

Original Research Article

Self-medication practice and associated socio-demographic variables among adult in Morang district of Miklajung rural municipality

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Received: 06 December 2020

Revised: 09 January 2021

Accepted: 13 January 2021

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ABSTRACT

Background: Self-medication is the selection and use of medicine to treat self-recognized illness. The study's main purpose was to evaluate the self-medication practice and its associated socio-demographic factors.

Methods: A cross-sectional study design was conducted in the Miklajung rural municipality of Morang district. A total of 408 households were selected by systematic random sampling. Participants from age 19-59 years old who had self-medicated for acute diseases in the last three months were included in the study. A semi-structured questionnaire was used as a tool to collect information regarding self-medication. All data extracted from questionnaires were entered and analyzed using SPSS version 20, for the association chi-square test was done.

Results: The overall prevalence of self-medication practice in last three months was 61.5%. The most common acute disease for self-medication was common cold 70.5%. More than 50 % of participants had used painkillers as medicine which was brought from the pharmacy, and the source of information on medicine was obtained from pharmacists. The main reason for self-medication practice was due to respondents perceiving illness as minor and cost of health services. The self-medication practice was found associated with occupation, marital status and wealth quintile with p value 0.01, 0.04 and 0.02 respectively.

Conclusions: The study revealed a high prevalence of self-medication practice among the adult. There was an association between self-medication practice and socio-demographic factors. People should be educated about the risk and benefit of self-medication practice.

Keywords: Acute illness, Associated factors, Nepal, Practice, Rural area, Self-medication

INTRODUCTION

Self-medication is a common health-related issue prevalent everywhere. According to WHO, self-medication is the selection and use of medicine by individuals to treat self-recognized illness, symptoms, and medication.¹ Self-medication is mostly prevalent in developing countries where universal access to health care is yet to be achieved.² Overall, the prevalence of self-medication was 42.64% in South East Asia Region, where the highest prevalence was found in Nepal.³ According to the prior studies, self-medication practice is done when people have minor disease, sufficient

knowledge of medicine, and to save time and cost.^{4,5} The people of a hilly area, tribal region, and other hard to reach places are dependent on self-medication practice for minor illness because of health worker shortages and other resources.² The self-medication practice is affected by the socio-demographic factor such as economic status where people purchases drugs without a prescription to save time and money.^{3,6,7}

Few studies have been conducted in Nepal regarding self-medication practice in general communities, but none study has been conducted in the Morang district yet. The majority of the survey is conducted among medical

students. The study aims to assess the self-medication practice and its associated socio-demographic variables in the Morang district.

METHODS

A descriptive cross-sectional study was conducted among 408 adults (age range from 19 to 59 years) ward number 9, Miklajung rural municipality of Morgan district, Nepal.

Sample Size calculation

The prevalence of self-medication practice is 59% from a study conducted in Nepal.³ The sample size was calculated by using the formula given below:

$$N = \frac{Z^2pq}{d^2}$$

= 371

Where,

p= prevalence= 59%= 0.59,

q= complement of prevalence= 1-0.59=0.41,

Z= 1.96 at 95% Confidence Interval,

d= maximum allowable error (5%) = 0.05

Including a non-response rate of 10%, the total sample size was 408.

The study population was the local people of ward no. 9 of Miklajung rural municipality household heads who had acute diseases in the last three months. In cases of absence of household anyone an adult family member of age 19 to 59 years old who is available at the time was included.

Sampling technique

Simple random sampling was done to select the ward number 9. Out of total of 878 households, 408 study samples were collected in January, 2019. Systematic

random sampling was used where k value was taken using the sample frame of the Miklajung rural municipality.

$$K^{th} \text{ item} = 878/408 = 2.1 \sim 2$$

Data collection tools were developed according to the objectives of study. The semi-structured questionnaire was used to collect the data. The questionnaire consisted of socio-demographic characteristics, diseases condition factors, and reasons for self-medication practice. To maintain the study’s reliability pretesting was conducted in Mahalaxmi municipality ward number 6 from where 40 household was taken, which was the 10 percent of sample size.

Statistical

Data was collected using a semi-structured questionnaire with face to face interview technique. After data collection, all the data were entered into SPSS version 16 for further analysis. Firstly, univariate analysis was done and presented the data using frequency and percentage. The bivariate analysis was done by the Chi-square test to show an association of self-medication practices with socio-demographics factors. The value of p less than 0.5 were considered to be significantly associated with 95% CI.

RESULTS

Out of 408 sample, highest numbers of the respondents were of age 30-39 years old by 136 (33.3%). Similarly, 267 (65.4%) respondents were female. The highest educational attainment of respondents was the secondary level attained at 193 (47.3%). More than half of the respondents belong to the Hindu religion at (78.4%). About 357 (87.5%) of respondents were married. The majority of the respondents was from Brahmin/Chhetri 127 (31.1%) followed by the Newar 113 (27.7%), Janajati 72 (17.6%), Dalit 56 (13.7%), and Terai/Madhese 40 (9.8%). Most of the respondents were involved in the business by 40.9%. The majority of respondents were from nuclear families by 218 (53.4%). Similarly, nearly half of the respondents were from poor wealth quintiles by 201 (49.3%) (Table 1).

