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Original Research Article

Knowledge and practice on over-the-counter drugs among adults of age group 20 and above residing in Chapapani-12, Pokhara, Kaski, Nepal

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ABSTRACT

Background: The incidence of usage of over-the-counter drugs is drastically increasing day by day. Over-the-counter (OTC) drugs are medicines sold directly to consumer without a prescription from health care personnel. In many countries, OTC drugs are selected by a regulatory agency to ensure that they are safe and effective when used without physician's care. Taking OTC medicines still has risk. Some interact with other medicines, supplements, food and drinks and some causes problem for people with certain medical conditions.
Methods: A descriptive cross sectional was conducted from 1st February - 15th August 2016 among 110 among adults of age group 20 and above residing in Chapapani-12, Pokhara. A pre-tested structured questionnaire were used and data were analyzed using Statistical Package for Social Science (SPSS) for windows version 18.0. Frequency, percentage, chi-square and correlation were performed.
Results: Nearly 1/3rd of the respondents (33.6%) were of age group 20-29 years and more than half (60.9%) were female. More than half of the respondents (54%) had good knowledge and less than half (47%) had good practice of OTC. There was significant association of knowledge with age, marital status, education and monthly family income. There was significant association of practice with education of respondents. There was weak positive correlation between knowledge and practice (r =0.211).
Conclusions: This showed that the knowledge hadn't been fully practiced into action by the community people and still they are lacking the concept of over-the-counter drugs and its safe use in daily living.

Keywords: Adults, Knowledge, Practice, Pharmacy, Prescription, Over-the-counter drugs

INTRODUCTION

Globally, self-medication has been reported as being on the rise. People around the world tend to treat the disease, almost 50% either wait for the problem to run its course or use a home remedy. About 25% visit doctor or use prescription medicine previously obtained for the same condition. The remaining 25% turn to the OTC medicines.[1] The global increase in the consumption of medications needs for studying medication knowledge and behaviors.[2] Medication knowledge assessment is used to assess a person's knowledge and ability to read and understand information necessary for appropriate medication use.[3]

The 2008 National Social Life, Health, and Aging Project examined the prevalence of both OTC and prescription medication use among adults aged 57 to 85 years old in Washington, DC. Results of the survey showed that 81% of the respondents took at least one prescription medication (29% took five or more prescription medications concurrently); 42% used at least one OTC

medication; and 49% used a dietary supplement. Of those taking a prescription medication, 46% also took an OTC medication.[4]

In many countries, OTC drugs are selected by a regulatory agency to ensure that they are safe and effective when used without physician's care. Taking over-the-counter medicines still has risk. Some interact with other medicines, supplements, food and drinks and some causes problem for people with certain medical conditions.[5]

In a recent New Mexico study of deaths from unintentional drug poisoning, 0.9% were from OTC medications.[6] A study in California showed that 8.5% admitted to abusing prescription drugs and 16.2% admitted to abusing OTC medications, mostly ephedrine and other stimulants.[7]

Due to the hilly terrain in Nepal, the poor socioeconomic status, the high cost of modern medicines and non-availability of doctors in rural areas, difficulties arise in accessing modern healthcare. Drug retail shops frequently serve as the public's first point of contact with the health care system from where over-the-counter drugs are much more easy to purchase.[8]

OTC drugs have drug interactions with prescriptions and other drugs, it can cause various adverse reactions and even lead to death as well. More medicines doesn't necessarily mean better. However, there is no adequate study regarding OTC in Nepal. So, this study aims to assess the knowledge and practice on OTC drug among adults.

METHODS

This is a community based cross-sectional study conducted in Chapapani-12, Pokhara between 1st February to 15th August 2016. The sample of this study consists of 110 adults of age group 20 and above using non-probability convenient sampling method. Adults who are willing to participate and available at the time of data collection were included in the study.

The instruments were developed after review of literature and consultation with guide and experts. Instruments were divided into 3 parts: Tool I: Socio-demographic proforma, Tool II: Knowledge questionnaire, Tool III: Practice questionnaire.

The pre-testing was conducted in adults of age group 20 and above residing in Phulbari-11, Pokhara, Kaski, Nepal from 25th May to 27th May 2016 among 11 adults. The data was collected through questionnaire by interview technique and recorded systematically to facilitate computer entry and data analysis.

Data analysis was planned based on the objectives of the study. Data was compiled, edited, coded, classified and tabulated. It was done to reduce, organize and give meaning to the data by through descriptive and inferential statistics using SPSS package 18 version. In descriptive statistics frequency and percentage, in inferential statistics, chi square test was used to determine the association of knowledge and practice with selected demographic variables and Karl Pearson correlation test was used to correlate the knowledge and practice score.

