ORIGINAL RESEARCH ARTICLE

OVER THE COUNTER DRUGS: AWARENESS AND PRACTICE AMONG THE ADULTS OF MUSHAHAR COMMUNITY

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ABSTRACT

Background: Over-the-counter drugs are the medicines that are sold without prescription of medical person. Though over-the-counter drugs are believed to be relatively safe, their inappropriate use could have serious implications. The aim of the study was to assess the awareness and practice on over-the-counter drugs among the Mushahar adults of Nawalparasi district, Nepal.

Methods: A descriptive cross-sectional study was conducted among 102 respondents. Non-probability purposive sampling technique was used to select the sample using semi-structured questionnaire. Data was collected through face to face exit interview. Descriptive statistics and inferential statistics were used for analyzing the data.

Results: Majority (91.2%) of the respondents knew that over-the-counter drugs are the unprescribed drugs by medical person and majority (95.1%) of the respondents used in case of fever and 83.3% of the respondents used because of easy accessibility More than half (52.9%) of the respondents had practiced over-the-counter drugs at least once within the first six months of data collection. The most preferred over-the-counter drugs were analgesics i.e 44.4%. On analyzing, there found a strong association between awareness level on demographic variables of educational status and occupation with the consumption of over-the-counter drugs as p value was <0.05.

Conclusions: Study revealed that people use over-the-counter drugs because of easily availability and the most commonly used drugs were analgesics. So, different awareness programmes to the community and timely monitoring and intervention from the government is needed to prevent the rampant of over the counter drugs.

INTRODUCTION

Over the counter (OTC) drugs are defined as drugs that are safe and effective for use by the general public without seeking treatment by a health professional.[1] OTC medicines treat a variety of illnesses and their symptoms including pain, coughs and colds, diarrhea, constipation, acne, and others.[2] For a range of illnesses, 8 in 10 consumers use OTC medicines to relieve their symptoms without having to see a healthcare professional.[3] Research showed that 81 percent of adults use OTC medicines as a first response to minor ailments.[4]

The World Health Organization (WHO) pointed out that responsible self-medication can help prevent and treat diseases that do not require medical consultation and provides a cheaper alternative for treating common illnesses.[5] Every day there is some form of practice of OTC drugs for self-care of health.[6] The over use, under use or misuse of medications leads to the waste of resources and results in negative health effects.[7] In Nepal, access to health care services is difficult and/or expensive. So, self-medication may provide an easier and cost-effective option.[8]

In developing countries like Nepal, there is a poor drug monitoring system and it is quite easy to buy any drug with or without

prescription. Lack of exposure to medical information, costly health services, poverty, illiteracy, easily availability and weak laws and regulations seems to be one of the important factors for the easy consumption of OTC drugs by the community.

The aim of the study was to assess the awareness and practice on OTC Drugs among Adults residing in Mushahar community.

METHODS

A descriptive cross-sectional design was used to find out the awareness and practice on over the counter drugs in the Mushahar Community (Sibir Tol) of Madhyabindu-2 Municipality, Nawalparasi district, Nepal. The inclusion criteria was that the participating individuals should be above 20 years. The total house hold in Mushahar community was 117 and total population was approximately 464. Among them, age of 20 and above was approximately 300.

Sample size was calculated by using formula:
Sample size (n) = $N/1+Nd^2$
Where, N= Actual population size, d=desirable or permissible error. We have, N=300, d=0.08. On calculation, the sample size was 102.

Non-probability purposive sampling technique was used to select the sample size of 102. Semi-structured interview schedule was used to collect the data on socio-demographic characteristics, awareness and practice on OTC drugs. Awareness questionnaire explores on meaning, conditions, effectiveness, drug dependency of OTC drugs and practice portion included questionnaire to explore on use of OTC drugs in the last 6 months, commonly used OTC drugs, its side effects, place of buying OTC drugs, checked the expiry date before using drugs and reasons of using drugs OTC drugs.

Questions with one possible answer was scored one point and multiple responses with each individual was scored one point. To find the association with other variables, awareness and practice were categorized into two groups i.e. below and above mean score. Validity of the instrument was established by consulting peer, advisor and with Research Committee members. Pre-test was conducted in 10% of the total sample in similar setting i.e. Madhyabindu Municipality-3, Bramasthan. After pre-test, necessary modifications were done in the final version of the questionnaire for the post test. Pretest data were not included in the final data analysis.

Data was collected after getting approval from Institutional Review Board (IRC) of NAIHS and written permission was taken from Madhyabindu-2 for data collection.