Table 1: Socio-demographic characteristics of respondents (n=408).

Variables	Frequency	Percentage
Age (in years)		
19-29	84	20.6
30-39	136	33.3
40-49	128	31.4
50-59	60	14.7
Gender		
Male	141	34.6
Female	267	65.4

Continued.

Variables	Frequency	Percentage
Education status		
Illiterate	74	18.1
Primary level	91	22.3
Secondary level	193	47.3
Graduate and so above	50	12.3
Religion		
Hindu	320	78.4
Buddhist	42	10.3
Kirat	36	8.8
Christain	10	2.5
Marital status		
Unmarried	26	6.4
Married	357	87.5
Widow	16	3.9
Divorced	9	2.2
Occupation		
Agriculture	60	14.7
Business	167	40.9
Private job	26	6.4
Government job	18	4.4
Student	8	2.0
Others	129	31.6
Ethnicity		
Brahmin/Chhetri	127	31.1
Terai/Madhesi	40	9.8
Dalit	56	13.7
Newar	113	27.7
Janajati	72	17.6
Wealth quintile		
Very rich	10	2.5
Rich	22	5.4
Medium	139	34.1
Poor	201	49.3
Very poor	36	8.8

Most of the respondents suffered from acute diseases in last three month which are common cold 70.5% followed by ache and pain 64.5%, gastritis 34.8%, fever 15.2%, skin-related diseases 7.2% and diarrhea/vomiting 4.0% (Table 2).

Table 2: Type of acute diseases in last three months (n=408).

Type of acute diseases	Number	Percent
Common cold/cough	282	70.5
Fever	61	15.2
Diarrhea/vomiting	16	4.0
Aches and pain	258	64.5
Gastritis	139	34.8
Skin related disease (wound and allergy)	29	7.2

Out of 408 participants, 247 had practiced self-medication in three months before the study. The prevalence of self-medication practice was 60.5% (Table 3).

Table 3: Prevalence of self-medication (n=408).

Prevalence of Self-medication	Frequency	Percent
Self-medication	247	60.5
No self-medication	161	39.5

The most common medicines for self-medication practice were painkillers (ibuprofen, paracetamol/NIMS) 73.7%, cough/cold remedies 49.4%, and gastrointestinal tract medicine (antacid) 30.4%. While the medicine such as antibiotics, medicine for skin such as Agenais and other were used less commonly. The majority of respondents had knowledge of medicine for self-medication practice

from pharmacists 85.4%, followed by health workers 43.4%, friend/family member/neighbor 34%, and media 6.5%. Similarly, pharmacy represented the highest 99.2 as a source of medicine for self-medication practice (Table 4).

Table 4: Disease condition for self-medication practice (n=247).

Variables	Frequency	Percent
Medicine for diseases*		
Cough/cold remedies	122	49.4
Antibiotics	30	12.1
Gastro intestinal tract medicine (Antacid)	75	30.4
Medicine for skin (products like Agensia)	20	8.1
Painkiller like (ibuprofen, Paracetamol/NIMS)	182	73.7
Any other medicine taken to relief the health issues	5	2.0
Source of knowledge for medicine*		
Pharmacists	211	85.4
Health worker	107	43.3
Friends/neighbour/family member	84	34.0
Media (TV, radio, internet, books)	16	6.5
Other source of information to use self-medication	9	3.6
Source of medicine*		
Medicine from pharmacy	245	99.2
From neighbour friends and relatives	60	24.3
From leftover medicines from previous prescription	32	13.0

*It is multiple responses set.

Table 5: Reasons for self-medication practice (n=247).

Variables	Frequency	Percent
Reasons for self-medication practice*		
Due to behaviour of health workers	16	6.5
Due to the test result	20	8.1
Due to the distance of health facilities	50	20.2
Due to the cost of health care	165	66.8
Perceived minor illness	229	92.7
Had taken medicine from previous prescription	229	56.1
Due to lack of time	155	38.0
Health professional present in house	22	5.4
Medicine store at home	135	33.1

*It is multiple responses set.

The most frequent reasons for self-medication practice was respondent perceiving illness as minor 92.7%, due to the cost of health care 66.8% previous experience 56.1%,

lack of time 38%, stored medicine at home 33.1%, due to the distance of health facilities 20.2%, due to the test result 8.15%, due to the behavior of health worker 6.5% and having health professional at home 5.4% (Table 5).

Table 6: Association of socio-demographic variable with self-medication practice.