Approval to conduct the study was taken from municipality office to perform study in the concerned community. Individual consent was taken from the respondents after explaining the purpose of the study prior to the data collection. Privacy and confidentiality of all respondents was maintained.

RESULTS

Data was collected by interviewing 110 adults of age group 20 and above residing in Chapapani-12, Pokhara.

Nearly 1/3rd of the respondents (33.6%) were of age group 20-29 years and more than half (60.9%) were female. Less than half (47.3%) of the respondents were Gurung and majority of them (84.5%) were Hindu. Almost 3/4th (74.6%) of the respondents were married. Less than half of the respondents (42.7%) have educational status of higher level and above as given in Table 1.

The current study shows that nearly about 1/3rd of them (30.9%) were housewife and nearly half of them (45.5%) have monthly family income within range of NRs. 10,000-20,000. About 60.9% of the respondents live in joint family and about 2/3rd of them (66.4%) took <15mins to reach the nearest pharmacy by foot. Nearly 60.9% had last purchased medicine without prescription 6 months before as shown in Table 1.

More than 3/4 of respondents were aware about OTC drugs. But only 1/10th of them know about caution taken before providing medicine to pregnancy and lactation. Minority (12%) respondents were aware about the use of OTC drugs for treating minor illness and injuriesas seen in Table 2.

Only 27% of respondent consult with the doctor before purchasing OTC drugs. Majority of the respondent (94.5%) purchase the medicine from pharmacy. Forty six percentage (46%) of the respondents replied that reason of consuming OTC drugs is time saving as they have to wait for long time for doctor as in Table 3.

Less than half of the respondents (54%) had good knowledge, 43% had average knowledge and 3% had poor knowledge on over-the-counter drugs as depicted in Figure 1. More than half of the respondents 47% had good practice on over-the-counter drugs as shown in Figure 2.

Table 1: Socio-demographic characteristics of respondents (n=110).

S.No.	Sample characteristics	Frequency (f)	Percentage (%)
1.	**Age (in years)**		
	20-29	37	33.6
	30-39	24	21.8
	40-49	27	24.5
	50 & above	22	20.0
2.	**Gender**		
	Male	43	39.1
	Female	67	60.9
3.	**Caste**		
	Brahmin/Chhetri	49	44.5
	Gurung	52	47.3
	Others	9	8.2
4.	**Religion**		
	Hindu	93	84.5
	Buddhist	17	15.5
5.	**Marital status**		
	Married	82	74.6
	Unmarried	25	22.7
	Others(Separated, Widow)	3	2.7
6.	**Education**		
	Illiterate	8	7.3
	Primary level	22	20.0
	Secondary level	33	30.0
	Higher secondary and above	47	42.7
7.	**Occupation**		
	Housewife	34	30.9
	Service	29	26.4
	Business	17	15.5
	Agriculture	16	14.5
	Others	14	12.7
8.	Monthly family income(NRs.)		
	<10,000	24	21.8
	10,000-20,000	50	45.5
	> 20,000	36	32.7
9.	**Type of family**		
	Nuclear	43	39.1
	Joint	67	60.9
10.	**Distance to reach the nearest pharmacy**		
	<15mins	73	66.4
	15-30mins	31	28.2
	30mins-1hour	6	5.5
11.	**Last time of medicine purchase without prescription**		
	> 6 months	67	60.9
	>6months	43	39.1

The study shows that there is significant association of knowledge with age, marital status and education status of respondents. Whereas, there is no significant association with gender, religion, caste, type of family and occupation as presented in Table 4.

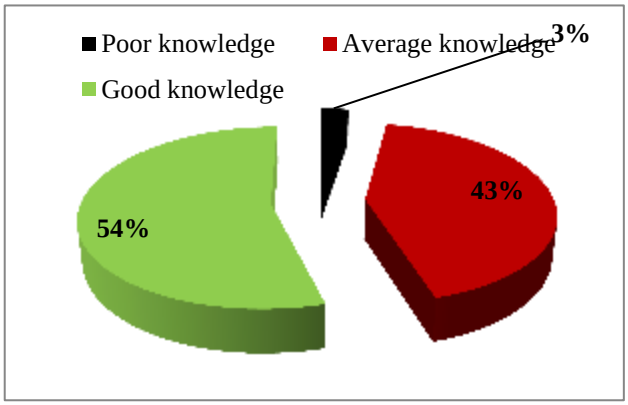

Figure 1: Pie-diagram representing knowledge level.