Adults who had used OTC drugs at least once within the last 6 months of data collection and those who were willing to participate in the study were included. Participants less than twenty years were not included in this study. Before data collection, the objectives of the study were explained and informed verbal consent was taken. Face to face exit – interviews were done using semi-structured questionnaire. It took about 25-30 minutes to complete the interview session. Data was collected from 2074-02-30 to 2075-03-25 for a period of 25 days.

After data collection, it was checked and reviewed for completeness and accuracy. Then, it was coded and entered into Statistical Package for Social Sciences (SPSS) version 20. Descriptive statistics i.e frequency, percentage, mean and standard deviation were used to describe the findings. Inferential statistics i.e., chi-square test was used to determine the association between selected variables with the awareness and practice on OTC drugs. The analyzed data are presented in tables and graphs.

Mean score was calculated and categorized as:

For level of Awareness:

Above mean score = Adequate awareness

Below mean score = Inadequate awareness[14]

For level of Practice:

Above mean score = Good practice

Below mean score = Poor practice[14]

During the study, privacy was maintained by interviewing them in separate place. Confidentiality maintained by reassuring that research findings will be used only for the study purpose. Anonymity was maintained by using the code number instead of name of the respondents.

RESULTS

Table 1: Socio-Demographic Characteristics of the Respondents (n=102)

Socio-demographic variables	Frequency (%)
Age (years)	
20-29	30(29.4%)
30-39	36(35.3%)
40-49	8 (7.8%)
50 and above	28(27.5%)
Gender	
Male	52(51.0%)
Female	50(49.0%)
Marital status	
Married	74(72.5%)
Unmarried	12(11.8%)
Separated	5(4.9%)
Widow	11(10.8)
Education	
Illiterate	45(44.1%)
Literate	57(55.9%)
If literate education level (n=57)	
Primary	27(47.4%)
Secondary	17(29.4%)
Higher secondary	10(17.5%)
Bachelor and above	3(5.3%)
Occupation	
House Manager	30(29.45)
Business	15(14.7%)
Agriculture	47(46.1%)
Service holder	10(9.8%)
Monthly income (NRs.)	
<10,000	31(30.4%)
10,000 - 20,000	43(42.2%)
> 20,000	28(27.5%)
Type of Family	
Nuclear	24(23.5%)
Joint	52(51.0%)
Extended	26(25.5%)

Mean age 38.32, SD ±12.96

Table 1 showed that more than one fourth (35.3%) of the respondents belonged to age group 30 to 39 years. Majority (51%) of the respondents were male and nearly one third (72.5%) were married. More than half (55.9%) were literate and among literate nearly half (47.4%) were graduated up to

primary level. 46.1% of the respondents were involved in agriculture based on occupation and 42.2% of the respondents had monthly income of 10 to 20 thousand and 51.0% of the respondents were from joint family.

Table 2: Awareness on Over the counter drugs(n=102)

Characteristics	Frequency (%)
OTC drugs means	
Drugs that are sold without prescription of medical person #	93(91.2%)
Drugs that are sold by FCHVs	8(7.8%)
Drugs that are sold with prescription of medical person	1(1.0%)
In which condition OTC drugs are used *	
Fever	97(95.1%)
Diarrhea	75(73.5%)
Common cold or cough	51(50.0%)
Headache/Stomach ache	38(37.3%)
Skin diseases	12(11.8%)
Effectiveness of OTC Drugs	
Yes	37(36.3%)
No	65(63.7%)
Drug dependency of OTC Drugs	
Yes	38(37.3%)
No	64(62.7%)

Multiple responses (Open ended questions)
 # Correct answer

Table 2 revealed that almost all (91.2%) of the respondents knew the meaning of OTC drugs and 95.1% were aware of using OTC drugs in the condition of fever. More than half of the respondents said that OTC drugs won't be effective and there won't be drug dependency on using OTC drugs i.e (63.7%) and (62.7%) respectively.
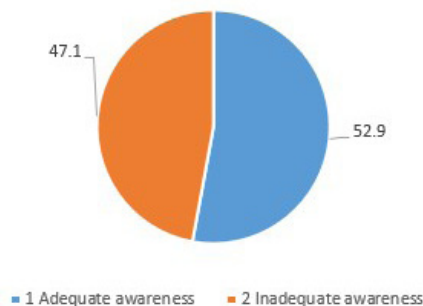

Figure 1: Awareness on OCT drugs

Above figure showed that more than half (52.9%) of the respondents had adequate awareness on OTC drugs.

