi, W. (2020). Self-medication and its consequences during & after the Coronavirus Disease 2019 (COVID-19) pandemic: a global health problem. European Journal of Environment and Public Health, 5(1).
14. Torres, N. F., Chibi, B.,Middleton, L. E., Solomon, V. P., & Mashamba-Thompson, T. P. (2019). Evidence of factors influencing self-medication with antibiotics in low and middle-income countries: a systematic scoping review. Public health, *168*, 92-101.
15. Poudyal, Aassmi & Nepal, Susmita. (2021). Self-medication practice and associated socio-demographic variables among adult in Morang district of Miklajung rural municipality. International Journal of Community Medicine And Public Health. 8. 570. 10.18203/2394-6040.ijcmph20210204.
16. Parajuli, S. B., Mishra, A., KC, H., Bhattarai, P., Karki, S., Pandit, R., & Dahal, P. (2019). Self-medication practices in surrounding communities of Birat Medical College and Teaching Hospital of Eastern Nepal. Journal of College of Medical Sciences-Nepal.
17. Osemene, K. P., & Lamikanra, A. (2012). A study of the prevalence of self-medication practice among university students in Southwestern Nigeria. Tropical Journal of Pharmaceutical Research, 11(4), 683-689.
18. Zeru, N., Fetene, D., Geberu, D. M., Melesse, A. W., & Atnafu, A. (2020). Self-medication practice and associated factors among University of Gondar College of Medicine and Health Sciences Students: a cross-sectional study. Patient preference and adherence, 14, 1779.
19. Eticha, T., & Mesfin, K. (2014). Self-medication practices in Mekelle, Ethiopia. PloS one, 9(5).

20. Aziz, M. M., Masood, I., Yousaf, M., Saleem, H., Ye, D., & Fang, Y. (2018). Pattern of medication Bhattarai, N., Basyal, D., & Bhattarai, N. (2014). Self medication practice among undergraduate pharmacy students in Kathmandu Valley, Nepal. International Journal of Pharma Sciences and Research, 5(11), 737-746.
21. Saeed, M. S., Alkhoshaiban, A. S., Al-Worafi, Y. M., & Long, C. M. (2014). Perception of self medication among university students in Saudi Arabia. Arch Pharm Pract. 2014; 5 (4): 149, 152.
22. Zafar, S. N., Syed, R., Waqar, S., Zubairi, A. J., Vaqar, T., Shaikh, M., ... & Saleem, S. (2008). Self-medication amongst university students of Karachi: prevalence, knowledge and attitudes. Journal of the Pakistan Medical Association, 58(4), 214.
23. Varun, K., & Abha, M. (2015). Prevalence and pattern of self-medication in an urban area of Delhi, India. Medical Journal of Dr. DY Patil University, 8(1).
24. Gyawali, S., Shankar, P. R., Poudel, P. P., & Saha, A. (2015). Knowledge, attitude and practice of self-medication among basic science undergraduate medical students in a medical school in western Nepal. Journal of clinical and diagnostic research: JCDR, 9(12), FC17.
25. Garofalo, L., Di Giuseppe, G., & Angelillo, I. F. (2015). Self-medication practices among parents in Italy. BioMed research international, 2015.
26. Wegbom, A. I., Edet, C. K., Raimi, O., Fagbamigbe, A. F., & Kiri, V. A. (2021). Self-Medication Practices and Associated Factors in the Prevention and/or Treatment of COVID-19 Virus: A Population-Based Survey in Nigeria. Frontiers in public health, 9, 606801.
27. Sisay, M., Mengistu, G., & Edessa, D. (2018). Epidemiology of self-medication in Ethiopia: a systematic review and meta-analysis of observational studies. BMC Pharmacology and Toxicology, 19(1), 1-12
28. Shafie, M., Eyasu, M., Muzeyin, K., Worku, Y., & Martín-Aragón, S. (2018). Prevalence and determinants of self-medication practice among selected households in Addis Ababa community. PloS one, 13(3), e0194122.
29. Afolabi, A. O. (2008). Factors influencing the pattern of self-medication in an adult Nigerian population. Annals of African medicine, 7(3), 120-127