There is significant association of practice with education status of respondents. Whereas there is no significant association between other demographic characteristics and practice as given in Table 5.

Figure 2: Pie-diagram representing practice level.

There is weak positive correlation between knowledge and practice at the significance level of 0.05 and r -value was found to be 0.211 as shown in Table 6.

DISCUSSION

Study findings have been discussed in terms of objectives stated and with the findings of the other studies. Nearly 76% were aware about the OTC drugs similar to the study conducted in Lagos State, Ikeja (70%), and West Bengal (84%).[9,10] Most the respondents (43.6) use OTC when symptoms are minor and manageabe comparable to study by Ghosh et al 62% used the OTC drugs when disease is not serious.[10] Many of the respondents(82.7%) used OTC drugs for fever (antipyretics) i.e, paracetamol which is in line with the study from Pune, West bengal, Ikeja, Lagos Resident(94%), 72% use crocin regularly.[8,9,11,12]

Table 2: Knowledge regarding over the counter drugs (n = 110).

Sample characteristics	Frequency (f)	Percentage (%)
Over the counter drugs are		
Sold directly without prescription	84	76.4
Sold with prescription	10	9.1
Very expensive	16	14.5
The decision for using OTC drug is made by		
Consumer	53	48.2
Doctors	20	18.2
Pharmacist	37	33.6
OTC drugs are primarily used to treat conditions that		
Do not require doctor's direct supervision	85	77.3
Permanent and life long	10	9.1
No absolute care	15	13.6
OTC drugs are used for treating disease like		
Hereditary diseases	97	88.2
Minor illness and injuries	13	11.8
Following drugs fall under OTC drugs except		
Antipyretics (Paracetamol)	93	84.5
Anti-cold/ Analgesics	10	9.1
Anti-cancer	7	6.4
Over the counter drugs can		
Sometimes cause side-effect	93	84.5
Mostly cause side-effects	7	6.4
Never cause side-effects	10	9.1
The common side-effects of OTC is		
Allergic rashes	64	58.2
Eye irritation	12	10.9
Difficulty breathing	8	7.3
Swelling of face and limbs	26	23.6
While using OTC drugs, caution should be taken mostly in		
Pregnant and lactation	12	10.9
Older adults	12	10.9
Adolescent/middle adults	86	78.2
If side-effects are seen, then one should		
Immediately stop the use of drug	104	94.5
Take low dose/use untill side effects subside	6	5.5
OTC drug along with prescribed drug is safe		
Yes	54	49.1
No	56	50.9

Table 3: Practice regarding over the counter drugs (n = 110).

Sample characteristics	Frequency (f)	Percentage (%)
Before using OTC drugs consult with		
Pharmacist	61	55.5
Doctor	30	27.3
Friends/relatives	9	8.2
Place of receiving OTC drugs is		
Hospital pharmacy	35	31.8
Out pharmacy	69	62.7
Friends/relatives	6	5.5
Consume over-the-counter drugs		
When symptoms are minor/manageable	48	43.6
Whenever I feel sick	22	20
When I can't visit doctor	40	36.4

Common reason for using OTC drugs is		
Time saving	50	45.5
Low cost	10	9.1
Safe and well tolerable	20	18.2
Easy accessibility	30	27.3
More commonly used OTC drugs is		
Antipyretics (Paracetamol)	91	82.7
Anti-cold	9	8.2
Analgesics	10	9.1
Ever taken OTC drug more than the recommended dose		
Yes	95	86.4
No	15	13.6
Ever experienced adverse effect from OTC drugs		
Yes	7	6.4
No	103	93.6
How often do you read the instructions on drugs label before use?		
Always	53	48.2
Occasionally	32	29.1
Never	25	22.7
How often do you check the expiry date?		
Always	10	9.1
Occasionally	89	80.9
Rarely	11	10
Storage of over-the-counter drugs		
Medicine box	42	38.2
Bedroom/open in the table	68	61.8
If OTC drugs shows change in shape, color, odour		
Immediately discard the drugs	49	44.5
Continue use till it expires	40	36.4
Does not matter	21	19.1

Table 4: Association of demographic variables with knowledge (n=110).