Table 3 showed that majority (52.9%) of the respondents were using OTC drugs. Highest proportion (44.4%) of the respondents used analgesic as OTC drugs. More than half (65.2%) of the respondents said nausea can be seen as side effect of using OTC drugs. Similarly, 43.5% of the respondents said medication intake can be stopped and health personnel should be visited if side effects seen while using OTC drugs and cent percent (100%) of the respondents bought OTC drugs from any medical shop. Most (87%) of the respondents didn't check expiry date before using the drugs.

Table 3: Practice on Over-the-Counter Drugs(n=54)

Variables	Frequency (%)
OTC drugs used in this last 6 months (n=102)	
Yes	54(52.9%)
No	48(47.1%)
Commonly used OTC drugs*(n=54)	
Analgesic	24(44.4%)
Anti-diarrhoea	21(38.9%)
Antipyretic	18(33.3%)
Anti-cold	6(11.1%)
Anti-fungal	5(9.3%)
Common side effects*	
Nausea	15(65.2%)
Vomiting	12(52.2%)
Headache	6(26.1%)
Diarrhea	1(4.3%)
If side effects are seen, what you should do	
Stop medicine intake immediately and visit health personnel #	10(43.5%)
Stop taking medicine until side effects subside	8(34.8%)
Immediately stop to take medicine	4(17.4%)
Start to take low dose	1(4.3%)
Place of buying OTC drugs(n=54)	
Any medical shop #	54(100%)
Checked the expiry date before using(n=54)	
Yes	7(13.0%)
No	47(87.0%)

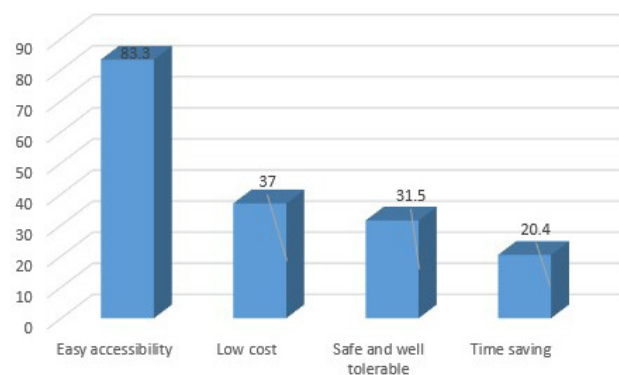*Multiple responses (Open Ended question), # Correct answer*

Figure 2: Reasons of using OTC drugs

Table 4: Level of Practice on OTC Drugs

Variables	Frequency (%)
Poor practice	32(59.3%)
Good practice	22(40.7%)
Total	54

Mean score 6.59, SD ±1.40
Above mean: Good practice
Below mean: Poor practice

Table 5 showed that there is a strong association between education status and occupation with awareness level of the respondents.

Table 5: Association of Socio-Demographic Variables with Awareness Level on OTC Drugs

Sample Characteristics	Awareness level				χ^2	p-value
	Adequate		Inadequate			
	F	%	F	%		
Age (Years)						
≤ 40	38	57.6	28	42.4		
≥40	16	44.4	20	55.6	1.612	0.204
Gender						
Male	31	59.6	21	40.4		
Female	23	46	27	54	1.897	0.168
Marital status						
Married	42	56.8	32	43.2		
Others	12	42.9	16	57.1	1.575	0.209
Education						
Illiterate	17	37.8	28	62.2		
Literate	37	64.9	20	35.1	7.432	**0.006**
Occupation						
House Manager	9	30	21	70		
Working	45	62.5	27	37.5	8.978	**0.003**
Type of Family						
Nuclear	11	45.8	13	54.8		
Joint and Extended	43	55.1	35	44.9	0.636	0.425

(P is significant at ≤ 0.05 level of significant)

Table 6: Association of Socio-demographic variables with Practice Level on OTC Drugs

Sample characteristics	Practice level				χ^2	p-value
	Poor		Good			
	f	%	f	%		
Age (Years)						
≤ 40	21	56.8	16	43.2		
≥40	11	64.7	6	35.3	0.305	0.581
Gender						
Male	17	58.6	12	41.4	0.011	0.918
Female	15	60	10	40		
Marital status						
Married	24	61.5	15	38.5	0.302	0.583
Others	8	53.3	7	46.7		
Education						
Illiterate	15	68.2	7	31.8	1.224	0.269
Literate	17	53.1	15	46.9		
Occupation						
House Manager	8	57.1	6	42.9	0.035	0.851
Working	24	60	16	40		
Monthly income (NRs)						
<20,000	22	61.1	14	38.9	0.153	0.659
> 20,000	10	55.6	8	44.4		
Type of family						
Nuclear	11	73.3	4	26.7	1. 704	0.192
Joint and Extended	21	53.8	18	46.2		

Table 6 described that there was no association found between socio-demographic variables with practice level on over the counter drugs.