Variables	Self-medication practice		P value
	Yes (%)	No (%)	
Marital status			
Unmarried	21 (8.5)	5 (3.1)	0.04*
Married	207 (83.8)	150 (93.2)	
Widow	12 (4.9)	4 (2.5)	
Divorced	7 (2.8)	2 (1.2)	
Occupation			
Agriculture	32 (13.0)	28 (17.4)	0.01*
Business	100 (40.5)	67 (41.6)	
Private job	24 (9.7)	2 (1.2)	
Government job	12 (4.9)	6 (3.7)	
Student	6 (2.4)	2 (1.2)	
Others	73 (29.6)	56 (34.8)	
Wealth quintile			
Wealthiest	5(2.0)	5(3.1)	0.02*
Fourth	16(6.5)	6(3.7)	
Middle	76(30.8)	63(39.1)	
Second	120(48.6)	81(50.3)	
Poorest	30(12.1)	6(3.7)	

*p value is <0.05 in confidence interval 95% which mean it's associated with self-medication

The marital status was associated with self-medication practice with p value was 0.04. Similarly, occupation and wealth quintile were associated with self-medication with p value 0.01 and 0.02, respectively (Table 6).

DISCUSSION

The study conducted among the adult of Morang district shows 60.5% prevalence of self-medication practice. A similar study conducted in western Nepal shows that the prevalence of self-medication practice was 59% in a six-month recall period.³ The prevalence of self-medication practice in other countries have similar result which includes Tamil Nadu of India 51.7%, Pakistan 61.20%, India 55%, and Italy 69%.⁸⁻¹⁰ On the contrary, the studies conducted in Brazil 16%, Northeast Ethiopia 35.9% and China 45.4% had a low prevalence than this study.^{2,5,11,12} The prevalence of self-medication practice is different among the countries may be because of the diverse demographic characteristics of respondents and different recall period.

In this study, self-medication practice was done by the respondents who had acute illness such as common cold 70.5%, aches and pain 60.5%, and gastritis 34.8% in last three months. In 2002, a similar study conducted in western Nepal showed headache, fever, cough/cold are

the most common conditions for self-medication practice.³ Likewise, the common cold was the main health issue for self-medication practice in China and India but there are other common illnesses such as ache and pain, and fever.^{11,12} Although, a study conducted in Nigeria has different result where the common health illnesses for self-medication practice is urinary tract infection.¹³

The results of this study represents that conventional medicine for self-medication practice was painkillers with 73.7%. The previous studies conducted in Nigeria, Pakistan, India, and the United Kingdom shows that paracetamol was the most common drug used for self-medication practice.^{2,5,8,11,14,15} In Ethiopia, there were other drugs that were common for self-medication practice, such as pain relievers (paracetamol), multivitamins, and cough mixtures.⁵ In general, the reason behind selecting medicine for self-medication practice is due to the confidence in the sign and symptoms or previous experience with the illness.

The primary source of information for medication is through pharmacist 85.4%. A study conducted in Tamil Nadu India reported that 58% of pharmacists provide information of medicine to a participant for self-medication practice.¹¹ In contrast to the findings, the research done in Pakistan shows that source of information on self-medication practice are own initiative of respondents to search information on medicine 60.8%, followed by family and friend 22.5%, and medical profession 12.4%.⁸ The difference in the finding might be due to weak legislation system for pharmacists.

The finding of the study shows that medicine for self-medication practice was brought from the pharmacy 99.2%. This finding compiles with the results of a prior study conducted in Malaysia, Pakistan, India, and the United Arab Emirates.^{8,11,16,17} It might be due to a large number of retail pharmacies and easily accessible over the medicine for the public people.

In this study, the top three reasons for the self-medication practice were perceived as minor illness 92%, due to the health care cost 66.8%, and experience with a similar disease. The study conducted in Nepal shows the main reason for the self-medication practice was a mild illness, previous experience of treating a related disease, and non-availability of health personnel.³ Some studies conducted in China, Brazil and Pakistan has a similar result where the main reasons for self-medication practice is due to minor illness.^{8,12,18} On the contrary, the studies have shown different leading reasons for self-medication practice which are financial constraint, easy availability of OTC drugs, and adequate knowledge on the illness.^{11,19-21} The reasons were similar for self-medication practice, it's may be due to the common socio-demographic characteristics, geographic area, high cost of health services, long distance to medical facilities, and easy availability of drugs.

In this study, there was an association between self-medication practice and socio-demographic variable such as occupation, marital status, and wealth quintile. A similar result was reported in South India, where self-medication practice was associated with marital status, occupation, and social-economic.²² In contrast to the finding, the study conducted in Addis Ababa community shows the association was between self-medication practice and monthly income.¹⁸ The self-medication is practice may be due to the high cost of health care and maybe the busy schedule of the people.

The study's limitation is recalls bias, where some respondents might not have revealed the truth or forgot to mention during the data collection.

CONCLUSION

The self-medication practice was high among the adult of the Miklajung rural municipality. People are commonly practicing self-medication when they perceived the illness as minor and their primary source for information about medicine was from pharmacist and pharmacy. Self-medication practice is associated with the socio-demographic factors such as marital status, occupation, and wealth quintile. To reduce the practice of self-medication, the government needs to prioritize the acute illness and strength the law regarding the sale and use of the drug. People need to be educated on the risk and benefit of self-medication. The Government of Nepal should focus on the coverage of health insurance and control increasing medical expenses. More studies need to be conducted to identify whether self-medication practice has a negative or positive impact on health.

ACKNOWLEDGEMENTS

We would like to acknowledge all the participants.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by Nepal Health Research Council

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Cite this article as: 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;8:570-5.