Sample characteristics	Knowledge score			Chi-square value(χ^2)		df	Significance
	Poor	Average	Good	Calculated value	Tabulated value		
Age (in years)							
20-29	0	19	18				
30-39	0	7	17				
40-49	0	15	12	17.938	12.59	6	*S
50 & above	3	6	13				
Gender							
Male	0	18	25	2.105	5.99	2	NS
Female	3	29	35				
Marital status							
Married	1	35	46				
Unmarried	0	12	13	48.094	9.49	4	*S
Others (Separated,Widow)	2	0	1				
Education							
Illiterate	3	4	1				
Primary level	0	12	10	42.959	12.59	6	*S
Secondary level	0	13	20				
Higher level and above	0	18	29				
Type of family							
Nuclear	1	13	29	4.774	5.99	2	NS
Joint	2	34	31				

*S= Significant; NS= Not Significant; df= degree of freedom.

Table 5: Association of demographic variables with practice (n=110).

Sample characteristics	Practice score		Chi-square value(χ^2)		df	Significance
	Fair	Good	Calculated value	Tabulated value		
Age (in years)						
20-29	21	16	1.947	7.82	3	NS
30-39	10	14				
40-49	16	11				
50 & above	11	11				
Gender						
Male	26	17	1.696	3.84	1	NS
Female	32	35				
Marital status						
Married	43	39	0.242	5.99	2	NS
Unmarried	13	12				
Others (Separate, Widow)	2	1				
Education						
Illiterate	8	0	7.930	7.82	3	*S
Primary level	10	12				
Secondary level	17	16				
Higher level and above	23	24				
Monthly family income (NRs.)						
< 10,000	13	11	0.285	5.99	2	NS
10,000-20,000	25	25				
>20,000	20	16				

*S= Significant; NS= Not Significant.

Table 6: Correlation between knowledge and practice.

Variables	Karl Pearson's correlation coefficient (r)	p-value	Significance
Knowledge score	0.211*	0.027	Significant
Practice score			

Correlation is significant at the level of 0.05.

Forty six percentage were using OTC as it is time saving alike to a study from Boudha, Kathmandu where 48% of respondents used OTC medicines due to easy to get the medicine as compared to visit to doctors or hospital and 87% of self-medicate due to convenience.[11,13] Among the respondent asked for place of purchasing OTC drugs, 94.5% replied as the pharmacy shop comparable to Lagos residents i.e. 74%.[9]

Only half(50.8%) of the residents claimed to always read the leaf-lets before using any drugs which is identical with the present study i.e 48.2%.[9] Whereas a study from Tamil Nadu shows that 1/4th respondents read the label content of the drugs.[14] Only 9% of the respondents always check the expiry date before using any OTC drugs distinguish to the result obtained from Malaysia (86%).[15] Almost 6% had experience the experienced adverse reactions such as gastrointestinal disturbance like constipation, diarrhoea, distension analogous to the result obtained from study done in Mangalore.[16]

The current study showed that more than half of the respondents (54%) had good knowledge on over-the-counter drugs similar to a study from Nigeria i.e. 47.2%, 67% from Taiwan.[17,18] Distinguish result was obtained from Central India that not even half of the respondents had adequate knowledge regarding over-the-counter drugs, their dose, duration, side-effects and interactions and Pune showed that 74 % respondents had no knowledge about medicines and 86.5% unaware about adverse drug reactions.[12,19]

The present study showed that nearly half of the respondents (46%) had level of knowledge regarding over-the-counter drugs from average to poor. However, study by Mohammed et al found that majority of the respondents (82%) stated that their level of knowledge was moderate to low.[20]

A study in Maharashtra showed that greater part (92%) of the respondents said that they have no knowledge about

over-the-counter drugs and only 8% have some knowledge about OTC drugs.[21] This study contradicts the present study where only 3% had poor knowledge and 43% had some knowledge regarding OTC drugs.

The study showed that about half (47%) of the respondent had good practice on over-the-counter drugs comparable results was obtained in a study from Nigeria (52.1%) and Taiwan (68.12%).[17,18]

There is significant association of education status of respondents with knowledge and practice on over the counter drugs which is in line with studies by Bhambhani et al.[19] There is no significant association between the age of respondent and the practice of the self-medication analogous to the study conducted in UAE.[22] Whereas contrast results was obtained in Malaysian population.[23]

CONCLUSION

Lower percentage (54%) had good knowledge on over-the-counter drugs. Less than half (47%) had good practice regarding over-the-counter drugs. The result showed that still they are lacking the concept of over-the-counter drugs, consultation of doctor before using the OTC drugs, its adverse effects, disease to be treated, caution to be taken, reading the instruction before use and checking the expiry date. In order to control this prevailing problem, legislation are to be made by the government especially to implement and facilitate the prescription system, conducting awareness programs and restricting drug advertisements for public. Therefore, it is suggested for awareness program among community people conducted at community level regarding over-the-counter drugs.

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