Table 7: Association between Awareness level and Practice level on OTC Drugs

Awareness level	Practice level				Total	χ^2	p-value
	Poor		Good				
	f	%	F	%			
Inadequate	16	57.1	12	42.9	28	0.108	0.743
Adequate	16	61.5	10	38.5	26		

(p ≤ 0.05 level of significant)

Table 7 illustrated that there found no statistically significant association between awareness level and practice level on OTC drugs as p>0.05.

DISCUSSION

This study enrolled 102 respondents to assess the awareness and practice on OTC drugs using semi-structured questionnaire in Mushahar community.

On demographic findings, 35.3% of the respondents belongs to age group 30 to 39 years with male 51% among which 72.5% were married. Regarding education, 55.9% were literate in Mushahar community with 47.4% were graduated up to primary level. Concerning occupation,46.1% involved in agriculture and 42.2% had monthly income of 10 to 20 thousand. Half of the respondents 51.0% belonged to joint family.

The present study reflected that 91.2% of the respondents knew the meaning of OTC drugs which is similar to the study conducted in Kaski, Pokhara which showed 76.4% aware on OTC drugs[9]. Respondents (95.1%) mentioned that OTC drugs can be used in Fever. Majority (62.7%) of the respondents said there won't be drug dependency on using OTC drugs. Recall bias may be the major drawback as the respondents had to respond the information that they had used in the last six months. This study demonstrates that more than half (52.9%) of the respondents had adequate awareness on OTC drugs. Public still needs to be more aware about OTC drugs for its effective use and less resistance to the body.

Regarding practice, more than half (52.9%) of the respondents were using OTC drugs. Another study done in Nigeria[11] admitted highest percent had practice OTC drugs i.e. 82%. Nearly, 44.5% of the respondents used analgesic as OTC drugs but contrast finding can be seen in another study done different setting among students of CMCTH (75.8%)[10] in Nigeria (87.7%)[11] and the study done in Kaski, Pokhara (82.7%).[9] Majority (65.2%) of the respondents said nausea can be seen as side effect of using OTC drugs. Similarly, least number of the respondents i. e 34.8% of the respondents said medication intake can be stopped and health personnel should be visited if side effects seen while using OTC drugs. All the respondents bought OTC drugs from any medical shop as there is no any rule that medicines can-

not be sold without medical prescription which is similar to the findings (95.4%) studied in Kaski, Pokhara.[9] Most (87%) of the respondents didn't check expiry date before using OTC drugs which seems to be dangerous and effect in the health of the people. This may be because they do not have idea about the importance of date printed in the cover of the drugs. Because of easy accessibility, majority (83.3%) of the respondents used OTC drugs which is inconsistent (34%) in the study done in Asmara, Eritera[12] and in the study done in Malaysia where 51% was found using OTC drugs.[13]

On analyzing the socio-demographic variables with the awareness level, significant association was found between education status and occupation as p <0.05 but there found no significant association was found between socio-demographic variables with practice level on over the counter drug. Similarly, on analyzing the knowledge with the practice, there found no significant association which is inconsistent to the study conducted in Kaski, Pokhara[9] where the study showed there was significance association between knowledge and practice on over the counter drugs.

Semi-structured questionnaire related to awareness and practice was used for data collection but the actual practice of the respondents was not observed. So, regarding practice, researcher may not get the actual information. Direct interview technique does not seem to be comfortable as the respondents may mask the relevant information.

The study was limited to only in a specific community, therefore, the findings of the study cannot be generalized. Research can be done by providing some interventions like raising awareness among adult population about the possible harmful effects that may arise from inappropriate medicines use and about the way of safer self-medication practices. A comparative study on awareness and practice on OTC drugs among adults can be done in different study and in different setting. Further research on practice of OTC drugs through observation can be done.

CONCLUSION

Self-medication is widely prevalent among the Nepalese population. Study found a high awareness on OTC drugs. It has been practiced because of easily accessibility and cost effective without consulting the medical personnel. Self-medication practices leads to drugs tolerance, dependence and also difficult to diagnose the actual underlying disease. So, awareness programmes through different mass/media on OTC drugs is important as it directly effects on the health of the public.

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